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The isostatic gravity anomaly field of southwestern Saudi Arabia  
and its interpretation

by

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# THE ISOSTATIC GRAVITY ANOMALY FIELD OF SOUTHWESTERN SAUDI ARABIA AND ITS INTERPRETATION

by

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## ABSTRACT

Regional gravity survey data from 2196 stations on a 10-km-square grid that covers 202,100 km<sup>2</sup>, representing most of southwestern Saudi Arabia, were reduced to a complete Bouguer gravity anomaly map by the application of terrain corrections. Along the western continental margin of the Arabian Shield, a positive gravity anomaly due to the abutting oceanic crust obscures gravity anomalies associated with the shield rocks. A regional gravity gradient increases northeastward across the shield.

An Airy-Heiskanen isostatic reduction--using mean crustal and mantle densities of 2.94 and 3.30 g cm<sup>-3</sup>, respectively, and a sea-level crustal thickness of 33.7 km--produced a map that removes the continental margin anomaly. The Airy-Heiskanen model, however, conflicts with seismic refraction results, and the resulting gravity anomaly map is inconvenient for interpretation. A new isostatic reduction, one based on plate tectonic considerations and constrained by the seismic refraction interpretation, consists of a Moho deflection (Airy part) and a mantle average density variation (Pratt part) and extends downward well into the asthenosphere. Parameters for the new reduction were determined by nonlinear least-squares parameter studies of a profile subset of the data.

Interpretation of the resulting isostatic map shows that the entire Red Sea-Arabian Plate system is uplifted across a broad domal uplift which has an amplitude of about 2 km at the western edge of the shield and exposes oceanic crust at sea level. A characteristic Bouguer gravity anomaly signature is observed in long profiles across the Red Sea and the Arabian Plate and is related to asthenosphere temperature variations. Only about one third of the observed uplift and half of the observed regional gravity gradient can be explained by lithosphere heating.

Areas of differing mean anomaly levels are correlated with the Hijaz-Asir province, the Nabitah mobile belt, the Afif province, the Ad Dawadimi belt, the Ar Rayn block, and other geologic provinces. Linear gravity highs are associated with both northwest-trending Najd fault zones and are due to mafic intrusives along the fault zones. The differing anomaly levels appear to represent crust-penetrating zones of differing mean density, substantiating the mobile belt and allochthonous block interpretation.

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At least three north-trending, imbricate, high-angle thrust zones in the Nabitah mobile belt are inferred to have been produced during the Pan-African collision and the consequent thickening of the crust. The thrusts and their east-west shear zones penetrated well into the Hijaz-Asir block and produced the majority of the structural features in the southern shield. In the northeast, the collision juxtaposed the Ar Rayn and Afif blocks with the Ad Dawadimi mobile belt between. No gravity evidence is seen for imbrication in this mobile belt.

A comparison of known mineral occurrences to the gravity anomaly map shows that the occurrences are controlled by structures related to the thrust belts and shear zones and are Nabitah orogeny in age. Occurrences along the Najd zones appear to be related to the igneous phase of the later Najd orogeny.

## INTRODUCTION

The results of regional-scale gravity surveys over a large portion of the southern Arabian Shield, coastal plains, and offshore islands have been reported by Gettings (1983). Further analyses presented here, consisting of additional corrections to the data and interpretation of the derivative maps, have greatly refined the inferred model and produced an optimum representation of the anomalous gravity field in the study area. The objectives of the additional corrections applied to the data were to correct for the deviations of the terrain surface from a plane at each station, yielding a complete Bouguer gravity anomaly map, and to correct for the mean crustal and upper mantle structure of the area as defined by seismic refraction and other geophysical and geological data in the area, yielding an isostatic gravity anomaly map. Interpretation of the resulting data set then isolated the components of the anomalous gravity field arising from sources in the asthenosphere, uppermost mantle and lower crust, and upper crust.

In this report, the uplift of the Arabian Plate-Red Sea system is seen as the primary manifestation of the regional scale Tertiary tectonic activity and provides the motivation for the isostatic model used to produce the final gravity anomaly map. For this reason, a characterization of the uplift is presented first, followed by the details of production of the complete Bouguer gravity anomaly map. The production of an isostatic gravity anomaly map, first by classical means and then by a model constrained by independent data is given next. Finally, the interpretation of the isostatic gravity anomaly map proceeds by sequentially removing regional and sub-regional scale anomalies to produce and interpret a final residual map related directly to upper crustal sources.

The area studied (fig. 1) provides a transect that is approximately perpendicular to the southern Red Sea deep-water axis and crosses the shelf, the coastal plain, and the principal tectonic elements of the southern Arabian Shield, an area of Proterozoic metamorphic and plutonic rocks. The gravity data from this area, when combined with other geologic and geophysical data, provide significant insight into both the Precambrian geologic history of the shield and the development of the Tertiary Red Sea-Arabian Plate sea-floor-spreading system.

Aside from some detailed studies on small mineralization targets, previous land-based gravity studies in western Saudi Arabia have been limited to those that established gravity base station networks (Ghalayini, 1958; Flanigan and Akhrass, <sup>1972</sup>~~1972~~<sup>1972</sup>) using such a large station spacing as to only define the very general features of the gravity field, and one study of the gravity field of the transition zone from the Arabian Shield onto the Red Sea shelf (Gettings, 1977). Gravity traverses along benchmark lines in the area also were completed by the Aerial Surveys Department of the Saudi Arabian Ministry of Petroleum and Mineral Resources in 1975 but are unpublished. In the deep-water axial trough of the Red Sea, several ship-based gravity surveys have been carried out (Allan, 1970; Plaumann, 1975). Other geophysical data in the study area have been summarized in Healy and others (1982) and Gettings and others (1983), which also contain summaries of the geologic setting.

The generalized physiography and geology of the southern Red Sea and the Arabian Peninsula are shown in the profile of figure 2, taken along an azimuth of  $056^{\circ}$  (perpendicular to the deep-water axis of the southern Red Sea) from the deep-water axis northeastward. The topographic profile was computed by averaging seven profiles spaced 100 km apart from 100 km south of the Farasan Islands to Jiddah. Topographic information was taken from the 1:4,000,000 scale topographic map of the Arabian Peninsula (U.S. Geological Survey, 1972), and geologic information was taken from the tectonic map of the Arabian Peninsula (Brown, 1972) along the central profile. The Phanerozoic rocks of the northeast part of the profile (fig. 2) are all sedimentary and form the gently northeast-dipping Arabian Platform. From the profile of figure 2, it is evident that the platform has been an area of basin subsidence and deposition since latest Precambrian times although there have been several periods of epeirogenic activity (Powers and others, 1966). The shield has evidently been elevated throughout the Phanerozoic, and the entire peninsula has been uplifted by regional doming centered on the Red Sea axis in late Mesozoic and Cenozoic times (fig. 2; Powers and others, 1966). Folding associated with compressional tectonism in the Zagros belt of Iran has affected the Platform sediments in the northeastern end of the profile (fig. 2). The Cenozoic

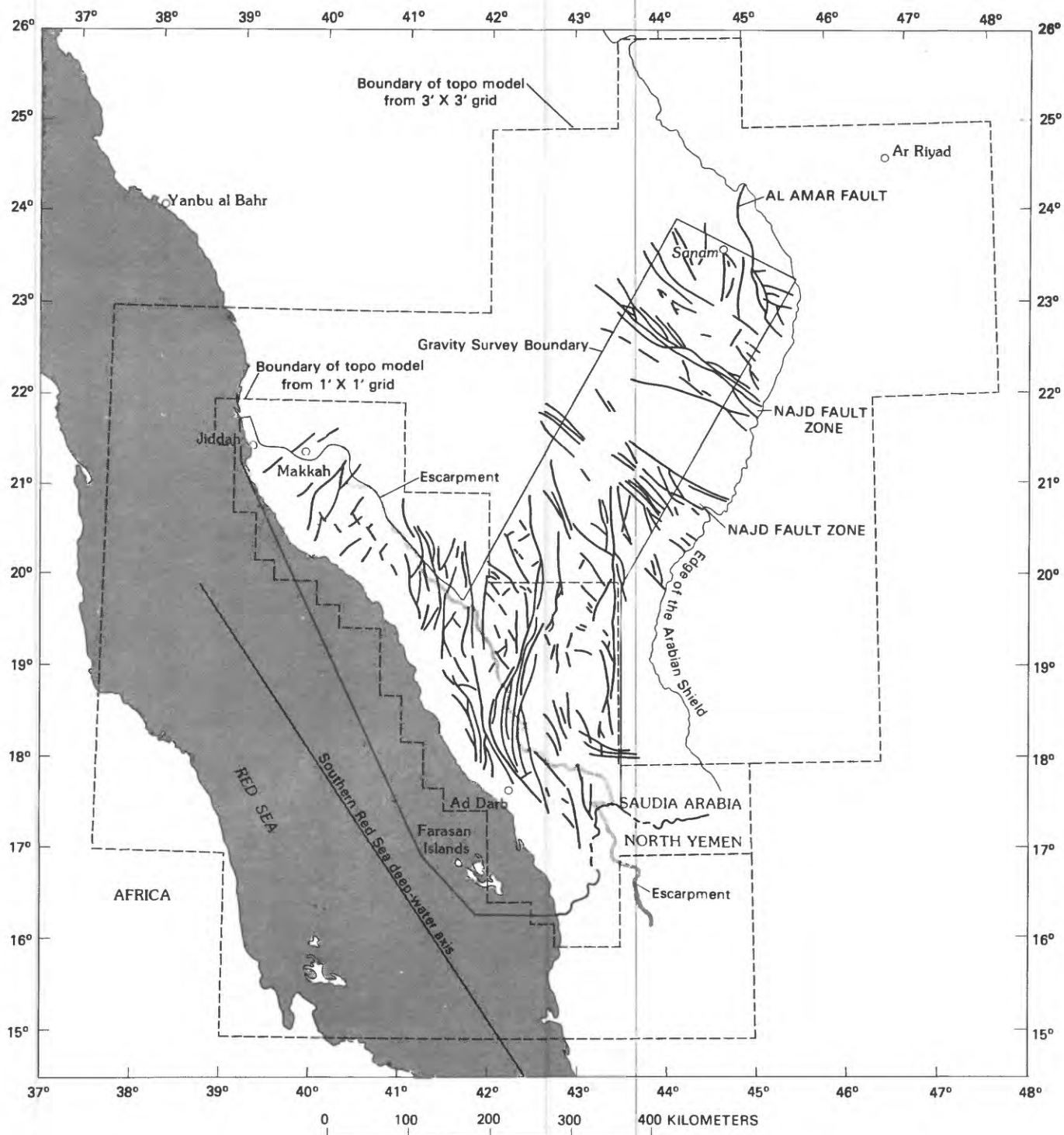


Figure 1.--Location of the gravity survey area in southwestern Saudi Arabia, boundaries of the digitized topographic models based on 1' X 1' and 3' X 3' grids, and principal faults within the survey area. The southern Red Sea deep-water axis as shown is defined as a least-squares straight line through the deepest water between latitudes 15° and 20° north.

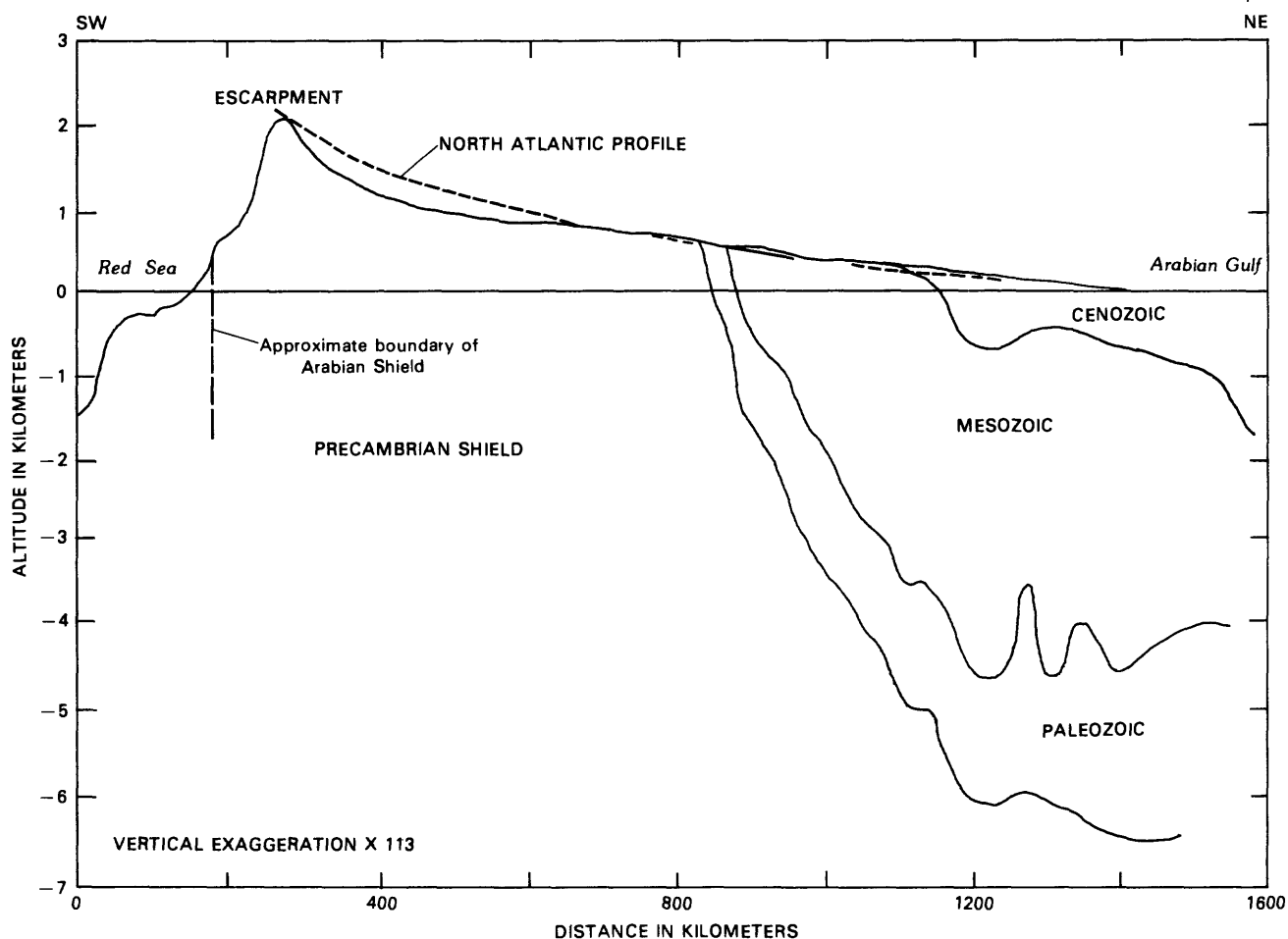
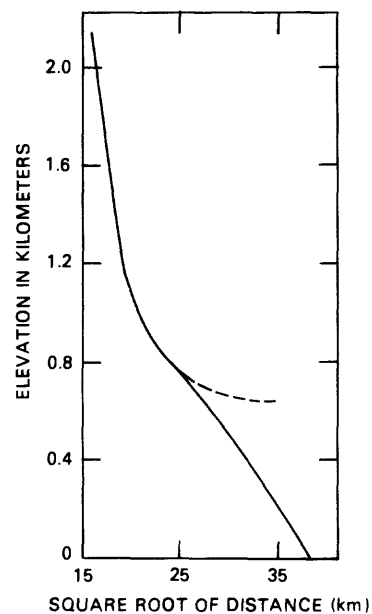


Figure 2.--Average topographic profile and generalized geology along a transect perpendicular to the southern Red Sea deep-water axis. Topography is the average of seven profiles spaced 100 km apart from Jiddah southwards. Dashed line shows the sea-bottom topography for the North Atlantic (Parsons and Sclater, 1977) normalized to the same starting and ending elevations for comparison. Inset shows a plot of the average topography as a function of the square root of distance; dashed line shows asymptotic behavior of the ocean floor for comparison. Topographic information from U.S. Geological Survey (1972); geological data from Brown (1972).





strata beneath the Red Sea and the adjacent coastal plain (fig. 2) are composed of Miocene and younger sedimentary rocks and evaporites achieving thicknesses in excess of 4 km (Gillmann, 1968) overlying oceanic crust of the Red Sea (Gettings, 1977). Crustal thickness varies from about 40 km beneath the shield, to 20 km at the boundary of the shield in the southwest, to less than 10 km beneath the Farasan Islands (Healy and others, 1982; Gettings and others, 1983).

Tertiary marine sediments top the escarpment along the Red Sea, and geomorphic evidence (reviewed in Gettings, 1982a) indicates that erosion since their uplift has not been great. The mean topographic surface is thus an approximation to the uplift of the Arabian Plate since Miocene time. The mean topography can be characterized by a simple mathematical function for points northeast of the top of the escarpment (fig. 2). The function was derived by fitting a combined linear and exponential function to the mean topographic profile northeast of the escarpment using a nonlinear least-squares approximation algorithm (Marquardt, 1963). The resulting function is

$$h(x) = 1.275 - (8.665 \cdot 10^{-4})x + (1.251) \exp \frac{-(x-237.5)}{89.92}$$

where  $h(x)$  is the altitude above sea level, and  $x$  is the distance in kilometers along the profile from the Red Sea axis. For this fit, the mean misfit in the interval between 250 and 1600 km along the profile is -22 m with a standard deviation of 37 m. The maximum and minimum misfits were 108 and -78 m, respectively.

The functional approximation for  $h(x)$  resembles the first terms of the theoretical solution for ocean floor depth as a function of age (Parsons and Sclater, 1977), and indeed the theoretical depth-age curve for the North Atlantic Ocean, from the same reference and suitably renormalized, is somewhat similar to the topographic profile of figure 2. To further test the correspondence, the altitude function was plotted as a function of the square root of distance (inset, fig. 2). For the ocean floor, such a plot begins with a linear segment and then approaches an asymptote (Parsons and Sclater, 1977); whereas for the topographic function, the curve begins nearly linear, begins to level off, and then has an inflection point and continues to decrease rather than approaching an asymptote. The plate-wide horizontal extent of the uplift, its chronology and geologic relations (Gettings, 1982a), and the similarity to oceanic spreading systems outlined above all suggest that the uplift is a mantle thermal phenomenon. As will be shown below, heating of the lithosphere can only explain at most one-third of the observed uplift and probably cannot explain its horizontal extent. Therefore the postulated uplift mechanism is a density increase in the asthenosphere as a function of distance from the Red Sea axis.

The density differences are presumably thermal in origin and caused by a convective system bringing hot, upwelling asthenosphere beneath the Red Sea and laterally flowing, cooling asthenosphere to the northeast. This mechanism leads directly to a revised procedure, demonstrated below, for the calculation of isostatic gravity anomalies that are constrained to fit the crustal thicknesses measured by the seismic refraction profile.

This work was completed under the auspices of a work agreement between the Ministry of Petroleum and Mineral Resources, Kingdom of Saudi Arabia, and the U.S. Geological Survey. H. R. Blank, Jr., contributed substantially to the work with many helpful discussions, which I gratefully acknowledge.

## **COMPUTATION OF COMPLETE BOUGUER GRAVITY ANOMALY (CBGA)**

### Gravity data

The gravity data used in compilation of the map are from 2196 gravity stations covering an area of 202,100 km<sup>2</sup> at a nominal spacing of 10 km on a square grid. The surveyed area extends from the Farasan Islands in the south both northeastward to Sanam and northwestward to Jiddah (fig. 1). The northeast leg of the survey covers a strip approximately 150 km wide, whereas the northwest leg includes offshore areas and onshore areas inland as far as the summit of the Red Sea escarpment. The data were reduced to free-air and simple Bouguer gravity anomaly (not terrain corrected) values by standard reduction formulae, a procedure which is fully documented by Gettings (1983). Although the resulting gravity map reveals much about the crustal and regional geologic structure (Gettings, 1983), terrain effects and the strong gravity effect of the continental margin clearly need to be eliminated if maximum resolution of the gravity effects of crustal structure is to be obtained.

The results of these steps of data processing are summarized statistically in the histograms of figure 3. The histogram of station elevations (fig. 3A) has the interesting property that it is bimodal; and the two peaks, after correction of the farther left peak for the higher station density in the low-lying Jiddah area, have similar shapes from their maxima toward the higher-elevation stations. Since the distribution of stations is nearly uniform, the corrected histogram reflects the distribution of average elevations. The lower altitude peak represents the coastal plain whereas the higher altitude peak essentially represents the plateau well east of the escarpment. The minimum in the 500- to 700-m interval between the peaks demonstrates that the mean elevation rises from the coastal plain to high elevations rather abruptly. The similarity in shape of the increasing elevation sides of the two peaks may indicate that the weathering

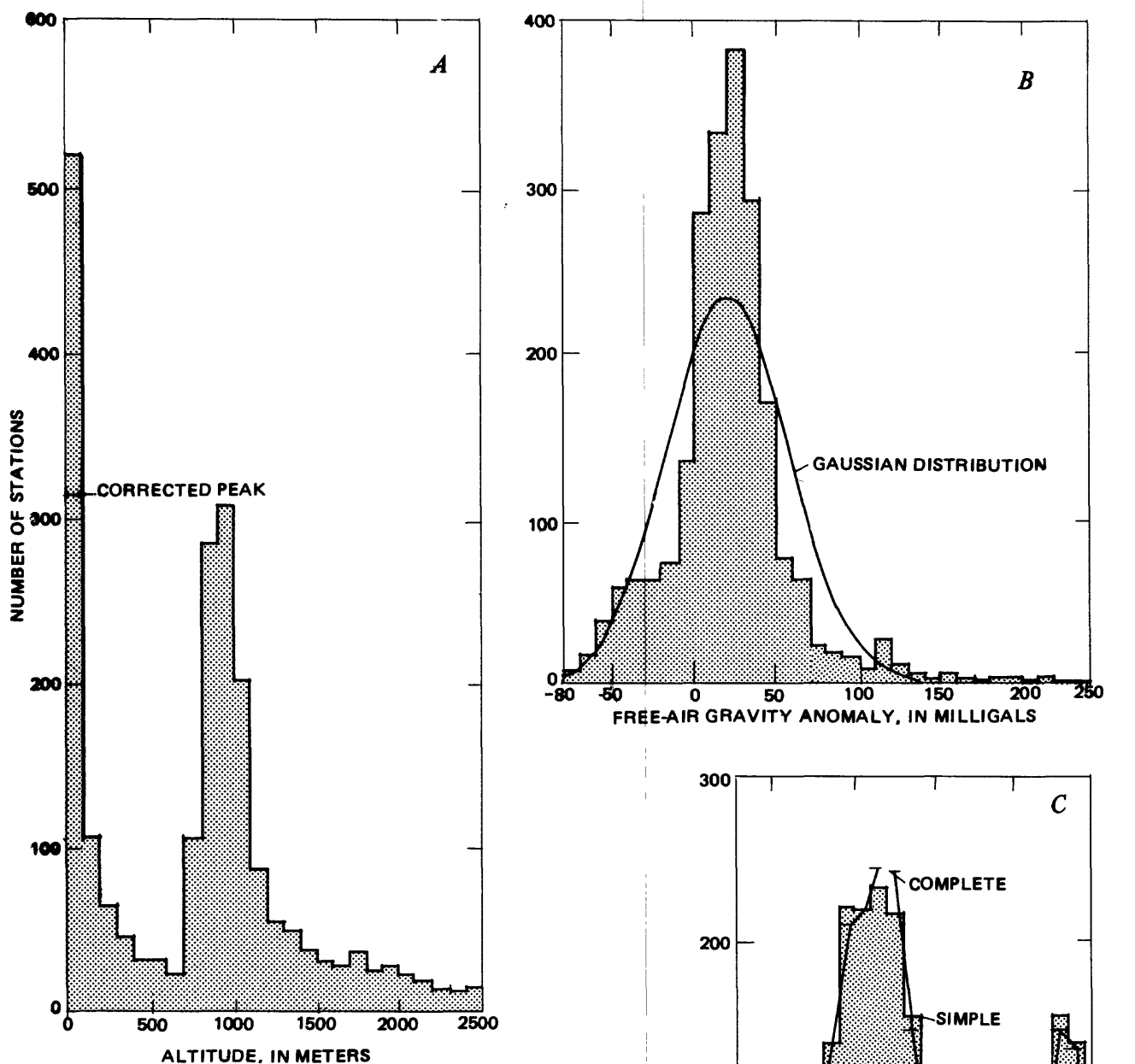


Figure 3.--Distributions of station altitudes (A), free-air gravity anomaly (B), and simple and complete Bouguer gravity anomaly (C) for the 2,196 stations in the gravity survey. The "corrected peak" in A is to compensate for station spacing in the Jiddah area that is tighter than the nominal 10-km grid used elsewhere. Superimposed curve on B is the Gaussian (normal) distribution for the free-air data. C shows the simple Bouguer gravity anomaly in the standard histogram plot; the complete (terrain corrected) Bouguer gravity anomaly is shown by the horizontal bars with straight line segments connecting their centers.

processes in this desert environment are, to first order, independent of distance from the Red Sea and of elevation except near to the escarpment. The distribution is intriguing and suggests that carefully designed statistical studies might provide insight into both geomorphological processes and geological structural controls of the topography. The mean elevation for stations in this dataset is 770 m with a standard deviation of 602 m; the minimum and maximum elevations are -0.2 and 2944 m, respectively.

The free-air anomalies (fig. 3B) are distributed in a single peak with a mean value of 20.88 mGal and standard deviation of 37.17 mGal. The values range from a minimum of -79.28 mGal to a maximum of 237.90 in a strongly non-Gaussian distribution. The mean value falls well above the predicted free-air anomaly value of zero for a mean elevation of 770 m (Woolard, 1969a), based on worldwide data from areas of near-zero isostatic anomaly. The observed mean free air anomaly is very similar to that observed in north and central Africa (25 mGal) but very different from that of east Africa, where average values are strongly negative, about -20 mGal for 770 m mean elevation (Woolard, 1969a). A consequence of this observation is that the mean isostatic gravity anomaly can be predicted to be about 25 mGal and therefore that the properties of the lithosphere and/or asthenosphere beneath the Arabian Plate depart from worldwide mean values.

The mean simple Bouguer gravity anomaly for the area (fig. 3C) is -65.26 mGal with a standard deviation of 54.33 mGal, and values range from -170.26 mGal to 46.24 mGal. The distribution is bimodal with a large peak at approximately -90 mGal corresponding mainly to the gravity field over the shield and another peak at about 30 mGal corresponding to gravity anomalies over the coastal plain and Red Sea shelf. As expected, the mean value of -65.21 mGal predicted from the mean elevation and mean free-air anomaly for the Bouguer reduction density of  $2.67 \text{ g cm}^{-3}$  used here compares very well with the observed mean anomaly of -65.26 mGal.

In any process in which a continuous field is sampled discretely, uncertainty is introduced into the field representation because of the lack of knowledge of field variations between sample points. In potential field studies, the usual practice is to represent the field by the smoothest surface according to some criterion--for example, minimum surface curvature--which fits the observed samples exactly. This results in a representation which is in some sense an average of all possible actual field surfaces and is in general the best one can do under the circumstances. Any such field representation is subject to errors in its definition of variations from two sources, one direct and one indirect.

First, location and amplitude of anomaly maxima, minima and gradients are affected directly by the probability of a sample point falling on a maximum, minimum or the defining points of a gradient. This probability distribution is essentially random for the regional scale survey described here, since the distribution of rock units is, to first order, independent of the regular station network used to sample the gravity field. Therefore observed anomaly amplitudes and gradients are always lower bounds to the true amplitudes and gradients; that is, the field representation is always smoother than the true field. For gravity surveys, this means that inferred mass excesses or deficiencies are always too small, and inferred depths to sources are usually too large. Furthermore, there will be errors in the horizontal location of center of mass and contacts of the anomaly source because of the lack of precise knowledge of the map location of anomaly maxima, minima, and steepest gradients. For large sources whose horizontal dimensions are equal to several station spacings or more, the approximation is good and the errors described above are minimized. However, for source dimensions comparable to or less than the station spacing, the ability to resolve anomalies is lost and, in fact, measured field values can be considered random. This case is the source of the second (indirect) error in anomaly definition.

Finite station spacing is a form of low-pass filtering and, as in any such filter, introduces noise into the field representation (Gibbs phenomenon). This random noise element results in an uncertainty in the absolute value of the anomalous gravity field at any point on the map, and is a second cause of random error in the representation. The amount of this uncertainty is a function of the size, distribution and average density contrast of small sources relative to the station spacing. On the other hand, since the sources are random and may be either mass deficiencies or excesses (assuming an average density was used in data reduction), the uncertainty of the field value due to this effect averages zero, and thus levels for larger anomalies are well defined if based on several points rather than only one.

These effects are illustrated in figure 4, which is a profile from the simple Bouguer gravity anomaly map (Gettings, 1983). The profile has been digitized at a 1-km interval and sampled twice at 20-km intervals. In the first case, sampling starts at 1 km on the data profile and in the second, it begins at 10 km on the same data profile. As can be seen from figure 4, the narrower anomalies (half wavelength approximately 20 km or less) have their shapes, locations, amplitudes, and even signs severely affected by the sampling process. Note, for example, for the large anomaly at approximately 680 km, the two profiles differ in amplitude by about 50 percent. On the other hand, the anomalies of larger horizontal extent are well reproduced by both sampling lines.

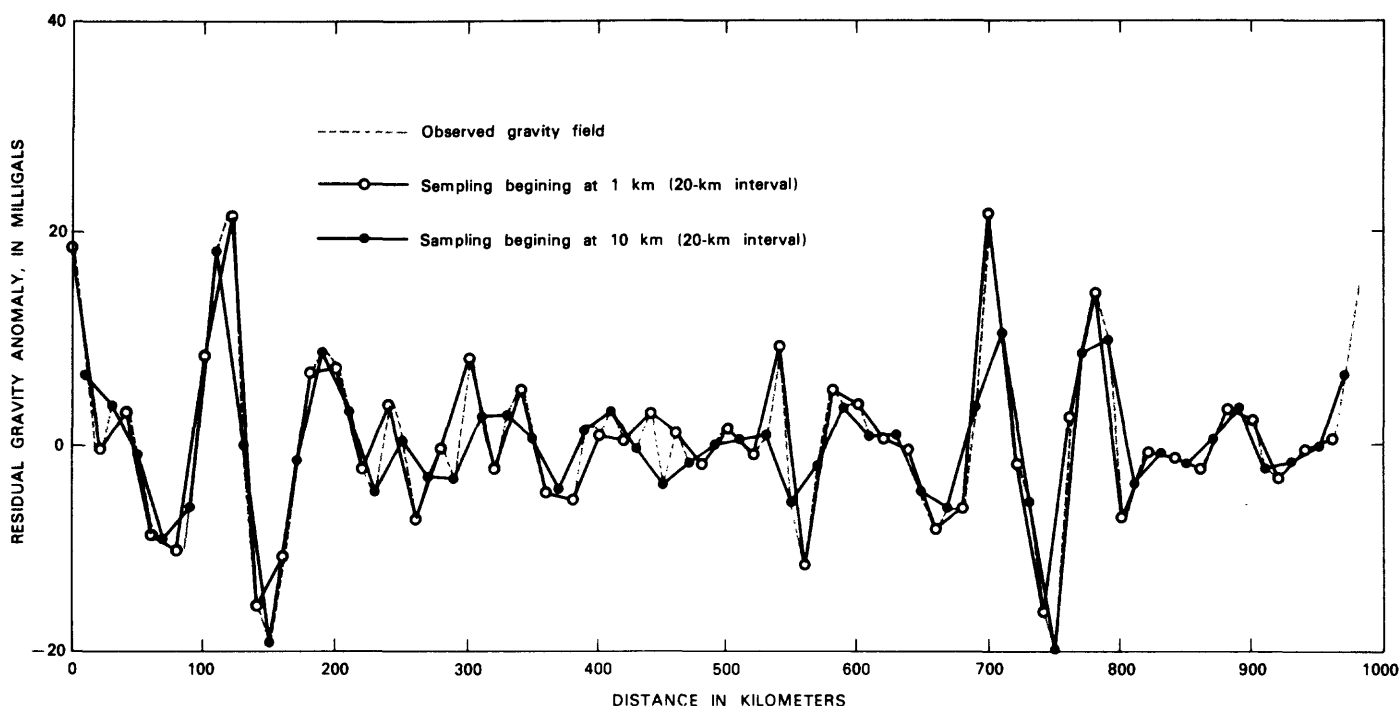


Figure 4.--Sample profile showing distortion of gravity anomalies due to finite station spacing. Observed data have been sampled twice at 20-km intervals, once starting 1 km from the origin and once starting 10 km from the origin. Note displacement of anomaly extrema and variation in anomaly amplitude.

For the gravity surveys described in this report the sample interval is 10 km on a square grid, so bodies about 10 km across or less are undefined by the survey work. This interval was chosen based on an assumed map scale for regional interpretation of 1:500,000, for which a 10-km spacing would sample all of the major geologic bodies adequately. For bodies of this size and in this environment (that is, a metamorphic/igneous terrane), we expect gravity anomalies of 5-15 mGal maximum amplitude; this yields a "noise envelope" of 2-3 mGals for definition of larger spatial anomalies unless large areas are available to average out the indirect effect. Thus features with characteristic horizontal dimensions of 30 km or larger are well defined by this data, features with extents in the 10-30 km range are only approximated, and those of less than 10 km dimensions are undefined.

## Terrain corrections

Terrain corrections were computed through Hayford-Bowie zone 0 (a radius of 166.7 km about each station) in three steps for all stations in the survey. In the first step, terrain deviations within a radius of 68 m about the station (Hayford-Bowie zones A and B) were considered, and corrections were only applied if terrain deviations from the station altitude were sufficient to cause a terrain effect of 0.01 mGal or more. These first-step corrections were computed manually using ring compartments, displaced half-slopes, frusta of cones, or combinations of these models as appropriate. Approximately 30 percent of the stations in the survey required correction. In the second step, corrections for stations with significant terrain deviations in the annular ring from 68 m radius to 2.29 km radius about the station were computed. Corrections were calculated using the method of Gettings (1982b), wherein points defining the topographic surface within the specified outer radius are chosen and digitized by machine and the correction is computed by a digital computer using an analytic surface representation. Point elevations were obtained from available 1:250,000 scale topographic maps (U.S. Defense Mapping Agency Topographic Center), and since these maps are not of large enough scale to accurately represent the detailed topography, the corrections are estimates only. This correction was computed for all stations in mountainous areas, in this case about 10 percent of the total stations.

The third step was the computation of the terrain effect from a radius of 2.29 km to 166.7 km and was carried out in two stages. Corrections were carried out using topography digitized from available maps on geographic grids at 1'x1' and 3'x3' intervals. Digitization was done manually by ruling a grid of the required size on the maps and estimating the average altitude in each compartment. Topographic maps at a scale of 1:250,000 and 1:4,000,000 were used for areas on land, and British Admiralty Charts were used for offshore areas. Digitization was completed by J. Peet and M. E. Gettings between October 1981 and June 1982. Areas of coverage of the 1'x1' and 3'x3' topographic models are shown on figure 1. The digitized maps were entered into computer files, and contour maps were plotted on the printer along with statistical information. Comparison of the printer maps with the topographic maps and examination of the statistical results allowed errors in the digitization and entry process to be easily located and corrected.

The terrain effects were computed using a computer program which calculated the correction from 2.29 km to 15.0 km using 1'x1' topography and from 15 km to 166.7 km using 3'x3' topography. The program uses the line-of-mass approximation to estimate the gravity effect of each compartment by replacing the topographic prism with a line of mass along the axis of the prism

from sea level to the altitude of the prism. Effects of the Earth's curvature were considered beyond a 15-km radius, and the program makes an exact circular join to the circular inner radius. About 60 hours of minicomputer central processor time were used in computing inner and outer zone terrain corrections.

Figure 5A shows a histogram of the total terrain correction and the portion of the correction out to a radius of 2.29 km about the station. The mean correction is 1.38 mGal with a standard deviation of 2.90 mGal; the minimum correction is -0.15 mGal (negative because of the effect of Earth curvature) and the maximum correction is 28.71 mGal, occurring at station AF116

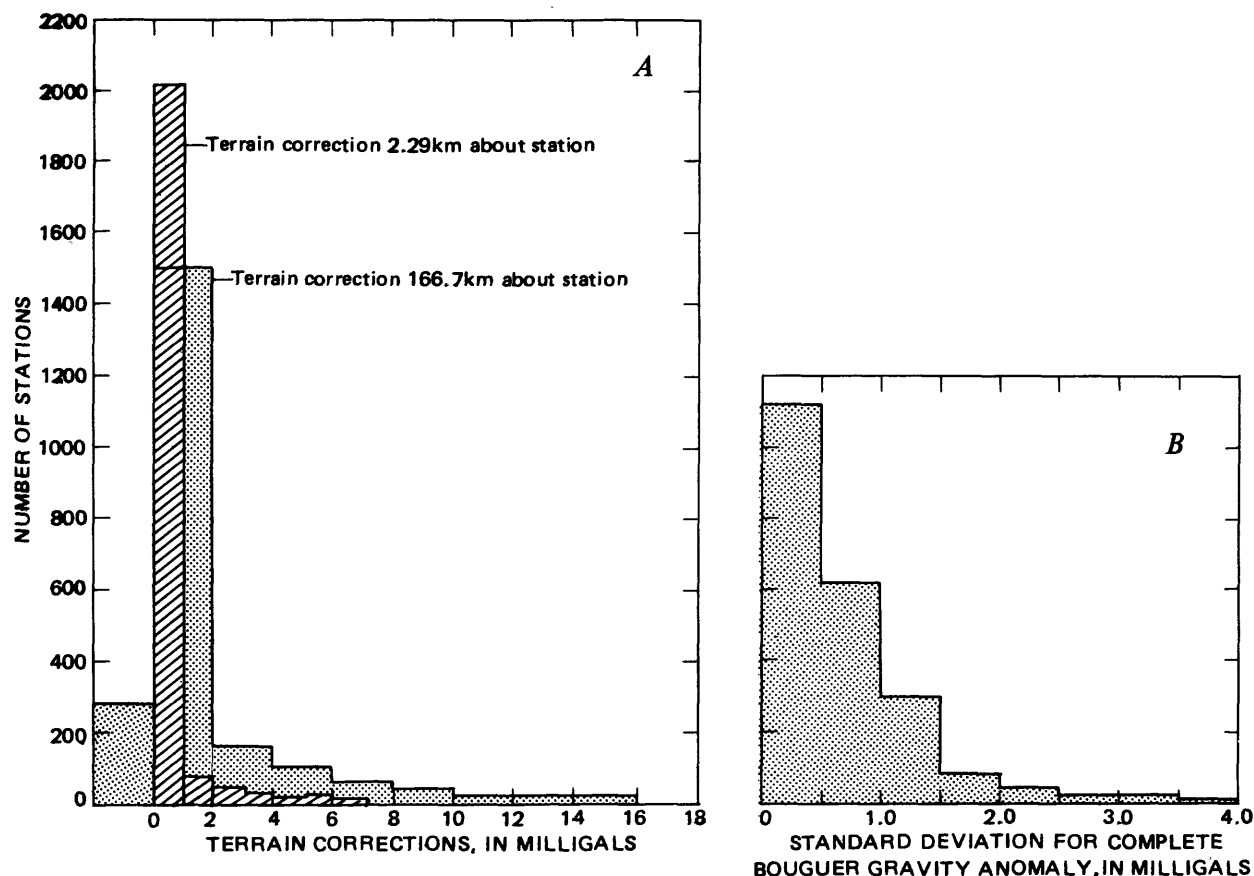


Figure 5.--Distributions of terrain corrections (A) and error estimates (B) for the complete Bouguer gravity anomaly (CBGA). The line pattern in A shows the distribution of the part of the terrain correction within 2.29 km radius about the station; the shaded bars show the total terrain correction to a radius of 166.7 km about the station. The standard deviation of the CBGA (B) is computed by a standard propagation-of-errors treatment for errors arising from all sources at each station and is a measure of the uncertainty in the CBGA value.



situated on a peak at the edge of the coastal plain near the Yemen border. Terrain corrections for 81 percent of the stations are less than 2 mGal, 89 percent are less than 4 mGal, and 93 percent are less than 6 mGal. For the topographic maps used here, the total correction is uncertain by about  $\pm 30$  percent, and thus the error introduced into the complete Bouguer gravity anomaly by the terrain correction is less than  $\pm 1.8$  mGal for 93 percent of the stations. Standard deviation estimates in the complete Bouguer gravity anomaly, computed by propagation of errors from observed gravity, station location and altitude, and terrain correction at each station, are depicted in figure 5B as a histogram of the standard deviation of the complete Bouguer gravity anomaly. The mean value for these data is 0.68 mGal with a standard deviation of 0.59 mGal and a maximum and minimum of 5.83 and 0.06 mGal, respectively. Thus the error in the complete Bouguer gravity anomaly as measured by the standard deviation is  $\pm 1.36$  mGal at the 95-percent confidence level (2 standard deviations), corresponding to a probable error of  $\pm 0.46$  mGal, and therefore a contour interval of 5 mGal is justified for map representations of the data.

#### Complete Bouguer gravity anomaly map

The complete Bouguer gravity anomaly was calculated at each station by adding the terrain correction and a curvature correction, which replaces the Bouguer slab used in calculation of the simple Bouguer gravity anomaly by a spherical cap of radius 166.7 km and thickness equal to the station altitude. The resulting data set was then interpolated onto a regular grid at 10-km intervals using a grid generation program which weights all stations surrounding each grid intersection according to the inverse of the square of the distance between the station and the intersection. Only stations within a 20-km radius of each intersection were considered in the calculation, and areas with intersections that had no stations within this radius were flagged as areas of no data. A contour map generation system (Donzeau and Gettings, 1981; Donzeau and others, 1981) was then employed to draw the map at a scale of 1:2,000,000. Although the gravity anomaly was computed at five other Bouguer reduction densities, the map presented here (plate 1A) is computed at a Bouguer reduction density of  $2.67 \text{ g cm}^{-3}$  to facilitate comparison with maps of neighboring areas. Although the shape of the field is not altered by use of different reduction densities, the amplitude of the anomalies is dependent on the density value. A value of  $2.73 \text{ g cm}^{-3}$  (recommended by Woollard, 1969b) would have yielded more realistic anomaly amplitudes for most of the survey area, because available bulk density measurements indicate that  $2.73 \text{ g cm}^{-3}$  is more nearly the mean value for exposed rocks of the Arabian Shield.

The complete Bouguer gravity anomaly (CBGA) map (pl. 1A) is very similar to the simple Bouguer gravity anomaly (SBGA) map (see Gettings, 1983) except that it is considerably smoothed in the area of the escarpment. Comparison of the histograms for the two data sets (fig. 3C) shows that the distribution has changed very little except that the main peak has been shifted to slightly less negative values and made more symmetric owing to the additive nature of terrain corrections. The peak at positive anomaly values is little changed because the areas of positive Bouguer gravity anomaly lie on the coastal plain and the Red Sea shelf relatively far from significant topography. The mean value of CBGA is -64.67 mGal with a standard deviation of 54.08 mGal; the maximum and minimum values are 46.54 and -170.47 mGal.

The dominant feature of the CBGA map (pl. 1A) is the large area of high gravity on the coastal plains and Red Sea shelf and the associated steep gravity gradient to negative CBGA values over the shield. This feature has been interpreted as the gravity expression of a passive continental margin where oceanic crust of the Red Sea abuts continental crust of the Arabian Plate (Gettings, 1977, 1983; Gettings and others, 1983), and this interpretation is reasonably definitive, especially when considered in conjunction with seismic refraction (Healy and others, 1982) and aeromagnetic studies (Blank and others, 1981).

On the shield, relative gravity anomaly maxima generally correlate with areas of diorite and more mafic plutonic rocks and sequences of intermediate to mafic metavolcanic rocks, whereas relative minima correlate with areas of granitic rocks (Gettings, 1983). The mobile belts defining the two suture zones presently recognized in the southern and eastern shield, the Nabitah mobile belt and the belt west of the Ar Rayn block in the Al Amar area (Stoeser and others, 1984), are expressed by trough-like gravity lows bounded by ridge-like gravity highs. The northeastern and southwestern Najd fault zones have ridge-like gravity maxima associated with them. These relationships are dealt with in detail in Gettings (1983) and will not be further discussed in relation to the CBGA map as there is no appreciable difference in the SBGA and CBGA maps in this part of the shield, which is characterized by low topographic relief.

In the southwest, where terrain corrections are important, the upper crustal component of the gravity anomaly field is obscured by the continental margin anomaly. Therefore, shield-related features of this area are not readily interpreted from the CBGA map, but they can be discerned on the isostatically corrected map described below and will be discussed in that section. The long-wavelength gravity anomaly which tilts the SBGA and CBGA maps to less negative values northwestward across the shield appears to have its origin in the asthenosphere and will also be discussed in detail below.

## ISOSTATIC GRAVITY ANOMALY (IGA) MAP

### Airy-Heiskanen isostatic gravity anomaly map

Initially, an isostatic reduction according to the Airy-Heiskanen system (Heiskanen and Vening Meinesz, 1958, p. 135) was carried out. In this system, compensation is assumed to be achieved by deflection of the crust-mantle boundary (Mohorovicic seismic discontinuity or Moho) in response to topographic loading. Thus, beneath topographic highs, the Moho is depressed relative to its depth below sea-level terrain, and a gravity low is produced by the excess crustal material filling the depression; the opposite occurs over the oceans, leading to gravity highs relative to a normal sea-level crustal section. Equality of mass is assumed in each section above a certain level in the mantle defined by the largest deflection into the mantle by loaded crust. The crust and mantle are each assumed to be laterally homogeneous and the model is specified by three parameters: the mean density of the crust beneath the terrain, the density contrast between the lower crust and upper mantle, and the thickness of normal crust beneath sea-level terrain. Traditional values for the crustal density and crust-mantle density contrast were 2.67 and 0.6 g cm<sup>-3</sup>, respectively (Heiskanen and Vening Meinesz, 1958, p. 135). Seismic refraction work has subsequently shown that 2.67 g cm<sup>-3</sup> is too small for average continental crust. Crustal thickness values used in the past for sea-level terrain have ranged from 20 to 60 km (Heiskanen and Vening Meinesz, 1958, chap. 5), but more recent studies put the value at 30-35 km. Woollard (1969a,b) recommends 2.93 and 3.32 g cm<sup>-3</sup> for crustal and upper mantle mean densities and 33 km for sea-level crustal thickness based on seismic and other evidence. The model assumes that the mean crustal density in the oceans is equal to that on the continents, but seismic evidence indicates that the oceanic crust mean density is probably more nearly 2.68 g cm<sup>-3</sup> because of its thinness (mean value 7.25 km) and the substantial proportion of sediments it includes (Worzel, 1974). There is also evidence that the oceanic mantle is less dense on the average than that beneath continents (Worzel, 1974), presumably because it is at a higher average temperature.

The mantle compressional wave velocities measured for the Saudi Arabian section (Healy and others, 1982) tend to be closer to oceanic than to normal continental values, and on this basis a slightly smaller density contrast of 0.36 g cm<sup>-3</sup> was chosen for the crust-mantle density difference. Thus, the parameters used were 2.94 and 3.30 g cm<sup>-3</sup> for the mean crust and upper mantle density, and 33.7 km for the sea-level crustal thickness (Worzel, 1974).

Isostatic corrections were calculated by computer using the 3'x3' digital terrain model out to a radius of 166.7 km about each station. As shown by Woollard (1969b), this model only accounts for about 75 percent of the isostatic correction; the outer zone correction, which accounts for the remaining topographic and isostatic correction for the whole earth, was derived from the maps of Karki and others (1961). Unfortunately, these maps were computed using a crustal density of  $2.67 \text{ g cm}^{-3}$ , a density contrast of  $0.6 \text{ g cm}^{-3}$ , and a sea-level crustal thickness of 30 km, so a means had to be found to adjust these values to the parameter values actually used.

A perturbation expansion of several simplified expressions for the combined topographic and isostatic correction was attempted, but all expressions failed to yield a result that could be expressed in terms of the parameters and the unperturbed correction (that is, the correction for the parameter set of Karki and others, 1961). They failed because of the nonlinear relation of the density contrast and the crustal density, whose ratio determines the root thickness. A second approach was then taken in which the effect of a point mass and its compensation at various angular distances from the station were evaluated for various parameter combinations. The same procedure was carried out using the more accurate double-layer theory of Heiskanen and Moritz (1967, p. 149). The results were expressed in terms of fractions of the correction for the parameters of Karki and others (1961). Least-squares fitting in the parameter space defined by crustal density, crust-mantle density contrast, and sea-level crustal thickness then defined the following empirical relations:

$$C(\rho, \Delta\rho, T) = C(2.67, 0.6, 30) f_T f_{\rho, \Delta\rho}$$

$$f_T = (0.03992T - 0.1976)$$

$$f_{\rho, \Delta\rho} = (0.8512 + 0.0195\rho - 0.0002\rho^2 + 0.0615\Delta\rho - 0.0067\Delta\rho^2 + 0.0025\rho\Delta\rho)$$

where  $C(\rho, \Delta\rho, T)$  is the combined correction for the specified parameters,  $C(2.67, 0.6, 30)$  is the combined correction read from the maps of Karki and others (1961), and  $f_T$  and  $f_{\rho, \Delta\rho}$  are the correction factors for the specified parameters. The crustal density is  $\rho$ , the crust-mantle density contrast is  $\Delta\rho$ , and  $T$  is the sea-level crustal thickness.

The isostatic corrections so defined were applied to all stations, and a contour map of the residual gravity field, termed the isostatic gravity anomaly, was drawn by computer. The map is shown in plate 1C, and figure 6 presents a histogram showing the

distribution of anomaly values. The map shows that the continental margin anomaly has been effectively reduced and that much of the structure of the gravity field on the shield near the margin has been significantly enhanced. The regional, northeastward-increasing gradient which "tilts" the complete Bouguer gravity anomaly map has been removed, and the remaining portion of the continental margin anomaly is attributable to the oceanic crust abutting the shield.

This optimistic assessment is only partly supported by figure 6, though. The mean anomaly shown there is 22.56 mGal with a standard deviation of 21.00, a maximum of 88.72, and a minimum of -35.54 mGal. If the isostatic model were correct on the average, then the mean anomaly value would be zero and the anomaly values would approximate a Gaussian (normal) distribution. Although the distribution of figure 6 is close to normal (skewness = 0.09, kurtosis = -0.49), the mean is more than one standard deviation from zero and thus is certainly significantly non-zero. This

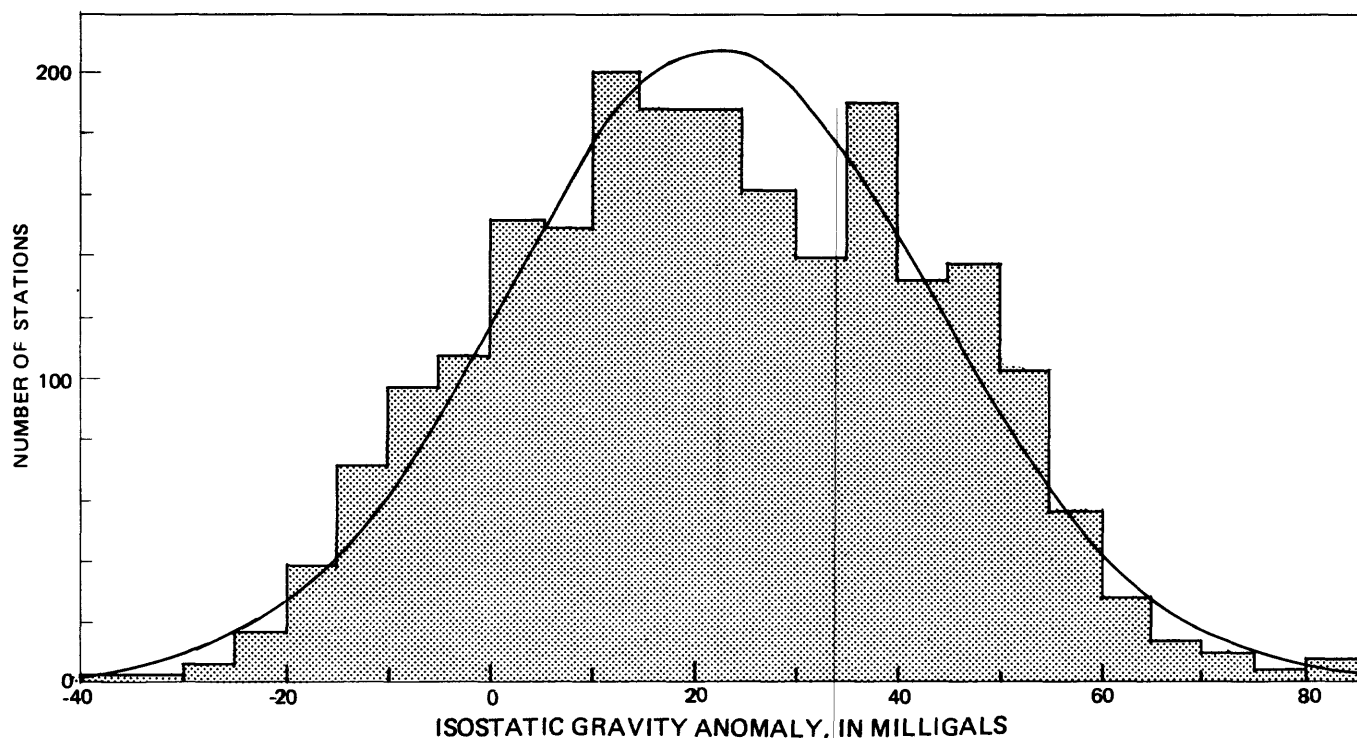


Figure 6.--Distribution of isostatic gravity anomaly values for the 2,196 stations in the survey. Superimposed curve is the Gaussian (normal) distribution determined from these data. Note that the mean value differs substantially from zero.

implies either that the area is not in isostatic equilibrium, that the parameters and/or the model are incorrect, or that the mean anomaly is due to some deep source not related to the compensation mechanism. Isostatic disequilibrium is unlikely considering the large area covered by the map and the relation to the Red Sea spreading system, which has been active at least since Miocene time, a long interval compared to estimates of isostatic response times. Therefore, it will be assumed for the remainder of this paper that isostatic response to density changes in the crust and upper mantle has been rapid compared to the spreading system dynamics. The fact that the mean isostatic gravity anomaly (IGA) value is positive shows that the isostatic model has, on the average, overestimated the magnitude of the compensation effect. The seismic refraction data show that the mean crustal density is, if anything, too large (Gettings and others, 1983) and that the mantle density could not be much higher than estimated. But even if the map is recomputed using a higher crustal density of  $2.84 \text{ g cm}^{-3}$ , the mean IGA decreases only to 15.87 mGal, which is still significantly non-zero. Thus it is clear that the parameters would have to be altered to physically unreasonable values to achieve a mean IGA near zero. The third possibility, that the mean IGA comes from some deep-seated source not related to isostasy, requires global data to evaluate and will not be considered here. Instead, an effort has been made to explain as much of the anomalous gravity field as possible with the isostatic model.

A more serious problem in using the Airy-Heiskanen model for these data is illustrated in figure 7, which shows the Moho depth function for a representative topographic profile and the seismically determined Moho depth. It is obvious that at least one reason why the mean IGA is positive is that the Moho depths of the Airy-Heiskanen model are too deep for all of the profile except the northeast end. This leads directly to an isostatic gravity correction that is too small and thus to a positive IGA. Moreover, the northeastward shallowing of the Moho beneath the Shield is responsible for removal of the regional tilt of the CBGA map and is incorrect, as it conflicts with the seismic refraction data. Finally, it is noted that to model the IGA map of plate 1C would require a great deal of effort just to rectify it with the seismically determined Moho depths. On the other hand, the great simplification of the map pattern and enhancement of shield gravity features near the continental margin encourage the use of some sort of IGA map. On this basis, a new isostatic reduction system, the plate-tectonic isostatic reduction, was developed and is described in the following section.

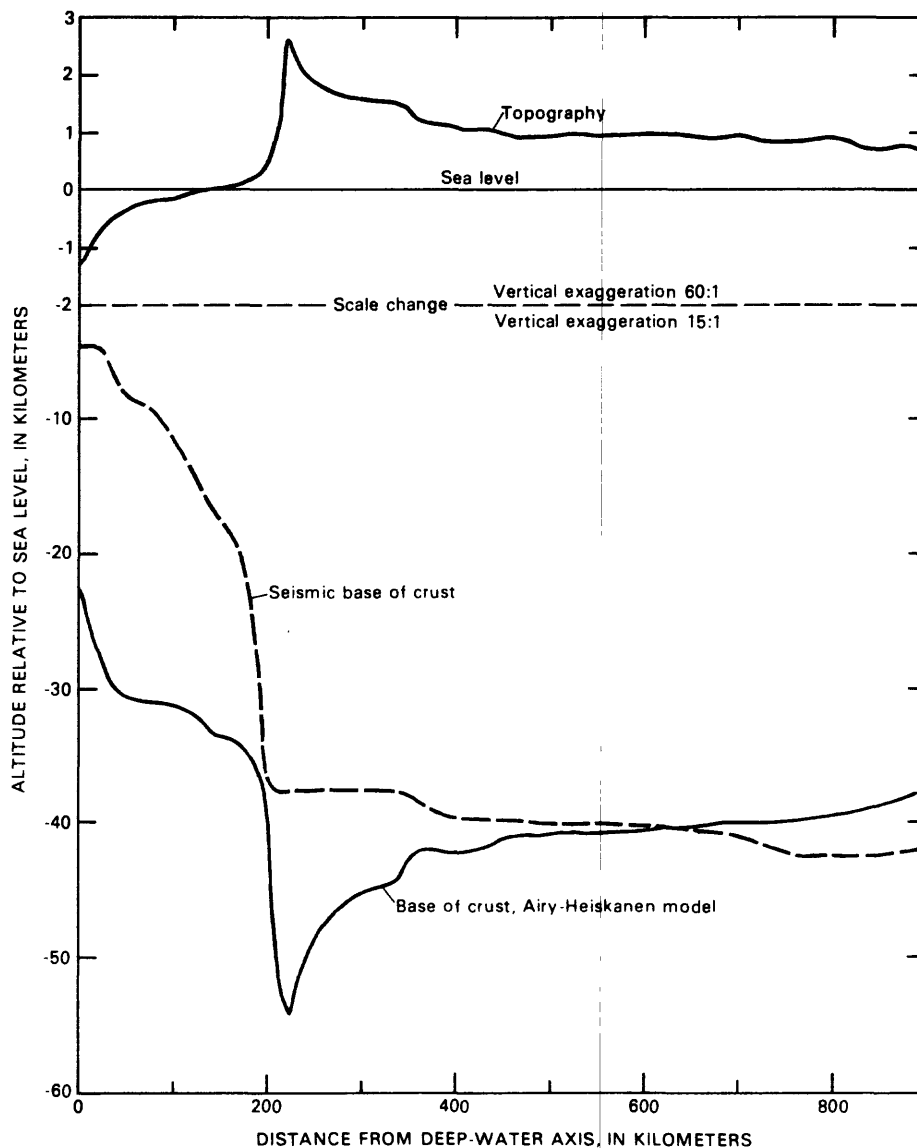


Figure 7.--Topographic section of southwestern Saudi Arabia and Moho depth calculated from the Airy-Heiskanen model compared with the Moho depth measured by the 1978 Saudi Arabian seismic refraction experiment (Healy and others, 1982).

## Plate-tectonic isostatic model

The plate-tectonic model of isostasy rests on two assumptions. The first is that vertical adjustments counteract lateral density differences in both the lithosphere and the asthenosphere down to depths on the order of 400-700 km in such a way that near equality of mass is maintained above that level. Thus at least part of the asthenosphere is presumed to be included in the compensation process. Second, the process of vertical adjustment is assumed to be rapid relative to plate-tectonic dynamic processes, so that isostatic equilibrium prevails, at least to first order, at most times. Evidence justifying the first assumption is steadily accumulating (see, for example, Lewis and Dorman, 1970, and Dorman and Lewis, 1972), and vertical crustal movements from crustal unloading and loading apparently take place on a time scales of about 10,000 yr (for example, Crough, 1977), justifying the second assumption.

Although the distribution of measurements of crustal thickness on a global scale is very irregular, at least some information is available in most areas (Soller and others, 1981), and it is reasonable to specify Moho depth as an approximately known function of position on the Earth's surface. This assumption requires abandonment of the elegant concept that Moho depth is a function of topographic altitude alone and thus abandonment of the basis for Airy's hypothesis of isostasy. The plate-tectonic isostatic reduction is developed on the hypothesis that there is equal mass in every column above a certain level  $R$ , which is analagous to the depth of compensation in the Pratt isostatic hypothesis but lies at much greater depths in the mantle. In addition to  $R$ , the necessary parameters are  $\rho_c$ , the mean crustal density;  $\rho_m$ , the density of the mantle at the Moho;  $M_0$ , the thickness of the crust at sea level; and  $\rho_{m_0}$ , the mean density of the mantle from the depth  $R$  to  $M_0$  beneath the sealevel column. The Moho depth as a function of position is denoted  $M(\vec{r})$ , where  $\vec{r}$  is the position vector on the Earth's surface. Altitude is denoted by  $h$ , but  $h$  is negative and measures ocean depth if the column in question is in the sea. The theory can easily be generalized to the case of two mean crustal densities, one for continental crust and one for oceanic, but this has not been done here. Figure 8 depicts five typical columns, one for sea-level terrain (center column), two for elevated terrain (left columns), and two for ocean bottoms (right columns). The upland and oceanic columns both include one column with  $M(\vec{r}) > M_0$  and one with  $M(\vec{r}) < M_0$ . For the above-sea-level columns, mass balance between them and the sea-level column requires

$$\rho_c M_0 + \rho_{m_0} (R - M_0) = \rho_c h + \rho_m(\vec{r}) (R - M(\vec{r})) + \rho_c M(\vec{r})$$



and therefore the mantle mean density is

$$\rho_m(\vec{r}) = [\rho_c(M_0 - h - M(\vec{r})) + \rho_{m_0}(R - M_0)] / (R - M(\vec{r}))$$

The isostatic correction will thus be a vertical prism extending from R to the moho with density contrast

$$\Delta\rho_P = \rho_m(\vec{r}) - \rho_{m_0}$$

and a prism extending from the moho depth  $M(\vec{r})$  to  $M_0$  with density contrast

$$\Delta\rho_A = \pm\rho_u - \rho_c$$

where the contrast is positive if  $M(\vec{r})$  is less than  $M_0$  and negative if  $M(\vec{r})$  is greater than  $M_0$ . For columns in ocean areas (fig. 8) mass balance with the sea-level column requires (noting that h is negative and  $\rho_w$  is the density of seawater)

$$\rho_c M_0 + \rho_{m_0}(R - M_0) = -h\rho_w + \rho_c(M(\vec{r}) + h) + \rho_m(\vec{r})(R - M(\vec{r}))$$

and thus the mantle mean density becomes

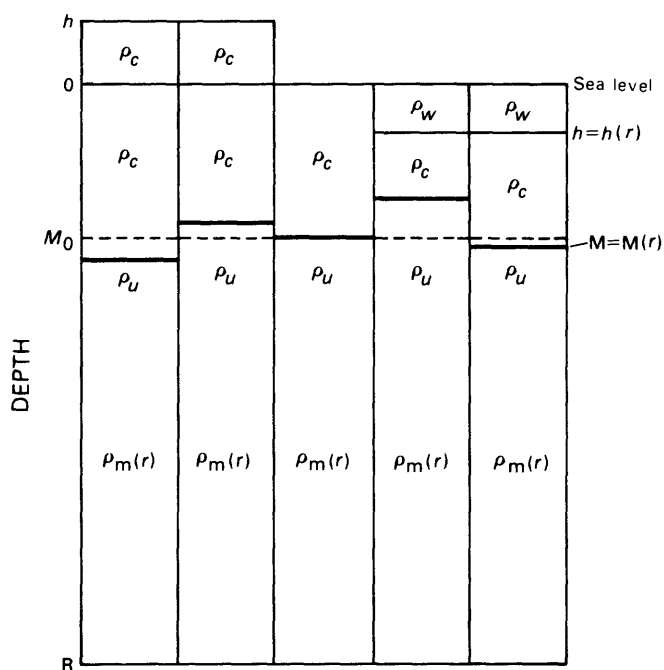
$$\rho_m(\vec{r}) = [\rho_c(M_0 - M(\vec{r}) - h) + \rho_w h + \rho_{m_0}(R - M_0)] / (R - M(\vec{r}))$$

and the correction is exactly as before. The isostatic correction thus defined can be viewed as a combination of the Pratt and Airy hypotheses: an Airy-like part accounts for the deviation of Moho depth from that under sea-level terrain, and a Pratt-like part accomplishes the compensation by density variations in the mantle. From the plate-tectonic viewpoint, the density variations in the mantle probably are mainly thermal in origin.

To apply the theory, the corrections were calculated using compartments defined by the 3'x3' digitized topography. Corrections were calculated using appropriate combinations of the line-of-mass approximation for a vertical prism, in which the prism is represented by a line of mass down its center. The gravity effect ( $\Delta g$ ) is given by (Heiskanen and Vening Meinesz, 1958, p. 182)

$$\Delta g = G\Delta\rho A[(r^2 + (z_{\text{top}} + e)^2)^{-\frac{1}{2}} - (r^2 + (z_{\text{bot}} + e)^2)^{-\frac{1}{2}}]$$

where G is the universal gravitational constant,  $\Delta\rho$  is the density contrast, A is the cross-sectional area of the prism, r is the horizontal distance from the station to the compartment,  $z_{\text{top}}$  is the depth to the top of the prism (from sealevel),  $z_{\text{bot}}$



is the depth to the bottom, and  $e$  is the station altitude. Two prism gravity effects are computed for each compartment, one for the Pratt-like part and one for the Airy-like part, and the total correction for each compartment is the algebraic sum of the two. Corrections were computed out to a radius about each station of 166.7 km. For the outer zone combined correction, the empirical correction factors and the maps of Karki and others (1961), described above in the section on the Airy-Heiskanen reduction, were used. The modifications necessary to compute this correction according to the plate-tectonic model are in progress and were not used for the present calculations. However, the outer zone combined correction varies gradually, because the topographic and isostatic effects nearly cancel each other, and it should not be greatly changed by any future corrections. It should be noted that curvature effects are not included in the present theory and thus the limiting radius of 166.7 km, beyond which curvature is important (Heiskanen and Moritz, 1967, p. 148), was used. Further, convergence of the prisms at depth has been ignored; a simple calculation shows that the error from this source is less than 4 percent for the correction within 166.7 km of the station. The error in the outer zone corrections is probably of this order or greater, so the simple theory is justified in this approximation.

A simple model consisting of a flat plateau of radius 166.7 km was used to compare corrections from this model with the corresponding Airy-Heiskanen correction and to investigate the effects of various parameter combinations. The correction for both systems is easily written down using the formula for the gravity effect of a point on the axis of a right circular cylinder. The correction was evaluated as a function of plateau elevation, using the Moho depth defined by the Saudi Arabian seismic refraction profile (Healy and others, 1982; see also fig. 7), and the results for several sets of parameters are presented in figure 9. Examination of this figure shows that the total correction range between high altitudes and low is much less than the corresponding Airy-Heiskanen correction, reflecting the deeper source of the compensating mass (Pratt-like part). The correction in the plate-tectonic system is not necessarily zero at zero elevation, as in the Airy-Heiskanen system, but depends upon the sea-level Moho depth and the Moho depth function; that is, the sea-level reference column need not correspond to the measured Moho depth for sea-level terrain in the Moho depth function. This is a useful property for the western coast of Saudi Arabia which overlies oceanic crust that is only about 17 km thick. By using a standard continental crust sea-level column (thickness about 33.7 km; Worzel, 1974) a comparison can be made.

In order to estimate the parameters used to reduce the data presented here, a parameter study was carried out on a subset of the data. A profile of topographic altitude and complete Bouguer gravity anomaly along the trace of the seismic refraction line was used as data, and a nonlinear least-squares parameter determination (Marquardt, 1963) was applied to the plateau model described above. The algorithm was modified to restart if any of the five parameters exceeded prescribed bounding values. The outer-zone part of the correction (beyond 166.7 km radius) was approximated as a constant 14 mGal, which is a mean value along the profile from the maps of Karki and others (1961) modified by the correction factors described above. The profile data and Moho depth function were projected normal to the Red Sea deep-water axis. Four Moho depth functions were used from the eleven available: those of Milkereit and Fluh, Prodehl, Zeng and others, and Mooney (Mooney and Prodehl, 1984).

These four were chosen because they were derived from seismic interpretations which considered to some degree synthetic seismograms and amplitude data and were judged to be the most thorough of the interpretations. The Moho depth function of Mooney is in fact a good approximation to the average of all estimates for these data. For several cases and criteria for termination of the fit, convergence could not be obtained; however, a convergent fit was obtained with the Moho depth function of Mooney, which yielded the best overall fit as measured by the chi-square criterion of all combinations attempted. Accordingly, the parameters from this fit were adopted as optimum for the gravity data of this survey. These are: mean crustal density,  $2.913 \text{ g cm}^{-3}$ ; mean mantle density of the sea-level column,  $3.446$

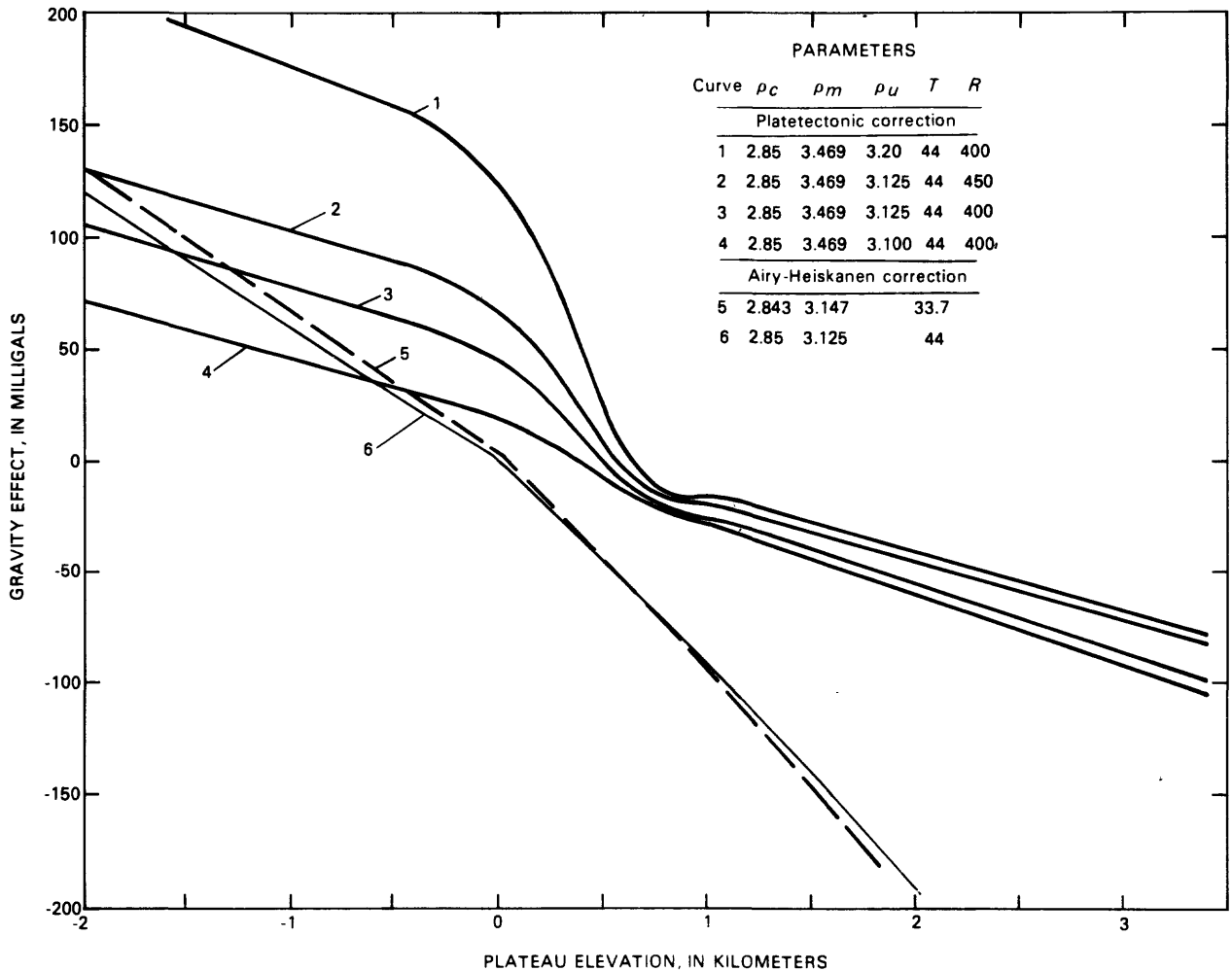


Figure 9.--Comparison of the Airy-Heiskanen and plate tectonic isostatic gravity corrections for circular plateaus of radius 166.7 km as a function of plateau altitude. Moho depth function for the plate tectonic correction is the seismically determined function of figure 7.

$\text{g cm}^{-3}$ ; mean sub-Moho density,  $3.110 \text{ g cm}^{-3}$ ; depth of equal mass, 666 km; and thickness of the sea-level column, 17.3 km. It is notable that the sea-level Moho depth is very near the seismically determined depth, and the parameters in general have very reasonable values. The depth of equal mass is also suspiciously near the 671-km density discontinuity determined from earthquake data (Hart and others, 1976), but the mantle mean density is somewhat low compared to  $3.645 \text{ g cm}^{-3}$  computed for the appropriate interval from Hart and others (1976) or  $3.500 \text{ g cm}^{-3}$  from Kaula (1980). However, inasmuch as the value of Kaula is for average oceanic mantle and that of Hart and others is for the whole earth, the value of  $3.446 \text{ g cm}^{-3}$  for mantle beneath the young, active Red Sea spreading system is quite reasonable.

The results of this computational exercise are shown in figure 10. It is immediately obvious from the data and the model-fit profiles that the regional tilting present in the CBGA map will also be present, although somewhat reduced, in the IGA map. This is a matter of some significance, for it yields insight into the isostatic model. In the isostatic model, only the relative topographic relief has been accounted for, and if, for example, the entire area is underlain by asthenosphere whose density is less than the global average, this will be manifested by long-wavelength anomalies in the gravity field which will not be removed by the isostatic model. The mean value of the IGA will thus differ from zero by an amount corresponding to the degree that the long-wavelength portion of the gravity field is anomalous in a global sense when compared to the gravity field from non-anomalous areas reduced with the same parameter set. In the present case, evidence will be presented below which implies that the northeastward-increasing regional gradient is part of a broad, asymmetric gravity low, which is centered on the Red Sea and is the gravity expression of hot, less dense upwelling asthenosphere beneath the Red Sea flowing northeastward beneath the Arabian Plate. The model thus succeeds in separating the gravity anomaly field into two components, an isostatic loading part and a somewhat tectonic part. Of course the short-wavelength gravity anomalies of the IGA represent the crustal departures from the mean density used in the reduction. The mean mantle density curve (fig. 10B) is manifestly logical for the asthenosphere convective system described here. It should be noted that the inferred density variations shown in figure 10B only reflect the portion of the gravity field that is affected by topographic loading variation. For these data, an additional northeastward-increasing density component would be necessary to account for the remaining regional gravity gradient. Thus, the density variation of figure 10B is only a lower bound on the true asthenosphere mean density function.

The isostatic reduction system described above was implemented in a computer program that calculated the corrections using the 3'x3' terrain model to 166.7 km radius about each station. The Moho depth function used was that of Mooney and others (1983), evaluated as a function of distance from the Red Sea deep-water axis. The outer zone combined correction was estimated from the empirical factors and maps of Karki and others (1961) described above. The IGA at each station, calculated by subtraction of the isostatic gravity correction from the CBGA, was then used to produce a contour map of the IGA, shown in plate 1B at a scale of 1:2,000,000.

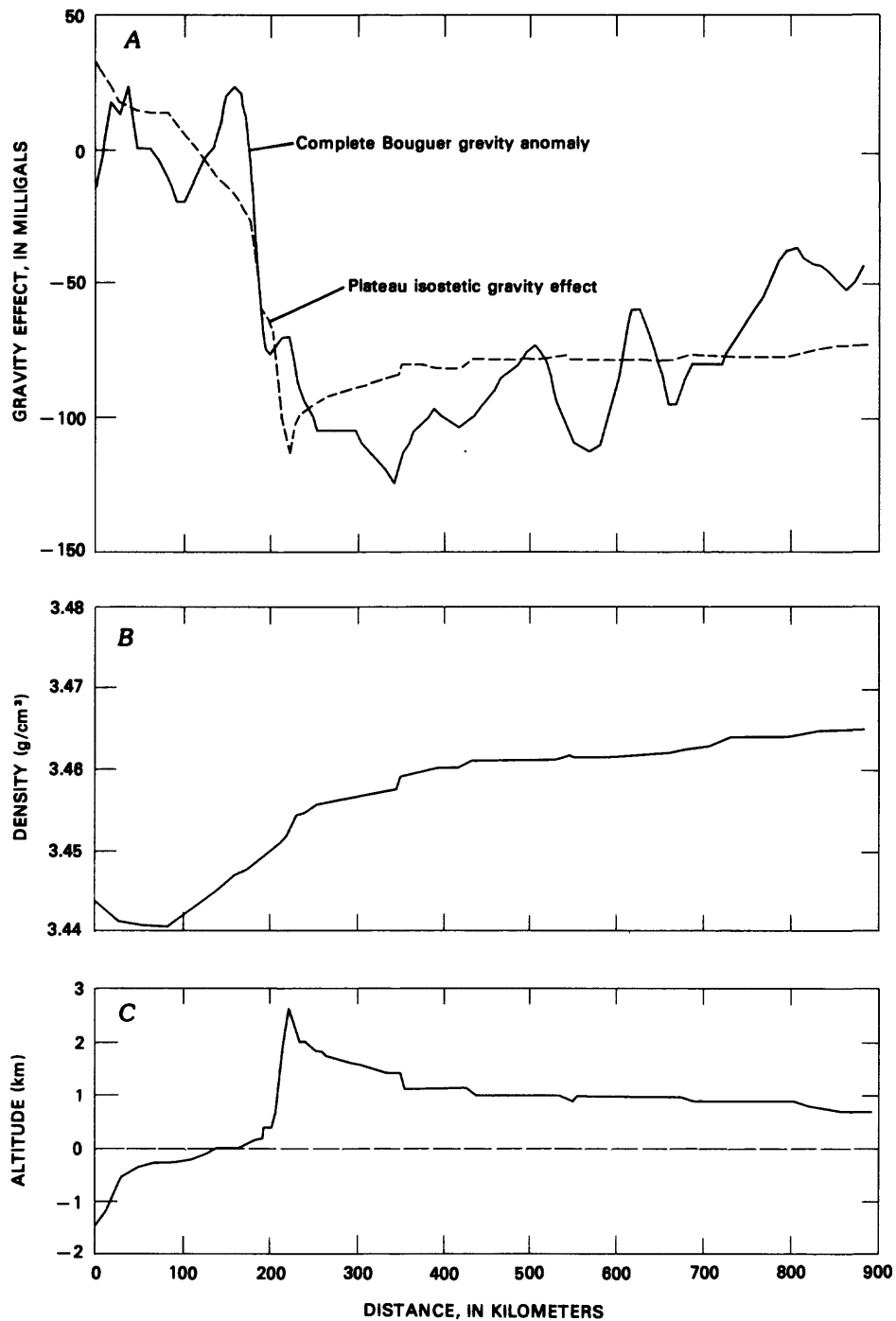


Figure 10.--Results of the nonlinear least-squares parameter determinations for the plate-tectonic isostatic model. A, Complete Bouguer gravity anomaly profile data and the resulting isostatic gravity effect determined from the seismic Moho depth function of figure 7, the topography shown in C, and the optimum parameters from the plate-tectonic isostatic model with the plateau approximation. B, The resulting mean mantle density, which decreases toward the Red Sea axis. C, Topographic profile.

Three histograms show the distribution of the IGA in figure 11: figure 11A is the distribution for stations less than 200 km from the Red Sea deep-water axis, 11B is for stations more than 200 km from the same axis, and 11C includes all stations. The first distribution represents very nearly all stations on the coastal plain and offshore islands and thus samples the Cenozoic oceanic crust of the Red Sea, and the second histogram represents the IGA distribution for stations on the Precambrian Shield. For the total dataset (fig. 11C), mean IGA is 11.28 mGal with a standard deviation of 28 mGal, and a maximum and minimum IGA of 93.91 and -65.76 mGal, respectively. In interpreting this histogram, the spatial distribution of stations must be considered. The shape of the survey area (fig. 1) and the concentration of 215 stations in the Jiddah area at only 2 km nominal spacing cause an overrepresentation of the positive continental margin anomaly and thus create a bias in the histogram toward positive IGA values. This bias explains the discrepancy between the observed mean and the predicted zero mean from the least-squares parameter study on the profile. Indeed, figure 11B shows the IGA for stations more than 200 km from the Red Sea axis has a mean of only 3.88 mGal (standard deviation of 25.42, maximum of 68.33, and minimum of -65.76 mGal), and histograms for stations far enough northeast to eliminate the coastal bias (not shown here) have a mean very near zero. The IGA distribution on the shield (fig. 11B) is nearly Gaussian, suggesting that the parameter set used is close to optimum.

The distribution for stations less than 200 km from the Red Sea axis (fig. 11A) is strongly non-Gaussian with a peak at about 35 mGal. The negative IGA part of the histogram corresponds to stations over the seaward-thickening wedge of Cenozoic sediments of the Red Sea shelf, which contain large amounts of low-density evaporites, whereas the positive peak shows that the crustal density used for the Red Sea crust is larger than the mean crustal density used in the reduction and, thus, that the oceanic crust, in areas where the Cenozoic sediments are thin or lacking, is more dense than the crust of the shield. In general, the map of plate 1B and the statistical results of figure 11 conform to the requirements and predictions discussed above and substantiate the least-squares procedure used to select the reduction parameters. The great advantage of the IGA map of plate 1B is that it is constrained by the refraction model and by an average structural model from which the residual IGA values represent deviations, and thus the map can be interpreted in a straightforward manner.

Plate 1B has several interesting features. First, the removal of the subcrustal part of the continental margin anomaly due to the abrupt change in Moho depth has significantly increased the resolution of crustal gravity anomalies in the shield rocks within approximately 150 km of the western edge of the Shield and has effectively isolated the crustal part of the continental margin gravity anomaly on the Cenozoic rocks. Two points should be noted: First, the positive IGA in the immediate

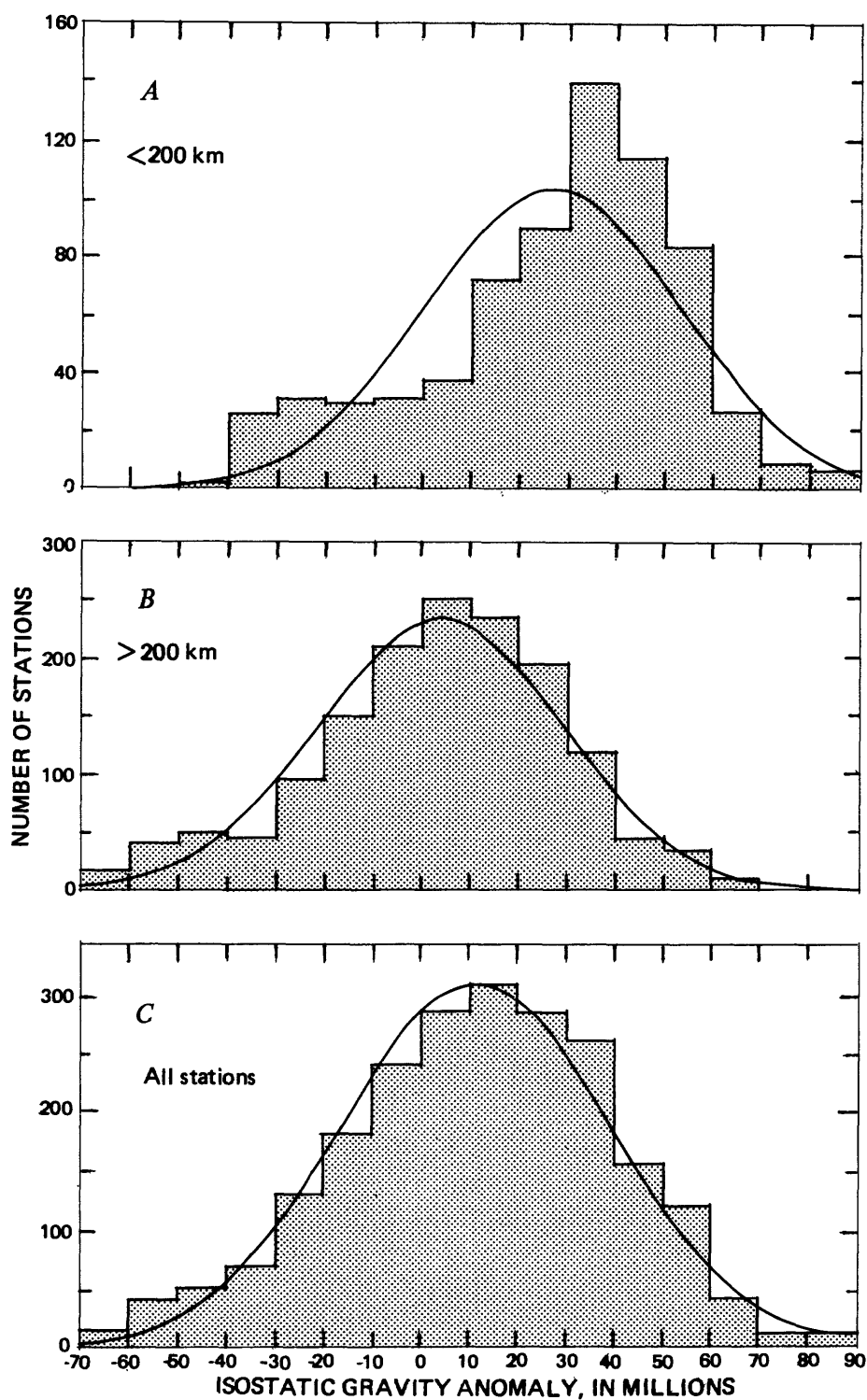


Figure 11.--Distributions of isostatic gravity anomalies after application of the plate-tectonic isostatic correction for stations less than 200 km from the Red Sea deep-water axis (A), for stations more than 200 km from the axis (B), and for all 2196 stations (C). The distance of 200 km from the deep-water axis corresponds approximately to the boundary between Red Sea oceanic crust and the rocks of the Precambrian Shield. Superimposed curves on all histograms are the Gaussian (normal) curves determined from each dataset.



area of Jiddah may not be as large in amplitude as shown on the map, because this area is a transform fault zone in the Red Sea. Therefore, the Moho depth function used in the reduction may not be correct on account of offsets which change the distance from the deep-water axis to a particular Moho depth. Second, the northeastward-increasing regional gravity anomaly gradient is quite apparent on the shield rocks in the central and northeastern portions of the map.

Plate 1D is a reduced version of plate 1B showing the major geologic provinces and some of the tectonic elements of the area. Over the shield, the nomenclature follows that of Stoesser and others (1984). The northeastern edge of the continental margin anomaly is defined by the approximate center of the steep gravity gradient and correlates well with the southwestern edge of Precambrian outcrop. The anomaly has an average amplitude of about 35 mGal, and areas of more positive anomaly correlate with areas of exposed Tertiary layered gabbro in the south (Gettings, 1977) and inferred gabbroic intrusives at shallow levels farther north (Gettings and Andreasen, *in press*). The anomaly extends well offshore and is inferred to be due to oceanic crust beneath a southwestward-thickening mantle of Cenozoic sediments (Gettings, 1977; Gettings and Andreasen, *in press*). To the southwest, an offshore gravity low, termed the Red Sea shelf gravity low, parallels the continental margin anomaly. The gravity low is in part due to thickening of the evaporite sequence in the Cenozoic sedimentary section (Gillmann, 1968; Gettings, 1977), probably from salt flowage, and is in part an artifact of the gravity reduction used. The water compartments of the topographic grid were calculated using a density of  $1.03 \text{ g cm}^{-3}$  during terrain correction instead of following the Bouguer correction procedure, which would have replaced the water with rock of the density used in the Bouguer correction. Thus the water portion of the crust must be included in model calculations at a density contrast of  $0.64 \text{ g cm}^{-3}$ , and part of the gravity low observed in the map is due to the water in the Red Sea. In areas where the continental margin anomaly is continuous and nearly linear, the gradient separating it from the Red Sea shelf gravity low (defined by the zero IGA contour) is less steep than the gradient over the continental margin. In areas of offset of the continental margin anomaly, however, the boundary gradient on the southwest is as great or greater than the northeast boundary gradient. These areas may be areas of greater average water depth nearer to shore, thus explaining part of the steeper gradient, but they are also zones of probable transform faulting, so the steepened gradient also has a component due to the offsetting structure.

On the shield, local gravity maxima generally correlate with layered or intrusive rocks of dioritic or more mafic composition, and minima are mostly associated with granitic intrusions. The Nabatah mobile belt (pl. 1D; Stoesser and others, 1984) is expressed as a large area of negative IGA. It includes the Wadi

Tarib batholith, a complex of diorite to granite plutons that is marked by the deepest gravity lows in the study area. The mobile belt is an area of metamorphic rocks (up to amphibolite grade) and plutons, and it is interpreted by Stoesser and others (1984) to be the collision zone where an allochthonous block from the east collided with the Hijaz-Asir province, made up of basaltic to andesitic layered rocks and associated intrusives. As such, it is not surprising that the belt has a strong gravity expression indicating a lower mean crustal density than the Hijaz-Asir, which has a more mafic composition and oceanic crustal affinities. The An Nimas batholith (pl. 1D), another complex of mainly dioritic plutons, is expressed only weakly in the gravity field, as its density contrast with surrounding rocks is small.

The discontinuous, ridge-like gravity high separating the Nabitah mobile belt from the Hijaz-Asir province is a fault zone and a belt of greenstone and higher metamorphic grade mafic rocks including many mafic plutons. The Nabitah fault zone in the axis of the mobile belt contains many mafic and ultramafic intrusive rocks along its length, resulting in a discontinuous string of gravity maxima.

The Afif province (fig. 1D; Stoesser and others, 1984) is composed of layered rocks of intermediate composition and associated intrusive rocks and is more continental in character than the Hijaz-Asir. If the regional gradient of the IGA map is considered, the Afif province appears to be an area of lower IGA than the Hijaz-Asir, and the Afif contains several large areas of gravity minima related to granitic gneisses. Several large, northwest-trending fault zones occur in this area and bound it on the southwest. These zones are late stage zones of left-lateral strike-slip faulting which extend across the Arabian Shield and are called the Najd fault zones. The two major Najd fault zones in the survey area (fig. 1D) are zones of extensive mafic and ultramafic intrusive rocks and produce large linear gravity maxima.

In the extreme northeast, an area of relative IGA maxima is bounded by a steep gradient to the southwest. This area corresponds to the Ar Rayn allochthonous block (pl. 1D; see, for example, Stoesser and others, 1984), and the bounding gravity trough to the southwest is thought to be another mobile belt representing the collision zone between the Ar Rayn and Afif blocks (Stoesser and others, 1984). The boundary of the Ar Rayn block corresponds to a seismic lateral-velocity discontinuity that penetrates the crust (Healy and others, 1982), thus lending credence to the mobile belt interpretation. The Nabitah mobile belt is also marked by a lateral-velocity discontinuity (Healy and others, 1982) that extends through the crust, but because the trace of the refraction line is along the boundary between the mobile belt and the Hijaz-Asir province and never crosses the mobile belt, the discontinuity is poorly defined.

Trends in the IGA map can be defined from gravity anomaly gradients, anomaly offsets, and terminations or changes in amplitude of anomalies. Because the trend lines are mainly defined by local anomalies, the IGA trend map is not substantially different from the simple Bouguer gravity anomaly trend map (Gettings, 1983, pl. 4). The trend sets present are north, east, northeast, and northwest in azimuth. As in the case of the aeromagnetic trends (Blank, 1982; Gettings and others, 1983), the north and east gravity anomaly trends appear to be the oldest, as they are systematically interrupted and offset by the northeast and northwest sets. Although the trends in total represent a confusing array of many different events and ages, their study nonetheless yields important ideas about controlling structures during igneous and structural episodes.

## INTERPRETATION OF THE ISOSTATIC GRAVITY ANOMALY MAP

### Very long wavelength regional features

The first step in the interpretation of plate 1B was to remove the northeastward-increasing regional gradient, which tilts the gravity anomaly field toward positive values to the northeast and is especially noticeable in the northeastern half of the map. Figure 12 shows two profiles from plate 1B which illustrate the regional gradient. As can be seen from the profiles, the gradient extends almost across the whole of the shield, showing an increase of about  $0.1 \text{ mGal km}^{-1}$  to the northeast.

As discussed above, the regional gradient is only partly removed by the isostatic correction and thus is well represented in the Bouguer gravity anomaly field. In order to better delineate the gradient, therefore, three long Bouguer gravity anomaly profiles were constructed along azimuth 056 degrees (approximately normal to the Red Sea deep-water axis), spaced about 450 km apart. The profiles extend from inland Sudan and Ethiopia, across the Red Sea, Saudi Arabia, the Arabian Gulf, and Iran, and into Afghanistan. The northern profile passes north of Yanbu al Bahr, the central near Jiddah, and the southern near Ad Darb. The profiles were assembled from gravity data published in Brown and others (1980), Isaev and Mitwalli (1974), Makris and others (1975), Qureshi (1971), Yousif (1982), Plaumann (1975), Sayyab and Valek (1968), U.S. Air Force (1971), Flanigan and Akhrass (unpub. data, 1972) Ghalayini (1958), and unpublished data of the U.S. Geological Survey. Bouguer gravity anomalies were used over the Red Sea rather than free-air gravity anomalies, and all values are based on  $2.67 \text{ g cm}^{-3}$  Bouguer reduction density. The profiles are shown in figure 13, aligned on the Red Sea deep-water axis.

Figure 13 reveals a characteristic signature or anomaly shape for the Red Sea-Arabian Plate system, consisting of an anomaly maximum over the Red Sea of 70 mGal or more, local minima over the shelves, a maximum just west of the shield, a minimum over

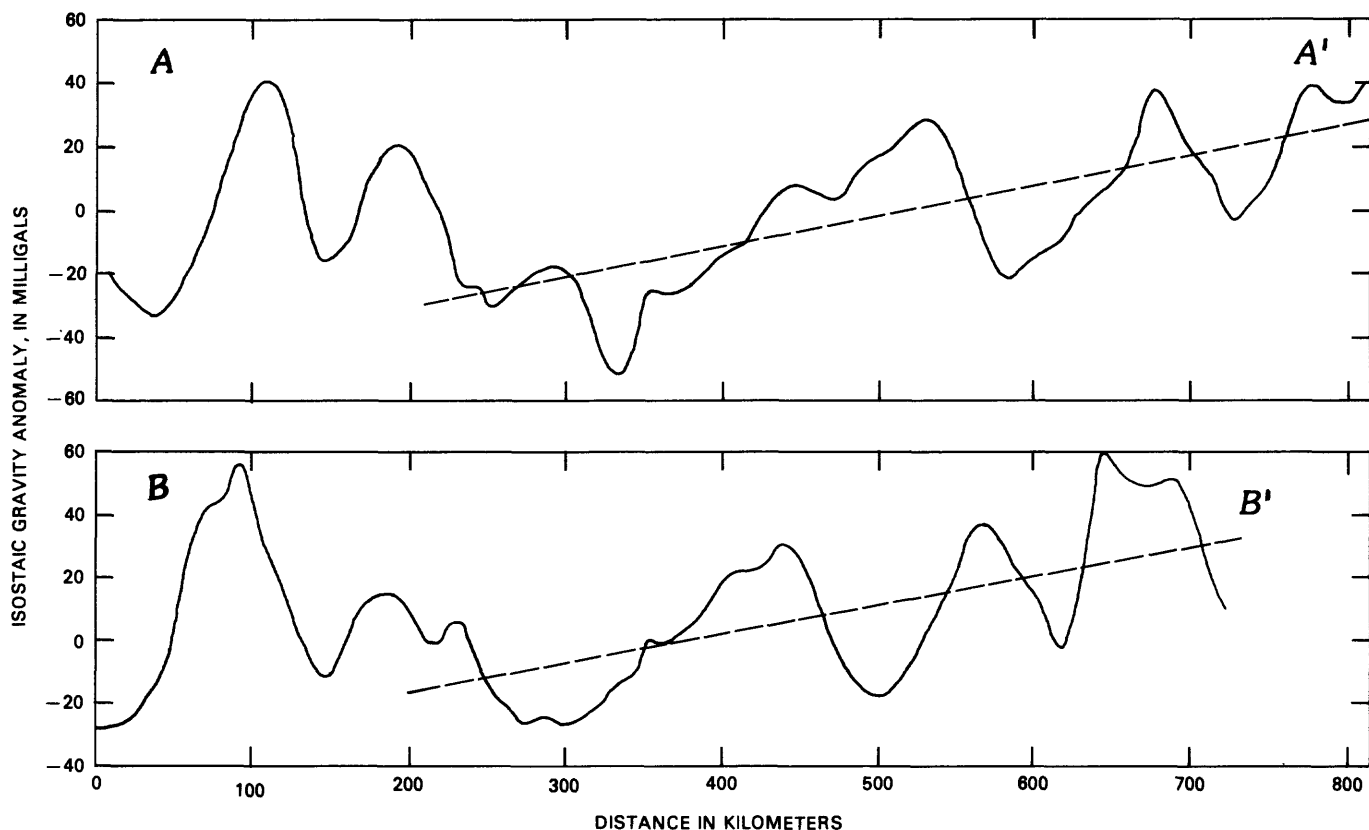


Figure 12.--Isostatic gravity anomaly profiles A-A' and B-B' from plate 1B. Dashed lines show the estimated regional gravity effect from the mantle across the shield.

the shield followed by a northeastward-increasing gradient, a maximum over the gulf, and a large minimum over Iran. The width of the pattern increases southward in accordance with plate rotation about a pole in the Mediterranean sea, as inferred from paleomagnetic work and coastline fits. The relative maximum of the Bouguer gravity anomaly over the Arabian Gulf is not fully understood but may be related to flexure and subsequent intrusion associated with early subduction of the Arabian Plate beneath Iran. High geothermal gradients occur in deep petroleum boreholes in this area (Gettings, <sup>unpub</sup> ~~data~~, 1981), suggesting that intrusives are present. The gravity anomaly gradient tends to flatten at about 1200 km from the Red Sea axis in the two southern profiles (figs. 13B and C), suggesting that the source has come to a constant density. The gradient itself is well developed over an approximately 500-km-wide zone in the southern profiles, southwest of which the anomaly pattern passes through a minimum and increases abruptly to positive values at the continental margin.

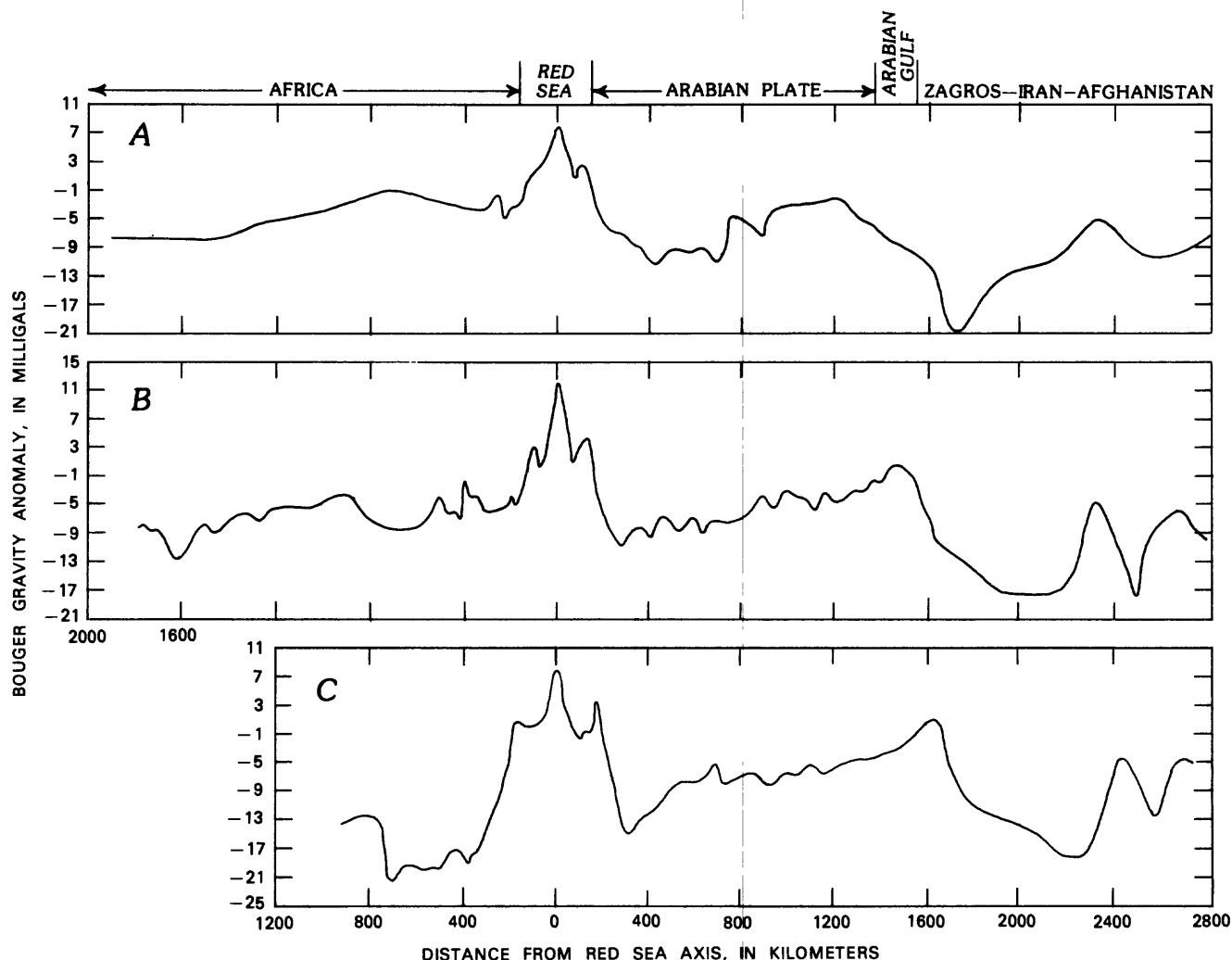


Figure 13.--Bouguer gravity anomaly profiles from inland Africa to Afghanistan at azimuth 056 degrees (normal to the southern Red Sea deep-water axis. Profiles have been aligned on the deep-water axis: Profile A passes 70 km north of Yanbu al Bahr, profile B passes through Jiddah, and profile C passes through Ad Darb. (See fig. 1 for place names.) Note the characteristic gravity signature of the Red Sea-Arabian Plate system and the systematic widening to the south.

The regional pattern has a very large horizontal extent and cannot be completely accounted for either isostatically or from crustal sources detected by seismic refraction (Gettings and others, 1983). Therefore, it is judged to originate from lateral density contrasts in the deep lithosphere, the asthenosphere, or both. In any case, the gravity low near the continental margin is assumed to result from hot, lower density material which gives

way to cooler, higher density material northeastward, thus creating the observed gravity anomaly gradient. Where the gradient flattens off, the material has reached an equilibrium temperature and density. The observed uplift of the Arabian Plate provides an important constraint on this system and is the principal argument that the gravity anomaly source is largely in the asthenosphere.

An alternative model, proposed by Brown and Girdler (1980) attributes the regional anomaly pattern to changes in depth to the lithosphere-asthenosphere boundary. A negative density contrast of the upper asthenosphere material relative to the lower lithosphere is assumed, and the anomaly is fitted by varying the shape of the interface. Since at present there is no reliable control on the thickness of the lithosphere in the study area, the regional gravity anomaly has been interpreted here in terms of density variations rather than depth to the lithosphere-asthenosphere boundary.

The source of the uplift and, thus, of the regional gravity anomaly was investigated by assuming that the uplift was due to differential heating of the lithosphere as a function of distance from the Red Sea. The assumed mechanism for this was heating of the base of the lithosphere by the flow of hot asthenosphere away from the Red Sea axis; thus, a given point on the base of the lithosphere, which has a given initial temperature, is heated over a specified period of time to a higher temperature (corresponding to the passage of a boundary layer of intermediate temperatures in the asthenosphere) and then remains at the higher temperature. Assuming a constant rate of asthenosphere flow, the transient solution to the temperature solution will mirror the uplift of the plate. A one-dimensional solution was used and is justified by the thermal time constant for the lithosphere, which is of the order of 150 m.y. as compared to minimum asthenosphere flow rates of about 10 km per m.y. A two-dimensional solution would yield longer times for the heating of the lithosphere because of the greater volume of lithosphere into which heat would flow, ahead of the advancing heating front. Only conduction was considered, but a model including intrusion would only have a shortened time scale; the amount of total uplift would be unchanged, to first order.

The model is thus a horizontal slab of thickness  $l$ , thermal conductivity  $K$ , density  $\rho$ , specific heat  $c$ , and thermal diffusivity  $\kappa = K/\rho c$ . The surface temperature is maintained at  $T_0$ , and the basal temperature is

$$\begin{aligned}
 T_1(t) &= T_1 && \text{where } t \leq 0 \\
 &= T_1 + \left( \frac{T_1 + T_2}{2} \right) \left( 1 - \cos \frac{t}{t_1} \right) && \text{where } 0 < t \leq t_1 \\
 &= T_2 && \text{where } t > t_1
 \end{aligned}$$

so that the thermal perturbation passes any point during the time interval  $(0, t_1)$ . The slab is assumed to be at a steady state, with the initial conditions at  $t=0$ . This problem can be solved by straightforward integration of the time and space terms of the appropriate Fourier series (Carslaw and Jaeger, 1959, sections 3.4 and 3.5). The temperature solution is,

for  $0 < t \leq t_1$ :

$$T(x, t) = T_0 + \frac{(T_1 - T_0)}{l} x - \frac{\pi K (T_2 - T_1)}{l^2} \sum_{n=1}^{\infty} \frac{n(-1)^n}{\alpha(\alpha^2 t_1^2 + \pi^2)} \sin \frac{n\pi x}{l} \left\{ \alpha^2 t_1^2 \left( 1 - \cos \frac{\pi t}{t_1} \right) - \alpha \pi t_1 \sin \frac{\pi t}{t_1} + \pi^2 (1 - e^{-\alpha t}) \right\}$$

and for  $t > t_1$ :

$$T(x, t) = T_0 + \frac{(T_2 - T_0)}{l} x + \pi (T_2 - T_1) \sum_{n=1}^{\infty} \frac{(-1)^n}{n} \sin \frac{n\pi x}{l} \cdot \frac{e^{-\alpha t} (1 + e^{-\alpha t_1})}{\alpha^2 t_1^2 + \pi^2}$$

where  $\alpha \equiv \frac{\kappa n^2 \pi^2}{l^2}$  and  $x$  is depth below the slab surface. The surface heat flow is,

for  $0 < t < t_1$ :

$$q(0, t) = K \left\{ \frac{T_1 - T_0}{l} - \frac{T_2 - T_1}{l} \sum_{n=1}^{\infty} \frac{(-1)^n}{\alpha^2 t_1^2 + \pi^2} \alpha^2 t_1^2 \left( 1 - \cos \frac{\pi t}{t_1} \right) - \alpha \pi t_1 \sin \frac{\pi t}{t_1} + \pi^2 (1 - e^{-\alpha t}) \right\}$$

and for  $t \geq t_1$ :

$$q(0, t) = K \left\{ \frac{T_2 - T_0}{l} + \pi^2 \frac{(T_2 - T_1)}{l} \sum_{n=1}^{\infty} \frac{(-1)^n e^{-\alpha t} (1 + e^{-\alpha t_1})}{\alpha^2 t_1^2 + \pi^2} \right\}$$

The uplift is obtained by integrating the difference of the temperature from the initial steady-state temperature across the thickness of the lithosphere, assuming a constant average thermal expansivity  $\beta_T$ .

For  $0 < t < t_1$ :

$$h(t) = \beta_T \frac{\kappa (T_2 - T_1)}{l} \sum_{n=1}^{\infty} \frac{(1 - (-1)^n) [\alpha^2 t_1^2 (1 - \cos \frac{\pi t}{t_1}) - \alpha \pi t_1 \sin \frac{\pi t}{t_1} + \pi^2 (1 - e^{-\alpha t})]}{\alpha(\alpha^2 t_1^2 + \pi^2)}$$

For  $t \geq t_1$ :

$$h(t) = \beta_T l (T_2 - T_1) \left\{ \frac{1}{2} - \sum_{n=1}^{\infty} \frac{(1 - (-1)^n)}{n^2} \cdot \frac{e^{-\alpha t} (1 + e^{-\alpha t_1})}{\alpha^2 t_1^2 + \pi^2} \right\}$$

The asymptotic ( $t \rightarrow \infty$ ) values for the temperature, surface heat flow, and uplift are

$$T(x) \rightarrow T_0 + (T_2 - T_1)x/l$$

$$q(0) \rightarrow \kappa(T_2 - T_0)/l$$

$$h(t \rightarrow \infty) \rightarrow \beta_T l (T_2 - T_1)/2$$

In order to evaluate these results for the case in point, the parameters were estimated as follows. The thickness of the lithosphere has been taken to be 120 km based on the results of Rayleigh wave studies (Knopoff and Fouda, 1975) which define the top of the low-velocity zone at this mean depth. Estimates by Kaula (1980) were used for average conductivity ( $0.005 \text{ cal cm}^{-1} \text{ s}^{-1} \text{ }^\circ\text{C}^{-1}$ ), density ( $3.30 \text{ g cm}^{-3}$ ), specific heat ( $0.3 \text{ cal g}^{-1} \text{ }^\circ\text{C}^{-1}$ ), diffusivity ( $0.005 \text{ cm}^2 \text{ s}^{-1}$ ), and average thermal expansivity ( $3.3 \times 10^{-5} \text{ K}^{-1}$ ). The temperature change at the base of the lithosphere was assumed to be from  $1200^\circ\text{C}$  to  $1500^\circ\text{C}$ , which covers the range of most estimates (Anderson, 1981), and was assumed to occur over 2 m.y. beneath any given point. These parameters represent fairly well defined average values and cannot be altered to any large extent. The short time for the temperature change at the base of the lithosphere clearly sets an upper bound on the rate of heating for this model. The resulting solution is shown in figure 14. The asymptotic values for the surface heat flow and uplift show that the heat flow will ultimately show a 25 percent increase and the maximum total uplift will be about 600 m, which is only about one-fifth of the total uplift documented in the southern part of the area (Gettings, 1982a). The shape of the uplift curve is also convex rather than concave as observed. The total density contrast below the Moho from the heating can be calculated and amounts to  $0.024 \text{ g cm}^{-3}$ , about half of what is needed to fit the observed regional anomaly (Gettings and others, 1983). The conclusion of this is that the uplift and regional gravity anomaly cannot be explained by heating of the lithosphere alone and that heating must have involved a substantial component in the asthenosphere as well. Similar results for uplift magnitude were obtained by Mareschal (1981). A separate line of evidence supporting the conclusion of a regional uplift originating in the asthenosphere is the observation that the entire system is uplifted some 2 km or more, as evidenced by the exposed oceanic crust at sea level at the continental margin; such crust normally resides well below sea level.

Since the time to obtain full uplift with the model above is of the order of 150 m.y., whereas the majority of the uplift is known on geologic grounds to have occurred in the last 30 m.y., to a first-order approximation, the uplift and density contrast due to heating in the lower lithosphere can be ignored as a



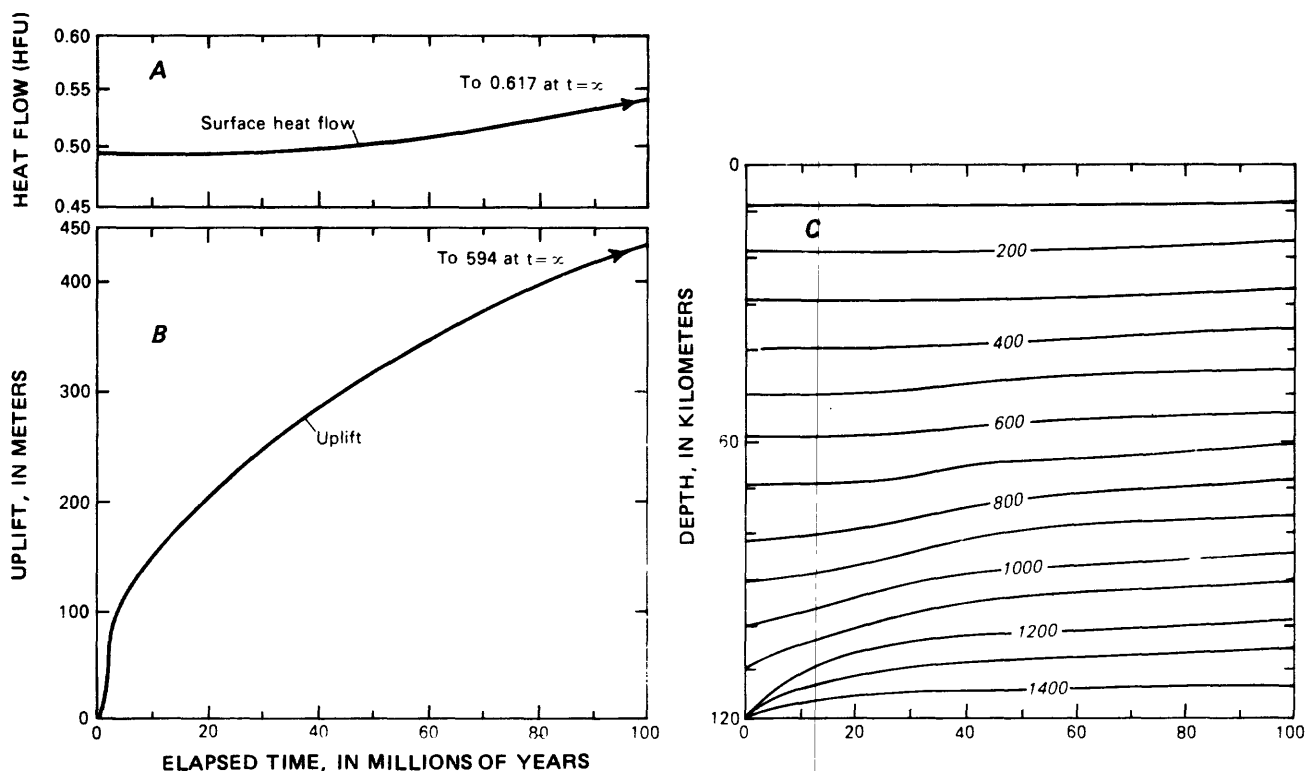


Figure 14.--Solutions of the lithosphere heating model for the selected parameters. A and B show the surface heat flow and uplift relative to the starting altitude as a function of time, and their asymptotic values. C shows the temperature distribution as a function of depth (vertical axis) and time (horizontal axis). The top surface of the slab is kept at 20° C and is heated to 1,500° C over a 2 -m.y. interval and remains at 1,500° C thereafter.

simplification. The regional gravity anomaly gradient was thus attributed entirely to the asthenosphere and modeled as a lateral density gradient in the depth range 120-666 km. The gravity effect for a two-dimensional horizontal rectangular prism with a linear horizontal density gradient can be obtained by direct integration, and a representative model composed of such a prism abutted against one of constant density is shown in figure 15.

Examination of this figure shows that the points of maximum curvature approximately define the zone of near-linear gradient. Modeling was effected by comparison of the shape of the gravity effect curve of figure 15 with the two southern profiles of figure 13 and varying the parameters until a fit was achieved. For figure 13, the gradient zone occurs over a horizontal distance of about 500 km with a gravity anomaly increase of about 50 mGal northeastward over this distance. The resulting best-fitting total density contrast was  $0.006 \text{ g cm}^{-3}$  over a 500-km distance (fig. 15). Although this contrast is small, it refers

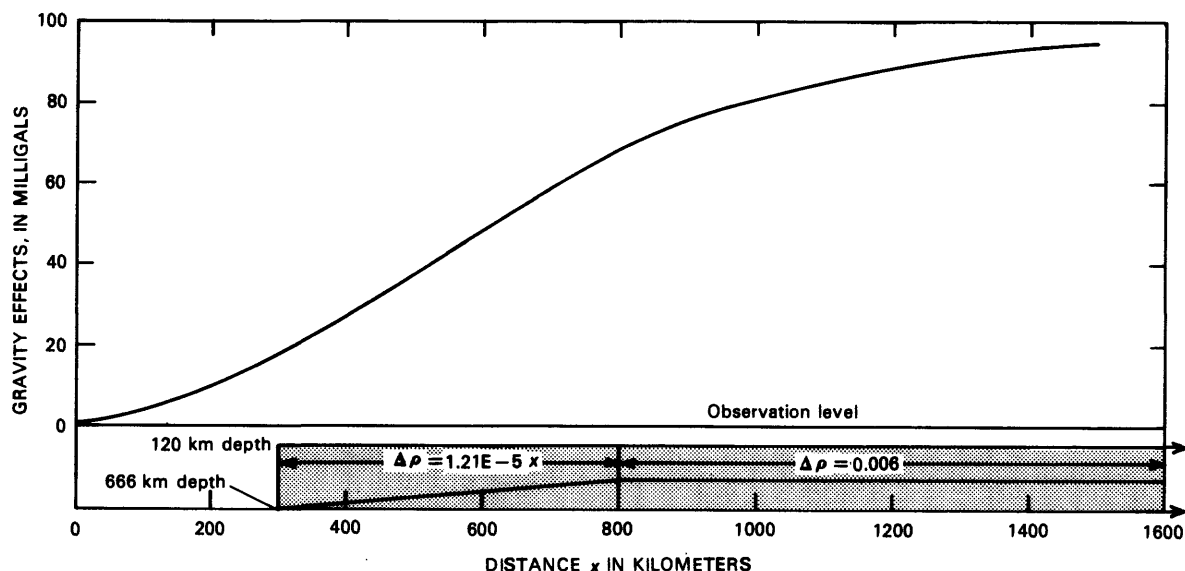


Figure 15.--Gravity effect of a horizontal rectangular prism that has a linear horizontal density contrast. Prism is abutted against another that has a constant density contrast of  $0.006 \text{ g cm}^{-3}$  extending to 10,000 km. Gravity effect is computed at the surface for the prisms with tops at 120 km depth and bases at 666 km depth--that is, for asthenosphere sources. Note that the points of maximum curvature define an interval of nearly linear gradient in the gravity effect.

to the average for a very large volume and thus has a significant expression in the anomalous gravity field. The density gradient is interpreted as due to the change in mean temperature of the asthenosphere above 666 km in the convecting system. For the parameters and results obtained in this study, the mean temperature change implied is about  $60^{\circ}\text{C}$ , which is well within the ranges implied by numerical modeling experiments (for example, McKenzie and others, 1974).

From the Bouguer gravity anomaly profiles of figure 15 and numerous assumptions, one can speculate on the minimum age of the asthenosphere flow. A steady flow is assumed; that is, the transient phase of asthenosphere flow was short. If this was not the case, a longer time would be required, so the result given here would be an estimate of minimum age. The velocity of the flow is assumed to be equal to the observed average rate of Red Sea sea-floor spreading and to have been constant through time. Finally, it is assumed that the opening of the Red Sea has been at a constant rate, presumably by distributed extension when supplies of basaltic magma were insufficient for creation of sea-floor crust at the axis of the Red Sea (Gettings, 1982a), and that the Red Sea has opened in the last 22 m.y. (Gettings and others, 1983). A mean spreading half-rate of about 9 km per m.y. is then obtained from the 190-km opening between the Red Sea axis

and the Arabian Shield, and the 1200-km distance between the Red Sea axis and the maximum curvature point on the southern Bouguer gravity anomaly profile (fig. 13) is estimated as the distance to cold asthenosphere. This implies an age of 140 Ma for the flow if this is the first cycle of the flow. The conduction time for a 120-km-thick lithosphere to appreciably respond to a thermal disturbance at its base is approximately 130 m.y. (Lachenbruch and Sass, 1977), and geologic data suggest that the majority of the uplift is Tertiary in age (Gettings, 1982a). It is thus possible that the flow is still in its first overturn, and that a long time is required for the initial rifting before the onset of sea-floor spreading.

In any case, the gravity effect determined by this model (fig. 15) was subtracted (as a function of distance from the Red Sea deep-water axis) from the IGA, and the resulting residual values used to produce a "detrended" IGA map, presented in plate 2A. This map represents the best estimate of the gravity anomaly field due to crustal sources that can be produced with the available constraining data. In the following sections, the sub-regional or province-like features are first modeled and then removed, leaving a final residual map which represents the upper crustal sources and bears maximum correlation with the surficial geology.

#### Sub-regional features and their interpretation

Plate 2B is a reduced version of plate 2A showing some inferred features of sub-regional extent. Correlations of the geologic provinces with the IGA field have been described above and are illustrated in plate 1D. Although hampered by the lack of a good generalized geologic map at 1:2,000,000 scale incorporating modern mapping, detailed comparison with available maps (U.S. Geological Survey and Arabian-American Oil Company, 1963; Brown, 1972; Johnson, 1982; see also map by W. R. Greenwood in Gettings, 1983) shows that the IGA field represented two different types of features: the average gravity anomaly field level (easily seen by coloring the map of pl. 2A at an interval of 30 mGal) is associated with areas of the size of the provinces of plate 1D, and deviations from the field level correlate with individual plutons and rock units.

The Ad Dawadimi and Nabitah mobile belts, as expressed in the IGA field (pl. 2A) were compared in detail with available 1:100,000- and 1:250,000-scale geologic mapping. The geologic relationships in general for the Nabitah mobile belt proved to be as summarized by Schmidt and others (1978) and as shown in figure 16. From west to east, the units crossed are metavolcanic layered rocks and subvolcanic or hypabyssal intrusives at the eastern edge of the Hijaz-Asir, then a belt of migmatites (granitic, granodioritic, and tonalitic gneisses), and finally a belt of dioritic and tonalitic hypabyssal intrusives overlain by

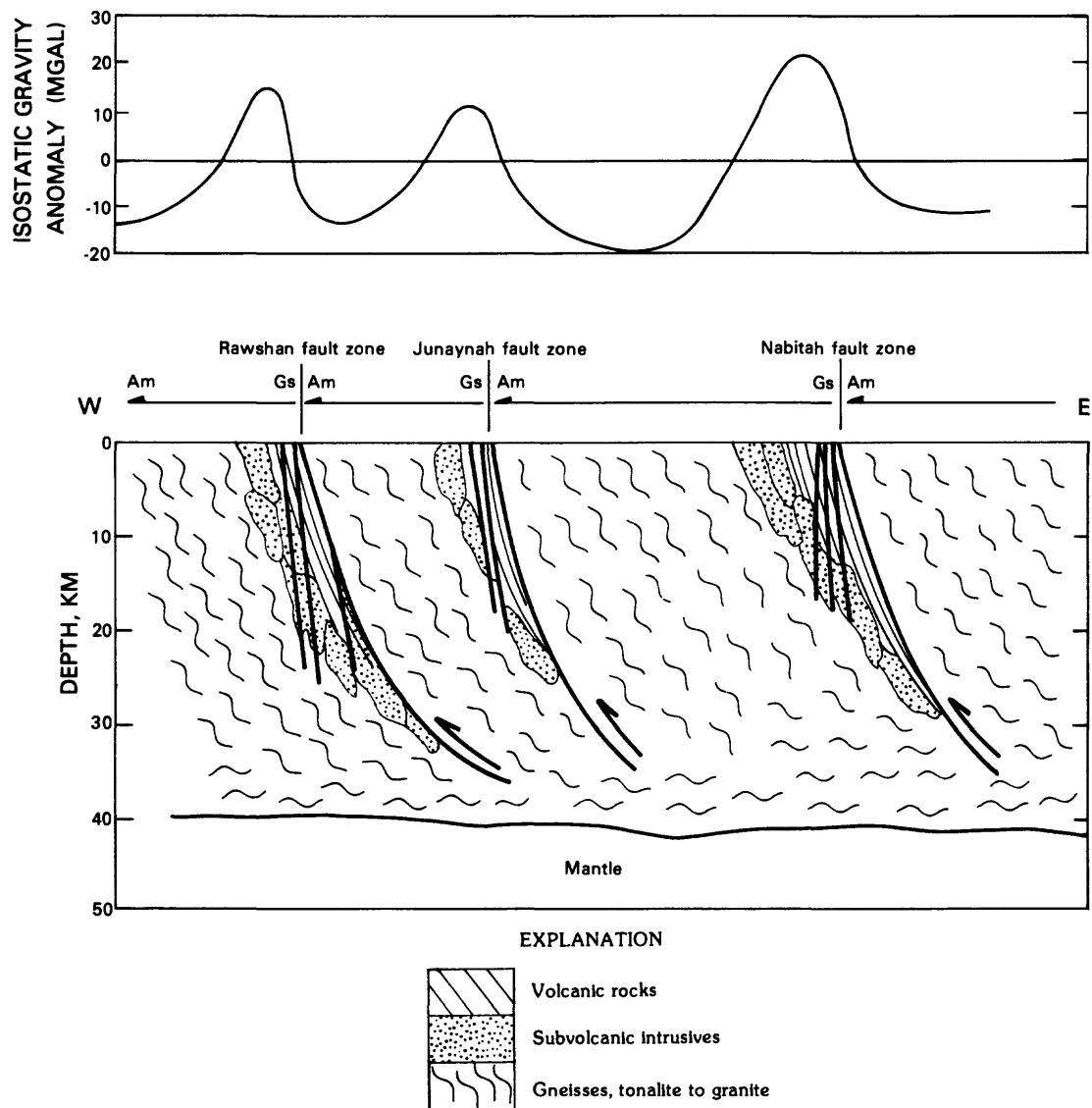


Figure 16.--Schematic cross section of the Nabitah mobile belt from west to east at approximately 20 degrees north latitude. Inferred thrust structure resulting from collision and crustal thickening of the Hulayfah island arc is shown. Metamorphic grade increase from greenschist (gs) to amphibolite (am) grade across each slice and a representative gravity anomaly profile is shown above the section. Vertical exaggeration is approximately 2:1.

metavolcanic rocks. This sequence of gneisses overlain by sub-volcanic intrusives that are in turn overlain by metavolcanic rocks is repeated three times in the central part of the belt (between  $19^{\circ}$  and  $20^{\circ}$  N. lat.), and each time the volcanic rocks contain a major north-trending fault zone, sometimes containing discontinuous bodies of serpentinite. The volcanic rocks are generally vertical or steeply dipping, usually to the east but occasionally to the west. The metamorphic grade across each zone generally increases from greenschist in the volcanic rocks in the east to amphibolite in the gneisses in the west.

Following the interpretation of Schmidt and others (1978) and in light of the mobile belt interpretation of Stoesser and others (1984), these sequences are here interpreted to be a series of high-angle, imbricate thrust belts formed during thickening of the Hulayfah island arc crust in the collision resulting in the Nabitah mobile belt. Each belt or sequence is a partially up-turned crustal section that includes rocks from depths of about 20 km (the amphibolite-grade rocks) up to the surface or near it. The rocks from the deeper zone behaved plastically, whereas the overlying volcanic rocks fractured brittly, forming the fault zones, along some of which serpentinites were squeezed up. Some hornfels metamorphism is present on the east sides of the volcanic belts, and in some cases folding of the lower-zone rocks may have created nappe-like structures (Schmidt and others, 1978; Stoesser and others, 1984).

The zones generally have a gravity signature that consists of a relative maximum over the hypabyssal intrusives and metavolcanics and a minimum over the gneisses (fig. 16). This signature is different from that usually associated with zones of upturned continental crust, which are generally marked by gravity maxima over the lower crustal rocks (Fountain and Salisbury, 1981). However, the sections examined by Fountain and Salisbury include lower crustal rocks, generally mafic granulites, which are not represented here. In the present case, the rocks represent only lowermost upper crust in the amphibolite facies, (corresponding to depths of about 25 km or less), and because they are generally less mafic than the overlying volcanics and intrusives (at least in part owing to remobilization), they cause gravity minima relative to the overlying section.

Moho depths for average island-arc terranes (for example, Sumatra, Japan, and Tonga-Fiji) are 15-30 km (Soller and others, 1981), and the Nabitah mobile belt is about 150 km wide (pl. 2B; Stoesser and others, 1984). For a Hulayfah island arc crust that was about 25 km thick to be thickened into the present crust (approximately 40 km thick according to Healy and others, 1982) would require the Hulayfah arc terrane to have been about 250 km wide before collision. This value is not unreasonable when compared with the larger arcs of today, such as Sumatra, and crustal thickening of this magnitude could explain the lack of

granulite facies rocks in the upturned sections. An alternate explanation might be detachment and a thin-skin tectonic style of deformation. However, if the mobile belt were underlain by a preexisting granulite facies series of mafic rocks, it would not be expected to have IGA values 20 mGal or more lower than those of the Hijaz-Asir province as observed. Considering also that spectral depth estimates from aeromagnetic data (H. R. Blank, written commun., 1983) place the top of the deepest magnetic sources at an average depth of 20 km, a model involving essentially only the Hulayfah island arc crust as the source of lower crust (20-40 km depth) in the mobile belt is preferred. The lowermost of this material would have been metamorphosed to the granulite facies by virtue of burial to depths below 30 km during crustal thickening, yielding the velocity, density, and magnetization distributions observed. It should be noted that remagnetization may have occurred during the Najd orogeny (Stoeser and others, 1984) on a shieldwide basis, so the depths to magnetic sources may or may not reflect the collision event. This, however, does not weaken the arguments for the model. Three inferred thrusts, drawn on the basis of the gravity signature and generalized geology, are shown in plate 2B in the Nabitah mobile belt; more may be present on a local scale in the map area and, based on geologic relations, at least one more cycle is probably present to the east of the map area. The large disruption of the thrusts along the east-west-trending gravity feature in the central part of the belt is notable, as is the deflection of the thrust traces by other east-west gravity anomaly trends. These trends also have a strong magnetic expression (H. R. Blank, written commun., 1983; Gettings and others, 1983) but little geologic expression other than rock unit distribution.

On plate 2B, the east-west trends are logically interpreted to be shear zones developed by differential or wrench movement during thrusting. Both the shear zones and the westward thrusting appear to have penetrated well into the Hijaz-Asir block (pl. 1D), and considerable transport has been taken up in folding the layered rocks at least as far west as longitude 41 degrees. A comparison of the thrust and trend pattern of plate 2B (also shown at larger scale on pl. 3) to the lithostratigraphic map of Johnson (1982) shows that the majority of the observed regional structure in the survey area can be explained by this model. South of the An Nimas batholith, the westward motion was taken up by folding of the Ablah group and older layered rocks into a syncline. The An Nimas batholith resisted folding and underwent westward transport, offsetting the layered rocks to the west and again folding them along northerly trending axes. Fault zones and local thrust faults were also developed with the folding, several of which are zones of mineralization. The east-west shear zones penetrate the Hijaz-Asir block as well as the mobile belt and offset earlier thrusts but not later ones, such as the Nabitah zone. That is, the more easterly, later thrusts have straighter axes because the available differential movement due

to varying mechanical properties in the Hijaz-Asir block had been used. Therefore, subsequent thrust fronts in the mobile belt became longer and more linear. The northwest and northeast shear couples in both the mobile belt and the Hijaz-Asir block formed during the collision because they are the axes of maximum shear stress within each thrust block.

In the extreme northeast of the area, high-angle thrusts are inferred both for the Urd belt rocks to the west of the Ad Dawadimi belt and for the Ar Rayn block to the east (pls. 1D and 2B). No imbrication is observed at the scale used here, but only a small portion of the belt is sampled by this survey.

Because of the sub-regional size of the areas of different average IGA level (pl. 2B) and their inferred correlation with at least some of the known tectonic features (pl. 1D), they were assumed to be features that penetrated the crust. This hypothesis is justified in general by the seismic refraction crustal section (Healy and others, 1982; Gettings and others, 1983), but if thin-skinned tectonic processes are widespread in the shield, the relationship of upper and lower crustal lateral density inhomogeneities may be coincidental rather than genetic. Boundaries delineating the various blocks of different IGA level were defined from a colored version of plate 2A, and polygonal approximations of these blocks are shown on plate 2B. The polygons were assumed to have their tops at the surface (taken as planar) and their bases at the Moho as defined by Mooney in Mooney and Prodehl (1984). The bases were taken as planar at the mean Moho depth, and the geometric factor of the gravity effect for each prism at each station was computed by the formulae of Plouff (1976). A linear regression program was then used to determine, on a least-squares basis, the density contrast of each of the 11 prisms that minimized the residual IGA. The resulting density contrasts and the resulting mean crustal densities are shown in plate 2B. The mean crustal densities of plate 2B show the oceanic crust of the continental margin to be significantly denser than any of the shield. For the offshore gravity low, a weighted average of the 4 km of known sediments at about  $2.4 \text{ g cm}^{-3}$  and 11 km of oceanic crust at  $3.007 \text{ g cm}^{-3}$ , for a total of 15 km mean crustal thickness (Gillmann, 1968; Healy and others, 1982), is in good agreement with the calculated value. On the shield, the mobile belts and the predominantly granitic area between the two Najd fault zones have lower than average densities of about  $2.88 \text{ g cm}^{-3}$ , whereas the Hijaz-Asir, Ar Rayn, Urd, and Najd fault zones all have mean densities close to  $2.92 \text{ g cm}^{-3}$ , in keeping with their mafic character.

Finally, the total correction for all 11 prisms was calculated as the sum of the products of the density contrasts and the geometric factors and was subtracted from the IGA at each station. The resulting residual IGA values were used to produce a map, shown in plate 2C, which represents the final estimate of the gravity anomaly field due to upper crustal, local sources.

## Interpretation of upper crustal anomalies

Plate 2D is a reduced version of plate 2C showing individual anomalies examined and correlated with surficial geology. In general, the residual gravity anomaly relative maxima are related to zones of hypabyssal diorite and gabbro intrusive rocks, commonly in association with their extrusive equivalents. Many of these areas of subvolcanic intrusives form linear or curvilinear belts, implying that a compressive tectonic environment throughout the survey area has brought these rocks, sampling 5-10 km depths, to shallow depths through folding and thrusting. Relative gravity anomaly minima are commonly associated with rocks of granodioritic or more felsic compositions regardless of their age and metamorphic grade. The IGA map of plate 2C can only yield limited structural models of individual plutons and units because of the smoothing of the field introduced by the grid generation process used to produce the maps. This is true also of thickness estimates because the anomaly amplitude is reduced in the gridding unless the grid point happens to fall exactly on the station location. Thickness estimates for a sampling of anomalies can be found in Gettings (1983), in which depth estimates were based on manually contoured data and more faithfully represent the true anomaly amplitudes. Thicknesses obtained by Gettings (1983) ranged between 1.5 and 4.5 km, which are typical for large plutons. For detailed study of particular areas of interest, the residual gravity anomaly values for stations in the area should be plotted and manually contoured to prepare the most faithful field representation for modeling calculations.

Individual anomalies on plate 2C are in the range of  $\pm 15$  mGal for the most part, as is typical for a shield terrane composed mainly of layered metamorphic and plutonic rocks. A histogram of the residual IGA values is shown in figure 17. The mean value is 0.66 mGal with a standard deviation of 14.54 mGal. The maximum and minimum anomaly are respectively 57.81 and -53.00 mGal, and the distribution is very nearly normal. For these data, 95 percent of the anomaly amplitudes are within the range of  $\pm 30$  mGal. The distribution indicates that systematic regional and deep source effects have been successfully removed. Moreover, this distribution and the short wavelengths and pseudo-random geographic distribution of the residual anomalies shown on plate 2C imply that the map depicts mainly density inhomogeneities in the upper crust.

A short catalog of remarks and comments on individual anomalies is given below, keyed to the anomaly designations of plate 2D. The geologic base used for most of the comparisons was the lithostratigraphic compilation of Johnson (1982) with a few exceptions as noted.



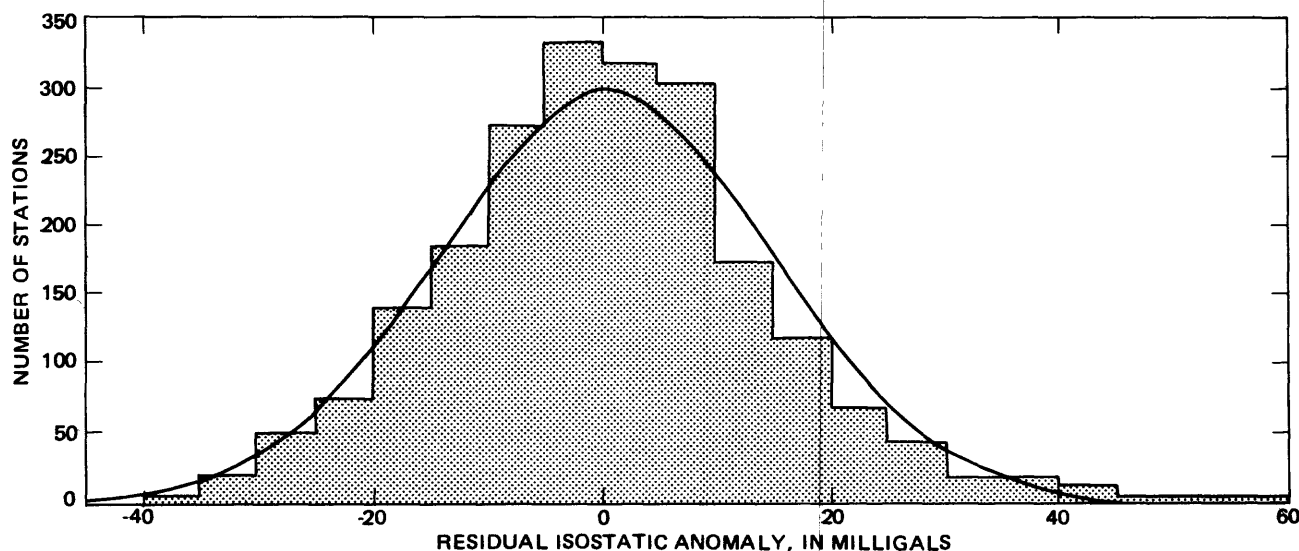


Figure 17.--Distribution of residual isostatic gravity anomalies after removal of regional gradient and correction for the hypothetical provinces of plate 2 C. Superimposed curve is the Gaussian (normal) curve determined by the data. Note the near-zero mean value and nearly normal distribution.

1. The anomalies designated 1 are spurious relative minima generated along the boundary between the polygons representing the offshore gravity low and the continental margin anomaly (pl. 2B). They occur because the Cenozoic sediments lap onto the oceanic crust in a seaward-thickening wedge rather than meeting along a vertical boundary as modeled, and as such have no physical meaning.

2. Anomalies designated 2 are local IGA maxima on the continental margin anomaly and in the south are associated with exposed layered gabbros of Miocene age (Gettings, 1977), although the anomalies are of much larger areal extent than the gabbros. Evidence is accumulating (H. R. Blank, oral commun., 1983) that the three anomalies in the south are expressions of calderas which produced the felsic volcanic rocks in the Cenozoic section. The anomalies farther north are interpreted to represent the same type of feature, and in the Jiddah area, where the anomalies are of much more limited spatial extent, they are inferred to be due to very shallow gabbroic intrusives of Miocene age (Gettings and Andreasen, *in press*). The relative minimum between the two extreme northwest anomalies labeled 2 (pl. 2D) has an unknown source. The northeast part of this minimum overlies amphibolites and diorites and one small granite body, and, unless the granite has much

greater extent beneath the coastal plain, these rock types would be expected to give a gravity maximum. The anomaly occurs in an area of Tertiary reactivation of faults associated with a major transform fault zone offshore. A buried Precambrian granite is proposed as the source but this is by no means certain.

3. This gravity high is associated with a Precambrian diorite-gabbro intrusive complex, which is extensively faulted and includes numerous small granite intrusives, among them the Makkah granite. The complex forms a northeast-trending zone about 40 km wide.

4. This gravity low is due to a northeast-trending, 40 km-wide zone of granites and granitic gneisses intruding pre-800-Ma volcanic rocks. Where the volcanic rocks are locally dominant volumetrically, small gravity highs are present.

5. This gravity high derives from a northeast-trending belt of intrusive rock varying in composition from diorite to gabbro. The belt is about 30 km wide and contains several discrete gabbroic intrusives and a few small granite intrusives. Thickness estimates for the large intrusives of anomalies 3-5 are about 3 km.

6. This anomaly is over an area of north-trending gneisses, tonalite-diorite, and amphibolites with minor granite intrusives and epiclastic metamorphic rocks. Although large amounts of amphibolite are exposed in the northern half of the anomaly, these must decrease volumetrically with depth, as the anomaly is a well defined minimum.

7. This gravity high is associated with metamorphosed mafic volcanic and volcanoclastic rocks faulted in north and northwest directions. Lithologic contacts trend north, and both trend sets have expression in the anomaly pattern. East-west controls are also apparent in the anomaly pattern but have no obvious geologic expression.

8. Gravity anomaly 8 is a local minimum mainly due to a large granitic gneiss on the west side of the Ablah synform. The vertical extent of the gneiss body is estimated at about 3.5 km.

9. This local gravity high overlies the Lakathah layered gabbro and diorite. Structural models for this body are treated in exhaustive detail by Gettings and Andreasen (1982), who obtain an average thickness for the mafic pluton of about 2 km. The actual gravity anomaly for this body is about 35 mGal over the gabbro whereas it is only 15-20 mGal on plate 2C and displaced somewhat to the northeast, providing a good example of the smoothing effect of the grid generation process on anomalies of small areal extent relative to the grid interval when the stations do not fall on the grid intersections.

10. This gravity high is caused by mafic metamorphic volcanic and volcanoclastic rocks. The north and south ends of the anomaly are controlled by east-west trends which continue eastward across the IGA map, offsetting and terminating other anomalies. The volcanic rocks wrap around to the west and terminate abruptly against a tonalite batholith to the north in one of the few expressions of east-west structural control in the geology. The north-trending belt of mafic volcanic rocks is in fact offset here to the west in a left-lateral sense about 40 km. Throughout the IGA map (pl. 2C), many offsets can be identified that are associated with the east-west trends, most often in a left-lateral sense and of magnitudes varying from 15 to 40 km.

11. This local minimum of 15-20 mGal is due to a source beneath the Cenozoic volcanic field. An intrusive of granitic composition is hypothesized as the source because of the sharply defined anomaly minimum, the outcropping granite immediately east of the anomaly, and the apparent doming of the metasediments concentric to the center of the anomaly.

12. This gravity low due to a batholith of tonalite to granite composition. The anomaly pattern suggest that only about one-third of the batholith is exposed, and it appears to extend considerably northward beneath the metasedimentary rocks. The southern end of the anomaly is terminated by an east-west trend which continues eastward across the map and by the northeast-trending Ad Darb transform zone, which juxtaposes Tertiary oceanic crust against the batholith to the south.

13. This is a curvilinear north-trending gravity high that is terminated at both ends by major east-west trends crossing the gravity anomaly map and is offset left-laterally about 20 km in its center. The anomaly overlies a belt of north-trending mafic, metamorphic volcanic and volcanoclastic rocks that contain many faults parallel to the zone. Some of the faults have been interpreted as thrusts having their upthrown blocks to the east (Greenwood, *in press*), and this zone probably represents the boundary between the Hijaz-Asir province and the Nabitah mobile belt. Comparison to other anomalies over similar rocks shows that the entire anomaly amplitude probably cannot be attributed to the mafic extrusive rocks alone, and the zone is likely to contain mafic to ultramafic intrusive bodies at depths of the order of 10 km or shallower. Such intrusions seem probable if the model of the mobile belt outlined above is correct. Further, the presence of shonkinite and syenite intrusions in the south end of the zone and its southern equivalent (pl. 2D, anomalies 15, 17, and 18) enhances the likelihood of intrusives beneath the central part. These more southerly bodies are commonly associated with areas of extensive mafic intrusives and have been dated at a minimum age of  $623 \pm 7$  Ma (K-Ar, Greenwood, 1981). Since there is abundant evidence for argon loss due to later thermal events on the Arabian Shield, it is quite possible that these bodies were intruded during the Nabitah orogeny of Stoesser and others (1984).

14. This gravity high is a southern extension of anomaly 13, offset eastward approximately 10 km by an east-west gravity trend. The geologic relations are similar to those for anomaly 13; additionally, the most intense part of the anomaly is bounded on both the north and south by west-northwest-trending faults, which are part of an east-west-trending arcuate zone. Mafic intrusives at shallow depths are probably also required to account for the amplitude of the anomaly, especially as there are gneisses in the immediate area.

15. This relative minimum is associated with a north-trending belt of gneisses which terminates against the south side of the arcuate fault zone mentioned in 14 above. The zone contains two syenite intrusions, which have little if any gravity expression.

16. This gravity low is due to a batholith of granite and granite gneisses and represents the southern end of the gneiss belt described in 15 above. This zone is inferred to be the westernmost gneiss belt of the Nabitah mobile belt in this area.

17. This is a north-trending gravity high over a complex of mafic volcanic and volcanoclastic rocks and dioritic to gabbroic intrusive rocks. The volcanic rocks are faulted along north-northwest directions, and several small granites intrude the area.

18. This gravity high overlies an area of predominantly diorite and mafic volcanic and volcanoclastic rocks that includes a syenite intrusive. It is offset in a left-lateral sense about 15 km from anomaly 17 along the east-west-trending arcuate fault zone discussed above.

19. This local gravity high is centered on a syenite body that intrudes a granitic gneiss and granite-tonalite terrane. As the mean density for syenite is  $2.7 \text{ g cm}^{-3}$  (G. R. Johnson and G. R. Olhoeft, written commun., 1980) and the host rock mean density is probably no more than  $2.55\text{--}2.6 \text{ g cm}^{-3}$ , the syenite is probably the cause of the anomaly.

20. This gravity low overlies a north-trending belt of syn-orogenic plutons in the Wadi Tarib batholith (Stoeser and others, 1984). The anomaly attributable to the plutons is less than 10 mGal and is superimposed on a gravity low which correlates with the entire complex. This implies that the granitic rocks are volumetrically dominant in the upper crust and that the metavolcanic rocks in the area are as subordinate at depth as they are on the surface.

21. This is a gravity low caused by the Tindahah pluton, a large postorogenic intrusion of granitic composition (Stoeser and others, 1984). The pluton appears to be somewhat lower in average density than the gneiss it intrudes to the northeast, as

the minimum is not well correlated with the gneiss. The anomaly attributable to the granite implies a depth extent of about 3 km.

22. This gravity relative minimum is strongly correlated with a large postorogenic granite intrusive in a metavolcanic terrane in the northwest quadrant of the Wadi Tarib batholith of Stoesser and others (1984). On the western side the anomaly abuts the curvilinear gravity high defining the edge of the mobile belt (anomaly 13), and this juxtaposition exaggerates the apparent anomaly on the west side. To the north, the anomaly is truncated by a ridgelike gravity high trending east-west across the mobile belt. The north and south edges of the ridgelike high continue as gravity trends across the residual IGA map (pl. 2C). Thus, about half of gradient on the north and west sides is attributed to subregional structures, and the anomaly due to the granite is about 10-15 mGal, as defined on the south and west sides. Estimated thickness is about 3 km for this pluton.

23. This series of three gravity highs forms a north-northeast-trending ridgelike feature in the residual IGA field. The southern high is separated from the others by an east-west gravity trend crossing the gravity map. Apparent offset is right-lateral along the east-west feature and amounts to about 20 km. Apparent offset between this high and the northern end of anomaly 13 is again right-lateral and of about 20 km magnitude. The anomalies are over areas of diorite and mafic volcanic rocks; however, the rocks to the west are also diorites, so it may be necessary to postulate mafic intrusives at shallow depths to account for the total anomaly magnitude.

24. This relative IGA minimum is in an area of granitic gneiss and intrusive granite in a terrane of diorite, tonalite-diorite, and metamorphic mafic volcanics. The minimum appears to be most closely associated with the granite, so granite must be the dominant rock type at depth and the cause of the anomaly, although at the surface only several small areas are exposed.

25. This sharply defined local anomaly high of at least 15 mGal amplitude occurs in a terrain of mafic metamorphic and volcanic rocks, intrusive gabbro, and, to the north, granite and tonalite. This anomaly was compared with the 1:100,000-scale detailed mapping by Greene (1982a,b), which showed that it overlies an area of graphic granite and rhyolite surrounded by a zone of metabasalt and metaandesite dikes which appear to be ring dikes. The area within the ring dikes is nearly circular and about 30 km in diameter. The granite is highly faulted in a pattern suggesting doming from beneath, and the anomaly source is almost certainly a shallow mafic intrusive. Judging from the size and shape of the anomaly, the fault pattern, the dike distribution, and the lithologies present, the postulated intrusive complex may well represent a caldera system. The configuration and underlying geology of this anomaly are closely comparable with those of anomaly 27, where the source intrusion is exposed.

26. This is a gravity low over a large area of granitic intrusives, granitic gneiss, and tonalite with several small gabbro intrusions. The anomaly is one of the larger discrete anomaly minima, and the exposed geology probably represents the average proportions of granitic rocks and gneisses at depth in the upper crust in the Wadi Tarib batholith area as well.

27. This is a local maxima of about 25 mGal amplitude centered over the Jabal Khashmadheeb batholith (Schmidt, 1980). The batholith is made up of multiple small plutons of alkali-feldspar granite and diabase and hybrids of the two and forms a semi-ring structure of about 10 km by 20 km. The granite and diabase are comagmatic, and the entire complex is probably the root zone of a caldera (Schmidt, 1980). The large areas of diabase and gabbro that almost certainly underlie it are the source of the gravity high. The relationships are very similar to those of anomaly 25, except that in the case of 27, erosion has cut down to a deeper level.

28. This gravity-high ridge represents a belt of mafic meta-volcanic rocks that includes many diorite, diorite-gabbro, and gabbro intrusive bodies and is bounded on the east by the Nabitah fault zone, which contains many long, narrow bodies of serpentine along the faults. Local highs on the ridge are produced in areas of predominantly diorite-gabbro and gabbro intrusives. A few small postorogenic granites intrude the zone and in some cases produce saddle points along the ridge. The ridge is abruptly terminated at the north end by another east-west-trending feature in the IGA field.

29. This northeast-trending gravity anomaly high overlies an area of predominantly mafic metavolcanic rocks containing some gabbros and young epiclastic rocks. The area is surrounded by granites and tonalites, and the exposed lithologies can completely account for the observed anomaly.

30. This gravity low occurs in an area of dominantly granitic intrusives and granitic gneisses with minor amounts of gabbro and mafic metavolcanic rocks and some Cenozoic basalt from Harrat Nawasif. The terrane is characteristic of mobile-belt gneissic areas to the east and may indicate a zone of left-lateral offset of the mobile belt.

31. This is a gravity-anomaly relative maximum in an area that has mafic metavolcanic rocks and gabbro in about equal amounts, intruded by large volumes of granite. The anomaly pattern indicates that the granites are not volumetrically important, in spite of their large outcrop areas.

32. This gravity low is over a large area of diorite and tonalite overlain to the east by young epiclastic rocks and some volcanic and volcanoclastic rocks. Some gabbroic rocks and granitic gneisses and granites are present. The general character

of the anomaly is different from that of anomalies examined up to this point: it has a smoother appearance and no steep gradients. It more nearly resembles the IGA low areas to the north (see anomalies 35, 38, and 39) and thus appears to be a part of the Afif province terrain rather than the Nabitah mobile belt.

33. This linear gravity high is centered on the southwest Najd fault zone. The rocks beneath the anomaly are chiefly volcanic, volcanoclastic, and epiclastic, and since the same rocks underlie the adjacent gravity low (anomaly 32), they cannot explain the gravity high. This anomaly has been analyzed in Gettings (1983) and Gettings and others (1983), and various lines of evidence reported therein show that it and anomaly 37 are probably zones of mafic intrusives at both deep and shallow crustal depths. The intrusives evidently used the fault zones as conduits and although only one small gabbro is exposed along anomaly 33, numerous gabbro and diorite bodies are exposed along the northeast Najd fault zone beneath anomaly 37. Such an intrusive complex at shallow levels is the major source proposed to account for anomaly 33. All or part of the deeper component of the anomaly at both 33 and 37 has been removed from plate 2C by the polygon modeling process described above.

34. This is a broad gravity high separated from the gravity low of the Afif province continental rocks to the east by a north-trending gradient (boundary indicated by a dashed line in pl. 2D). This boundary is also present in the aeromagnetic map (Andreassen and others, 1980), where it marks a distinct textural change. The exposed rocks beneath anomaly 34 are predominantly mixed metavolcanic and metasedimentary ones of distal volcanic sequences; their compositions vary from mafic to felsic. These rocks are younger than the Nabitah orogeny (Stoeser and others, 1984) and they are not thought to be the anomaly source. Based on both the texture and amplitude of anomaly 34, and on geologic grounds (Stoeser and others, 1984) the anomaly source is proposed to be rocks of the Nabitah mobile belt similar to those east of the Nabitah fault zone between 19° and 20° north latitude (pl. 2C).

35. This large, smooth gravity low overlies the granites, tonalites, mixed granite to diorite batholiths, and granitic gneiss of the Afif continental block. This area represents the best sample of the Afif continental block in the survey area.

36. This gravity anomaly low is due to a large batholith of granodioritic composition. The batholith is synorogenic and contains inclusions of paragneiss and later intrusions of gabbro and diorite.

37. This is a linear gravity high along the northeastern Najd fault zone caused by late intrusives of gabbro and diorite. See also the description for anomaly 33.

38. This is a local gravity low caused by a late granitic circular pluton in the Afif crust.

39. This composite gravity low in the Afif province crust is caused by a series of late calc-alkaline and alkaline granite plutons along an axis parallel to the northwest-trending Najd faults. The east end of the anomaly is terminated abruptly against the dense gneisses and amphibolites of the Ar Rayn block in thrust contact.

40. This north-trending gravity anomaly high is due to the Ar Rayn block rocks, which here are amphibolitic gneisses, amphibolites, diorites, gabbros, and ultramafic rocks, including some ophiolitic rocks at the north end of the anomaly. The contact is interpreted to be a high-angle thrust resulting from the collision of the Ar Rayn and Afif blocks, which also created a mobile belt, the Ad Dawadimi belt (anomaly 42), between the two blocks.

41. This gravity low, in the extreme northeast corner of the survey area, is due to a large area of granitic gneiss in the Ar Rayn block. The anomaly is bounded on the southwest by the Al Amar thrust fault.

42. This is a series of three small, north-northeast-trending gravity lows in the Ad Dawadimi belt. The lows are caused by late calc-alkalic granite intrusions in the Abt schist.

43. This is a north-northwest-trending gravity high over an area of exposed diorites, gneisses, gabbros, and ultramafic rocks between the Murdama sedimentary rocks to the southwest and the Ad Dawadimi belt rocks to the northeast. The Murdama rocks are in depositional contact with the exposed crystalline rocks and here form the edge of a basin; the gabbroic and ultramafic rocks form a belt along the northeast boundary and are termed the Urd belt. The crystalline rocks are the source of the gravity high, as they have a positive density contrast with the metasediments and granitic rocks to the southwest and northeast. The northeast boundary, delineated by the Urd belt, is interpreted to be the boundary between the Afif province crust and the Ad Dawadimi mobile belt (pl. 2B).

#### Relationship to mineralization

Data on known mineral occurrences in the area were retrieved from the Mineral Occurrence Documentation System (MODS) of the Deputy Ministry for Mineral Resources in March 1981 and were plotted along with the inferred tectonic elements discussed above on plate 3. Four categories were used in the retrieval: base metals (Cu, Pb, Zn, and gossan), precious metals (Au and Ag), ultramafic-associated minerals (Cr, Ni, Co, and V), and exotics (F, Sn, Sb, Mo, Ba, W, Hg, Nb, Ta, barite, and rare earths). This plot was overlaid on the IGA map of plate 2C and the lithostratigraphic map (Johnson, 1982) to study correlations.



Three major spatial correlations can be observed from plate 3. First, many of the mineral localities in the Nabitah mobile belt and the Ar Rayn block seem to be closely related to the northerly trending thrusts and fold belts throughout the survey area, either trending parallel to or along the thrust faults. Second, the east-west trends have some control over the distribution of mineral occurrences. In the mobile belt, the intersection of the east-west structures and the inferred thrust faults is associated with a clustering of occurrences, particularly in the Nabitah fault zone belt. In the Hijaz-Asir block, occurrences tend to fall in east-west zones as well as north-south, although not all of these zones coincide with the east-west zones inferred from the gravity data, and many are parallel to and between the gravity anomaly trends. Some offsets in the north-trending groups of occurrences coincide with the gravity anomaly east-west trends and correspond to shear offsets of favorable host rocks.

The third relationship is a correlation between some mineral occurrences and the two northwest-trending Najd fault zone intrusive axes. Occurrences in these areas tend to fall on the flanks (gradients) of the gravity highs whose maxima define the inferred intrusive axes. The northeast zone (pl. 3), in particular, has a good correlation along its north side.

Many zones of exploration can be defined on plate 3 following these general guidelines and using both the IGA map and the generalized geology as a guide. Detailed literature studies from larger scale geologic and aeromagnetic mapping in the target areas are required to delineate actual exploration areas, however, and this large task is well beyond the scope of this report. It is hoped that such studies will be undertaken within the framework laid out here.

## SUMMARY

1. The application of terrain corrections to the regional gravity survey data for southwestern Saudi Arabia results in a significant improvement in the utility of the map for geologic studies, especially in the southwestern third of the map, by removing noise in the gravity field due to topographic relief.

2. The uplift of the Red Sea-Arabian Plate system, as recorded in the average topography and general geologic relations, provides an important constraint on interpretation of the gravity data, particularly the very long-wavelength features. This constraint and others imposed by seismic refraction, aeromagnetic, heat-flow and geologic data make it possible to construct a plate-tectonic model of the asthenosphere and lithosphere system that is self-consistent and yields insight into the recent tectonic history of the area.

3. The continental margin gravity anomaly high is successfully removed by a classical Airy-Heiskanen isostatic reduction, but the resulting physical model is in severe conflict with seismic refraction results and indicates parameter values for this area that are highly anomalous when compared to worldwide average values.

4. An isostatic reduction based on plate-tectonic theory and with sufficient flexibility to incorporate constraints from seismic refraction data has been presented and successfully applied to the Saudi Arabian data. The regional variation of the gravity anomaly field is separated in the process into a part explained by lithosphere loading and a component due to asthenosphere density inhomogeneities. The model implies that isostatic compensation occurs both by deflections of the Moho and by sub-Moho density variations; that is, it is a combination of Airy- and Pratt-type compensation. Parameter studies show that the depth of compensation is well into the asthenosphere, in agreement with previous studies, and that the mantle parameters in the area of the gravity survey are more oceanic than continental in character.

5. It has been shown that the Red Sea-Arabian Plate has a characteristic Bouguer gravity anomaly signature. Model studies presented here have shown that heating of the lithosphere can explain only a modest amount of the observed regional uplift of the system and, at most, half of the regional gravity effect; therefore, the majority of the vertical movements must originate from lateral density differences in the asthenosphere, which are inferred to be due to thermal convection driving the sea-floor spreading system.

6. Interpretation of the isostatic gravity anomaly map on the Arabian Shield after removal of the regional gradient, has shown that the differences in the mean gravity anomaly field correlated with geologic provinces are probably crust-penetrating and thus substantiate the geologic interpretation that the provinces are allochthonous blocks sutured together by mobile belts.

7. Detailed correlation of anomaly belts has identified offsets along east-west shear zones of inferred successive thrust faults in the mobile belts and has provided a tectonic model based on the surface geology and the gravity anomaly field which appears to be capable of explaining the observed general structure in the southern Arabian Shield. The model encompasses a single orogenic episode of east-west compression, followed by the formation of the left-lateral, northwest-trending Najd fault zones. Shear (wrench) movement between differentially moving thrust fronts, owing to differing mechanical properties in the allochthonous block during the Pan-African collision, explains

the penetrative east-west trends that are obvious in the aeromagnetic and gravity anomaly maps but subtle in the geologic maps. Thin-skinned tectonic processes may have operated to cover deeper east-west boundaries between rocks of differing magnetization and density during the compressional event.

8. Comparisons between mineral occurrences and the residual gravity anomaly and generalized geology have shown that the principal regional controls in the southern shield are the north-trending fault and thrust zones and the east-west shear zones. These relations imply that the mineralization resulted primarily from the plutonism associated with the Pan-African collision and, therefore, that further exploration targets can be located on the basis of the tectonic model. In the area of the Najd fault zones, later mineralization resulted from plutonism localized along the northwest-trending fault zones.

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## APPENDIX

### Principal facts for the 2196 gravity stations of the gravity survey of southwestern Saudi Arabia

#### Column heading explanation

(All gravity values in milligals)

SEQ #:	Sequence number of station in the table.	CBGA:	Complete Bouguer gravity anomaly (SBGA plus terrain and curvature corrections).
IDENT.:	Gravity station identification number.	S.D.CB:	Standard deviation of the CBGA from propagation of errors of the parameters.
LATITUDE:	Station latitude (north) in degrees and minutes.	IS.GRAV:	Total isostatic gravity correction, using the plate-tectonic system to a radius of 166.7 km about the station and the combined topographic-isostatic correction (Karki and others, 1961) beyond, modified for parameters as described in the text.
LONGITUDE:	Station longitude (east) in degrees and minutes.	IGAL:	Isostatic gravity anomaly based on plate-tectonic system.
ALT.:	Station altitude in meters.	IGA2:	Isostatic gravity anomaly after removal of regional gradient.
OBS. GRAV.:	Observed gravity.	IGA3:	Residual isostatic gravity anomaly after removal of regional gradient and correction for model geologic provinces.
FAGA:	Free-air gravity anomaly.		
SBGA:	Simple Bouguer gravity anomaly (without terrain and curvature corrections).		
TTC:	Total terrain correction to a radius of 166.7 km about the station.		

ICU #	IDENT.	LATITUDE	LONGITUDE	ALT.	QRS.	GRAV.	FAGA	SRGA	TTC	CRGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	H	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
1	A1	21	46.020	39	3.200	0.0	978774.494	32.22	0.35	32.57	0.17	-10.32	42.91	48.75	41.69
2	A2	21	46.380	39	4.420	1.0	978778.139	35.80	0.33	36.01	0.39	-11.26	47.30	53.02	45.77
3	A3	21	46.860	39	5.750	0.2	978777.013	33.93	0.34	34.25	0.42	-13.47	47.73	53.32	45.95
4	A4	21	46.930	39	6.810	3.0	978773.662	31.37	0.35	31.38	0.68	-14.99	46.38	51.88	44.10
5	A5	21	47.350	39	8.240	3.6	978769.695	27.15	0.40	27.14	0.42	-16.61	43.76	49.13	41.11
6	A6	21	47.760	39	9.750	8.5	978769.164	27.71	0.41	27.15	0.49	-19.46	46.61	51.84	43.53
7	A8	21	48.300	39	12.120	29.8	978771.167	35.73	0.44	32.79	0.36	-24.00	56.72	61.74	52.85
8	A9	21	48.560	39	14.460	46.1	978768.495	37.82	0.55	33.14	0.37	-28.44	61.48	66.30	56.39
9	B1	21	48.160	39	3.860	0.0	978772.576	31.19	0.36	31.55	0.17	-10.30	41.87	47.71	39.47
10	B2	21	45.350	39	4.740	3.7	978773.307	32.87	0.33	32.78	0.36	-10.74	43.53	49.29	40.80
11	B3	21	45.720	39	6.010	3.3	978772.628	31.68	0.34	31.65	0.36	-12.82	44.48	50.12	41.38
12	B4	21	45.940	39	7.130	2.2	978769.966	28.45	0.35	28.55	0.42	-14.55	43.11	48.65	39.54
13	B5	21	46.260	39	8.150	1.6	978768.460	26.43	0.37	26.62	0.45	-15.41	42.04	47.48	38.19
14	B6	21	46.500	39	9.290	4.6	978765.873	24.52	0.39	24.39	0.39	-17.38	41.78	47.12	37.47
15	B7	21	46.880	39	10.960	15.7	978772.756	34.44	0.42	33.08	0.36	-20.32	53.37	58.56	48.39
16	B8	21	47.220	39	12.240	15.5	978775.184	36.65	0.50	35.39	1.27	-22.80	58.17	63.24	52.73
17	B9	21	47.650	39	13.920	47.9	978771.776	42.60	0.53	37.70	0.37	-26.31	63.89	68.81	57.81
18	C1	21	44.170	39	4.500	2.2	978770.288	30.61	0.35	30.71	0.36	-9.25	39.97	45.82	35.91
19	C2	21	44.440	39	5.640	4.0	978771.550	32.14	0.33	32.02	0.36	-10.99	43.02	48.76	38.47
20	C3	21	44.660	39	6.650	4.1	978768.328	28.73	0.33	28.59	0.36	-12.69	41.29	46.94	36.27
21	C4	21	45.060	39	8.130	2.2	978765.562	24.96	0.35	25.06	0.36	-14.22	39.29	44.80	33.69
22	C5	21	45.210	39	9.160	6.5	978763.782	24.35	0.36	23.97	0.36	-15.85	39.83	45.25	33.58
23	C6	21	45.440	39	10.050	13.0	978762.925	25.26	0.38	24.17	0.36	-17.40	41.55	46.89	34.91
24	C7	21	45.660	39	10.950	21.5	978768.769	33.50	0.40	31.47	0.36	-19.04	50.45	55.71	43.38
25	C8	21	46.110	39	11.750	29.1	978773.032	39.65	0.42	36.77	0.36	-20.80	57.50	62.67	50.55
26	C9	21	46.240	39	13.970	38.7	978771.773	41.22	0.59	37.42	0.49	-24.63	61.97	66.96	53.00
27	D1	21	43.090	39	5.010	0.0	978766.523	27.28	0.34	27.62	0.17	-9.02	36.66	42.53	30.36
28	D2	21	43.320	39	5.700	6.9	978769.584	32.23	0.33	31.78	0.36	-10.15	41.92	47.72	35.38
29	D3	21	43.230	39	6.710	0.0	978766.891	27.50	0.33	27.83	0.17	-11.43	39.28	45.01	31.47
30	D4	21	43.850	39	7.840	2.0	978764.500	24.89	0.34	25.00	0.36	-12.54	37.55	43.15	29.88
31	D5	21	44.080	39	8.920	2.0	978761.901	22.25	0.35	22.37	0.36	-14.24	36.62	42.13	28.27
32	D6	21	44.320	39	10.090	5.0	978761.220	22.25	0.38	22.06	0.36	-16.15	38.22	43.62	29.07
33	D7	21	44.590	39	11.200	14.5	978768.183	31.86	0.43	30.65	0.36	-18.23	48.86	54.16	39.02
34	D8	21	44.940	39	12.440	26.0	978769.981	36.85	0.50	34.40	0.37	-20.58	54.93	60.11	44.43
35	D9	21	45.180	39	13.600	38.9	978765.811	36.41	0.53	32.53	0.37	-22.74	55.18	60.26	43.77
36	E2	21	42.090	39	6.530	3.2	978766.190	28.97	0.34	28.94	0.36	-10.14	39.09	44.90	28.46
37	E3	21	42.630	39	7.780	2.5	978762.640	24.64	0.34	24.70	0.36	-11.35	36.06	41.74	25.25
38	E4	21	42.880	39	8.880	2.4	978760.650	22.36	0.35	22.44	0.36	-13.09	35.55	41.13	23.85
39	E5	21	43.270	39	10.410	7.7	978761.363	24.31	0.38	23.82	0.36	-15.67	39.49	44.93	26.61
40	E6	21	43.600	39	11.400	15.0	978767.399	32.26	0.42	30.98	0.36	-17.42	48.37	53.71	34.99
41	E7	21	43.900	39	12.820	30.4	978765.278	34.68	0.48	31.72	0.40	-19.84	51.49	56.71	36.17
42	E8	21	44.260	39	13.850	47.5	978761.570	35.78	0.52	30.92	0.37	-21.98	52.78	57.90	37.42
43	E9	21	44.430	39	15.030	76.5	978754.172	37.16	0.56	30.05	0.43	-24.16	53.00	58.02	35.76
44	F1	21	40.870	39	5.710	0.0	978763.769	26.86	0.37	27.23	0.17	-7.86	35.09	41.04	21.24
45	F2	21	41.210	39	7.030	1.7	978765.686	26.91	0.34	27.06	0.42	-9.80	36.86	42.68	21.91
46	F3	21	41.680	39	8.430	6.2	978760.673	24.80	0.36	24.46	0.36	-11.32	35.78	41.47	19.94
47	F4	21	41.930	39	9.540	6.2	978760.076	24.05	0.37	23.71	0.36	-12.99	36.71	42.30	18.77
48	F5	21	42.250	39	10.830	14.3	978764.697	30.74	0.38	29.49	0.36	-15.23	44.71	50.18	25.61
49	F6	21	42.770	39	12.340	31.1	978767.610	38.30	0.44	35.21	0.42	-18.03	53.17	58.49	32.72
50	F7	21	42.740	39	13.240	40.6	978766.357	40.01	0.48	35.89	0.37	-19.38	55.17	60.42	30.68

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	DES. GRAV.	FAGA	SRGA	TTC	CEGA	S.D.CR	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
51	F8 21	43.150	39 14.400	55.0	978760.312	37.98	31.83	0.54	32.29	0.37	-21.66	53.81	58.95	28.59
52	F9 21	43.630	39 15.260	67.9	978755.348	36.51	28.91	0.61	29.42	0.56	-23.63	52.88	57.92	28.27
53	G1 21	39.850	39 6.980	2.3	978763.100	27.91	27.65	0.36	28.01	0.36	-8.64	36.65	42.55	11.91
54	G2 21	40.130	39 7.050	6.6	978763.261	29.11	28.37	0.36	28.72	0.36	-8.97	37.70	43.58	14.58
55	G3 21	40.430	39 8.000	5.7	978760.542	25.80	25.17	0.37	25.53	0.36	-9.56	35.09	40.88	11.04
56	G4 21	40.670	39 9.550	9.1	978758.963	25.03	24.01	0.36	24.36	0.36	-11.84	36.19	41.85	9.49
57	G5 21	41.030	39 11.020	17.1	978768.359	36.52	34.61	0.38	34.96	0.58	-14.18	49.10	54.62	20.92
58	G6 21	41.340	39 12.340	33.8	978770.449	43.45	39.67	0.41	40.03	0.81	-16.42	56.37	61.77	26.95
59	G7 21	41.550	39 13.420	45.7	978769.029	45.48	40.37	0.45	40.75	0.87	-18.33	58.97	64.27	28.47
60	G8 21	41.850	39 14.460	58.1	978761.057	41.03	34.53	0.50	34.94	0.84	-20.30	55.10	60.31	23.99
61	G9 21	42.180	39 15.620	78.6	978754.241	40.20	31.41	0.51	31.80	0.68	-22.57	54.17	59.27	22.38
62	H1 21	38.900	39 6.180	2.4	978762.207	28.03	27.76	0.42	28.18	0.15	-6.86	35.04	41.06	7.43
63	H2 21	39.120	39 7.380	9.1	978762.501	29.96	28.95	0.40	29.33	0.36	-7.62	36.93	42.85	7.93
64	H3 21	39.340	39 8.650	10.4	978759.966	27.80	26.64	0.37	27.00	0.36	-9.43	36.41	42.21	6.04
65	H4 21	39.680	39 10.050	14.4	978762.234	30.96	29.35	0.36	29.68	0.36	-11.62	41.28	46.96	9.87
66	H5 21	39.960	39 11.110	23.4	978769.994	41.21	38.59	0.37	38.92	0.36	-13.32	52.20	57.78	20.11
67	H6 21	40.330	39 12.740	40.9	978769.335	45.57	40.99	0.39	41.32	0.52	-16.06	57.28	62.71	24.06
68	H7 21	40.420	39 13.620	67.7	978763.958	48.37	40.80	0.40	41.10	0.52	-17.41	58.32	63.67	24.26
69	H8 21	40.800	39 14.940	82.0	978754.743	43.18	34.00	0.44	34.32	0.46	-19.80	53.90	59.13	19.26
70	H9 21	40.770	39 15.090	148.5	978736.271	45.27	28.65	0.45	28.89	0.55	-20.05	48.52	53.74	13.65
71	I1 21	37.980	39 6.300	1.8	978761.511	28.10	27.90	0.43	28.32	0.71	-6.15	34.48	40.54	3.40
72	I2 21	37.890	39 7.890	8.6	978760.408	29.19	28.22	0.42	28.63	0.52	-7.11	35.73	41.68	2.33
73	I3 21	38.160	39 9.170	10.5	978759.719	28.80	27.63	0.38	27.99	1.07	-8.94	36.92	42.75	2.67
74	I4 21	38.620	39 10.400	18.4	978765.106	36.16	34.10	0.37	34.44	0.81	-11.07	45.48	51.19	10.90
75	I6 21	39.490	39 14.140	59.0	978764.047	46.73	40.13	0.42	40.47	0.87	-17.22	57.54	62.91	21.04
76	I7 21	39.770	39 15.130	67.6	978754.240	39.29	31.73	0.44	32.07	0.87	-19.04	50.93	56.20	14.06
77	I8 21	39.860	39 15.970	80.8	978748.504	37.54	28.50	0.45	28.83	0.87	-20.48	49.10	54.31	11.70
78	J1 21	36.340	39 6.480	4.7	978760.324	29.49	28.97	0.49	29.45	0.58	-5.08	34.53	40.67	-0.60
79	J2 21	36.440	39 7.240	8.6	978761.194	31.47	30.50	0.49	30.98	0.78	-5.15	36.13	42.21	0.46
80	J3 21	36.630	39 8.470	5.9	978758.703	27.94	27.28	0.42	27.70	0.36	-6.80	34.49	40.47	-1.94
81	J4 21	37.160	39 9.510	11.6	978760.135	30.59	29.29	0.40	29.68	0.74	-8.59	38.25	44.11	1.78
82	J5 21	37.500	39 10.550	12.0	978760.716	36.94	35.60	0.37	35.95	0.36	-10.21	46.14	51.90	9.34
83	J6 21	37.900	39 12.160	26.6	978771.774	46.10	43.12	0.39	43.47	0.39	-12.72	56.13	61.75	18.67
84	J7 21	38.000	39 13.100	37.7	978767.098	44.75	40.53	0.39	40.86	0.36	-14.08	54.85	60.39	16.83
85	J8 21	38.380	39 14.280	51.1	978760.461	41.85	36.14	0.40	36.46	0.36	-16.16	52.49	57.91	14.15
86	J9 21	38.620	39 15.400	63.5	978752.795	37.77	30.66	0.42	30.99	0.36	-18.20	49.02	54.34	10.24
87	K1 21	35.150	39 6.440	0.0	978758.892	27.84	27.84	0.58	28.42	0.20	-3.97	32.41	38.63	-4.58
88	K2 21	35.500	39 7.450	1.1	978760.728	29.65	29.53	0.50	30.03	0.37	-4.63	34.66	40.78	-2.62
89	K3 21	35.500	39 8.740	2.4	978757.124	26.45	26.18	0.43	26.61	0.36	-6.19	32.80	38.82	-5.41
90	K4 21	36.100	39 9.730	6.9	978759.755	29.85	29.08	0.39	29.46	0.36	-7.96	37.40	43.31	-0.75
91	K5 21	36.150	39 10.700	17.2	978763.712	36.94	35.01	0.39	35.38	0.36	-9.19	44.54	50.37	5.80
92	K6 21	36.540	39 11.930	24.0	978768.102	43.02	40.34	0.38	40.68	0.36	-11.17	51.80	57.51	12.73
93	K7 21	36.990	39 13.190	33.5	978767.446	44.84	41.09	0.39	41.43	0.36	-13.35	54.70	60.29	15.36
94	K8 21	37.230	39 14.400	47.3	978762.368	43.77	38.48	0.40	38.81	0.45	-15.23	53.92	59.40	14.14
95	K9 21	37.490	39 15.940	83.3	978748.033	40.28	30.96	0.40	31.24	0.36	-17.82	48.83	54.17	8.47
96	L1 21	34.050	39 6.600	0.0	978757.873	27.95	27.95	0.66	28.61	0.21	-3.38	32.01	38.28	-6.41
97	L2 21	34.420	39 7.940	2.0	978758.648	28.96	28.74	0.51	29.24	0.68	-4.29	33.55	39.69	-5.34
98	L3 21	34.660	39 9.030	3.0	978755.796	26.17	25.83	0.45	26.28	0.68	-5.78	32.06	38.11	-7.23
99	L4 21	35.040	39 10.370	8.3	978757.140	28.76	27.83	0.40	28.22	0.36	-7.70	35.91	41.83	-3.79
100	L5 21	35.180	39 11.140	18.6	978764.756	39.41	37.33	0.39	37.69	0.42	-8.80	46.45	52.30	6.46

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	DBS. GRAV. MGAL	FAG# MGAL	SRGA MGAL	TTC MGAL	CRGA S.D.C.R MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
101	L6 21	35.640	39 12.800	20.8	978766.715	41.58	39.25	0.38	39.60	-11.51	51.07	56.77	10.63
102	L7 21	35.860	39 13.930	31.1	978764.954	42.77	39.29	0.40	39.64	-13.24	52.81	58.41	12.01
103	L8 21	36.160	39 15.240	45.7	978756.319	38.33	33.22	0.43	33.57	-15.41	48.87	54.35	7.70
104	L9 21	36.770	39 16.980	69.1	978748.511	37.12	29.39	0.42	29.72	-18.61	48.14	53.45	6.69
105	M1 21	33.130	39 6.800	0.0	978757.112	28.13	28.13	0.71	28.84	0.21	31.74	38.04	-7.68
106	M2 21	33.200	39 9.000	1.9	978757.445	28.98	28.77	0.48	29.24	0.36	33.85	39.98	-6.65
107	M3 21	33.630	39 9.670	7.2	978753.941	26.67	25.86	0.43	26.28	0.48	32.02	38.08	-8.48
108	M4 21	34.130	39 11.430	21.3	978761.840	38.41	36.02	0.38	36.37	0.67	44.66	50.55	3.69
109	M5 21	34.700	39 13.210	36.8	978765.381	46.15	42.03	0.38	42.36	0.36	53.38	59.10	12.03
110	M6 21	34.840	39 15.650	46.9	978761.360	45.10	39.85	0.40	40.19	0.71	54.67	60.19	12.44
111	M7 21	35.170	39 16.230	72.5	978753.011	44.32	36.20	0.38	36.48	0.74	52.00	57.46	9.76
112	M8 21	35.640	39 17.470	86.7	978747.269	42.47	32.77	0.40	33.05	0.68	50.96	56.29	8.55
113	N1 21	32.030	39 7.130	0.0	978756.796	28.95	28.95	0.73	29.68	0.19	31.94	38.28	-8.46
114	N2 21	32.080	39 8.200	0.0	978757.319	29.42	29.42	0.58	30.00	0.19	32.68	38.94	-8.18
115	N3 21	32.490	39 9.630	6.1	978754.518	28.08	27.40	0.46	27.85	0.36	32.61	38.73	-8.63
116	N4 21	32.790	39 10.800	12.2	978754.884	30.02	28.66	0.41	29.05	0.42	35.46	41.48	-6.08
117	N5 21	33.090	39 11.950	19.5	978766.099	43.18	41.00	0.38	41.35	0.71	49.43	55.34	7.60
118	N6 21	33.340	39 13.050	31.7	978766.678	47.27	43.72	0.38	44.06	0.52	53.70	59.51	11.58
119	N7 21	33.720	39 14.410	44.6	978762.187	46.37	41.38	0.38	41.69	0.77	53.45	59.13	11.04
120	N8 21	33.900	39 15.380	87.3	978753.559	50.74	40.97	0.38	41.22	0.90	54.37	59.97	11.73
121	N9 21	34.110	39 16.370	67.2	978753.721	44.48	36.96	0.38	37.24	0.81	52.03	57.54	9.17
122	O2 21	31.300	39 8.990	0.5	978755.946	29.00	28.94	0.52	29.46	0.18	32.53	38.77	-9.08
123	O3 21	31.290	39 9.820	3.1	978754.685	28.55	28.21	0.46	28.66	0.36	32.71	38.89	-9.22
124	O4 21	31.680	39 10.760	6.5	978754.177	28.69	27.97	0.41	28.37	0.36	33.76	39.84	-8.34
125	O5 21	31.940	39 12.250	14.2	978764.818	41.44	39.86	0.38	40.22	0.36	47.62	53.58	5.12
126	O6 21	32.130	39 13.460	28.7	978768.162	49.07	45.86	0.36	46.18	0.36	55.19	61.04	12.37
127	O7 21	32.470	39 14.560	42.2	978763.389	48.12	43.39	0.37	43.70	0.36	54.53	60.28	11.51
128	O8 21	32.860	39 16.000	74.7	978751.506	45.86	37.51	0.36	37.76	0.36	50.79	56.40	7.50
129	O9 21	32.970	39 17.210	85.7	978745.142	42.78	33.19	0.36	33.43	0.48	48.23	53.74	4.65
130	P3 21	29.970	39 9.970	0.3	978754.131	28.49	28.45	0.46	28.91	0.16	32.12	38.36	-10.39
131	P4 21	30.560	39 11.570	10.0	978754.677	31.42	30.30	0.39	30.68	0.58	36.19	42.28	-6.62
132	P5 21	31.450	39 15.100	38.9	978759.216	43.97	39.62	0.36	39.92	1.40	50.54	56.30	6.99
133	P6 21	31.750	39 16.300	50.9	978750.534	38.69	32.99	0.36	33.28	0.45	45.69	51.34	1.92
134	P7 21	31.980	39 17.430	62.9	978746.535	38.15	31.12	0.37	31.40	0.36	45.53	51.08	1.56
135	P8 21	32.250	39 18.350	82.0	978741.571	38.81	29.63	0.37	29.89	0.36	45.56	51.02	1.45
136	Q2 21	29.320	39 10.680	0.5	978754.731	29.82	29.76	0.42	30.18	0.15	33.67	39.90	-9.26
137	Q3 21	29.640	39 12.270	11.9	978755.893	34.17	32.84	0.37	33.19	0.36	38.81	44.90	-4.49
138	Q4 21	29.870	39 14.370	29.8	978754.279	37.85	34.51	0.35	34.82	0.36	43.17	49.08	-0.64
139	Q5 21	30.010	39 15.170	38.3	978753.537	39.58	35.30	0.34	35.58	0.36	45.06	50.90	1.09
140	Q6 21	30.770	39 16.170	55.3	978748.671	39.19	33.00	0.35	33.27	0.36	44.69	50.41	0.67
141	Q7 21	31.130	39 17.600	64.2	978744.546	37.44	30.26	0.35	30.51	0.36	44.15	49.74	-0.10
142	Q8 21	31.130	39 18.660	82.2	978743.450	41.90	32.70	0.35	32.93	1.10	48.06	53.56	3.58
143	R1 21	27.970	39 9.450	4.9	978751.241	29.07	28.52	0.50	29.01	0.37	30.18	36.57	-12.73
144	R2 21	27.890	39 10.300	4.5	978752.670	30.45	29.95	0.45	30.39	0.36	32.46	38.79	-10.72
145	R3 21	28.350	39 11.780	12.7	978758.007	37.85	36.43	0.40	36.81	0.36	40.92	47.12	-2.56
146	R4 21	28.580	39 13.150	20.8	978756.680	38.79	36.46	0.37	36.80	0.36	42.67	48.75	-1.13
147	R5 21	28.810	39 14.300	29.7	978750.047	34.67	31.35	0.34	31.64	0.36	39.01	44.09	-5.02
148	R6 21	29.040	39 15.660	44.7	978746.687	35.70	30.70	0.34	30.98	0.48	40.24	46.10	-4.06
149	R7 21	29.630	39 16.750	56.0	978748.516	40.42	34.15	0.34	34.41	0.36	45.58	51.32	1.16
150	R8 21	29.770	39 18.050	75.5	978743.624	41.40	32.95	0.34	33.18	0.36	46.17	51.80	1.52

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	OBS. GRAV.	FAGA	SRGA	TTC	CRGA	S.D.C.R	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
151	R9 21	29.970	39 19.030	92.5	978739.007	41.83	31.48	0.35	31.69	0.36	-14.75	46.18	51.72	1.38
152	S1 21	26.100	39 8.770	0.0	978750.176	28.40	28.40	0.53	28.93	0.19	1.00	27.95	34.49	-15.11
153	S2 21	26.830	39 10.810	6.8	978752.913	32.49	31.73	0.43	32.15	0.36	-1.85	34.00	40.36	-9.51
154	S3 21	27.200	39 11.800	5.7	978755.165	34.03	33.39	0.39	33.77	0.36	-3.26	37.02	43.28	-6.69
155	S4 21	27.450	39 13.260	20.0	978760.110	43.13	40.89	0.36	41.22	0.36	-5.17	46.35	52.49	2.32
156	S5 21	27.900	39 14.420	29.0	978749.951	35.29	32.04	0.35	32.35	0.36	-6.93	39.20	45.22	-5.03
157	S6 21	28.120	39 15.610	42.1	978745.568	34.73	30.01	0.35	30.30	0.36	-8.62	38.62	44.74	-5.63
158	S7 21	28.380	39 16.800	58.1	978743.756	37.59	31.09	0.34	31.34	0.36	-10.32	41.51	47.32	-3.15
159	S8 21	28.680	39 18.240	79.4	978743.012	43.11	34.23	0.34	34.45	0.55	-12.49	46.72	52.40	1.84
160	S9 21	28.700	39 19.280	100.3	978739.183	45.71	34.49	0.35	34.70	0.52	-13.93	48.35	53.95	3.29
161	T1 21	25.830	39 9.550	0.6	978749.530	28.22	28.15	0.49	28.64	0.25	0.30	28.36	34.86	-14.96
162	T2 21	25.750	39 10.630	1.9	978751.149	30.32	30.11	0.43	30.54	0.36	-0.84	31.38	37.81	-12.24
163	T3 21	26.050	39 11.710	7.7	978755.051	35.71	34.85	0.40	35.23	0.45	-2.26	37.48	43.81	-6.38
164	T4 21	26.160	39 13.100	13.0	978757.209	39.39	37.93	0.36	38.28	0.36	-3.96	42.20	48.42	-1.98
165	T5 21	26.770	39 14.870	28.9	978750.490	36.95	33.72	0.34	34.02	0.68	-6.57	40.51	46.56	-3.98
166	T6 21	27.180	39 15.850	39.9	978745.369	34.81	30.34	0.34	30.63	0.77	-8.13	38.65	44.60	-5.99
167	T7 21	27.300	39 17.300	78.6	978740.010	41.27	32.48	0.35	32.72	0.36	-10.05	48.38	54.60	-2.36
168	T8 21	27.500	39 18.420	79.5	978740.512	41.85	32.95	0.35	33.19	0.36	-11.74	44.71	50.45	-0.37
169	T9 21	27.870	39 19.560	106.8	978735.993	45.38	33.43	0.36	33.64	0.87	-13.60	46.94	52.56	1.71
170	U0 21	23.440	39 9.670	3.1	978747.340	29.24	28.90	0.49	29.38	0.55	1.80	27.57	34.19	-16.00
171	U1 21	23.930	39 9.070	3.0	978747.917	29.29	28.95	0.52	29.47	0.55	2.11	27.36	34.00	-16.01
172	U3 21	24.280	39 11.800	4.1	978749.264	30.62	30.16	0.40	30.55	0.45	-1.15	31.70	38.12	-12.36
173	U4 21	24.700	39 12.290	4.2	978753.595	33.55	33.08	0.38	33.46	0.36	-2.01	35.46	41.82	-8.68
174	U5 21	25.260	39 13.420	21.4	978754.258	39.95	37.56	0.37	37.90	0.81	-3.77	41.60	47.85	-2.74
175	U6 21	25.700	39 14.900	33.0	978754.416	43.24	39.55	0.35	39.85	1.89	-5.77	45.53	51.64	0.91
176	U7 21	25.840	39 16.410	64.7	978743.228	41.70	34.46	0.37	34.73	0.61	-7.73	42.28	48.27	-2.62
177	U8 21	26.140	39 17.600	55.7	978743.137	37.52	31.29	0.35	31.56	0.61	-9.44	40.85	46.73	-4.24
178	U9 21	26.380	39 18.770	74.4	978738.764	39.67	31.35	0.35	31.59	0.36	-11.20	42.59	48.36	-2.67
179	C10 21	46.640	39 14.260	52.9	978767.205	40.62	34.70	0.56	35.18	0.40	-25.58	60.63	65.58	52.28
180	C11 21	44.380	39 7.680	2.7	978765.469	25.72	25.42	0.34	25.76	0.36	-12.78	38.55	44.14	32.14
181	D10 21	45.440	39 14.750	51.8	978760.867	35.18	29.39	0.61	29.92	0.43	-25.01	54.80	59.78	42.50
182	I5A 21	38.930	39 11.630	30.1	978773.090	47.43	44.06	0.38	44.40	1.10	-13.05	57.38	62.98	22.18
183	I5B 21	39.180	39 12.870	45.2	978767.895	46.64	41.58	0.38	41.90	0.97	-15.04	56.82	62.31	20.91
184	J10 21	38.740	39 16.550	85.7	978744.609	36.31	26.72	0.44	27.04	0.36	-20.11	46.92	52.15	7.57
185	JF1 21	31.310	39 10.550	5.0	978753.580	28.01	27.45	0.43	27.88	0.39	-4.91	32.78	38.90	-9.41
186	JF2 21	31.330	39 10.580	7.6	978753.332	28.55	27.70	0.42	28.11	0.22	-4.97	33.06	39.18	-9.13
187	K10 21	37.660	39 16.770	85.5	978745.224	37.98	28.41	0.42	28.71	0.36	-19.21	47.69	52.96	7.08
188	N10 21	34.300	39 17.790	73.4	978749.562	42.04	33.83	0.39	34.11	0.77	-17.23	51.13	56.52	7.93
189	O10 21	33.390	39 18.020	80.6	978745.101	40.74	31.72	0.36	31.96	0.36	-16.65	48.40	53.82	4.76
190	OF1 21	31.280	39 12.150	11.4	978759.370	35.81	34.53	0.38	34.90	0.42	-6.83	41.70	47.70	-1.04
191	OF2 21	31.500	39 13.470	26.2	978768.390	49.17	46.24	0.36	46.56	0.36	-8.65	55.15	61.04	12.09
192	OF1 21	28.870	39 11.450	12.3	978756.454	35.64	34.27	0.40	34.65	0.64	-4.05	38.67	44.86	-4.61
193	TU1 21	24.650	39 9.970	3.3	978748.330	29.06	28.69	0.47	29.16	0.68	0.59	32.57	35.10	-15.00
194	TU2 21	25.030	39 10.990	4.1	978750.952	31.54	31.08	0.43	31.51	0.45	-0.77	32.28	38.72	-11.51
195	U0 21	26.410	39 19.900	92.1	978735.507	41.85	31.54	0.36	31.77	0.36	-12.73	44.25	49.93	-1.19
196	U1A 21	24.040	39 9.540	4.1	978748.240	29.84	29.38	0.50	29.87	0.19	1.51	28.37	34.44	-12.02
197	U1 21	24.180	39 11.600	1.0	978750.359	30.86	30.75	0.40	31.15	0.61	-0.85	32.00	38.44	-6.13
198	U2 21	24.590	39 13.710	12.0	978752.330	35.81	34.46	0.35	34.80	0.52	-3.57	38.34	44.60	-6.13
199	U3 21	24.960	39 15.340	32.6	978751.734	41.19	37.54	0.35	37.85	1.13	-5.77	43.53	49.65	-1.24
200	U4 21	25.170	39 16.590	68.0	978742.768	42.94	35.33	0.37	35.60	0.61	-7.49	42.90	48.91	-2.09

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	QBS. GRAV. MGAL	FAGA MGAL	SEGA MGAL	TTC MGAL	CRGA MGAL	S.D.CB MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
201	UV5	21 25.440	39 17.780	68.7	978741.461	41.57	33.89	0.36	34.15	0.36	-9.18	43.13	49.03	-2.06
202	UV6	21 25.750	39 18.950	90.0	978736.817	43.19	33.12	0.37	33.36	0.42	-10.93	44.04	49.84	-1.30
203	J001	21 29.360	39 10.400	0.0	978754.142	29.03	29.03	0.43	29.46	0.17	-3.17	32.64	38.88	-10.20
204	J002	21 30.060	39 10.710	0.0	978754.959	29.13	29.13	0.42	29.55	0.17	-4.10	33.66	39.84	-9.05
205	J003	21 29.880	39 9.850	0.0	978754.121	28.48	28.48	0.46	28.94	0.18	-3.00	31.95	38.21	-10.54
206	J004	21 31.340	39 9.100	0.0	978756.021	28.88	28.88	0.51	29.39	0.18	-3.22	32.63	38.86	-9.00
207	J005	21 31.080	39 9.230	0.0	978754.886	28.01	28.01	0.50	28.51	0.18	-3.16	31.69	37.93	-10.11
208	J006	21 31.660	39 9.850	0.0	978754.717	27.25	27.25	0.45	27.70	0.17	-4.35	32.06	38.22	-9.70
209	J007	21 31.330	39 9.860	3.0	978754.824	28.62	28.62	0.46	28.74	0.36	-4.14	32.88	39.05	-9.05
210	J008	21 31.670	39 10.730	5.0	978754.241	28.30	27.75	0.41	28.15	0.36	-5.36	33.50	39.59	-8.59
211	J009	21 39.630	39 6.060	0.0	978763.048	27.38	27.38	0.39	27.77	0.17	-7.34	35.12	41.11	11.67
212	J010	21 42.510	39 5.380	0.0	978768.229	29.58	29.58	0.35	29.93	0.17	-8.99	38.93	44.80	30.97
213	J012	21 43.410	39 6.970	0.0	978765.982	26.41	26.41	0.33	26.74	0.16	-11.88	38.63	44.33	30.94
214	J011	21 43.140	39 5.970	0.0	978768.266	28.97	28.97	0.33	29.30	0.16	-10.33	39.65	45.44	32.46
215	AF001	17 43.450	42 13.090	62.0	978505.996	14.59	7.65	0.27	7.83	1.02	-45.33	53.00	57.72	13.16
216	AF002	16 55.010	42 33.400	3.0	978469.561	1.32	0.99	0.09	0.89	0.20	-23.04	23.93	29.73	17.94
217	AF003	16 53.880	42 24.910	0.0	978454.730	-13.48	-13.49	-0.08	-13.57	0.47	-11.75	-1.80	4.73	-37.21
218	AF004	16 52.350	42 18.960	0.0	978459.182	-7.75	-7.76	-0.03	-7.79	0.45	-4.32	-3.45	3.60	-17.67
219	AF005	16 48.370	42 12.420	0.0	978457.956	-5.66	-5.67	0.00	-5.67	0.47	4.68	-10.33	-2.61	13.34
220	AF006	16 45.300	42 8.870	0.0	978438.577	-22.49	-22.50	0.02	-22.48	0.45	9.80	-32.26	-24.11	-3.97
221	AF007	16 43.580	42 3.400	0.0	978435.426	-24.21	-24.22	0.07	-24.15	0.46	15.24	-39.37	-30.71	-8.40
222	AF008	16 40.620	41 59.530	0.0	978439.293	-17.90	-17.91	0.10	-17.81	0.47	19.01	-36.80	-27.70	-4.39
223	AF009	16 37.990	41 55.790	0.0	978446.819	-8.20	-8.21	0.15	-8.06	0.45	20.71	-28.75	-19.27	4.55
224	AF010	16 34.650	41 51.630	0.0	978449.293	-2.98	-2.99	0.21	-2.78	0.45	21.09	-23.84	-13.98	10.13
225	AF011	16 28.660	41 53.700	0.0	978442.824	-4.54	-4.55	0.22	-4.33	0.45	21.01	-25.31	-15.33	8.79
226	AF012	16 29.380	41 57.460	0.0	978444.800	-3.15	-3.16	0.19	-2.97	0.45	20.91	-23.85	-14.12	9.91
227	AF013	16 31.810	42 3.300	0.0	978440.491	-9.45	-9.46	0.10	-9.36	0.45	19.71	-29.05	-19.78	3.80
228	AF014	16 35.770	42 11.290	0.0	978428.077	-25.11	-25.12	0.02	-25.10	0.48	13.18	-38.26	-29.79	-7.95
229	AF015	16 38.880	42 12.260	0.6	978435.496	-20.07	-20.15	0.08	-20.07	0.48	10.64	-30.69	-22.46	-1.68
230	AF016	16 43.310	42 16.600	0.0	978449.839	-9.58	-9.59	0.00	-9.59	0.45	4.07	-13.64	-5.96	9.66
231	AF017	16 47.750	42 27.920	0.0	978452.663	-10.44	-10.45	-0.08	-10.53	0.47	-10.32	-0.19	6.44	-33.08
232	AF018	16 41.890	42 33.740	0.0	978443.168	-15.07	-15.08	-0.08	-15.16	0.45	-12.34	-2.80	3.69	-37.72
233	AF019	16 35.950	42 22.450	0.0	978424.691	-28.65	-28.66	-0.02	-28.68	0.45	3.32	-31.98	-24.35	-8.96
234	AF020	16 36.960	42 16.320	0.0	978424.816	-29.35	-29.36	0.08	-29.28	0.53	8.26	-37.52	-29.49	-9.88
235	AF021	16 25.300	42 17.080	0.0	978420.059	-24.56	-24.57	0.01	-24.56	0.44	13.80	-38.33	-29.75	-7.48
236	AF022	16 31.070	42 15.470	0.0	978417.817	-31.51	-31.52	0.01	-31.51	0.45	12.25	-43.74	-35.34	-13.98
237	AF023	16 29.650	42 18.960	0.0	978420.967	-27.20	-27.21	0.00	-27.21	0.44	10.12	-37.31	-29.10	-8.22
238	AF024	16 25.950	42 24.910	0.0	978419.300	-25.85	-25.86	-0.03	-25.89	0.44	6.75	-32.63	-24.67	-5.20
239	AF025	16 25.650	42 29.750	0.0	978425.896	-19.01	-19.02	-0.05	-19.07	0.44	2.37	-21.42	-13.80	2.22
240	AF026	16 27.500	42 39.910	0.0	978434.523	-11.89	-11.90	-0.10	-12.00	0.45	-9.07	-2.92	3.85	-26.76
241	AF027	16 25.030	42 40.380	0.0	978432.955	-11.44	-11.45	-0.10	-11.55	0.44	-7.98	-3.56	3.30	-20.96
242	AF028	16 25.210	42 46.790	0.0	978449.079	4.53	4.53	-0.09	4.44	0.18	-15.30	19.75	26.12	-14.65
243	AF029	16 59.450	42 26.320	0.0	978473.184	0.29	0.29	-0.08	0.21	0.47	-18.00	18.22	24.34	-22.05
244	AF030	17 2.910	42 18.350	0.0	978466.454	-9.34	-9.35	-0.06	-9.41	0.46	-11.45	2.05	8.61	-33.79
245	AF031	17 8.980	42 14.120	0.0	978480.760	-0.16	-0.17	-0.02	-0.19	0.46	-11.41	11.23	17.79	-25.09
246	AF032	17 6.140	42 4.140	0.0	978475.528	-2.99	-3.00	0.01	-2.99	0.46	0.82	-3.79	3.64	9.76
247	AF033	17 5.190	41 55.460	3.0	978464.368	-12.42	-12.76	0.16	-12.61	0.60	9.37	-21.97	-13.85	5.27
248	AF034	17 0.020	41 51.140	0.0	978452.068	-21.29	-21.30	0.09	-21.21	0.45	15.73	-36.92	-28.20	-5.99
249	AF035	16 58.580	41 58.400	0.0	978457.518	-14.63	-14.64	0.08	-14.56	0.46	10.79	-25.32	-17.08	3.16
250	AF036	16 59.290	42 2.060	4.3	978459.258	-12.16	-12.65	0.03	-12.63	0.54	7.16	-19.78	-11.84	5.89

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SROA MGAL	TTC MGAL	CRGA S.D.CB MGAL	IS.CRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
251	AF037	16 53.950	42 18.530	1.8	978463.032	-4.68	-4.89	0.01	-4.89	0.53	0.16	7.16	-18.87
252	AF038	16 26.970	42 56.770	58.7	978458.143	30.28	23.71	0.03	23.65	0.52	53.86	59.32	14.91
253	AF039	16 32.950	42 49.870	23.1	978457.606	13.85	11.27	-0.04	11.20	0.52	36.70	42.39	-4.16
254	AF040	16 33.760	42 43.140	0.0	978455.502	3.95	1.25	-0.09	3.86	0.20	21.13	27.33	-16.87
255	AF041	16 38.370	42 53.110	39.5	978462.073	18.93	14.51	0.03	14.48	0.52	50.58	55.70	8.05
256	AF042	16 40.350	42 43.190	0.0	978458.177	1.20	1.20	-0.08	1.12	0.18	23.92	29.74	-17.21
257	AF043	16 44.420	42 41.540	0.6	978461.819	1.66	1.59	-0.08	1.51	0.18	25.66	31.39	-16.10
258	AF044	16 46.660	42 49.560	34.7	978462.266	10.78	6.89	0.03	6.87	0.52	46.29	51.24	3.03
259	AF045	16 53.610	42 48.800	44.7	978472.882	18.69	13.69	0.07	13.69	0.52	60.82	65.44	17.58
260	AF046	16 47.910	42 38.790	0.0	978466.259	3.02	3.02	-0.09	2.93	0.18	26.53	32.31	-15.26
261	AF047	16 51.170	42 33.910	0.0	978466.118	0.16	0.16	-0.10	0.06	0.18	20.21	26.18	-20.68
262	AF048	16 56.320	42 32.810	0.0	978472.237	1.97	1.97	-0.09	1.88	0.23	23.48	29.37	-16.55
263	AF049	17 0.890	42 31.320	0.0	978479.807	5.71	5.71	-0.10	5.61	0.18	31.53	37.17	-11.05
264	AF050	17 2.800	42 27.320	0.0	978479.628	3.92	3.92	-0.10	3.82	0.18	26.07	31.92	-15.78
265	AF051	17 4.730	42 21.840	0.0	978480.242	2.91	2.91	0.00	2.91	0.18	16.95	26.05	-20.15
266	AF052	17 9.240	42 24.520	0.0	978482.190	1.04	1.04	-0.09	0.95	0.18	24.41	25.37	-17.11
267	AF053	17 12.220	42 20.660	0.0	978474.195	-9.47	-9.48	-0.09	-9.57	0.20	12.43	12.43	-16.75
268	AF054	17 14.440	42 19.670	0.0	978488.362	2.80	2.80	-0.05	2.75	0.22	22.71	23.46	-6.66
269	AF055	17 19.890	42 18.680	0.0	978499.866	9.65	9.65	-0.07	9.58	0.18	36.26	41.85	4.71
270	AF056	17 7.120	42 38.200	38.4	978475.071	7.57	3.28	0.31	3.53	0.17	44.69	48.13	16.92
271	AF057	17 5.320	42 43.850	64.5	978471.018	13.10	5.88	0.08	5.87	0.37	53.89	59.58	31.88
272	AF058	17 2.120	42 47.180	66.7	978479.994	25.45	17.99	0.12	18.01	0.37	56.42	74.25	88.72
273	AF059	16 57.830	42 49.810	63.9	978487.765	35.96	28.81	0.16	28.88	0.16	55.72	84.42	82.91
274	AF060	17 22.470	42 32.500	77.8	978500.425	32.03	23.32	0.25	23.46	0.16	55.33	78.58	36.67
275	AF061	17 18.890	42 35.310	59.2	978491.367	20.29	13.66	0.33	13.91	0.17	55.98	69.74	27.77
276	AF062	17 14.640	42 37.230	48.1	978479.734	8.85	3.47	0.05	3.45	0.15	53.64	61.34	14.46
277	AF063	17 1.880	42 37.870	25.1	978478.200	11.02	8.21	-0.04	8.13	0.15	37.24	45.31	1.76
278	AF064	16 56.090	42 40.710	26.2	978473.750	11.77	8.84	0.00	8.80	0.40	43.85	48.99	0.43
279	AF065	16 58.640	42 45.680	52.3	978479.508	23.45	17.59	0.06	17.58	0.40	65.38	69.98	22.15
280	AF066	17 24.160	42 37.120	115.5	978465.587	7.38	-5.55	0.25	-5.46	0.38	62.59	66.42	24.99
281	AF067	17 28.400	42 38.820	154.6	978414.633	-35.14	-52.45	0.46	-52.21	0.53	25.56	28.99	0.60
282	AF068	17 27.640	42 33.920	109.6	978478.091	15.07	2.81	0.23	2.88	0.37	69.27	73.17	31.35
283	AF069	17 26.420	42 30.130	94.1	978503.855	37.10	26.57	0.12	26.55	0.16	56.30	82.59	41.10
284	AF070	17 24.810	42 27.980	64.3	978513.981	39.41	32.21	0.06	32.18	0.62	49.11	81.11	85.67
285	AF071	17 13.460	42 42.260	73.9	978464.687	2.77	-5.50	0.16	-5.44	0.37	63.08	57.44	16.75
286	AF072	17 16.330	42 45.840	108.2	978434.896	-18.86	-30.98	0.36	-30.77	0.41	75.30	44.24	47.78
287	AF073	17 19.350	42 49.170	163.8	978396.122	-43.05	-61.39	0.75	-60.87	0.52	85.44	24.13	27.19
288	AF074	17 25.960	42 52.310	327.7	978505.382	-43.86	-80.53	2.48	-78.50	0.67	95.84	16.45	18.78
289	AF075	17 3.990	42 56.020	186.1	978441.011	21.75	0.93	0.60	1.27	0.38	78.61	79.35	45.59
290	AF076	17 0.760	42 54.660	131.8	978470.838	37.54	22.79	0.44	23.04	0.18	71.24	93.91	55.12
291	AF077	17 1.590	42 58.950	175.2	978413.854	-6.74	-26.35	0.81	-25.79	0.54	81.12	54.85	23.24
292	AF078	16 57.630	43 1.310	228.4	978386.905	-13.93	-39.50	1.07	-38.75	0.56	80.55	41.18	44.49
293	AF079	16 53.180	42 51.890	54.1	978475.969	25.04	18.98	0.17	19.07	0.52	53.28	72.21	29.44
294	AF080	16 48.430	42 53.710	69.5	978459.069	16.85	9.07	0.19	9.16	0.52	50.35	59.32	63.83
295	AF081	16 43.420	42 57.310	89.3	978455.212	23.27	13.27	0.26	13.41	0.55	51.07	64.23	21.71
296	AF082	16 36.280	42 56.850	83.8	978468.544	40.80	31.42	0.14	31.44	0.53	40.66	71.87	29.84
297	AF083	16 31.790	42 52.290	56.3	978458.591	26.04	19.74	0.00	19.66	0.52	28.08	47.58	53.14
298	AF084	16 25.000	42 50.250	39.9	978448.225	16.16	11.70	-0.04	11.60	0.52	-19.43	30.91	-6.11
299	AF085	16 29.480	42 48.450	37.7	978453.964	17.56	13.35	-0.04	13.25	0.79	20.69	33.83	-5.03
300	AF086	16 35.770	42 46.610	30.1	978458.177	14.27	10.90	-0.04	10.82	0.79	23.46	40.00	-6.64



SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	DES.	GRAV.	FAGA	SRGA	TTC	CRGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	M		MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
301	AF087	17	2.940	43	4.860	223.5	978348.424	-58.39	-83.41	2.62	-81.10	0.74	-92.18	10.50	5.54
302	AF088	17	16.220	42	41.530	80.9	978462.751	0.65	-8.40	0.18	-8.34	0.37	-65.79	57.23	17.58
303	AF089	17	18.820	42	46.160	135.0	978414.927	-32.68	-47.80	0.49	-47.50	0.43	-79.39	31.52	3.40
304	AF090	17	22.080	42	49.430	243.8	978369.236	-47.57	-74.86	1.02	-74.18	0.56	-88.78	13.93	6.72
305	AF091	17	7.130	42	48.480	89.6	978476.913	25.21	15.19	0.25	15.31	0.53	-67.24	82.29	42.44
306	AF092	17	8.860	42	52.800	131.4	978445.484	5.22	-9.48	0.52	-9.14	0.69	-78.85	69.33	36.92
307	AF093	16	43.120	42	47.500	24.2	978459.552	7.76	5.05	-0.02	4.99	0.42	-31.90	36.83	
308	AF094	16	43.440	42	52.120	49.9	978456.736	12.61	7.03	0.06	7.01	0.55	-40.39	47.27	4.20
309	AF095	16	47.870	42	44.900	8.0	978468.239	7.50	6.60	-0.04	6.55	0.42	-32.75	39.28	-3.79
310	AF096	16	52.870	42	42.620	26.0	978473.097	13.75	10.84	-0.03	10.77	0.37	-34.58	45.29	1.92
311	AF097	17	11.040	42	30.230	10.0	978483.610	4.02	2.90	-0.05	2.84	0.53	-35.13	37.94	-5.61
312	AF098	17	15.760	42	25.940	26.9	978500.705	22.32	19.31	-0.05	19.22	0.56	-33.38	52.53	9.06
313	AF099	17	21.200	42	24.980	34.7	978505.212	24.59	20.71	-0.01	20.65	0.52	-38.29	58.85	15.38
314	AF100	17	25.890	42	23.930	29.1	978511.260	24.89	21.63	0.04	21.63	0.52	-42.47	64.03	20.80
315	AF101	17	7.240	42	31.310	5.0	978481.386	3.47	2.92	-0.08	2.83	0.52	-32.51	35.33	-8.08
316	AF102	17	0.440	42	40.360	28.6	978477.852	12.96	9.76	-0.03	9.69	0.67	-39.93	49.55	6.01
317	AF103	17	19.740	42	41.160	82.1	978450.945	-13.78	-22.98	0.30	-22.80	0.37	-70.44	47.44	10.32
318	AF104	17	24.070	42	44.140	167.5	978392.525	-49.54	-68.30	0.64	-67.89	0.53	-82.46	14.12	-1.67
319	AF105	17	28.020	42	47.410	394.1	978339.241	-36.27	-80.38	2.10	-78.80	0.80	-91.64	11.75	7.95
320	AF106	17	18.980	42	53.860	222.5	978368.330	-52.40	-77.31	1.43	-76.19	0.74	-92.01	15.22	11.17
321	AF107	17	12.360	42	58.580	229.0	978372.157	-40.93	-66.56	1.15	-65.73	1.03	-92.15	25.79	28.42
322	AF108	17	12.030	42	48.750	116.0	978449.840	2.14	-10.84	0.36	-10.65	1.01	-75.12	64.15	28.91
323	AF109	17	11.710	42	51.460	149.0	978432.197	-5.04	-21.72	0.49	-21.44	1.01	-80.03	58.17	28.22
324	AF110	17	11.920	42	53.920	182.0	978404.144	-23.08	-43.45	0.65	-43.06	1.01	-84.71	41.15	24.21
325	AF111	17	8.620	43	1.410	242.0	978355.647	-50.26	-77.34	1.41	-76.27	1.04	-92.54	15.61	18.21
326	AF112	17	7.220	43	7.060	322.0	978300.743	-79.28	-115.32	3.77	-111.98	1.26	-97.93	-14.88	-12.73
327	AF113	17	2.890	43	2.400	204.0	978366.570	-46.22	-69.06	1.44	-67.90	1.04	-88.55	20.10	22.98
328	AF114	16	45.440	43	6.840	145.6	978373.901	-42.33	-58.63	1.10	-57.74	0.71	-75.73	17.61	-19.77
329	AF115	16	48.910	43	11.030	216.6	978324.356	-42.84	-97.09	2.59	-94.80	1.13	-82.86	-7.48	-32.78
330	AF116	17	1.400	43	8.620	1448.6	978062.019	34.58	-127.52	28.71	-100.19	5.83	-94.19	-9.51	-8.39
331	AF117	16	41.410	43	5.000	122.6	978420.957	0.95	-12.76	0.62	-12.32	1.01	-65.65	52.99	13.18
332	AF118	16	37.630	43	2.710	84.6	978464.314	35.70	26.23	0.35	26.46	1.01	-54.75	80.99	40.27
333	AF119	17	27.560	42	57.410	834.5	978236.871	-2.32	-95.71	7.57	-89.11	1.60	-100.82	9.45	15.66
334	AF120	17	31.190	43	1.000	1082.5	978169.316	3.52	-117.61	9.66	-109.12	2.00	-104.20	-7.86	9.13
335	AF121	17	32.760	43	5.260	1006.1	978174.475	-16.24	-128.83	9.85	-120.10	2.04	-106.61	-16.18	-15.63
336	AF122	17	34.840	43	9.500	1189.9	978148.352	12.54	-120.60	6.05	-115.80	1.39	-108.11	-11.04	-11.07
337	AF123	17	35.800	43	14.130	1419.5	978106.976	41.18	-117.66	3.73	-115.30	1.01	-109.02	-10.36	21.54
338	AF124	17	37.060	43	18.890	1511.0	978067.887	29.23	-139.85	4.97	-136.29	1.20	-109.73	-30.87	32.04
339	AF125	17	37.740	43	22.700	1738.0	978010.928	41.71	-152.77	4.11	-150.14	1.30	-109.94	-45.20	-46.86
340	AF126	17	38.300	43	25.990	2367.6	977895.227	119.72	-145.21	6.64	-140.06	1.66	-109.63	-37.22	-39.32
341	AF128	17	40.470	43	29.550	2205.5	977945.960	118.57	-128.22	2.68	-127.05	1.28	-110.13	-23.34	-26.04
342	AF129	16	58.400	41	47.040	0.0	978451.245	-20.75	-20.76	0.13	-20.63	0.46	18.89	-39.49	-7.24
343	AF130	17	2.840	41	44.640	0.0	978460.080	-15.65	-15.66	0.14	-15.52	0.46	18.43	-33.93	-24.88
344	AF131	17	1.170	41	33.080	0.0	978467.208	-7.12	-7.13	0.27	-6.86	0.46	20.83	-27.66	-17.80
345	AF132	16	59.630	41	39.250	0.0	978464.728	-8.30	-8.31	0.21	-8.10	0.46	20.58	-28.65	-19.09
346	AF133	16	53.960	41	43.930	0.0	978460.844	-7.43	-7.44	0.18	-7.26	0.47	20.66	-27.89	-18.37
347	AF134	16	51.510	41	52.060	0.0	978448.984	-17.25	-17.26	0.12	-17.14	0.45	18.84	-35.96	-26.87
348	AF135	16	47.490	41	56.730	-0.2	978442.952	-19.99	-19.99	0.09	-19.89	0.45	17.92	-37.79	-28.84
349	AF136	16	49.880	42	0.000	0.0	978445.384	-19.49	-19.50	0.08	-19.42	0.45	14.52	-33.92	-25.34
350	AF137	16	44.930	41	51.120	0.0	978452.470	-8.29	-8.30	0.16	-8.14	0.45	20.66	-28.78	-19.31

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	GRV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CEGA MGAL	S.D.C.R. MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
351	AF138	16 47.470	41 44.640	0.0	978458.993	-3.87	-3.88	0.21	-3.67	0.45	21.04	-24.68	-14.93	9.09
352	AF139	16 51.460	41 35.420	0.0	978470.147	3.95	3.95	0.31	4.26	0.46	20.85	-16.57	-6.45	17.64
353	AF140	16 55.490	41 25.050	0.0	978474.581	5.01	5.01	0.43	5.44	0.46	20.33	-14.87	-4.26	19.47
354	AF141	16 51.760	41 30.240	0.0	978472.004	5.55	5.55	0.39	5.94	0.46	20.48	-14.52	-4.08	19.85
355	AF142	16 47.930	41 33.550	0.0	978466.896	3.64	3.64	0.37	4.01	0.46	20.60	-16.58	-6.18	17.81
356	AF143	16 39.940	41 35.230	0.0	978458.864	2.23	2.23	0.46	2.69	0.46	20.43	-17.72	-7.06	16.70
357	AF144	16 41.270	41 49.250	0.0	978451.850	-5.88	-5.89	0.20	-5.69	0.45	21.11	-26.77	-17.04	6.99
358	AF145	16 42.600	41 55.610	0.0	978445.188	-13.64	-13.65	0.13	-13.52	0.45	20.02	-33.51	-24.23	-0.67
359	BA	1 20 18.170	43 3.750	1099.5	978310.270	-4.15	-127.19	0.21	-128.16	0.71	-105.65	-25.74	-39.19	-8.29
360	BA	2 20 15.420	43 8.000	1087.1	978331.180	15.61	106.03	0.26	106.94	0.71	-105.61	-4.53	-18.33	14.54
361	BA	3 20 12.830	43 13.080	1099.5	978319.870	10.66	112.37	0.16	113.40	0.71	-105.61	-11.02	-25.31	8.43
362	BA	4 20 10.580	43 17.170	1056.7	978325.150	4.92	113.32	0.19	114.28	0.55	-105.66	-11.73	-26.41	7.49
363	BA	5 20 8.420	43 22.080	1033.3	978349.570	24.22	-91.40	0.08	-92.46	0.39	-105.63	10.12	-5.08	28.34
364	BA	6 20 5.670	43 27.500	998.1	978340.810	7.27	-104.41	0.02	-105.50	0.21	-105.73	-2.71	-18.43	14.03
365	BA	7 20 4.080	43 32.580	958.2	978345.930	1.62	-105.60	0.00	-106.68	0.30	-105.57	-3.93	-20.23	10.28
366	BA	8 20 2.420	43 36.670	932.5	978344.600	-6.02	-110.38	-0.05	-111.48	0.13	-105.49	-8.73	-25.45	3.07
367	BA	9 20 0.170	43 41.330	938.5	978350.040	3.44	-101.58	-0.06	-102.70	0.39	-105.42	-0.04	-17.21	8.45
368	BA	10 20 3.580	43 43.580	920.6	978365.920	10.49	-92.52	-0.07	-93.64	0.24	-104.66	8.30	-9.56	6.24
369	BA	11 20 7.500	43 38.420	935.4	978362.020	7.36	-97.31	-0.06	-98.43	0.13	-104.49	3.30	-14.19	6.55
370	BA	12 20 10.170	43 34.670	927.2	978369.100	9.31	-94.44	-0.05	-95.54	0.71	-104.56	6.27	-10.94	12.62
371	BA	13 20 13.080	43 30.920	956.4	978370.420	16.81	-90.21	-0.02	-91.31	0.39	-104.57	10.44	-6.52	18.74
372	BA	14 20 15.080	43 25.920	956.6	978367.560	12.06	-94.98	0.14	-95.92	0.21	-104.70	5.96	-10.48	17.80
373	BA	15 20 17.330	43 19.920	998.7	978354.630	9.92	-101.83	0.28	-102.66	0.24	-104.92	-0.68	-16.48	13.97
374	BA	16 20 20.500	43 13.920	1040.8	978336.530	1.71	-114.76	0.23	-115.67	0.22	-105.07	-13.65	-28.89	2.04
375	BA	17 20 22.500	43 9.330	1046.1	978351.140	15.99	-101.07	0.22	-101.99	1.26	-105.33	0.25	-14.50	16.04
376	BA	55 20 23.500	42 55.080	1047.3	978352.730	16.57	-100.62	0.41	-101.36	0.25	-105.82	1.38	-11.37	6.62
377	BA	56 20 25.670	42 50.330	1063.8	978357.580	24.78	-94.26	0.46	-94.96	0.23	-105.86	7.77	-4.54	9.07
378	BA	57 20 27.830	42 45.250	1098.1	978355.720	31.38	-91.50	0.40	-92.28	0.55	-105.73	10.23	-1.59	9.40
379	BA	58 20 30.500	42 38.920	1080.5	978370.080	37.67	-83.23	0.91	-83.49	0.30	-105.53	18.87	7.65	16.70
380	BA	59 20 32.670	42 34.580	1119.9	978364.470	42.08	-83.24	0.55	-83.88	0.56	-105.34	18.16	7.33	15.48
381	BA	60 20 35.080	42 30.330	1148.3	978359.730	43.32	-85.18	0.53	-85.86	0.40	-105.14	15.91	5.43	12.91
382	BA	61 20 37.420	42 25.670	1090.9	978375.610	39.57	-82.50	0.84	-82.84	0.29	-104.83	18.79	8.72	15.70
383	BA	62 20 40.580	42 19.080	1135.1	978341.150	15.61	-111.41	0.45	-112.16	0.40	-104.15	-11.35	-20.84	-14.36
384	BA	63 20 45.080	42 22.170	1107.7	978368.290	29.82	-94.13	0.54	-94.78	0.24	-104.55	6.51	-3.83	2.57
385	BA	64 20 42.330	42 26.580	1082.1	978385.310	41.68	-79.41	0.90	-79.68	0.73	-104.95	22.11	11.44	18.18
386	BA	65 20 40.080	42 32.670	1079.1	978385.800	43.48	-77.27	0.88	-77.56	0.43	-105.38	24.67	13.38	20.66
387	BA	66 20 37.500	42 37.580	1054.6	978376.730	29.01	-89.00	0.73	-89.42	0.26	-105.70	13.19	1.48	9.48
388	BA	67 20 35.500	42 42.080	1072.3	978372.410	32.53	-87.46	0.58	-88.04	0.88	-105.75	14.56	2.43	11.34
389	BA	68 20 33.080	42 47.000	1085.5	978364.900	31.49	-89.98	0.57	-90.58	0.18	-105.79	12.03	-0.53	9.93
390	BA	69 20 30.170	42 52.670	1044.0	978354.650	11.31	-105.52	0.57	-106.09	0.56	-105.87	-3.27	-16.33	-2.73
391	BA	70 20 28.080	42 57.500	1019.2	978351.530	2.59	-111.45	0.50	-112.08	0.40	-105.84	-9.23	-22.78	-3.76
392	BA	71 20 22.580	42 56.000	1092.2	978340.950	19.95	-102.27	0.28	-103.17	0.24	-105.84	-0.53	-13.32	6.25
393	BA	72 20 21.670	42 56.580	1062.9	978348.980	19.83	-99.11	0.50	-99.76	0.26	-105.79	2.90	-9.88	11.10
394	BA	73 20 32.000	43 0.080	1003.5	978354.900	-2.74	-115.04	0.43	-115.72	0.16	-105.72	-12.94	-27.29	-5.14
395	BA	74 20 35.080	42 55.500	1011.8	978372.080	13.95	-99.27	0.42	-99.97	0.40	-105.79	2.84	-11.15	2.80
396	BA	75 20 37.670	42 49.500	1032.4	978369.620	15.28	-100.25	0.47	-100.91	0.16	-105.91	1.96	-11.40	-1.09
397	BA	76 20 39.830	42 44.580	1034.0	978372.100	16.11	-99.59	0.76	-99.97	0.26	-105.79	2.78	-10.10	-1.37
398	BA	77 20 42.330	42 39.500	1014.3	978387.650	23.09	-90.40	0.76	-90.76	0.26	-105.73	11.99	-0.44	7.26
399	BA	78 20 45.170	42 35.000	1044.3	978381.890	23.76	-93.09	0.72	-93.51	0.56	-105.57	8.98	-3.11	3.94
400	BA	79 20 47.420	42 30.330	1037.1	978385.560	22.97	-93.08	0.61	-93.61	0.27	-105.46	8.81	-2.87	3.76

SEQ #	IDENT.	LATITUDE		LONGITUDE		ALT.	OBS. GRAV.	FAGA	SEGA	TTC	CRGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	D	MIN	H	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
401	BA	80	20	49.830	42	24.830	1060.2	978390.070	32.20	-86.43	0.51	-87.08	0.17	-104.99	14.80	9.92
402	BA	81	20	54.670	42	27.170	1034.5	978395.650	25.20	-90.55	0.53	-91.16	0.17	-105.24	11.04	5.23
403	BA	82	20	53.080	42	31.420	1018.3	978387.030	12.98	-100.97	0.48	-101.61	0.23	-105.53	0.92	-5.11
404	BA	83	20	50.670	42	35.580	1018.3	978376.190	4.55	-109.39	0.50	-110.02	0.24	-105.63	-7.38	-13.43
405	BA	84	20	48.670	42	39.920	1033.3	978380.610	15.60	-100.03	0.36	-100.80	0.15	-105.70	1.86	-4.17
406	BA	85	20	45.420	42	46.830	1011.6	978373.170	4.71	-108.49	0.48	-109.13	0.16	-105.69	-6.40	-11.94
407	BA	86	20	42.670	42	51.500	1019.8	978368.370	5.17	-108.94	0.37	-109.70	0.15	-105.67	-7.02	-11.38
408	BA	87	20	40.670	42	56.670	1022.9	978376.200	15.95	-98.51	0.26	-99.38	0.36	-105.51	3.12	1.17
409	BA	88	20	40.580	42	56.920	980.3	978383.820	10.51	-99.18	0.41	-99.87	0.37	-105.56	2.81	1.04
410	BA	89	20	40.830	42	56.500	984.5	978381.810	9.55	-100.61	0.38	-101.33	0.39	-105.58	1.35	-0.77
411	BA	90	20	37.670	43	2.080	990.1	978354.860	-12.53	-123.33	0.25	-124.18	0.22	-105.37	-21.71	-15.37
412	BA	91	20	47.000	43	11.170	1045.8	978388.170	28.68	-88.34	0.07	-89.41	0.13	-104.00	11.49	4.79
413	BA	92	20	42.330	43	14.330	959.4	978412.820	31.32	-76.03	0.10	-77.01	0.55	-103.90	24.05	17.41
414	BA	93	20	42.080	43	5.580	973.7	978372.170	-4.65	-113.62	0.07	-114.64	0.21	-104.79	-12.70	-8.03
415	BA	94	20	44.920	43	0.920	956.3	978385.060	0.03	-106.98	0.10	-107.96	0.39	-105.14	-5.62	-6.31
416	BA	95	20	46.670	42	55.670	1037.3	978372.470	10.69	-105.38	0.09	-106.43	0.39	-105.41	-4.07	-9.14
417	BA	96	20	49.000	42	50.580	1003.1	978386.950	12.29	-99.96	0.23	-100.84	0.55	-105.48	1.68	-4.86
418	BA	97	20	51.670	42	44.170	977.0	978386.450	1.07	-108.26	0.37	-108.98	0.15	-105.62	-6.22	-13.26
419	BA	98	20	54.500	42	40.580	974.0	978384.490	-4.64	-113.64	0.49	-114.24	0.17	-105.61	-11.47	-18.78
420	BA	99	20	56.330	42	34.420	1008.9	978380.180	-0.02	-112.92	0.43	-113.61	0.40	-105.54	-11.02	-17.90
421	BA	100	20	47.580	43	7.000	958.2	978404.230	17.13	-90.09	-0.03	-91.20	0.39	-104.46	10.43	10.40
422	BA	101	20	50.080	43	1.170	959.4	978392.830	3.61	-103.75	0.00	-104.83	0.13	-104.93	-2.72	-7.07
423	BA	102	20	53.170	42	55.500	983.2	978397.680	12.71	-97.31	0.00	-98.41	0.13	-105.10	3.79	-4.17
424	BA	103	20	55.000	42	50.830	1020.6	978403.010	27.74	-86.46	0.00	-87.58	0.21	-105.22	14.61	5.98
425	BA	104	20	56.920	42	46.670	991.3	978390.290	4.06	-106.87	0.10	-107.87	0.55	-105.33	-5.46	-14.22
426	BA	105	20	59.170	42	43.500	999.3	978393.840	7.81	-104.01	0.21	-104.91	0.55	-105.35	-2.50	-11.29
427	BA	106	21	1.170	42	39.000	1004.5	978390.690	4.26	-108.15	0.49	-108.77	0.26	-105.40	-6.31	-20.58
428	BA	107	21	3.170	42	31.920	1012.4	978401.080	15.07	-98.22	0.54	-98.80	0.37	-105.38	3.61	-4.01
429	BA	108	20	58.920	42	29.330	1046.2	978390.920	19.62	-97.45	0.43	-98.17	0.23	-105.40	4.15	-2.51
430	BA	109	21	9.500	42	32.080	995.6	978400.160	2.57	-108.84	0.33	-109.61	0.36	-105.15	-7.39	-15.97
431	BA	110	21	8.500	42	38.420	956.2	978422.830	14.09	-92.90	0.21	-93.77	0.14	-105.11	8.52	-1.06
432	BA	111	21	4.000	42	45.330	996.0	978401.010	9.10	-102.35	0.14	-103.32	0.14	-105.06	-1.18	-11.53
433	BA	112	21	0.830	42	50.920	1014.8	978411.450	28.54	-85.02	0.06	-86.08	0.21	-104.99	15.92	4.16
434	BA	113	20	59.170	42	54.170	965.3	978433.260	36.74	-71.27	0.01	-72.35	0.24	-104.95	29.75	18.74
435	BA	114	20	56.500	43	0.330	946.9	978404.620	5.11	-100.85	-0.04	-101.96	0.39	-104.70	-0.04	-9.36
436	BA	115	20	53.920	43	5.500	941.3	978400.890	2.24	-103.09	-0.05	-104.21	0.21	-104.34	-2.63	-7.54
437	BA	116	20	52.170	43	11.170	927.7	978417.990	16.89	-86.91	-0.06	-88.03	0.24	-103.90	13.13	-4.94
438	BA	117	20	49.420	43	16.170	928.7	978440.440	42.40	-61.52	-0.05	-62.62	0.21	-103.54	38.17	24.65
439	BA	118	20	46.500	43	21.670	963.1	978409.440	24.93	-82.84	0.00	-83.92	0.13	-103.00	16.23	1.02
440	BA	119	20	43.670	43	26.580	894.7	978406.640	3.84	-96.27	-0.05	-97.35	0.13	-102.55	2.55	-13.80
441	BA	120	20	40.880	43	32.500	859.6	978404.690	-6.15	-102.35	-0.09	-103.44	0.39	-101.93	-4.03	-24.13
442	BA	121	20	39.170	43	36.080	843.2	978416.630	2.42	-91.94	-0.08	-93.00	0.13	-101.41	5.93	-14.53
443	BA	122	20	37.000	43	41.420	834.5	978415.790	1.04	-92.34	-0.10	-93.41	0.24	-100.58	4.70	-16.34
444	BA	123	20	34.330	43	47.170	812.7	978417.740	-1.08	-92.03	-0.11	-93.10	0.21	-99.72	4.23	-17.41
445	BA	124	20	32.330	43	51.170	794.3	978417.630	-4.89	-93.78	-0.13	-94.85	0.24	-99.03	1.84	-20.22
446	BA	125	20	30.920	43	56.580	797.8	978423.000	2.94	-86.33	-0.11	-87.39	0.13	-98.04	8.30	-14.47
447	BA	126	20	34.830	43	59.170	785.5	978435.710	7.99	-79.91	-0.12	-80.96	0.14	-97.95	14.68	-8.93
448	BA	127	20	36.580	43	53.500	790.2	978431.640	3.64	-84.78	-0.12	-85.84	0.24	-98.86	10.68	-12.22
449	BA	128	20	38.420	43	49.670	797.4	978428.500	0.90	-88.33	-0.12	-89.40	3.61	-99.45	7.70	-14.79
450	BA	129	20	41.580	43	43.630	825.2	978433.080	10.92	-81.42	-0.10	-82.49	0.55	-100.33	15.41	-6.50

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	ORS.	GRAV.	FAGA	SEGA	TTC	CRGA	S.D.CB	IS.	GRAV	IGA1	IGA2	IGA3
		D	MIN	D	MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
451	BA	130	20	43.500	43	40.170	838.0	978427.720	7.60	-86.17	-0.10	-87.25	0.136	-100.94	11.22	-9.58
452	BA	131	20	47.330	43	34.580	858.4	978428.960	11.32	-84.74	-0.09	-85.82	0.155	-101.54	13.18	-6.92
453	BA	132	20	49.500	43	30.420	875.9	978422.450	8.04	-89.97	-0.08	-91.06	0.21	-102.07	8.42	-11.01
454	BA	133	20	51.920	43	24.170	910.5	978418.550	12.40	-89.49	-0.06	-90.59	0.36	-102.61	9.33	-8.83
455	BA	134	20	54.170	43	17.580	941.5	978441.200	42.36	-62.99	-0.05	-64.11	0.39	-103.18	36.30	17.05
456	BA	135	20	54.420	43	17.920	970.1	978431.680	41.41	-67.14	0.00	-68.23	0.13	-103.12	32.03	15.34
457	BA	136	20	54.580	43	18.080	930.0	978440.970	38.45	-65.72	-0.06	-66.84	0.17	-103.14	33.56	14.19
458	BA	137	20	57.330	43	12.000	907.9	978422.270	9.89	-91.70	-0.04	-92.78	0.36	-103.65	8.19	-10.55
459	BA	138	20	59.500	43	7.000	909.2	978417.320	3.16	-98.58	-0.06	-99.68	0.36	-104.07	1.71	-16.50
460	BA	139	21	2.170	43	2.420	915.4	978427.400	12.46	-89.97	-0.05	-91.06	0.14	-104.38	10.61	-3.64
461	BA	140	21	3.420	42	59.000	935.8	978450.020	40.12	-64.59	-0.04	-65.70	0.15	-104.54	36.08	18.65
462	BA	141	21	5.920	42	54.580	979.6	978435.700	36.79	-72.82	-0.04	-73.96	0.84	-104.63	27.77	10.73
463	BA	142	21	10.080	42	50.080	956.2	978425.650	15.31	-91.68	-0.05	-92.81	0.17	-104.67	9.04	-4.76
464	BA	143	21	11.170	42	43.330	937.9	978425.620	8.53	-96.42	0.00	-97.48	0.77	-104.85	4.60	-11.37
465	BA	144	21	13.500	42	38.500	966.5	978422.100	11.48	-96.67	0.02	-97.74	0.19	-104.92	4.33	-11.18
466	BA	145	21	17.670	42	40.330	974.3	978422.440	9.98	-99.04	-0.05	-100.18	0.74	-104.62	1.56	-14.63
467	BA	146	21	17.330	42	42.830	1276.8	978349.030	30.26	-112.61	1.16	-112.75	1.58	-104.43	-12.05	-28.57
468	BA	147	21	17.580	42	42.080	994.8	978419.600	13.56	-97.75	-0.05	-98.91	0.71	-104.60	2.75	-13.69
469	BA	148	21	17.080	42	43.580	1091.0	978389.930	14.08	-108.00	0.14	-109.03	0.24	-104.49	-7.75	-24.35
470	BA	149	21	15.580	42	45.830	955.4	978429.380	13.22	-93.69	-0.08	-94.85	0.24	-104.63	6.96	-9.81
471	BA	150	21	13.170	42	51.000	915.8	978445.160	19.23	-83.25	-0.06	-84.36	0.68	-104.57	17.51	0.25
472	BA	151	21	11.420	42	55.330	915.8	978451.630	27.47	-75.01	-0.07	-76.12	0.68	-104.42	25.59	7.87
473	BA	152	21	8.420	43	0.830	947.2	978442.390	30.96	-75.03	-0.07	-76.17	0.64	-104.30	25.34	7.11
474	BA	153	21	5.080	43	5.500	895.6	978420.830	-3.14	-103.37	-0.05	-104.44	0.17	-104.06	-3.01	-21.59
475	BA	154	21	2.580	43	13.790	893.6	978431.060	8.98	-91.01	-0.07	-92.10	0.42	-103.38	8.63	-10.94
476	BA	155	20	59.170	43	18.420	878.4	978430.520	7.19	-91.11	-0.07	-92.19	0.21	-103.07	8.29	-11.61
477	BA	156	20	2.670	43	21.670	862.1	978444.510	12.62	-83.84	-0.08	-84.92	0.74	-102.71	15.23	-5.53
478	BA	157	21	2.920	43	22.330	868.2	978424.720	25.32	-83.02	0.03	-84.07	0.14	-102.58	15.65	-5.24
479	BA	158	21	3.080	43	22.830	888.9	978444.500	20.47	-79.00	-0.07	-80.09	0.58	-102.57	19.85	-1.13
480	BA	159	20	58.500	43	21.830	896.5	978435.830	18.75	-81.57	-0.07	-82.67	0.48	-102.80	17.48	-2.87
481	BA	160	20	56.170	43	26.670	859.4	978427.020	0.84	-95.33	-0.09	-96.42	0.94	-102.36	3.41	-17.42
482	BA	161	20	53.080	43	32.830	846.8	978439.610	12.64	-82.12	-0.10	-83.21	0.77	-101.78	16.08	-5.36
483	BA	162	20	50.670	43	37.420	836.0	978440.460	12.57	-80.98	-0.10	-82.06	0.87	-101.22	16.70	-5.19
484	BA	163	20	48.670	43	41.830	799.7	978448.630	11.53	-77.95	-0.13	-79.03	0.24	-100.78	19.39	-2.98
485	BA	164	20	46.330	43	47.000	777.1	978444.830	3.09	-83.86	-0.14	-84.93	0.14	-100.16	12.93	-10.01
486	BA	165	20	43.500	43	53.330	764.4	978447.260	4.42	-81.11	-0.15	-82.17	0.21	-99.28	14.85	-8.78
487	BA	166	20	42.170	43	56.330	757.1	978451.800	8.03	-76.68	-0.15	-77.74	0.27	-98.81	18.83	-5.13
488	BA	167	20	40.080	44	0.000	749.4	978452.700	8.63	-75.22	-0.15	-76.27	0.84	-98.15	19.66	-4.64
489	BA	168	20	44.580	44	3.330	735.0	978459.840	6.85	-75.39	-0.13	-76.41	0.17	-98.68	20.09	-5.18
490	BA	169	20	47.080	43	58.080	745.3	978458.980	6.68	-76.72	-0.15	-77.76	0.97	-98.98	19.00	-5.50
491	BA	170	20	49.170	43	54.000	774.0	978456.630	11.10	-75.51	-0.13	-76.56	0.19	-99.49	20.64	-3.69
492	BA	171	20	51.500	43	50.330	774.0	978453.100	5.24	-81.37	-0.14	-82.43	1.46	-100.04	15.32	-8.71
493	BA	172	20	54.000	43	45.000	783.1	978455.600	8.05	-79.58	-0.14	-80.65	0.21	-100.65	17.69	-5.78
494	BA	173	20	56.080	43	39.670	834.8	978446.740	13.06	-80.36	-0.10	-81.43	0.14	-101.18	17.29	-5.56
495	BA	174	20	58.670	43	34.670	818.5	978455.410	14.09	-77.49	-0.11	-78.57	0.14	-101.71	20.72	-1.62
496	BA	175	21	1.000	43	30.170	856.5	978442.670	10.83	-85.05	0.45	-85.59	0.87	-101.98	13.88	-8.00
497	BA	176	21	8.420	43	27.080	845.5	978448.720	5.90	-88.71	-0.09	-89.78	0.71	-102.23	9.95	-12.77
498	BA	177	21	6.830	43	32.330	839.6	978455.710	12.68	-81.27	-0.10	-82.35	0.55	-101.82	16.99	-5.88
499	BA	178	21	2.500	43	38.080	841.3	978457.580	19.45	-74.69	-0.09	-75.77	0.39	-101.43	23.18	-0.13
500	BA	179	21	1.000	43	42.330	829.7	978457.010	16.81	-76.04	-0.09	-77.10	0.39	-101.06	21.51	-1.63

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	OBS.	GRAV.	FAGA	SRGA	TTC	CRGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	D	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
501	BA	180	20	58.500	43	47.580	790.5	978462.100	12.31	-76.14	-0.13	-77.21	0.39	-100.68	21.13
502	BA	181	20	56.000	43	52.920	766.2	978469.300	14.53	-71.21	-0.14	-72.26	0.39	-100.09	25.56
503	BA	182	20	53.830	43	57.580	761.3	978469.240	15.13	-70.06	-0.13	-71.10	0.24	-99.53	26.18
504	BA	183	20	52.170	44	2.580	747.0	978475.350	18.49	-65.10	-0.11	-66.11	0.39	-99.24	30.93
505	BA	184	20	49.330	44	7.420	748.7	978476.020	22.52	-61.25	-0.13	-62.28	0.27	-99.24	34.74
506	BA	185	20	54.080	44	10.500	779.8	978463.060	14.41	-72.85	-0.02	-73.80	0.90	-99.52	23.43
507	BA	186	20	56.670	44	5.500	822.4	978452.650	14.55	-77.48	-0.06	-78.50	0.71	-99.66	18.72
508	BA	187	21	0.330	43	58.670	785.7	978465.970	12.86	-75.06	-0.09	-76.08	0.55	-99.97	21.57
509	BA	188	21	1.670	43	54.830	776.4	978477.930	20.60	-66.27	-0.12	-67.32	0.21	-100.34	30.72
510	BA	189	21	5.830	43	45.580	867.0	978461.630	28.07	-68.95	0.01	-69.94	0.71	-100.92	28.42
511	BA	190	21	7.170	43	42.170	815.1	978469.290	18.36	-72.85	-0.11	-73.92	0.71	-101.21	24.88
512	BA	191	21	8.670	43	39.330	823.0	978465.480	15.47	-76.62	-0.11	-77.70	0.87	-101.43	21.30
513	BA	192	21	10.920	43	34.500	826.7	978456.990	5.84	-86.67	-0.11	-87.74	0.39	-101.71	11.52
514	BA	193	21	12.170	43	29.000	841.7	978456.130	8.34	-85.84	-0.09	-86.91	0.36	-102.08	12.67
515	BA	194	21	6.000	43	19.170	867.2	978435.110	1.44	-95.60	-0.07	-96.68	0.15	-102.88	3.65
516	BA	195	21	10.830	43	12.920	881.1	978452.260	20.18	-78.42	-0.04	-79.47	0.33	-103.36	21.29
517	BA	196	21	13.330	43	3.830	892.0	978461.080	27.64	-72.17	-0.03	-73.23	0.33	-103.97	28.11
518	BA	197	21	15.330	42	59.420	896.5	978466.590	32.51	-67.81	-0.04	-68.88	0.39	-104.19	32.67
519	BA	198	21	18.170	42	53.080	914.6	978443.320	11.93	-90.41	-0.08	-91.53	0.14	-104.31	10.07
520	BA	200	21	21.080	42	48.080	1148.8	978392.700	30.62	-97.93	0.52	-98.63	0.40	-104.21	2.21
521	BA	201	21	20.500	42	47.420	955.8	978439.110	18.06	-88.89	-0.08	-90.05	0.39	-104.36	11.48
522	BA	202	21	22.170	42	48.830	1011.6	978419.450	14.12	-99.08	-0.01	-100.21	0.39	-104.29	1.09
523	BA	203	21	23.830	42	42.330	1020.2	978412.450	7.88	-106.28	-0.01	-107.42	0.14	-104.33	-6.08
524	BA	204	21	28.080	42	45.830	944.7	978439.020	6.80	-98.91	-0.09	-100.07	0.24	-104.20	1.34
525	BA	205	21	24.830	42	51.500	944.5	978445.480	16.53	-89.16	-0.09	-90.32	0.42	-104.14	11.03
526	BA	206	21	22.670	42	55.580	912.4	978443.080	6.43	-95.67	-0.09	-96.80	1.00	-104.14	4.65
527	BA	207	21	20.830	43	1.000	883.5	978459.730	16.04	-82.83	-0.06	-83.90	0.30	-103.97	17.47
528	BA	208	21	18.670	43	5.420	882.2	978449.520	7.63	-91.09	-0.01	-92.12	0.30	-103.70	8.99
529	BA	209	21	16.170	43	10.500	861.5	978467.670	21.93	-74.47	0.00	-75.47	0.48	-103.54	25.52
530	BA	210	21	13.080	43	15.000	861.0	978453.930	11.18	-85.17	0.00	-86.17	0.30	-103.15	14.44
531	BA	211	21	10.830	43	22.420	854.5	978457.950	15.47	-80.15	-0.08	-81.22	0.17	-102.57	18.83
532	BA	212	21	16.080	43	23.420	843.6	978458.600	7.43	-86.97	-0.07	-88.02	0.39	-102.49	11.98
533	BA	213	21	18.080	43	19.080	852.6	978473.300	22.87	-72.53	-0.05	-73.57	0.24	-102.77	26.68
534	BA	214	21	21.000	43	13.830	861.0	978463.810	13.00	-83.34	-0.02	-84.36	0.27	-103.11	16.21
535	BA	215	21	23.000	43	8.580	869.9	978470.770	20.67	-76.68	0.00	-77.68	0.19	-103.48	23.23
536	BA	216	21	25.500	43	3.330	873.6	978460.240	8.72	-89.03	-0.04	-90.08	0.14	-103.79	11.12
537	BA	217	21	28.170	42	58.000	898.7	978466.910	20.41	-80.16	-0.08	-81.27	1.69	-103.92	20.00
538	BA	218	21	30.250	42	52.250	911.0	978454.430	9.59	-92.35	-0.09	-93.48	0.19	-103.95	7.78
539	BA	219	21	33.170	42	47.580	924.6	978448.120	4.48	-98.98	-0.09	-100.13	0.17	-103.98	1.12
540	BA	220	21	37.750	42	50.830	897.8	978462.350	5.72	-94.74	-0.08	-95.85	0.15	-103.86	5.36
541	BA	221	21	35.330	42	58.920	885.1	978480.690	22.64	-76.40	-0.07	-77.49	0.19	-103.75	23.65
542	BA	222	21	33.250	43	3.750	870.6	978475.480	16.12	-81.30	-0.04	-82.35	0.30	-103.61	18.70
543	BA	223	21	30.250	43	7.830	865.4	978481.990	23.08	-73.76	0.02	-74.74	0.33	-103.38	26.09
544	BA	224	21	28.830	43	11.920	863.0	978472.980	14.78	-81.79	0.04	-82.75	0.21	-103.19	17.90
545	BA	225	21	25.920	43	16.330	853.2	978471.500	13.26	-82.21	0.01	-83.20	0.14	-102.95	17.23
546	BA	226	21	22.670	43	23.500	838.6	978471.130	11.70	-82.13	-0.04	-83.15	0.33	-102.51	16.88
547	BA	227	21	20.420	43	28.080	841.3	978469.100	12.80	-81.34	-0.08	-82.40	0.15	-102.17	17.28
548	BA	228	21	18.000	43	32.830	833.6	978469.050	12.84	-80.44	-0.10	-81.51	0.51	-101.88	17.91
549	BA	229	21	16.000	43	38.000	816.1	978470.990	11.41	-79.91	-0.11	-80.98	0.19	-101.64	18.25
550	BA														

SEQ #	IDENT.	LATITUDE		LONGITUDE		ALT.	ORS. GRAV.	FAGA	SRGA	TTC	CRGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	D	MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
551	BA	230	21	13.580	43	42.170	814.4	978478.160	20.52	-70.61	-0.11	-71.68	0.14	-101.40	27.31	2.20
552	BA	231	21	10.750	43	47.330	820.1	978478.160	25.15	-66.62	-0.08	-67.66	0.27	-101.02	30.93	5.34
553	BA	232	21	8.080	43	53.170	794.5	978483.540	25.33	-63.57	-0.11	-64.62	0.19	-100.64	33.67	7.47
554	BA	233	21	6.080	43	57.500	788.4	978475.690	17.62	-70.60	-0.09	-71.63	0.15	-100.33	26.37	-0.30
555	BA	234	21	3.080	44	3.580	820.6	978467.060	21.95	-69.87	-0.03	-70.86	0.19	-100.03	26.73	-0.57
556	BA	235	21	0.500	44	7.750	829.9	978459.970	20.33	-72.53	0.00	-73.50	0.30	-99.92	23.96	-3.73
557	BA	236	21	0.330	44	12.500	846.8	978444.060	9.81	-84.95	0.03	-85.90	0.17	-99.97	11.57	-16.85
558	BA	237	21	3.080	44	16.250	887.5	978445.030	20.57	-78.74	0.07	-79.69	0.17	-99.99	17.68	-11.64
559	BA	238	21	5.830	44	9.580	885.8	978445.550	17.79	-81.33	0.04	-82.31	0.17	-100.05	15.13	-13.43
560	BA	239	21	8.250	44	5.750	841.5	978463.540	19.66	-74.50	0.00	-75.48	0.27	-100.21	22.24	-5.98
561	BA	240	21	10.920	44	0.420	814.7	978455.250	0.40	-90.77	-0.05	-91.77	0.27	-100.44	6.26	-21.41
562	BA	241	21	12.670	43	55.330	809.9	978475.430	17.32	-73.30	-0.08	-74.34	0.15	-100.68	23.95	-3.10
563	BA	242	21	15.830	43	52.000	926.0	978455.860	30.37	-73.25	0.16	-74.14	0.52	-100.95	24.08	-2.79
564	BA	243	21	15.420	43	52.170	862.2	978468.700	23.94	-72.54	-0.01	-73.55	0.19	-100.92	24.82	-2.03
565	BA	244	21	16.080	43	51.830	852.1	978471.840	23.29	-72.06	-0.03	-73.08	0.36	-101.01	25.41	-1.46
566	BA	245	21	18.080	43	45.330	843.3	978478.840	25.54	-68.82	-0.06	-69.86	0.33	-101.33	28.97	2.90
567	BA	246	21	22.000	43	39.830	886.3	978469.730	25.71	-73.47	-0.03	-74.52	0.24	-101.64	24.51	-1.13
568	BA	247	21	28.420	43	36.920	898.3	978474.660	27.78	-72.74	-0.03	-73.80	0.15	-101.92	25.47	-0.41
569	BA	248	21	30.330	43	31.170	858.3	978491.690	30.50	-65.54	-0.03	-66.56	0.19	-102.06	32.97	7.76
570	BA	249	21	32.500	43	27.250	847.7	978493.510	26.83	-68.03	0.00	-69.02	0.19	-102.32	30.80	5.95
571	BA	250	21	35.500	43	21.170	845.9	978497.370	27.05	-67.61	0.00	-68.59	0.14	-102.68	31.59	7.33
572	BA	251	21	38.330	43	17.670	848.3	978497.730	25.23	-69.69	0.00	-70.68	0.55	-102.89	29.70	5.67
573	BA	252	21	40.330	43	12.330	842.8	978490.890	14.63	-79.68	-0.01	-80.67	0.24	-103.16	20.00	-3.42
574	BA	253	21	42.830	43	6.330	855.2	978492.300	17.29	-78.41	-0.03	-79.43	0.58	-103.40	21.45	-1.30
575	BA	254	21	45.000	43	1.420	861.4	978495.440	20.09	-76.30	-0.03	-77.32	1.30	-103.57	23.69	1.47
576	BA	255	21	47.580	42	55.080	868.4	978501.850	25.99	-71.18	-0.05	-72.24	1.30	-103.59	28.79	7.27
577	BA	256	21	42.670	42	52.170	884.5	978494.320	28.51	-70.46	-0.08	-71.56	0.48	-103.71	29.53	8.97
578	BA	257	21	40.580	42	58.170	872.4	978486.960	19.58	-78.04	-0.07	-79.12	0.36	-103.73	22.03	0.79
579	BA	258	21	37.330	43	4.170	857.4	978486.210	17.55	-78.39	-0.04	-79.43	0.36	-103.58	21.62	-0.18
580	BA	259	21	34.500	43	9.750	849.9	978481.700	13.64	-81.46	0.00	-82.45	0.39	-103.34	18.38	-3.29
581	BA	260	21	32.830	43	13.830	846.1	978476.560	9.04	-85.63	0.03	-86.59	0.27	-103.02	13.93	-7.85
582	BA	261	21	30.500	43	19.420	844.3	978478.080	12.40	-82.08	0.05	-83.01	0.68	-102.73	17.24	-6.21
583	BA	262	21	27.850	43	24.420	830.3	978500.980	33.70	-59.21	-0.03	-60.22	0.17	-102.45	39.79	15.85
584	BA	263	21	25.000	43	29.830	837.3	978491.950	29.74	-63.95	-0.03	-64.96	0.19	-102.10	34.66	10.21
585	BA	264	21	25.500	43	30.500	845.1	978488.780	28.47	-66.10	-0.05	-67.13	0.19	-102.12	32.49	7.88
586	BA	265	21	25.170	43	30.080	1060.1	978437.220	43.59	-75.03	0.41	-75.78	0.16	-101.94	23.03	1.48
587	BA	266	21	23.330	43	33.830	875.0	978469.150	20.28	-77.63	-0.06	-78.70	0.61	-101.89	20.61	-0.69
588	BA	267	21	32.250	43	39.670	934.8	978464.710	25.16	-79.44	0.00	-80.50	0.51	-101.90	18.65	-8.08
589	BA	268	21	28.670	43	44.630	1010.3	978442.490	29.91	-83.14	0.24	-84.02	0.97	-101.62	14.62	-12.53
590	BA	269	21	27.170	43	47.670	1169.1	978400.920	38.88	-91.94	1.41	-91.76	0.64	-101.38	6.20	-21.23
591	BA	270	21	27.670	43	48.830	932.4	978445.010	3.24	-98.85	0.00	-99.89	0.74	-101.55	-1.03	-28.70
592	BA	271	21	27.000	43	46.670	951.8	978451.630	22.71	-83.80	0.07	-84.80	0.55	-101.48	13.88	-0.07
593	BA	272	21	24.000	43	55.830	908.2	978436.460	-2.84	-104.47	0.02	-105.49	0.64	-101.15	-7.01	-35.39
594	BA	273	21	22.580	44	0.830	943.6	978428.210	1.28	-104.31	0.10	-105.28	0.94	-101.00	-7.05	-36.06
595	BA	274	21	20.080	44	5.750	920.1	978434.450	2.82	-100.14	0.06	-101.13	0.74	-100.67	-3.16	-38.68
596	BA	275	21	18.170	44	11.170	1086.3	978405.200	26.80	-94.76	0.78	-95.15	0.39	-100.34	2.00	-28.17
597	BA	276	21	15.170	44	16.170	943.8	978432.030	12.70	-92.90	0.14	-93.83	0.64	-100.21	3.59	-27.04
598	BA	277	21	13.170	44	22.080	912.4	978436.860	9.88	-92.32	0.10	-93.16	0.45	-100.17	4.32	-27.04
599	BA	278	21	8.080	44	19.000	887.5	978439.830	13.40	-87.02	0.08	-87.97	0.74	-100.11	9.48	-20.82
600	BA	279	21	10.670	44	12.830	887.4	978446.810	14.65	-84.65	0.05	-85.62	0.90	-100.25	12.00	-17.61

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	OBS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CEGA S.D.CB MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL		
601 BA	280 21	13.420	44	8.330	871.5	978450.310	10.45	-87.07	0.02	-88.06	0.19	-100.40	9.77	-19.43	-5.57
602 BA	281 21	15.330	44	2.580	857.6	978443.510	-2.57	-98.54	0.00	-99.54	0.48	-100.56	-1.49	-29.99	-16.58
603 BA	282 21	17.920	43	57.170	866.0	978448.140	2.01	-94.89	-0.01	-95.91	1.10	-100.84	2.38	-25.54	-12.61
604 BA	283 21	20.580	43	51.920	864.2	978454.780	5.39	-91.32	-0.02	-92.34	0.87	-101.17	6.28	-21.10	-9.79
605 BA	284 21	22.670	43	47.080	1244.3	978393.290	59.05	-80.19	2.13	-79.33	0.64	-101.20	18.25	-8.59	0.85
606 BA	285 21	25.580	43	41.580	1062.4	978437.430	44.09	-74.79	0.53	-75.42	0.46	-101.58	23.04	-3.26	4.66
607 BA	286 21	25.330	43	41.670	924.5	978464.130	28.49	-74.96	0.01	-76.00	0.27	-101.65	22.92	-3.36	4.45
608 BA	287 21	25.670	43	41.670	957.8	978456.570	30.86	-76.31	0.08	-77.31	0.58	-101.64	21.50	-4.82	3.21
609 BA	288 21	13.170	43	28.080	848.3	978455.100	8.34	-86.59	-0.10	-87.68	0.14	-102.18	12.00	-10.90	-10.11
610 BA	289 21	37.830	43	42.580	985.5	978433.810	4.16	-106.11	0.09	-107.12	0.45	-101.94	-8.08	-35.88	-9.08
611 BA	290 21	39.500	43	37.500	1044.0	978450.490	37.17	-79.65	0.25	-80.54	0.18	-101.96	18.34	-8.84	9.40
612 BA	291 21	39.830	43	37.250	948.1	978470.630	27.38	-78.71	0.01	-79.77	1.82	-102.05	19.48	-7.70	10.67
613 BA	292 21	40.080	43	37.170	951.7	978469.610	27.21	-79.28	0.01	-80.34	0.33	-102.10	18.94	-8.26	10.44
614 BA	293 21	43.170	43	31.420	903.4	978478.020	17.53	-83.56	0.00	-84.60	0.19	-102.24	14.99	-11.64	2.30
615 BA	294 21	45.580	43	27.080	900.4	978489.280	25.37	-75.38	0.00	-76.42	0.15	-102.39	23.32	-2.90	8.02
616 BA	295 21	47.080	43	21.830	868.4	978499.160	23.82	-73.35	0.00	-74.36	0.22	-102.68	25.75	0.17	7.36
617 BA	296 21	49.420	43	16.330	875.9	978514.070	38.62	-59.39	-0.02	-60.43	2.05	-102.90	39.89	14.89	19.68
618 BA	297 21	51.670	43	11.670	861.4	978521.420	39.16	-57.23	0.00	-58.23	0.55	-103.10	42.33	17.79	21.15
619 BA	298 21	54.830	43	5.920	853.2	978518.720	30.64	-64.83	0.03	-65.80	0.39	-103.35	35.04	11.03	13.13
620 BA	299 21	56.750	43	1.000	869.2	978518.780	33.63	-63.63	-0.01	-64.64	0.24	-103.49	36.28	12.82	14.05
621 BA	300 21	51.920	42	57.580	863.7	978510.220	28.41	-68.24	-0.03	-69.27	0.61	-103.64	31.82	9.43	9.88
622 BA	301 21	49.670	43	3.250	857.1	978508.080	26.57	-69.34	-0.04	-70.38	0.27	-103.51	30.60	7.57	8.60
623 BA	302 21	47.000	43	8.670	856.3	978504.070	25.08	-70.74	-0.02	-71.75	0.15	-103.28	29.00	5.42	7.19
624 BA	303 21	44.830	43	13.920	856.6	978511.770	35.12	-60.73	-0.02	-61.75	0.30	-102.97	38.70	14.55	17.36
625 BA	304 21	42.330	43	18.830	850.9	978498.200	22.38	-72.84	0.00	-73.83	0.30	-102.78	26.44	1.81	5.78
626 BA	305 21	39.750	43	24.250	865.0	978492.810	24.00	-72.79	-0.01	-73.80	0.48	-102.49	26.13	0.96	6.55
627 BA	306 21	37.420	43	29.670	878.4	978481.130	18.86	-79.43	-0.01	-80.46	0.51	-102.24	19.19	-6.55	1.10
628 BA	307 21	36.750	43	34.580	983.1	978457.170	27.90	-82.11	0.07	-83.14	0.14	-101.97	15.94	-10.48	0.54
629 BA	308 21	33.830	43	36.000	894.0	978476.010	22.25	-77.79	-0.02	-78.84	0.17	-101.99	20.52	-5.80	4.05
630 BA	309 21	41.670	43	45.500	1105.5	978398.900	2.32	-121.38	0.50	-122.07	0.43	-101.94	-23.37	-52.06	-17.43
631 BA	310 21	39.920	43	50.330	1156.6	978388.400	9.39	-120.03	0.92	-120.33	0.35	-101.78	-21.93	-51.19	-14.37
632 BA	311 21	39.830	43	50.750	1078.7	978404.600	1.65	-119.05	0.44	-119.78	0.21	-101.83	-21.12	-50.44	-13.42
633 BA	312 21	40.000	43	49.830	1089.5	978402.700	2.91	-119.01	0.47	-119.71	0.52	-101.86	-21.05	-50.24	-13.68
634 BA	313 21	37.170	43	56.000	1045.2	978406.450	-4.08	-121.05	0.32	-121.87	0.25	-101.70	-23.23	-53.08	-14.80
635 BA	314 21	34.250	44	2.010	1009.3	978407.660	-10.95	-123.90	0.22	-124.79	0.27	-101.45	-26.29	-56.77	-17.55
636 BA	315 21	31.850	44	5.210	1010.2	978416.650	0.78	-112.26	0.32	-113.06	0.65	-101.24	-14.78	-45.51	-6.43
637 BA	316 21	30.170	44	10.910	972.6	978428.550	2.80	-106.03	0.15	-106.97	0.68	-100.86	-8.97	-40.42	-0.80
638 BA	317 21	27.500	44	15.500	931.6	978441.850	6.18	-98.06	0.09	-99.03	0.71	-100.62	-1.15	-33.03	6.07
639 BA	318 21	24.670	44	21.420	917.1	978434.540	-2.70	-105.33	0.09	-106.28	0.27	-100.34	-8.63	-41.13	-2.86
640 BA	319 21	22.000	44	26.380	881.6	978438.260	-7.20	-105.86	0.05	-106.83	0.45	-100.18	-9.23	-42.21	-5.17
641 BA	320 21	19.080	44	22.330	927.6	978430.960	3.68	-100.12	0.13	-101.04	0.33	-100.14	-3.62	-35.55	-2.22
642 BA	321 21	18.670	44	17.250	986.7	978427.120	16.45	-93.96	0.26	-94.80	0.22	-100.32	2.62	-28.68	4.98
643 BA	322 21	23.000	44	13.830	982.3	978436.730	21.31	-88.61	0.22	-89.48	0.20	-100.47	8.10	-23.02	12.84
644 BA	323 21	25.080	44	8.420	1015.1	978423.740	16.32	-97.27	0.34	-98.05	0.33	-100.73	-0.30	-30.79	5.10
645 BA	324 21	27.170	44	2.920	1029.3	978411.850	6.67	-108.51	0.39	-109.25	0.19	-101.08	-11.20	-41.05	-5.84
646 BA	325 21	30.500	43	56.500	992.9	978412.590	-7.23	-118.34	1.13	-118.31	0.71	-101.44	-19.76	-48.96	-14.97
647 BA	326 21	32.580	43	53.170	1110.8	978397.050	11.47	-112.83	0.68	-113.34	0.19	-101.54	-15.05	-43.95	-10.74
648 BA	327 21	34.250	43	47.610	1084.6	978408.420	13.04	-108.33	0.32	-109.18	0.28	-101.70	-10.66	-38.87	-9.84
649 BA	328 21	46.250	43	48.580	1098.9	978399.790	-3.55	-126.53	0.42	-127.29	0.17	-102.09	-28.42	-58.10	-19.00
650 BA	329 21	48.420	43	42.500	1012.8	978428.800	-3.36	-116.70	0.11	-117.71	0.55	-102.21	-18.46	-47.42	-10.60

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	ORS.	GRAV.	FAGA	SRGA	TTC	CRGA	S.D.C.R	IS.GRAV	IGA1	IGA2	IGA3
		D	D	M	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
651 BA	330 21	51.000	43 37.170	973.2	978440.980		-6.08	-114.99	0.04	-116.04	0.19	-102.25	-16.64	-45.05	-10.75
652 BA	331 21	56.670	43 32.500	956.2	978467.710		9.49	-97.50	0.04	-98.54	0.15	-102.42	1.05	-27.25	5.86
653 BA	332 21	55.750	43 32.670	984.3	978459.980		11.39	-98.75	0.05	-99.80	0.17	-102.39	-0.30	-28.52	4.23
654 BA	333 21	55.500	43 27.670	913.2	978461.500		11.23	-90.95	0.02	-91.97	0.17	-102.54	7.86	-19.54	4.58
655 BA	334 21	58.750	43 22.500	899.0	978495.760		17.72	-82.87	-0.01	-83.91	0.19	-102.70	16.13	-10.82	3.78
656 BA	335 22	0.920	43 17.420	899.5	978507.480		27.33	-73.32	-0.02	-74.37	0.36	-102.91	25.88	-0.51	9.12
657 BA	336 22	3.250	43 12.920	890.9	978520.730		35.49	-64.20	-0.06	-65.28	0.15	-103.02	35.10	9.15	16.08
658 BA	337 22	6.170	43 6.420	880.6	978537.630		46.15	-52.38	-0.08	-53.48	0.30	-103.36	47.27	21.99	26.23
659 BA	338 22	1.670	43 3.500	869.5	978524.130		33.94	-63.36	-0.06	-64.42	0.33	-103.49	36.50	12.13	14.52
660 BA	339 22	59.420	43 7.750	865.5	978528.810		39.74	-57.11	-0.05	-58.16	0.55	-103.23	42.52	17.75	21.13
661 BA	340 21	56.920	43 13.500	874.0	978511.390		27.55	-70.25	-0.02	-71.28	0.27	-102.98	29.12	3.76	9.14
662 BA	341 21	53.420	43 18.830	885.0	978502.640		25.84	-73.19	-0.01	-74.22	2.05	-102.75	25.91	0.12	7.75
663 BA	342 21	51.830	43 23.830	887.6	978498.420		24.07	-75.25	0.04	-76.23	0.15	-102.59	23.75	-2.64	8.93
664 BA	343 21	49.170	43 29.080	910.6	978478.840		14.35	-87.54	0.04	-88.54	0.55	-102.32	11.09	-15.83	2.01
665 BA	344 21	51.330	43 49.420	1292.9	978360.350		11.58	-133.09	1.77	-132.62	1.83	-102.06	-34.32	-64.69	-23.69
666 BA	345 21	51.250	43 50.000	1146.8	978394.630		0.87	-127.46	0.68	-127.99	0.66	-102.18	-29.17	-59.62	-18.47
667 BA	346 21	51.500	43 48.920	1111.0	978402.310		-2.75	-127.08	0.45	-127.82	0.71	-102.22	-28.84	-59.15	-18.27
668 BA	347 21	49.000	43 55.580	1135.3	978396.290		3.32	-123.72	0.64	-124.29	0.88	-102.10	-25.51	-56.60	-14.54
669 BA	348 21	46.030	44 0.420	1066.4	978415.480		2.33	-117.07	0.34	-117.82	0.61	-102.03	-18.91	-50.44	-8.05
670 BA	349 21	43.950	44 6.240	1063.7	978423.070		11.24	-107.79	0.38	-108.57	0.21	-101.60	-10.08	-42.30	0.43
671 BA	350 21	41.680	44 12.540	1025.8	978422.410		1.23	-113.56	0.26	-114.43	0.33	-101.24	-16.21	-49.15	-6.46
672 BA	351 21	39.080	44 17.950	985.8	978430.950		0.11	-110.20	0.18	-111.12	1.10	-100.90	-13.12	-46.60	-4.36
673 BA	352 21	36.580	44 21.140	954.0	978442.900		4.82	-101.93	0.12	-102.88	1.53	-100.67	-5.02	-38.72	3.01
674 BA	353 21	33.580	44 27.160	938.0	978441.410		1.48	-103.48	0.12	-104.42	1.07	-100.32	-6.86	-41.16	-0.59
675 BA	354 21	31.330	44 32.070	961.5	978433.690		3.32	-104.27	0.21	-105.14	0.48	-100.04	-7.93	-42.75	-3.52
676 BA	355 21	27.330	44 30.420	910.7	978442.140		0.20	-101.71	0.12	-102.63	0.42	-100.06	-5.25	-39.39	-0.46
677 BA	356 21	29.580	44 24.250	914.3	978444.530		1.39	-100.91	0.09	-101.87	0.68	-100.33	-4.23	-37.67	2.52
678 BA	357 21	32.000	44 18.910	953.1	978435.130		1.48	-105.17	0.13	-106.11	0.61	-100.61	-8.30	-41.19	-0.21
679 BA	358 21	34.670	44 13.880	984.7	978424.820		-1.81	-112.01	0.18	-112.92	0.87	-100.93	-14.89	-51.07	-9.48
680 BA	359 21	37.000	44 8.350	1015.6	978416.500		-2.99	-116.65	0.24	-117.53	0.58	-101.22	-19.28	-52.46	-10.66
681 BA	360 21	40.580	44 3.690	1029.3	978415.340		-3.62	-118.80	0.26	-119.68	0.33	-101.69	-21.01	-52.42	-11.39
682 BA	361 21	42.420	43 57.830	1074.9	978407.420		0.62	-119.66	0.40	-120.42	0.94	-101.88	-21.70	-30.99	-2.64
683 BA	362 21	42.420	43 57.830	1074.9	978407.420		17.68	-84.82	0.15	-85.71	0.52	-104.23	15.81	-20.97	5.69
684 BA	363 21	18.750	44 38.750	916.0	978575.970		24.82	-75.41	0.06	-76.38	0.39	-104.22	25.20	-9.54	11.77
685 BA	364 21	21.080	44 32.670	895.7	978591.920		34.50	-64.51	0.01	-65.51	0.45	-104.33	36.19	-7.03	17.08
686 BA	365 21	23.500	44 27.920	884.8	978607.620		48.67	-48.43	-0.02	-49.45	0.49	-104.27	52.26	8.15	12.49
687 BA	366 21	25.750	44 22.830	867.7	978629.530		46.47	-47.92	-0.06	-48.96	0.36	-104.06	52.61	5.22	6.59
688 BA	367 21	26.500	44 16.920	843.5	978635.620		44.59	-50.96	-0.04	-51.99	0.22	-104.19	49.68	7.11	7.11
689 BA	368 21	32.500	44 12.670	853.9	978637.130		49.09	-48.78	-0.03	-49.82	0.64	-104.17	51.77	7.64	7.11
690 BA	369 21	35.420	44 8.330	874.6	978638.460		37.20	-55.07	-0.06	-56.10	0.27	-103.90	45.36	1.57	4.94
691 BA	370 21	32.250	44 14.420	824.6	978628.620		44.60	-48.10	-0.06	-49.13	0.30	-103.89	52.31	7.99	16.27
692 BA	371 21	21.250	44 19.580	828.5	978632.630		30.47	-64.44	-0.04	-65.47	0.55	-103.95	35.97	-8.95	12.48
693 BA	372 21	18.830	44 25.500	848.2	978609.770		17.56	-78.27	-0.01	-79.28	0.74	-103.94	22.13	-23.25	-1.96
694 BA	373 21	15.830	44 30.830	856.4	978591.050		8.70	-85.64	-0.02	-86.64	0.16	-103.95	14.82	-31.00	-4.95
695 BA	374 21	13.330	44 35.580	843.1	978583.570		27.51	-90.24	0.77	-90.62	1.01	-103.54	9.83	-35.89	-6.52
696 BA	375 21	11.500	44 36.170	1052.3	978535.830		7.83	-88.69	0.00	-89.69	0.20	-103.78	11.54	-34.26	-4.95
697 BA	376 21	11.920	44 36.420	862.6	978575.150		16.83	-74.96	-0.03	-75.95	0.61	-103.81	25.43	-20.20	9.27
698 BA	377 21	10.750	44 36.080	820.3	978595.930		32.86	-64.56	0.13	-65.48	0.25	-105.22	37.03	-12.86	8.53
699 BA	378 21	37.920	44 49.450	921.7	978616.180		32.86	-76.83	0.26	-77.67	0.16	-105.38	24.83	-24.71	-0.51
700 BA	379 21	40.750	44 44.750	980.3	978595.510		36.07	-83.05	0.59	-83.62	0.25	-105.46	18.71	-30.15	-4.71
	380 21	43.000	44 37.830	1064.6	978575.200										



SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	ORS. GRAV.	FAGA	SRGA	TTC	CRGA	S.D.C.R	IS.GRAV	IGA1	IGA2	IGA3
		D MIN	D MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
701	BA	381 23	45 250	44	34.000	1025.7	978595.430	41.81	-72.97	0.33	-73.77	0.26	-105.63	28.85
702	BA	382 23	47 580	44	28.420	1048.1	978586.620	37.32	-79.96	0.34	-80.76	0.55	-105.63	21.78
703	BA	383 23	50 580	44	22.920	1032.7	978584.530	27.24	-88.32	0.23	-89.23	0.23	-105.68	13.41
704	BA	384 23	53 000	44	18.330	1005.3	978604.400	35.87	-76.62	0.15	-77.59	0.25	-105.65	25.09
705	BA	385 23	55 080	44	12.330	977.9	978629.520	50.22	-59.21	0.09	-60.21	0.39	-105.60	42.51
706	BA	386 23	57 670	44	6.920	956.8	978648.360	59.66	-47.41	0.07	-48.42	0.22	-105.61	54.38
707	BA	387 23	52 920	44	4.580	965.0	978652.080	71.20	-36.78	0.06	-37.80	0.22	-105.12	64.46
708	BA	388 23	50 670	44	10.080	1046.5	978621.560	68.33	-48.77	0.25	-49.66	0.55	-105.05	52.31
709	BA	389 23	50 500	44	10.670	968.6	978637.880	60.81	-47.58	0.07	-48.59	0.15	-105.16	53.71
710	BA	390 23	50 580	44	9.670	955.9	978641.260	60.18	-46.78	0.06	-47.80	0.15	-105.08	54.46
711	BA	391 23	47 580	44	15.330	943.0	978630.970	49.24	-56.28	0.05	-57.29	0.15	-105.04	44.97
712	BA	392 23	45 000	44	20.330	967.3	978611.930	40.56	-67.67	0.11	-68.65	0.25	-105.11	33.60
713	BA	393 23	42 500	44	25.080	997.1	978589.120	29.72	-81.85	0.23	-82.73	0.25	-105.22	19.54
714	BA	394 23	39 170	44	29.830	977.7	978597.240	35.54	-73.86	0.25	-74.71	0.25	-105.14	27.56
715	BA	395 23	37 420	44	36.330	1045.0	978572.770	33.77	-83.17	0.53	-83.78	0.41	-105.20	18.35
716	BA	396 23	35 080	44	41.580	1009.4	978579.610	32.21	-80.74	0.43	-81.43	1.43	-105.01	20.62
717	BA	397 23	33 170	44	46.330	963.9	978597.690	38.35	-69.51	0.28	-70.31	0.25	-104.96	31.81
718	BA	398 23	14 500	44	33.500	838.7	978587.510	10.01	-83.84	-0.02	-84.84	0.25	-103.89	16.57
719	BA	399 23	35 080	44	54.920	864.7	978625.220	33.17	-63.59	0.07	-64.52	0.64	-104.99	37.92
720	BA	400 23	32 750	44	59.250	829.9	978632.950	32.73	-60.14	0.07	-61.04	0.16	-104.75	41.27
721	BA	401 23	32 080	45	5.580	869.4	978627.860	40.56	-56.72	0.26	-57.47	0.46	-104.42	44.39
722	BA	402 23	26 830	45	11.500	883.7	978630.400	53.29	-45.60	0.38	-46.23	0.65	-104.14	55.31
723	BA	403 23	25 250	45	15.670	816.8	978647.770	51.75	-39.65	0.12	-40.49	0.45	-103.93	61.03
724	BA	404 23	22 330	45	20.830	793.7	978633.070	33.12	-55.69	0.09	-56.54	0.30	-103.67	44.79
725	BA	405 23	19 920	45	26.330	784.6	978610.230	10.11	-77.68	0.08	-78.53	0.49	-103.34	22.48
726	BA	406 23	17 080	45	31.250	753.8	978609.040	2.52	-81.83	0.03	-82.70	1.00	-103.03	18.10
727	BA	407 23	13 080	45	28.500	772.5	978582.420	-13.95	-100.40	0.06	-101.27	0.18	-103.13	-0.39
728	BA	408 23	15 920	45	23.080	821.8	978597.510	13.24	-78.72	0.21	-79.47	0.20	-103.45	21.56
729	BA	409 23	18 170	45	17.750	832.6	978613.570	30.18	-62.99	0.23	-63.73	0.28	-103.71	37.53
730	BA	410 23	20 250	45	13.250	876.1	978624.640	52.40	-45.64	0.33	-46.32	0.37	-103.96	55.07
731	BA	411 23	22 830	45	8.330	850.3	978624.970	41.94	-53.71	0.21	-53.99	0.42	-104.22	47.73
732	BA	412 23	25 580	45	2.330	821.6	978624.200	29.30	-62.64	0.08	-63.52	0.27	-104.55	38.61
733	BA	413 23	28 080	44	57.080	821.5	978624.340	26.66	-65.26	0.02	-66.21	0.27	-104.77	36.14
734	BA	414 23	29 250	44	54.250	926.8	978603.590	37.12	-66.59	1.23	-66.41	0.29	-104.69	35.58
735	BA	415 23	29 250	44	54.580	866.8	978615.380	30.39	-66.60	0.07	-67.53	0.22	-104.80	34.70
736	BA	416 23	29 420	44	54.000	858.7	978617.480	29.81	-66.28	0.06	-67.21	0.36	-104.72	34.97
737	BA	417 23	31 670	44	50.080	885.8	978613.700	31.92	-67.20	0.08	-68.14	0.15	-104.95	34.20
738	BA	418 23	28 000	44	43.670	924.0	978593.760	27.80	-75.59	0.17	-76.48	0.36	-104.78	25.59
739	BA	419 23	35 420	44	30.490	1001.8	978571.730	21.61	-90.49	0.38	-91.23	0.17	-104.98	10.81
740	BA	420 23	32 750	44	34.080	980.9	978590.920	37.29	-72.47	0.30	-73.27	0.25	-104.90	28.75
741	BA	421 23	34 830	44	29.420	956.0	978595.000	31.39	-75.58	0.19	-76.47	0.16	-104.97	25.69
742	BA	422 23	37 420	44	22.920	942.6	978610.320	39.72	-65.75	0.10	-66.72	0.30	-104.83	35.33
743	BA	423 23	40 170	44	16.920	928.6	978637.340	59.38	-44.53	0.04	-45.54	0.20	-104.69	56.41
744	BA	424 23	43 750	44	11.670	905.8	978644.870	55.91	-45.44	0.01	-46.47	0.18	-104.72	55.57
745	BA	425 23	45 670	44	7.170	928.1	978637.600	53.40	-50.46	0.02	-51.49	0.18	-104.64	50.41
746	BA	426 23	47 420	44	2.330	956.9	978640.900	63.64	-43.44	0.04	-44.47	0.30	-104.61	57.31
747	BA	427 23	42 580	44	0.080	912.2	978635.800	50.11	-51.96	0.00	-53.00	0.18	-104.16	48.47
748	BA	428 23	40 750	44	4.250	913.2	978632.650	49.30	-52.89	0.00	-53.93	0.30	-104.25	47.63
749	BA	429 23	38 330	44	9.330	880.6	978641.090	50.35	-48.18	-0.02	-49.22	0.77	-104.25	52.43
750	BA	430 23	35 420	44	14.500	877.9	978633.430	45.07	-53.16	-0.02	-54.19	0.27	-104.38	47.59

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	OBS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA MGAL	S.D.C.R MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
751	BA	431 23	32.920	44 20.420	935.6	978631.450	63.66	-41.04	0.10	-42.00	0.45	-104.52	59.77	21.51
752	BA	432 23	30.170	44 25.080	916.3	978607.550	36.83	-65.70	0.07	-66.68	0.16	-104.58	35.20	3.36
753	BA	433 23	28.080	44 30.920	944.2	978589.280	29.46	-76.19	0.19	-77.07	0.15	-104.67	24.81	2.48
754	BA	434 23	24.750	44 36.920	926.3	978591.050	29.37	-74.28	0.16	-75.18	0.28	-104.55	26.64	6.93
755	BA	435 23	24.420	44 41.080	1085.0	978548.120	35.77	-85.64	1.58	-85.23	0.39	-104.49	16.09	-4.06
756	BA	436 23	24.670	44 41.750	952.7	978576.890	23.44	-83.16	0.31	-83.93	0.37	-104.58	17.85	-2.55
757	BA	437 23	24.000	44 40.250	951.6	978576.490	23.44	-83.05	0.27	-83.85	0.37	-104.51	17.87	-2.00
758	BA	438 23	25.420	44 49.170	864.1	978608.230	26.62	-70.07	0.04	-71.03	0.22	-104.71	31.13	5.88
759	BA	439 23	24.000	44 54.080	832.1	978614.560	24.63	-68.48	0.02	-69.43	0.25	-104.59	32.70	-1.44
760	BA	440 23	20.830	44 58.920	822.5	978615.200	25.78	-68.25	0.05	-69.17	0.25	-104.45	34.85	-6.10
761	BA	441 23	18.830	45 3.750	810.1	978613.200	22.14	-68.51	-0.02	-69.48	0.15	-104.32	32.45	-12.20
762	BA	442 23	15.750	45 10.080	783.2	978620.440	24.45	-63.19	0.01	-64.11	0.39	-104.05	37.64	-12.92
763	BA	443 23	13.830	45 15.420	832.1	978610.230	31.42	-61.69	0.18	-62.48	0.55	-103.82	38.89	-10.54
764	BA	444 23	11.420	45 20.330	798.2	978601.200	14.56	-74.76	0.09	-75.62	0.39	-103.61	25.64	-24.98
765	BA	445 23	8.330	45 25.420	780.4	978592.320	3.54	-83.78	0.06	-84.65	0.58	-103.30	16.34	-35.19
766	BA	446 23	3.500	45 23.330	760.8	978617.090	27.51	-57.62	0.01	-58.52	0.90	-103.35	42.58	-7.94
767	BA	447 23	6.080	45 18.080	773.2	978620.850	32.30	-54.22	0.02	-55.12	0.74	-103.58	46.18	-3.21
768	BA	448 23	8.500	45 12.500	770.0	978619.060	26.89	-59.27	0.00	-60.19	0.74	-103.85	41.39	-6.37
769	BA	449 23	10.580	45 7.920	762.4	978616.390	19.61	-65.70	0.03	-66.64	0.74	-104.05	35.15	-14.68
770	BA	450 23	13.580	45 2.670	758.7	978616.730	15.54	-69.35	-0.02	-70.28	0.90	-104.29	31.77	-11.35
771	BA	451 23	15.500	44 57.170	775.4	978616.700	18.57	-68.19	0.00	-69.12	0.74	-104.31	32.90	-4.98
772	BA	452 23	18.580	44 51.830	827.3	978606.730	21.25	-71.32	0.00	-72.29	0.39	-104.44	29.71	2.47
773	BA	453 23	20.420	44 46.920	932.4	978588.310	33.25	-71.08	0.23	-71.91	0.39	-104.43	29.78	7.51
774	BA	454 23	22.670	44 41.500	992.3	978566.160	27.12	-83.91	0.76	-84.26	0.60	-104.48	17.30	-2.62
775	BA	455 23	22.670	44 41.250	935.4	978578.800	22.21	-82.46	0.22	-83.30	0.25	-104.50	18.44	-1.41
776	BA	456 23	22.420	44 41.920	923.2	978580.470	20.38	-82.92	0.19	-83.78	0.15	-104.56	18.06	-1.95
777	BA	457 23	16.170	44 44.250	848.1	978597.630	21.21	-73.37	0.00	-74.68	0.25	-104.24	27.06	7.29
778	BA	458 23	13.420	44 49.330	805.8	978604.220	17.74	-72.43	-0.01	-73.39	0.27	-104.17	28.40	-19.31
779	BA	459 23	11.250	44 54.330	766.2	978613.200	16.87	-68.87	0.00	-69.79	0.33	-104.18	32.13	0.99
780	BA	460 23	8.920	44 59.420	773.6	978617.660	26.14	-60.42	0.00	-61.34	0.16	-104.06	40.43	-0.96
781	BA	461 23	6.080	45 5.000	760.8	978619.480	27.10	-58.03	-0.02	-58.96	0.16	-103.92	42.71	-6.34
782	BA	462 23	3.420	45 9.920	720.6	978638.430	36.53	-44.10	-0.07	-45.05	0.81	-103.80	56.62	7.17
783	BA	463 23	1.420	45 14.330	750.7	978618.470	28.02	-55.98	-0.02	-56.90	0.17	-103.70	44.59	-5.25
784	BA	464 22	59.330	45 19.500	773.6	978622.530	41.41	-45.15	0.02	-46.05	0.17	-103.40	55.06	6.05
785	BA	465 22	53.750	45 17.500	716.7	978624.790	32.14	-48.06	-0.06	-48.99	0.30	-103.37	52.27	4.56
786	BA	466 22	56.670	45 12.830	699.2	978628.000	26.80	-51.44	-0.08	-52.37	0.84	-103.56	49.12	-0.11
787	BA	467 22	59.330	45 7.080	707.7	978633.740	32.29	-46.90	-0.07	-47.83	0.64	-103.70	53.78	9.76
788	BA	468 23	1.170	45 2.080	724.1	978633.640	35.26	-45.77	0.02	-46.62	0.64	-103.73	54.97	6.72
789	BA	469 23	1.920	44 58.920	827.3	978619.740	52.39	-40.18	1.69	-39.46	0.43	-103.69	61.83	14.20
790	BA	470 23	2.080	44 58.670	762.0	978634.420	46.75	-38.52	0.05	-39.38	0.27	-103.74	62.12	24.72
791	BA	471 23	1.750	44 59.330	748.1	978635.050	43.45	-40.27	0.08	-41.08	0.20	-103.75	60.46	22.33
792	BA	472 23	3.420	44 56.420	739.0	978622.910	26.69	-56.01	0.15	-56.74	0.33	-103.78	44.86	10.54
793	BA	473 23	6.080	44 52.420	764.6	978607.520	16.31	-69.25	0.03	-70.13	0.42	-103.85	31.46	-15.99
794	BA	474 23	8.000	44 46.420	807.2	978596.980	16.83	-73.49	-0.01	-74.45	0.27	-103.80	26.96	-19.87
795	BA	475 23	11.080	44 41.500	827.7	978583.420	6.25	-86.37	-0.01	-87.35	0.25	-103.88	14.09	-32.55
796	BA	476 23	26.250	44 10.000	846.9	978624.380	36.55	-58.22	-0.06	-59.26	0.18	-103.85	42.08	-1.38
797	BA	477 23	28.500	44 4.830	828.0	978627.550	31.42	-61.24	-0.06	-62.27	0.52	-103.81	39.11	-3.84
798	BA	478 23	30.500	43 59.420	849.5	978618.540	26.84	-68.22	-0.04	-69.24	0.52	-103.67	31.91	-10.48
799	BA	479 23	33.830	43 54.170	846.2	978617.390	21.01	-73.68	-0.03	-74.70	0.55	-103.76	26.56	-15.42
800	BA	480 23	38.170	43 56.920	865.5	978626.820	31.60	-65.25	-0.02	-66.27	0.25	-103.87	35.04	-7.76

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA MGAL	S.D.CR MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL		
801	RA	481 23	35.750	44	2.330	851.5	978631.490	34.62	-60.66	-0.03	-61.68	0.20	-103.95	39.75	-3.57	-5.83
802	RA	482 23	30.830	44	12.750	847.6	978635.070	42.42	-52.42	-0.05	-53.46	0.30	-104.12	48.15	3.85	5.30
803	RA	483 23	4.670	44	30.420	762.4	978600.600	10.24	-75.07	0.04	-75.94	0.22	-103.40	25.20	-19.01	10.72
804	RA	484 23	1.170	44	35.580	784.1	978587.030	7.16	-80.58	0.04	-81.47	0.33	-103.25	19.47	-25.13	5.43
805	RA	485 22	58.580	44	41.830	787.8	978573.490	-2.42	-90.59	0.03	-91.49	0.20	-103.28	9.48	-35.76	-5.92
806	RA	486 22	57.020	44	46.750	804.3	978571.390	2.24	-87.76	0.02	-88.68	0.30	-103.17	12.10	-33.69	-5.79
807	RA	487 22	54.580	44	51.750	837.6	978557.350	1.11	-92.61	0.11	-93.48	0.48	-103.15	7.19	-39.08	-15.13
808	RA	488 22	52.670	44	55.000	993.7	978531.660	25.65	-85.54	0.39	-86.26	0.46	-103.03	13.85	-32.69	-13.99
809	RA	489 22	53.170	44	55.420	817.6	978570.570	9.68	-81.81	0.20	-82.57	0.16	-103.20	18.22	-28.43	-11.37
810	RA	490 22	52.250	44	54.830	890.4	978549.110	11.68	-87.96	0.20	-88.78	0.27	-103.06	11.65	-34.83	-15.61
811	RA	491 22	51.170	44	58.080	810.7	978584.170	23.31	-67.41	0.29	-68.07	0.23	-103.10	32.64	-14.19	-1.95
812	RA	492 22	49.000	45	2.250	786.2	978622.350	56.26	-31.71	0.18	-32.47	0.25	-103.11	68.33	21.14	29.35
813	RA	493 22	47.330	45	7.420	754.1	978616.160	41.96	-42.42	0.00	-43.33	0.24	-103.10	57.55	9.83	15.10
814	RA	494 22	45.330	45	9.080	755.6	978607.930	36.34	-48.21	0.00	-49.12	0.39	-103.03	51.69	3.94	8.66
815	RA	495 22	44.250	45	13.420	744.1	978604.050	30.07	-53.19	-0.02	-54.11	0.36	-103.05	46.75	-1.46	1.89
816	RA	496 22	46.500	45	14.920	736.5	978611.740	33.00	-49.41	-0.03	-50.33	0.16	-103.27	50.77	2.17	4.97
817	RA	497 22	48.170	45	13.920	741.9	978612.400	33.53	-49.49	-0.02	-50.40	0.33	-103.18	50.59	1.97	4.92
818	RA	498 22	50.170	45	12.830	715.0	978615.990	26.67	-53.34	-0.07	-54.27	0.42	-103.30	46.91	-1.75	1.38
819	RA	499 22	51.420	45	10.250	724.2	978611.320	23.49	-57.54	-0.05	-58.47	0.30	-103.33	42.72	-5.72	-1.85
820	RA	500 22	54.170	45	4.830	733.9	978627.390	39.59	-42.53	-0.01	-43.42	0.30	-103.40	57.81	9.82	15.96
821	RA	501 22	56.420	45	0.500	754.8	978628.140	44.37	-40.09	0.12	-40.88	0.30	-103.47	60.37	12.74	21.85
822	RA	502 22	58.920	44	53.920	745.5	978605.850	16.50	-66.92	0.21	-67.60	0.42	-103.51	33.71	-13.28	6.98
823	RA	503 23	1.080	44	49.330	771.4	978590.990	7.30	-79.02	0.06	-79.88	0.45	-103.49	21.34	-25.22	0.60
824	RA	504 23	4.170	44	44.170	749.7	978597.690	3.96	-79.93	0.08	-80.75	0.15	-103.57	20.61	-25.52	3.16
825	RA	505 23	6.250	44	38.330	786.3	978597.540	12.84	-75.14	0.00	-76.07	0.15	-103.50	25.10	-20.40	9.54
826	RA	506 23	8.330	44	34.330	789.6	978602.380	16.44	-71.91	-0.02	-72.87	0.15	-103.62	28.41	-16.72	13.01
827	RA	507 23	6.580	44	26.250	767.0	978603.010	12.00	-73.83	0.06	-74.68	0.55	-103.41	26.46	-17.35	10.74
828	RA	508 23	8.670	44	19.920	778.8	978606.090	16.45	-70.70	0.01	-71.61	0.14	-103.42	29.51	-13.61	9.42
829	RA	509 23	11.250	44	14.920	789.4	978605.910	16.73	-71.60	-0.02	-72.55	0.39	-103.40	28.51	-14.16	-3.33
830	RA	510 23	12.080	44	12.250	803.3	978609.510	23.72	-66.17	-0.03	-67.15	0.14	-103.44	33.91	-8.46	-1.70
831	RA	511 23	14.420	44	9.670	811.2	978608.860	22.96	-67.81	-0.04	-68.81	0.25	-103.53	32.32	-9.92	-6.48
832	RA	512 23	16.250	44	4.670	812.7	978607.990	20.55	-70.39	-0.01	-71.35	0.39	-103.50	29.75	-11.96	-11.62
833	RA	513 23	20.500	43	59.500	820.1	978610.720	20.92	-70.85	-0.01	-71.82	0.15	-103.54	29.30	-12.10	-14.00
834	RA	514 23	20.920	43	54.500	850.0	978606.800	25.77	-69.34	-0.02	-70.35	0.25	-103.55	30.69	-10.03	-12.88
835	RA	515 23	22.920	43	51.500	840.5	978611.050	24.90	-69.15	-0.01	-70.14	0.15	-103.59	30.97	-9.52	-12.90
836	RA	516 23	23.420	43	48.750	849.1	978609.120	25.07	-69.94	-0.01	-70.94	0.15	-103.59	30.14	-9.99	-13.65
837	RA	517 23	28.580	43	51.580	854.9	978613.640	25.72	-69.94	-0.04	-70.98	0.55	-103.61	30.12	-10.96	-14.61
838	RA	518 23	26.830	43	54.170	856.9	978611.950	26.57	-69.32	-0.04	-70.35	0.25	-103.51	30.63	-10.65	-13.96
839	RA	519 23	26.280	43	56.580	836.5	978615.990	24.83	-68.77	-0.04	-69.79	0.15	-103.59	31.33	-10.24	-13.19
840	RA	520 23	24.250	44	2.000	831.9	978612.590	22.33	-70.76	-0.05	-71.79	0.39	-103.63	29.39	-12.74	-14.48
841	RA	521 23	21.420	44	6.500	817.4	978613.340	21.70	-69.76	-0.06	-70.78	0.15	-103.63	30.43	-12.06	-12.09
842	RA	522 23	18.830	44	12.250	805.6	978617.490	25.04	-65.10	-0.06	-66.11	0.25	-103.68	35.18	-7.86	-4.49
843	RA	523 23	16.330	44	17.330	801.7	978621.050	30.13	-59.58	-0.05	-60.57	0.39	-103.70	40.76	-2.75	6.42
844	RA	524 23	14.670	44	20.080	802.6	978617.370	28.54	-61.27	-0.05	-62.27	0.39	-103.62	38.99	-4.75	12.26
845	RA	525 23	13.750	44	22.750	832.1	978609.560	30.84	-62.27	-0.05	-63.30	0.39	-103.62	37.87	-6.15	16.11
846	RA	526 23	11.500	44	28.330	805.0	978609.390	24.76	-65.32	-0.04	-66.31	0.25	-103.69	35.00	-9.59	17.92
847	RA	527 22	54.420	44	25.080	848.6	978560.470	7.80	-87.16	0.10	-88.04	0.22	-102.86	12.31	-30.13	-0.85
848	RA	528 22	56.080	44	20.500	858.1	978551.600	0.07	-95.95	0.14	-96.81	0.55	-102.99	3.65	-38.31	-10.87
849	RA	529 22	57.920	44	18.080	841.1	978566.140	7.38	-86.74	0.18	-87.54	0.55	-103.09	13.07	-28.73	-2.77
850	RA	530 22	59.580	44	15.000	856.4	978569.810	13.97	-81.86	0.15	-82.70	0.39	-103.05	17.83	-23.69	-0.34

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA S.D. CR MGAL	IS. GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL			
851	BA	531 23	2.670	44	8.330	1051.8	978548.850	49.96	-67.73	0.82	-68.06	0.73	-103.11	31.96	-8.91	0.89
852	BA	532 23	2.920	44	7.420	924.0	978573.820	35.23	-68.17	0.02	-69.20	0.39	-103.18	31.26	-9.50	-1.33
853	BA	533 23	2.580	44	9.000	977.9	978564.920	43.33	-66.10	0.10	-67.09	0.39	-103.07	33.09	-7.87	3.30
854	BA	534 23	4.250	44	4.330	877.9	978586.160	31.90	-66.33	0.01	-67.34	0.25	-103.27	33.34	-7.10	-2.95
855	BA	535 23	5.920	44	1.170	890.6	978582.580	30.43	-69.23	0.00	-70.25	0.22	-103.29	30.41	-9.74	-8.19
856	BA	536 23	7.420	43	57.500	1016.9	978548.830	34.02	-79.77	0.16	-80.73	0.25	-103.38	19.65	-20.11	-20.38
857	BA	537 23	9.750	43	53.000	920.0	978552.160	4.92	-98.03	0.00	-99.08	0.14	-103.47	1.67	-37.66	-39.42
858	BA	538 23	11.250	43	49.080	920.6	978564.880	16.19	-86.82	0.00	-87.87	0.25	-103.52	12.92	-25.98	-28.51
859	BA	539 23	13.920	43	43.080	891.1	978587.850	27.15	-72.56	-0.01	-73.60	0.39	-103.61	27.39	-10.90	-14.19
860	BA	540 23	16.580	43	44.750	892.8	978595.020	31.94	-67.96	0.00	-68.99	0.22	-103.64	32.02	-6.79	-10.24
861	BA	541 23	18.580	43	46.580	914.1	978601.380	42.69	-59.60	-0.01	-60.65	0.22	-103.55	40.20	0.90	-2.60
862	BA	542 23	16.420	43	53.500	871.2	978591.940	22.37	-75.11	0.03	-76.09	0.22	-103.58	24.91	-15.19	-17.74
863	BA	543 23	13.670	43	56.920	887.2	978583.960	22.33	-76.95	0.01	-77.96	0.25	-103.53	22.95	-17.37	-18.91
864	BA	544 23	11.670	44	2.750	903.9	978583.830	29.53	-71.61	-0.01	-72.66	0.39	-103.36	28.03	-12.95	-12.26
865	BA	545 23	9.170	44	6.920	837.9	978597.230	25.28	-68.47	0.00	-69.45	0.25	-103.35	31.43	-9.90	-6.04
866	BA	546 23	6.670	44	12.330	840.5	978592.590	24.16	-69.89	-0.01	-70.88	0.39	-103.31	29.94	-11.91	0.27
867	BA	547 23	4.170	44	17.330	807.1	978592.440	16.42	-73.89	0.10	-74.74	0.15	-103.27	26.15	-16.16	7.19
868	BA	548 23	1.920	44	22.080	792.7	978586.260	8.23	-80.47	0.12	-81.29	0.30	-103.17	19.54	-23.22	4.19
869	BA	549 22	59.170	44	27.330	849.5	978571.190	13.67	-81.39	1.03	-81.35	0.32	-103.04	19.21	-24.02	5.72
870	BA	550 22	56.500	44	32.830	806.0	978577.380	9.32	-80.87	0.01	-81.81	0.24	-102.92	18.73	-25.02	5.72
871	BA	551 22	54.580	44	37.750	831.6	978558.440	0.35	-92.70	0.00	-93.68	0.14	-102.89	6.75	-37.51	-6.79
872	BA	552 22	53.080	44	41.080	865.3	978549.740	3.67	-93.16	0.02	-94.14	0.14	-102.85	6.15	-38.44	-8.22
873	BA	553 22	51.670	44	43.830	858.3	978546.950	0.24	-95.81	0.03	-96.77	0.24	-102.81	3.50	-41.34	-11.88
874	BA	554 22	49.420	44	48.500	888.2	978537.290	2.23	-97.16	0.11	-98.07	0.14	-102.86	2.16	-43.13	-15.93
875	BA	555 22	46.750	44	53.420	950.5	978533.120	20.15	-86.21	0.25	-87.03	0.25	-102.70	12.86	-52.87	-10.37
876	BA	556 22	44.670	44	58.830	860.4	978598.640	60.10	-36.18	1.24	-35.94	0.35	-102.71	64.26	17.96	29.92
877	BA	557 22	44.420	44	58.500	909.8	978590.050	67.02	-34.79	0.34	-35.48	0.16	-102.69	64.53	18.30	30.71
878	BA	558 22	44.170	44	58.420	871.4	978598.070	63.46	-34.05	0.27	-34.79	0.25	-102.71	65.35	19.16	31.71
879	BA	559 22	44.670	44	58.670	863.2	978597.820	60.14	-36.45	0.27	-37.18	0.15	-102.70	62.97	16.69	28.85
880	BA	563 22	44.250	44	19.750	932.7	978539.720	23.94	-80.43	0.11	-81.38	0.45	-102.67	18.54	-22.12	1.27
881	BA	564 22	47.330	44	15.000	943.0	978535.970	20.06	-85.46	0.10	-86.42	0.74	-102.95	13.75	-26.52	-5.83
882	BA	565 22	49.330	44	10.420	943.1	978550.500	32.47	-73.04	0.08	-74.04	0.71	-103.02	26.19	-13.60	1.67
883	BA	566 22	52.170	44	4.250	947.3	978552.360	32.57	-73.43	0.06	-74.44	0.55	-103.22	25.99	-13.17	-5.90
884	BA	567 22	54.670	43	59.000	974.4	978547.280	33.16	-75.87	0.06	-76.90	0.68	-103.27	23.49	-15.15	-12.16
885	BA	568 22	55.750	43	56.500	1007.6	978540.110	35.07	-77.68	0.09	-78.71	0.68	-103.33	21.65	-16.73	-15.02
886	BA	569 22	57.170	43	53.750	1011.1	978542.290	36.80	-76.34	0.10	-77.36	0.81	-103.38	23.04	-15.08	-14.45
887	BA	570 22	58.250	43	52.250	1051.2	978534.440	40.15	-77.48	0.91	-77.71	0.61	-103.36	22.57	-15.44	-15.34
888	BA	571 22	57.750	43	51.830	988.8	978548.740	35.74	-74.91	0.06	-75.95	0.42	-103.38	24.52	-13.38	-13.25
889	BA	572 22	58.670	43	52.750	1005.1	978545.630	36.66	-75.81	0.09	-76.83	0.42	-103.38	23.58	-14.55	-14.43
890	BA	573 22	59.920	43	48.580	1000.4	978550.860	39.09	-72.85	0.08	-73.88	0.52	-103.47	26.64	-11.00	-11.75
891	BA	574 23	1.500	43	43.920	969.1	978552.760	29.62	-78.82	0.02	-79.88	0.52	-103.62	20.87	-12.24	-17.61
892	BA	575 23	4.420	43	38.500	926.5	978567.560	28.11	-75.56	0.00	-76.61	0.52	-103.78	24.43	-12.17	-14.17
893	BA	576 23	6.330	43	40.170	934.0	978569.040	29.84	-74.68	0.00	-75.74	0.17	-103.66	25.17	-11.89	-14.25
894	BA	577 23	8.830	43	41.330	914.2	978576.880	28.85	-73.45	-0.01	-74.50	0.30	-103.65	26.45	-11.05	-13.78
895	BA	578 23	6.750	43	45.920	939.7	978567.810	29.91	-75.24	0.00	-76.31	0.45	-103.55	24.47	-13.49	-15.69
896	BA	579 23	3.920	43	51.750	936.0	978562.660	26.69	-78.05	0.00	-79.11	0.22	-103.44	21.57	-16.96	-18.00
897	BA	580 23	1.920	43	58.170	962.3	978558.580	32.89	-74.79	0.04	-75.83	0.39	-103.28	24.61	-14.67	-13.50
898	BA	581 22	58.830	44	2.830	932.7	978564.980	33.50	-70.87	0.06	-71.87	0.15	-103.24	28.63	-11.02	-5.90
899	BA	582 22	56.670	44	7.750	943.0	978559.680	33.71	-71.81	0.07	-72.80	0.20	-103.14	27.55	-12.61	3.36
900	BA	583 22	54.500	44	12.500	909.4	978547.590	13.60	-88.16	0.10	-89.10	0.20	-103.03	11.24	-29.40	-7.61

REQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA S.D.CB MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL	
901	BA	584 22	52.080	44 17.580	943.4	978523.010	2.12	-103.45	0.10	-104.42	0.18	-102.92	-4.26	-19.95
902	BA	585 22	50.830	44 20.250	945.7	978527.480	8.64	-97.18	0.09	-98.16	0.17	-102.79	1.84	-12.75
903	BA	586 22	49.330	44 22.670	941.9	978519.870	1.47	-103.92	0.09	-104.90	0.33	-102.68	-4.99	-18.87
904	BA	602 22	48.830	44 24.250	925.8	978519.680	-3.14	-106.74	0.09	-107.71	4.20	-102.69	-7.73	-49.50
905	BA	603 22	47.170	44 27.670	965.1	978518.350	9.43	-98.56	0.13	-99.51	0.22	-102.50	0.14	-41.95
906	BA	604 22	44.500	44 33.580	968.4	978522.360	17.33	-91.04	0.17	-91.95	0.25	-102.30	7.50	-35.17
907	BA	605 22	42.250	44 38.170	967.5	978507.670	4.77	-103.49	0.21	-104.37	0.25	-102.19	-5.02	-17.96
908	BA	606 22	39.670	44 43.420	967.8	978498.560	-1.48	-109.78	0.20	-110.67	0.22	-102.12	-11.38	-25.53
909	BA	607 22	38.420	44 47.920	1026.2	978492.280	11.59	-103.24	0.38	-103.99	0.55	-102.10	-4.90	-49.01
910	BA	608 22	35.670	44 50.920	942.3	978508.910	5.27	-100.17	0.20	-101.04	0.15	-102.07	-1.74	-46.01
911	BA	609 22	33.330	44 53.250	905.9	978523.840	11.46	-89.91	0.16	-90.78	0.25	-101.92	8.46	-35.91
912	BA	610 22	31.830	44 58.750	853.2	978577.670	50.63	-44.85	0.14	-45.70	0.39	-101.98	53.78	8.77
913	BA	611 22	30.330	45 3.250	813.3	978586.920	49.16	-41.85	0.09	-42.71	0.24	-102.02	56.91	11.39
914	BA	612 22	25.330	44 59.250	782.3	978569.000	26.98	-60.56	0.02	-61.46	0.14	-101.78	38.00	-6.44
915	BA	613 22	27.250	44 56.250	802.8	978562.940	25.21	-64.62	0.04	-65.53	0.24	-101.70	33.80	-10.40
916	BA	614 22	29.500	44 51.420	849.9	978524.490	-1.08	-96.20	0.06	-97.13	0.22	-101.74	2.12	-41.61
917	BA	615 22	31.920	44 46.420	907.4	978502.930	-7.47	-109.02	0.11	-109.95	0.24	-101.81	-10.79	-54.05
918	BA	616 22	34.250	44 41.170	895.5	978521.780	5.21	-94.99	0.07	-95.95	0.14	-101.96	3.37	-39.37
919	BA	617 22	36.330	44 38.170	902.8	978529.730	13.20	-87.83	0.07	-88.79	0.39	-101.99	10.55	-31.97
920	BA	618 22	34.330	44 37.170	1085.2	978488.050	29.93	-91.50	1.81	-90.86	0.44	-101.82	7.80	-34.38
921	BA	619 22	34.670	44 37.080	905.6	978526.190	12.29	-89.05	0.06	-90.02	1.59	-101.97	9.28	-32.92
922	BA	620 22	33.920	44 37.250	914.6	978526.200	15.88	-86.47	0.08	-87.43	1.07	-101.89	11.77	-30.38
923	BA	621 22	37.250	44 35.580	937.5	978522.990	14.95	-89.51	0.11	-90.46	0.24	-102.10	8.90	-33.34
924	BA	622 22	40.080	44 30.500	927.8	978534.380	21.55	-82.27	0.10	-83.22	0.39	-102.24	16.28	-25.52
925	BA	623 22	42.080	44 25.420	934.8	978533.050	20.24	-84.36	0.12	-85.30	0.55	-102.41	14.35	-26.92
926	BA	624 22	39.670	44 17.420	897.3	978546.970	35.17	-75.24	0.23	-76.04	0.58	-102.72	24.04	-15.79
927	BA	625 22	42.670	44 11.750	915.9	978550.430	31.16	-71.33	0.18	-72.19	0.42	-103.00	28.11	-11.18
928	BA	626 22	44.250	44 6.330	962.0	978542.780	36.04	-71.61	0.08	-72.61	0.45	-103.13	27.69	-10.96
929	BA	627 22	47.330	44 1.670	1004.2	978542.770	45.75	-66.62	0.10	-67.64	0.64	-103.28	32.68	-5.59
930	BA	628 22	49.920	43 56.420	991.2	978549.850	46.03	-64.88	0.07	-65.92	0.30	-103.38	34.53	-0.56
931	BA	629 22	52.170	43 51.080	1027.8	978538.010	43.06	-71.95	0.12	-72.96	0.33	-103.45	27.47	-9.73
932	BA	630 22	54.500	43 46.170	1002.8	978548.420	43.25	-68.96	0.07	-70.01	0.71	-103.50	30.53	-5.75
933	BA	631 22	55.330	43 44.000	1016.7	978547.040	45.26	-68.51	0.10	-69.53	0.39	-103.52	30.99	-5.28
934	BA	632 22	57.170	43 40.750	1023.5	978543.420	41.75	-72.78	0.11	-73.79	0.55	-103.57	26.76	-9.39
935	BA	633 22	59.670	43 35.750	967.5	978540.990	39.34	-68.92	0.02	-69.99	0.94	-103.78	30.94	-5.38
936	BA	634 22	57.170	43 34.170	1004.2	978557.180	49.56	-62.81	0.06	-63.87	0.27	-103.72	36.90	2.16
937	BA	635 22	54.750	43 32.420	1016.6	978549.340	48.16	-65.60	0.09	-66.63	0.16	-103.78	34.14	-0.45
938	BA	636 22	52.170	43 38.000	1011.6	978544.690	44.74	-66.45	0.08	-67.49	0.20	-103.56	31.08	-4.09
939	BA	637 22	50.080	43 42.750	1056.5	978537.120	53.28	-64.94	0.20	-65.90	0.30	-103.44	34.43	-1.25
940	BA	638 22	47.080	43 49.080	1030.8	978547.860	59.21	-56.03	0.13	-57.04	0.18	-103.39	43.32	6.98
941	BA	639 22	45.080	43 53.580	995.6	978554.160	56.90	-54.51	0.07	-55.55	0.33	-103.39	44.91	8.08
942	BA	640 22	42.250	43 58.920	978.3	978555.990	56.42	-53.05	0.07	-54.07	0.24	-103.35	40.59	13.85
943	BA	641 22	39.420	44 5.000	939.2	978555.200	46.60	-58.50	0.13	-59.43	0.20	-103.18	40.98	9.23
944	BA	642 22	37.580	44 8.250	933.0	978548.190	39.64	-64.76	0.15	-65.67	0.61	-103.09	34.67	-3.57
945	BA	643 22	36.330	44 12.000	934.2	978542.740	35.89	-68.64	0.18	-69.52	0.68	-102.89	30.61	-8.06
946	BA	644 22	34.920	44 15.170	931.7	978538.000	31.89	-72.37	0.14	-73.29	0.25	-102.74	26.72	-12.27
947	BA	645 22	33.330	44 20.830	915.4	978536.520	27.07	-75.36	0.16	-76.24	0.77	-102.43	23.49	-4.69
948	BA	646 22	31.170	44 25.830	937.2	978531.740	31.32	-73.55	0.10	-74.51	0.68	-102.09	24.81	-1.23
949	BA	647 22	28.170	44 30.670	905.5	978533.230	26.22	-75.11	1.13	-75.01	0.45	-101.84	24.18	-16.44
950	BA	648 22	28.420	44 30.670	860.9	978541.630	20.59	-75.74	0.03	-76.71	0.77	-101.88	22.63	-0.90

USER #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. H	QRS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA S.D.CE MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL			
951	BA	649 22	27.830	44	30.670	864.2	978541.830	22.43	-74.27	0.02	-75.25	0.42	-101.83	24.03	-15.55	-0.29
952	BA	650 22	25.500	44	35.580	851.9	978537.370	16.65	-78.68	0.01	-79.66	0.68	-101.79	19.62	-21.45	0.19
953	BA	651 22	22.330	44	40.830	837.6	978534.870	13.10	-80.63	0.00	-81.61	0.24	-101.55	17.47	-24.04	0.53
954	BA	652 22	20.000	44	45.500	851.0	978527.440	12.27	-82.96	0.02	-83.93	0.77	-101.42	14.99	-26.96	-0.12
955	BA	653 22	17.420	44	50.580	898.5	978508.010	10.22	-90.32	0.13	-91.22	0.64	-101.27	7.40	-35.02	-7.90
956	BA	654 22	14.830	44	55.920	874.6	978515.680	13.25	-84.62	0.11	-85.52	0.87	-101.19	13.09	-29.84	-1.79
957	BA	655 22	17.500	44	57.420	840.4	978543.940	28.14	-65.90	0.05	-66.83	0.24	-101.36	32.05	-11.36	15.91
958	BA	656 22	20.250	44	59.170	802.9	978563.720	33.44	-56.40	0.01	-57.34	0.94	-101.49	41.77	-2.16	23.21
959	BA	657 22	22.420	44	53.330	813.6	978529.560	0.29	-90.75	0.01	-91.70	0.64	-101.60	7.49	-35.82	-8.70
960	BA	658 22	24.670	44	48.420	805.0	978521.890	-12.41	-102.50	0.01	-103.44	0.16	-101.67	-4.13	-46.96	-19.06
961	BA	659 22	27.000	44	44.000	829.7	978522.690	-6.46	-99.31	0.02	-100.26	0.36	-101.66	-1.03	-43.46	-15.50
962	BA	666 22	37.250	44	21.920	883.4	978549.500	26.00	-72.85	0.19	-73.68	0.22	-102.49	26.21	-14.04	2.45
963	BA	667 22	34.750	44	27.670	875.3	978546.630	23.29	-74.65	0.11	-75.55	0.27	-102.16	24.02	-16.83	6.03
964	BA	668 22	32.830	44	33.250	875.5	978540.480	19.25	-78.71	0.04	-79.69	0.19	-101.92	19.66	-21.81	4.30
965	BA	669 22	30.170	44	37.500	858.0	978540.430	16.63	-74.38	0.01	-80.36	0.61	-101.80	18.90	-22.91	4.09
966	BA	670 22	33.250	44	31.500	875.2	978533.740	11.97	-85.96	0.06	-86.91	0.19	-101.98	12.48	-23.78	-3.61
967	BA	671 22	33.670	44	31.580	879.5	978542.070	21.18	-77.23	0.06	-78.19	0.19	-101.96	21.18	-20.13	5.40
968	BA	672 22	32.750	44	31.500	872.1	978543.510	21.32	-76.27	0.05	-77.23	0.19	-101.92	22.12	-19.09	5.69
969	BA	673 22	25.420	44	9.830	997.7	978521.630	45.99	-65.65	0.13	-66.63	0.15	-102.88	33.31	-3.90	8.71
970	BA	674 22	28.000	44	4.330	982.1	978543.200	60.00	-49.89	0.12	-50.87	0.74	-103.17	49.41	12.77	25.40
971	BA	675 22	30.500	43	59.000	964.1	978550.820	59.41	-48.47	0.11	-49.44	0.15	-103.47	51.18	15.10	27.78
972	BA	676 22	32.750	43	54.170	956.7	978547.840	51.75	-55.30	0.08	-56.30	0.36	-103.48	44.35	8.79	21.56
973	BA	677 22	34.170	43	51.080	972.7	978553.270	60.61	-48.24	0.06	-49.26	0.33	-103.43	51.30	16.06	28.95
974	BA	678 22	35.420	43	48.670	972.2	978545.160	51.01	-57.78	0.05	-58.82	0.52	-103.30	41.62	6.62	19.40
975	BA	679 22	36.330	43	46.000	998.6	978539.260	52.29	-59.46	0.07	-60.49	0.64	-103.28	39.84	5.16	18.60
976	BA	680 22	39.170	43	40.250	1034.6	978513.950	35.05	-80.72	0.13	-81.73	0.68	-103.31	10.53	-15.58	-2.07
977	BA	681 22	41.920	43	35.000	1032.5	978528.230	45.74	-69.79	0.12	-70.81	0.68	-103.34	29.48	-4.14	9.19
978	BA	682 22	45.330	43	30.250	1021.6	978536.020	46.51	-67.80	0.09	-68.84	0.55	-103.50	31.65	-1.52	9.93
979	BA	683 22	50.420	43	28.250	1032.9	978547.300	55.81	-59.77	0.10	-60.81	0.58	-103.75	39.89	6.38	12.69
980	BA	684 22	49.420	43	32.170	1042.1	978540.570	52.99	-63.62	0.14	-64.62	0.42	-103.63	35.93	1.94	7.47
981	BA	685 22	46.670	43	35.170	1053.7	978533.440	52.40	-65.51	0.19	-66.47	0.65	-103.45	33.87	-0.28	6.52
982	BA	686 22	44.500	43	39.920	1054.4	978528.380	49.88	-68.10	0.20	-69.05	0.65	-103.38	31.22	-3.41	3.40
983	BA	687 22	41.920	43	45.750	1010.5	978548.540	59.26	-53.81	0.08	-54.85	0.68	-103.38	45.55	10.30	17.17
984	BA	688 22	40.250	43	50.080	969.1	978555.270	55.00	-53.44	0.05	-54.47	0.71	-103.43	46.09	10.34	17.16
985	BA	689 22	37.170	43	57.670	966.6	978558.170	60.47	-47.74	0.08	-48.74	0.24	-103.45	51.86	15.26	22.39
986	BA	690 22	35.420	44	1.920	934.5	978562.150	56.37	-48.20	0.12	-49.14	0.25	-103.38	51.48	14.42	21.87
987	BA	691 22	32.830	44	7.170	943.1	978546.740	46.37	-59.16	0.13	-60.10	0.25	-103.07	40.20	2.62	10.73
988	BA	692 22	33.080	44	9.250	1044.2	978525.120	55.68	-61.16	0.72	-61.59	0.82	-102.94	38.29	0.37	8.38
989	BA	693 22	32.920	44	8.920	991.1	978537.240	51.59	-59.71	0.12	-60.30	0.48	-103.02	39.80	1.95	10.01
990	BA	694 22	33.330	44	9.670	967.9	978540.370	47.12	-61.18	0.12	-62.15	0.64	-102.94	37.93	-0.08	7.87
991	BA	695 22	30.670	44	12.000	967.4	978534.840	44.27	-63.98	0.13	-64.94	0.55	-102.81	35.02	-3.06	5.71
992	BA	700 22	33.000	44	12.920	973.7	978528.700	37.59	-71.36	0.12	-72.33	0.55	-102.75	27.55	-10.91	-2.56
993	BA	701 22	27.830	44	17.170	950.6	978526.640	33.90	-72.47	0.11	-73.43	0.14	-102.47	26.23	-12.33	-2.69
994	BA	702 22	25.420	44	21.920	899.6	978540.490	34.58	-66.09	0.09	-67.03	0.24	-102.21	32.53	-6.48	3.93
995	BA	703 22	24.000	44	25.920	898.1	978543.810	38.94	-61.56	0.05	-62.54	0.14	-101.87	36.69	-2.78	8.36
996	BA	704 22	22.500	44	29.250	908.0	978540.360	40.13	-61.47	0.05	-62.46	0.22	-101.74	36.60	-3.22	8.72
997	BA	705 22	20.750	44	32.580	893.4	978532.620	29.74	-70.23	0.04	-71.22	0.55	-101.55	27.70	-12.43	0.48
998	BA	706 22	17.580	44	38.250	916.5	978528.260	35.86	-66.70	0.09	-67.65	0.22	-101.36	31.01	-9.65	5.93
999	BA	707 22	15.000	44	43.170	907.1	978523.100	30.52	-70.99	0.10	-71.92	0.24	-101.22	26.62	-14.50	9.07
1000	BA	708 22	12.250	44	48.500	936.3	978502.200	21.52	-83.25	0.22	-84.09	0.74	-101.10	14.25	-27.37	-0.19

SEQ #	IDENT.	LATITUDE		LONGITUDE		ALT.	QRS.	GRAV.	FAGA	SAGA	TTC	CBGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3.
		D	MIN	D	MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
1001	BA	709	22	10.000	44	52.830	910.3	978512.480	26.15	-75.71	0.20	-76.55	0.25	-101.02	21.79	-20.23	7.51
1002	BA	710	22	7.830	44	51.920	952.2	978491.260	20.14	-86.41	0.33	-87.16	0.15	-100.92	10.97	-30.70	-3.74
1003	BA	711	22	5.750	44	51.330	942.4	978486.290	14.32	-91.13	0.28	-91.92	0.22	-100.93	6.24	-35.14	-9.33
1004	BA	712	22	7.500	44	45.500	949.7	978482.670	11.12	-95.15	0.23	-95.99	0.25	-101.06	2.27	-38.43	-14.28
1005	BA	713	22	10.500	44	40.250	972.0	978499.860	32.04	-76.72	0.25	-77.56	0.25	-101.12	20.69	-19.53	0.50
1006	BA	714	22	11.830	44	37.170	974.4	978519.770	51.29	-57.74	0.23	-58.60	0.71	-101.13	39.86	-0.24	14.42
1007	BA	715	22	13.420	44	33.080	967.4	978518.800	46.49	-61.76	0.17	-62.68	0.90	-101.37	35.84	-3.60	9.60
1008	BA	716	22	15.170	44	29.830	950.1	978514.950	34.56	-71.76	0.12	-72.71	0.39	-101.44	25.93	-13.21	-0.28
1009	BA	717	22	17.580	44	24.670	937.4	978531.900	45.95	-58.95	0.09	-59.92	0.39	-101.78	39.09	0.48	13.58
1010	BA	718	22	19.420	44	24.250	1021.3	978528.800	66.79	-47.49	0.25	-48.37	0.74	-101.87	50.49	11.75	23.88
1011	BA	719	22	19.670	44	24.170	955.5	978541.090	58.51	-48.41	0.11	-49.37	1.07	-101.91	49.71	10.96	22.98
1012	BA	720	22	19.000	44	24.420	968.3	978538.720	60.80	-47.55	0.13	-48.51	0.74	-101.82	50.46	11.74	24.05
1013	BA	721	22	20.170	44	19.750	938.6	978530.490	42.17	-62.86	0.09	-63.83	0.39	-102.12	35.52	-2.63	10.43
1014	BA	722	22	22.250	44	14.420	960.5	978533.490	49.73	-57.75	0.12	-58.71	0.22	-102.52	40.97	3.41	17.02
1015	BA	723	22	21.170	44	5.580	1007.3	978490.880	32.70	-90.01	0.13	-91.00	0.68	-102.94	8.97	-27.12	-0.59
1016	BA	724	22	23.330	44	0.870	1021.2	978499.340	33.16	-81.11	0.15	-82.08	0.20	-103.21	18.11	-17.47	9.99
1017	BA	725	22	25.670	43	55.920	1012.0	978504.470	32.97	-80.27	0.11	-81.28	0.17	-103.31	19.04	-16.02	12.03
1018	BA	726	22	28.500	43	50.830	1003.3	978518.250	41.06	-71.20	0.08	-72.24	0.17	-103.40	28.20	-6.38	21.30
1019	BA	727	22	31.830	43	46.170	1010.3	978519.020	40.45	-72.60	0.08	-73.64	0.16	-103.28	26.66	-7.57	18.09
1020	BA	728	22	33.080	43	41.250	1022.5	978505.470	29.34	-85.08	0.10	-86.11	0.16	-103.21	14.08	-19.55	8.67
1021	BA	729	22	35.420	43	36.080	992.9	978515.840	29.08	-82.03	0.05	-83.08	0.16	-103.25	17.24	-15.86	12.71
1022	BA	730	22	38.500	43	29.420	1012.8	978501.520	16.61	-96.72	0.07	-97.77	0.15	-103.25	2.49	-29.94	-1.19
1023	BA	731	22	40.750	43	25.170	1015.8	978498.450	12.06	-101.61	0.08	-102.65	0.15	-103.48	2.15	-34.17	-5.75
1024	BA	732	22	37.000	43	20.500	983.5	978493.650	1.30	-108.75	0.04	-109.81	0.24	-103.57	-9.14	-40.01	-6.84
1025	BA	733	22	33.750	43	27.420	973.6	978497.970	6.03	-102.91	0.03	-103.97	0.24	-103.26	-3.58	-35.18	-1.20
1026	BA	734	22	31.000	43	32.000	970.6	978500.700	10.77	-97.84	0.02	-98.91	0.15	-103.07	1.29	-30.72	4.11
1027	BA	735	22	28.000	43	37.580	1026.2	978485.310	15.72	-99.11	0.12	-100.12	0.27	-103.03	0.11	-32.65	2.92
1028	BA	736	22	26.500	43	40.580	1052.5	978488.060	28.18	-89.59	0.19	-90.55	0.20	-103.05	9.39	-23.45	12.40
1029	BA	737	22	25.580	43	43.830	1051.2	978475.670	16.36	-101.26	0.19	-102.22	0.27	-103.09	-2.23	-35.46	0.12
1030	BA	738	22	25.170	43	46.830	1069.3	978455.520	2.23	-117.42	1.51	-117.07	0.43	-103.09	-17.09	-50.72	-15.90
1031	BA	739	22	25.080	43	46.580	1059.0	978475.530	19.16	-99.34	0.21	-100.28	0.16	-103.11	-0.28	-33.86	1.15
1032	BA	740	22	25.250	43	47.080	1049.9	978478.910	19.55	-97.93	0.19	-98.89	0.30	-103.15	1.17	-32.51	2.14
1033	BA	741	22	23.500	43	47.920	1084.3	978467.300	20.41	-100.92	0.29	-101.80	0.18	-103.09	-1.90	-35.52	0.33
1034	BA	742	22	21.250	43	52.750	1072.5	978472.700	24.55	-95.46	0.24	-96.30	0.20	-103.10	3.55	-30.55	5.37
1035	BA	743	22	18.580	43	59.000	1077.3	978476.620	32.78	-87.77	0.25	-88.69	0.42	-103.11	11.25	-33.52	12.10
1036	BA	744	22	16.080	44	0.080	1180.4	978441.170	31.78	-100.31	2.84	-98.70	0.59	-103.03	0.92	-33.74	3.54
1037	BA	745	22	16.000	44	3.830	1061.5	978474.030	28.04	-90.74	0.21	-91.69	0.22	-102.91	8.09	-27.15	8.59
1038	BA	746	22	18.330	44	11.830	988.2	978498.620	27.55	-83.03	0.13	-84.00	0.81	-102.54	15.63	-21.13	3.48
1039	BA	747	22	15.830	44	16.830	982.1	978508.880	38.57	-71.33	0.12	-72.31	0.17	-102.13	26.93	-10.32	12.62
1040	BA	748	22	13.250	44	21.830	990.8	978494.300	29.39	-81.48	0.15	-82.43	0.17	-101.86	16.50	-21.24	0.41
1041	BA	749	22	10.330	44	26.580	980.4	978486.020	20.97	-88.73	0.16	-89.67	0.33	-101.48	8.92	-29.23	-9.22
1042	BA	750	22	7.830	44	32.580	939.7	978520.530	45.55	-59.60	0.11	-60.56	0.27	-101.19	37.86	-0.93	14.90
1043	BA	751	22	5.500	44	37.830	923.1	978511.880	34.22	-69.07	0.11	-70.01	0.55	-101.00	28.26	-11.08	4.12
1044	BA	752	22	3.670	44	39.670	930.7	978495.210	21.81	-82.33	0.13	-83.26	0.87	-100.97	14.97	-24.45	-9.38
1045	BA	753	22	2.500	44	44.080	910.2	978503.040	24.54	-77.31	0.11	-78.24	1.26	-100.80	19.88	-20.09	-4.46
1046	BA	754	22	0.500	44	47.580	897.9	978502.970	22.77	-77.71	0.12	-78.62	0.94	-100.74	19.48	-20.81	-5.35
1047	BA	755	21	55.080	44	45.100	868.2	978516.540	32.83	-64.32	0.04	-65.29	0.42	-100.56	32.72	-6.63	6.17
1048	BA	756	21	57.830	44	40.750	888.7	978514.910	34.66	-64.79	0.06	-65.75	0.42	-100.72	32.35	-6.63	8.14
1049	BA	757	22	0.080	44	37.250	902.1	978507.370	28.90	-72.04	0.08	-73.00	0.42	-100.83	25.18	-13.50	3.07
1050	BA	758	22	1.330	44	34.170	931.1	978491.750	20.92	-83.26	0.11	-84.21	0.45	-100.99	14.03	-24.32	-5.18

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA MGAL	S.D.CR MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL		
1051	BA	759 22	2.920	44	29.920	963.0	978482.690	20.04	-87.71	0.15	-88.65	0.68	-101.04	9.55	-28.33	-1.39
1052	BA	760 22	5.830	44	23.080	1004.6	978477.900	25.04	-87.37	0.20	-88.28	0.49	-101.46	10.21	-26.94	6.51
1053	BA	761 22	8.670	44	19.670	1031.8	978475.080	27.64	-87.82	0.24	-88.72	1.20	-101.74	9.98	-26.95	6.62
1054	BA	762 22	10.920	44	14.500	1045.8	978474.720	29.23	-87.79	0.24	-88.70	0.87	-102.13	10.35	-26.02	8.82
1055	BA	763 22	12.670	44	8.080	1055.9	978476.690	32.48	-85.68	0.23	-86.60	0.36	-102.51	12.81	-22.74	13.94
1056	BA	769 21	44.080	43	52.000	1115.5	978396.280	0.29	-124.53	0.53	-125.19	0.19	-101.94	-26.53	-56.51	-16.82
1057	BA	770 21	44.830	43	40.500	1012.4	978421.430	-7.13	-120.43	0.12	-121.43	1.63	-102.08	-22.31	-50.56	-17.79
1058	BA	771 21	46.670	43	35.330	955.5	978455.710	7.67	-99.25	0.02	-100.30	0.42	-102.25	-0.86	-28.49	-0.03
1059	BA	772 21	48.000	43	32.580	929.1	978463.180	5.62	-98.35	0.01	-99.39	0.22	-102.26	0.13	-27.22	-1.56
1060	BA	773 21	53.750	43	44.420	1032.5	978434.670	3.04	-112.50	0.15	-113.48	0.36	-102.38	-14.14	-43.09	-4.13
1061	BA	774 21	56.750	43	40.730	987.0	978443.350	-5.44	-115.89	0.07	-116.92	1.00	-102.39	-17.43	-46.97	-8.10
1062	BA	775 21	59.500	43	37.580	960.1	978456.180	-3.78	-111.22	0.04	-112.26	0.84	-102.49	-12.59	-42.00	-3.79
1063	BA	776 22	2.080	43	30.750	920.0	978477.960	2.92	-100.02	0.00	-101.07	0.64	-102.46	-1.32	-29.94	4.14
1064	BA	777 22	2.170	43	24.830	904.4	978491.540	11.60	-89.60	-0.02	-90.66	1.13	-102.61	9.28	-18.41	6.61
1065	BA	778 22	6.670	43	19.500	941.1	978494.810	21.48	-83.83	0.00	-84.89	0.61	-102.77	15.10	-12.25	3.59
1066	BA	779 22	8.830	43	15.920	943.0	978515.530	40.52	-65.00	-0.01	-66.08	0.58	-102.92	34.06	7.03	19.13
1067	BA	780 22	8.830	43	11.920	883.7	978527.840	34.53	-64.36	-0.05	-65.42	0.77	-103.14	35.11	8.71	16.94
1068	BA	781 22	11.830	43	9.750	906.3	978524.300	34.81	-66.60	-0.05	-67.69	1.07	-103.24	32.88	6.48	14.29
1069	BA	782 22	16.830	43	12.000	890.1	978532.630	32.87	-66.73	-0.04	-67.79	0.74	-103.30	32.88	5.58	18.02
1070	BA	783 22	13.500	43	18.000	922.2	978505.200	18.86	-84.34	-0.03	-85.42	0.55	-103.07	14.93	-12.95	6.56
1071	BA	784 22	10.670	43	23.330	920.3	978498.800	14.85	-88.13	-0.03	-89.21	0.33	-102.81	10.89	-17.51	12.25
1072	BA	785 22	8.330	43	27.170	922.1	978495.120	14.18	-89.00	-0.02	-90.07	0.68	-102.68	9.89	-18.86	14.44
1073	BA	786 22	7.250	43	29.670	1043.0	978456.190	13.69	-103.02	0.91	-103.25	0.26	-102.50	-3.79	-32.81	2.40
1074	BA	787 22	7.580	43	29.750	931.7	978481.120	3.93	-100.32	-0.01	-101.39	1.00	-102.62	-1.51	-30.58	4.81
1075	BA	788 22	6.920	43	29.500	937.7	978478.860	4.22	-100.71	-0.01	-101.78	0.17	-102.57	-1.97	-30.93	4.01
1076	BA	789 22	5.250	43	34.580	951.4	978465.390	-3.27	-109.74	0.01	-110.80	0.45	-102.54	-11.05	-40.62	-2.63
1077	BA	790 22	11.920	43	54.080	1161.4	978435.060	24.19	-105.77	0.64	-106.35	0.23	-102.86	-6.90	-40.23	0.57
1078	BA	791 22	9.320	43	48.330	1130.4	978428.750	11.12	-115.37	0.52	-116.05	0.17	-102.74	-16.63	-48.80	-7.19
1079	BA	792 22	3.420	43	39.080	968.1	978457.640	-3.95	-112.28	0.04	-113.33	0.84	-102.60	-13.58	-43.65	-3.90
1080	BA	793 22	1.170	43	43.830	999.1	978445.920	-3.75	-115.55	0.08	-116.58	0.94	-102.59	-16.93	-47.50	-6.47
1081	BA	794 21	58.580	43	48.170	1048.7	978431.470	-0.19	-117.54	0.18	-118.51	0.15	-102.59	-19.00	-49.97	-8.15
1082	BA	795 21	56.920	43	52.920	1106.8	978414.620	2.61	-121.24	0.39	-122.03	0.55	-102.40	-22.88	-54.42	-11.90
1083	BA	796 22	1.670	43	55.920	1133.8	978419.060	10.42	-116.45	0.49	-117.16	0.22	-102.61	-17.88	-50.41	-7.69
1084	BA	797 22	6.420	43	58.330	1099.0	978439.740	15.39	-107.58	0.35	-108.42	0.19	-102.77	-8.87	-42.26	-0.30
1085	BA	798 22	11.420	44	1.250	1111.5	978450.710	24.97	-99.41	0.37	-100.23	0.23	-102.86	-0.63	-34.98	4.80
1086	BA	800 22	13.830	43	55.670	1125.4	978452.450	28.46	-97.47	0.43	-98.24	0.46	-102.94	1.39	-32.37	7.45
1087	BA	801 22	9.000	43	52.830	1099.0	978440.970	13.91	-109.06	0.35	-109.89	0.23	-102.76	-10.37	-43.20	-1.52
1088	BA	802 22	12.000	43	48.330	1099.0	978436.250	6.04	-116.94	0.36	-117.76	0.55	-102.83	-18.16	-50.63	-9.52
1089	BA	803 22	14.000	43	42.920	1038.3	978451.370	0.33	-115.86	0.17	-116.83	0.39	-102.79	-17.09	-48.94	-8.38
1090	BA	804 22	16.580	43	37.420	984.2	978470.850	0.39	-109.74	0.05	-110.79	0.22	-102.83	-10.86	-42.13	-2.54
1091	BA	805 22	19.000	43	32.500	966.1	978487.900	9.30	-98.80	0.01	-99.68	0.24	-102.80	0.08	-30.68	7.72
1092	BA	806 22	21.830	43	26.830	942.8	978496.370	7.59	-97.91	0.00	-98.97	0.71	-102.91	1.15	-29.03	7.58
1093	BA	807 22	24.250	43	22.080	947.7	978503.110	13.28	-92.77	0.00	-93.84	0.14	-103.07	6.43	-23.28	11.35
1094	BA	808 22	26.420	43	17.170	934.1	978513.380	17.05	-87.47	-0.02	-88.55	0.74	-103.32	12.01	-17.17	14.95
1095	BA	809 22	21.170	43	13.920	919.5	978523.570	28.30	-74.59	-0.04	-75.68	0.74	-103.28	24.89	-3.20	16.38
1096	BA	810 22	19.170	43	19.580	930.4	978509.120	19.33	-84.78	-0.02	-85.86	0.39	-103.04	14.43	-14.32	15.79
1097	BA	811 22	16.500	43	24.750	929.6	978497.660	10.44	-93.58	-0.02	-94.66	0.14	-102.93	5.52	-23.75	10.52
1098	BA	812 22	14.170	43	31.170	956.8	978477.390	1.02	-106.05	0.00	-107.12	0.39	-102.65	-7.29	-37.31	0.47
1099	BA	813 22	11.500	43	35.250	961.0	978469.000	-3.26	-110.60	0.01	-111.87	0.14	-102.68	-12.01	-42.37	-3.18
1100	BA	814 22	9.000	43	40.250	991.4	978459.110	-1.14	-112.08	0.07	-113.12	0.14	-102.65	-13.38	-44.26	-3.71



SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA MGAL	S.D.C.R MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
1101	BA	815 22	5.170	43 38.080	967.7	978459.130	-4.41	-112.71	0.03	-113.76	0.14	-102.59	-14.00	-4.50
1102	BA	816 22	5.000	43 38.420	1032.7	978444.400	1.08	-114.47	1.86	-113.75	0.40	-102.56	-14.18	-4.60
1103	BA	817 22	4.830	43 38.670	968.3	978459.550	-4.45	-112.81	0.03	-113.87	0.24	-102.62	-14.08	-4.45
1104	BA	818 22	6.670	43 44.420	1020.7	978449.460	0.69	-113.52	0.13	-114.52	0.39	-102.70	-14.82	-4.70
1105	BA	819 22	5.000	43 50.920	1073.8	978453.900	3.27	-116.89	0.26	-117.80	0.39	-102.74	-18.21	-8.09
1106	BA	820 22	8.830	44 5.830	1090.8	978457.020	27.61	-94.45	0.34	-95.28	0.17	-102.55	4.05	9.19
1107	BA	821 22	6.000	44 11.420	1049.6	978464.670	25.52	-91.93	0.24	-92.84	0.42	-102.15	6.22	10.54
1108	BA	822 22	2.920	44 16.000	1014.4	978469.940	23.15	-90.35	0.18	-91.30	0.25	-101.81	7.52	11.29
1109	BA	823 22	0.750	44 4.080	1008.8	978461.300	15.06	-97.83	0.14	-98.80	0.22	-102.44	0.66	9.62
1110	BA	824 21	58.250	44 26.720	981.6	978461.050	9.02	-100.82	0.16	-101.75	0.22	-101.11	-3.53	-4.64
1111	BA	825 21	56.000	44 31.860	967.0	978466.800	12.62	-95.59	0.16	-96.52	0.27	-100.78	1.42	-36.03
1112	BA	826 21	53.250	44 37.370	939.5	978474.790	14.98	-90.15	0.13	-91.08	0.48	-100.55	6.70	-8.19
1113	BA	827 21	51.000	44 42.020	907.0	978499.530	32.03	-69.46	0.09	-70.41	0.64	-100.41	27.33	5.47
1114	BA	828 21	46.420	44 39.630	950.5	978499.130	49.81	-56.55	0.18	-57.44	0.61	-100.31	40.07	31.14
1115	BA	829 21	48.670	44 35.010	984.4	978449.180	7.99	-102.17	0.25	-103.02	0.61	-100.43	-5.47	-42.63
1116	BA	830 21	51.250	44 30.050	1012.9	978444.350	9.27	-104.07	0.29	-104.90	0.15	-100.70	-7.18	-7.08
1117	BA	831 21	53.920	44 24.940	1043.5	978440.730	12.32	-104.45	0.35	-105.24	0.16	-100.98	-7.33	-4.53
1118	BA	832 21	54.670	44 21.480	1052.1	978444.460	17.92	-99.81	0.34	-100.62	0.36	-101.23	-2.47	2.13
1119	BA	833 21	56.830	44 17.550	1063.4	978450.090	24.79	-94.21	0.35	-95.01	0.28	-101.56	3.41	-31.89
1120	BA	834 21	58.250	44 14.630	1063.4	978451.500	24.71	-94.28	0.31	-95.13	0.31	-101.76	3.50	9.98
1121	BA	835 22	0.420	44 9.500	1068.7	978451.520	24.10	-95.48	0.30	-96.34	0.18	-102.09	2.60	10.17
1122	BA	836 22	2.420	44 4.920	1085.2	978445.550	21.13	-100.30	0.33	-101.14	0.68	-102.40	-1.93	6.33
1123	BA	837 22	4.330	44 1.500	1109.6	978437.860	18.97	-105.19	0.40	-105.98	0.21	-102.64	-6.60	-40.25
1124	BA	843 21	59.170	44 0.690	1140.2	978430.360	16.31	-111.27	0.54	-111.94	0.18	-102.52	-12.77	-2.79
1125	BA	844 21	57.000	44 5.370	1122.1	978428.490	21.12	-104.44	0.52	-105.12	0.18	-102.16	-6.25	3.30
1126	BA	845 21	53.830	44 11.130	1114.1	978437.980	21.44	-103.22	0.53	-103.85	0.29	-101.68	-5.43	3.42
1127	BA	846 21	51.920	44 16.380	1091.9	978429.430	18.03	-104.15	0.53	-104.80	0.29	-101.35	-6.65	1.02
1128	BA	847 21	49.330	44 21.340	1081.2	978426.520	14.51	-106.47	0.50	-107.14	0.22	-101.05	-9.26	-2.89
1129	BA	848 21	46.580	44 26.950	1054.1	978425.970	8.45	-109.50	0.45	-110.20	0.34	-100.73	-12.57	-8.26
1130	BA	849 21	44.290	44 31.930	1023.3	978435.110	10.46	-104.05	0.41	-104.77	0.19	-100.34	-7.43	-5.63
1131	BA	850 21	41.580	44 37.120	977.7	978447.000	11.08	-98.32	0.25	-99.17	0.16	-100.04	-2.00	-3.57
1132	BA	851 21	37.500	44 34.150	989.5	978435.040	6.97	-103.75	0.29	-104.57	0.18	-100.16	-7.31	-4.88
1133	BA	852 21	39.830	44 29.750	980.0	978438.590	5.18	-104.48	0.22	-105.35	0.18	-100.35	-7.88	-3.38
1134	BA	853 21	42.420	44 24.780	1005.5	978432.380	-5.82	-118.34	0.26	-119.20	0.65	-100.64	-21.50	-15.13
1135	BA	854 21	44.250	44 19.140	1031.2	978424.700	2.53	-112.86	0.30	-113.70	0.46	-100.95	-15.77	-7.65
1136	BA	855 21	46.830	44 14.010	1037.0	978427.750	4.69	-111.34	0.30	-112.18	0.30	-101.35	-13.89	-4.69
1137	BA	856 21	49.170	44 8.770	1064.5	978425.550	8.55	-110.56	0.36	-111.36	0.31	-101.68	-12.80	-2.77
1138	BA	857 21	49.500	44 5.450	1099.6	978422.640	16.13	-106.91	0.49	-107.60	0.22	-101.95	-8.89	1.60
1139	BA	858 21	49.330	44 5.280	1131.5	978415.670	19.18	-107.43	0.66	-107.98	0.23	-101.86	-9.43	1.09
1140	BA	859 21	49.170	44 5.050	1091.2	978423.510	14.75	-107.35	0.46	-108.07	0.43	-101.89	-9.38	1.19
1141	BA	860 21	52.750	44 3.350	1102.5	978422.480	13.49	-109.88	0.48	-110.58	0.29	-102.15	-11.66	-1.15
1142	BA	861 21	54.170	43 59.420	1107.2	978418.090	9.07	-114.82	0.45	-115.56	0.17	-102.37	-16.44	-5.63
1143	BA	862 21	56.830	43 50.330	1104.4	978454.210	20.58	-103.00	0.37	-103.82	0.34	-102.94	-4.12	1.97
1144	BA	863 22	18.920	43 45.080	1052.1	978459.590	7.61	-110.11	0.20	-111.06	0.20	-102.95	-11.20	-4.76
1145	BA	864 22	21.670	43 39.170	1037.1	978467.590	8.08	-107.97	0.16	-108.95	0.22	-102.93	-9.06	-2.64
1146	BA	865 22	23.920	43 35.250	1019.2	978476.920	9.50	-104.55	0.11	-105.56	0.74	-102.91	-5.64	0.44
1147	BA	866 22	26.500	43 29.420	966.7	978476.540	10.18	-97.99	0.01	-99.06	0.55	-102.89	0.97	6.68
1148	BA	867 22	29.080	43 24.580	941.8	978500.260	3.48	-101.90	0.00	-102.97	0.52	-103.13	-2.61	2.44
1149	BA	868 22	31.670	43 19.920	956.0	978497.300	2.15	-104.83	0.00	-105.90	0.33	-103.41	-5.30	-0.98
1150	BD001	17 52.320	42 15.170	154.1	978425.256	-45.47	-62.72	1.01	-61.93	0.49	-63.50	1.16	5.20	-9.75

USER #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA MGAL	S.D.CB MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
1151	RD002	17 46.970	41 23.770	0.0	978497.321	-16.29	-16.30	0.13	-16.17	0.22	11.53	-27.68	-19.39	-4.63
1152	RD003	17 50.630	41 8.210	0.0	978500.967	-15.85	-15.86	0.20	-15.66	0.22	19.97	-35.61	-26.36	-5.56
1153	RD004	17 41.670	40 55.190	0.0	978499.370	-9.62	-9.63	0.46	-9.17	0.24	21.31	-30.45	-20.03	3.23
1154	RD005	18 2.710	40 58.300	0.0	978515.604	-11.86	-11.87	0.27	-11.60	0.21	20.90	-32.47	-23.13	-2.38
1155	RD006	18 13.660	41 18.400	0.0	978547.359	10.15	10.15	0.08	10.23	0.22	0.03	10.20	17.51	-27.89
1156	RD007	18 13.980	40 53.350	0.0	978526.917	-10.57	-10.58	0.26	-10.32	0.23	20.50	-30.79	-21.67	-1.40
1157	RD008	18 16.830	40 44.710	0.0	978532.298	-7.74	-7.75	0.37	-7.38	0.23	23.01	-30.36	-20.81	1.56
1158	RD009	18 20.450	40 50.100	0.0	978530.002	-13.28	-13.29	0.27	-13.02	0.23	20.30	-33.29	-24.27	-3.91
1159	RD010	18 30.410	40 40.530	0.0	978545.794	-6.47	-6.48	0.36	-6.12	0.24	22.48	-28.57	-19.38	2.57
1160	RD011	18 28.090	41 3.130	0.0	978557.711	7.54	7.54	0.11	7.65	0.22	5.35	2.31	9.98	-20.39
1161	RD012	18 36.030	41 3.820	0.0	978571.302	13.94	13.94	0.10	14.04	0.23	-0.23	14.28	21.49	-20.11
1162	RD013	18 22.940	41 15.850	0.0	978561.839	16.31	16.31	0.05	16.36	0.21	-3.50	19.87	26.89	-20.13
1163	RD014	18 25.250	41 13.020	0.0	978566.930	19.32	19.32	0.06	19.38	0.21	-2.27	21.65	28.75	-17.37
1164	RD015	18 34.090	40 52.960	0.0	978550.744	-4.85	-4.86	0.16	-4.70	0.23	11.26	-15.94	-7.85	3.98
1165	RD016	18 43.570	40 37.250	0.0	978556.851	-7.38	-7.39	0.26	-7.13	0.22	19.86	-26.96	-19.21	3.00
1166	RD017	18 52.260	40 24.620	0.0	978565.411	-6.79	-6.80	0.41	-6.39	0.24	24.25	-30.61	-21.40	1.44
1167	RD018	18 51.770	40 37.210	0.0	978559.621	-12.13	-12.14	0.22	-11.92	0.22	15.70	-27.60	-19.29	0.42
1168	RD019	18 56.740	40 36.510	0.0	978560.694	-15.63	-15.64	0.22	-15.42	0.23	13.56	-28.96	-20.85	-2.05
1169	RD020	19 2.990	41 2.260	0.0	978594.498	12.38	12.38	0.00	12.38	0.22	-18.00	30.39	36.28	-12.81
1170	RD021	19 6.100	41 6.470	0.0	978597.231	12.22	12.22	0.01	12.23	0.23	-26.89	39.13	44.50	-5.11
1171	RD022	19 1.360	41 9.760	0.0	978598.1515	17.90	17.90	0.03	17.93	0.23	-27.09	45.03	50.41	0.76
1172	RD023	18 58.370	41 4.250	0.0	978592.883	15.04	15.04	0.00	15.04	0.22	-16.69	31.74	37.73	-11.35
1173	RD024	18 53.350	40 52.920	0.0	978570.685	-2.52	-2.53	0.11	-2.42	0.22	-0.26	-2.14	4.96	-28.44
1174	RD025	18 53.120	41 10.170	0.0	978595.350	22.35	22.35	0.01	22.36	0.22	-19.81	42.19	48.01	-1.68
1175	RD026	18 49.840	41 14.080	0.0	978593.397	23.41	23.41	0.05	23.46	0.22	-22.21	45.68	51.37	1.58
1176	RD027	18 44.140	41 12.700	0.0	978587.317	22.56	22.56	0.01	22.57	0.21	-15.48	38.06	44.19	-5.27
1177	RD028	18 38.630	41 14.520	0.0	978583.666	23.93	23.93	0.02	23.95	0.21	-13.34	37.30	43.59	-5.67
1178	RD029	18 35.040	41 20.280	0.0	978576.112	19.65	19.65	0.06	19.71	0.21	-17.35	37.08	43.12	-6.23
1179	RD030	18 30.970	41 24.910	0.0	978564.217	11.44	11.44	0.13	11.57	0.21	-19.81	31.40	37.30	-11.21
1180	RD031	17 26.660	42 16.140	0.0	978518.685	22.67	22.67	-0.03	22.64	0.19	-30.02	52.67	58.08	9.48
1181	RD032	17 31.280	42 13.100	0.0	978525.194	25.20	25.20	0.00	25.20	0.20	-30.37	55.57	60.97	12.52
1182	RD033	17 34.360	42 7.930	0.0	978529.923	27.27	27.27	0.00	27.27	0.20	-25.95	53.22	58.87	10.74
1183	RD034	17 39.540	42 3.110	0.0	978528.268	21.12	21.12	0.03	21.15	0.20	-24.22	45.38	51.12	3.63
1184	RD035	17 42.590	41 58.750	0.0	978531.685	21.88	21.88	0.05	21.93	0.22	-21.25	43.20	49.12	2.38
1185	RD036	17 45.910	41 54.570	0.0	978530.818	18.12	18.12	0.08	18.20	0.22	-18.86	37.07	43.14	-2.55
1186	RD037	17 49.010	41 49.550	0.0	978535.422	20.01	20.01	0.12	20.13	0.20	-15.36	35.50	41.80	-2.49
1187	RD038	17 52.430	41 45.680	0.0	978532.785	14.44	14.44	0.12	14.54	0.21	-13.59	28.14	34.55	-7.98
1188	RD039	17 56.800	41 41.690	0.0	978537.104	14.85	14.85	0.12	14.97	0.21	-12.52	27.49	33.97	-4.81
1189	RD040	18 0.540	41 39.760	0.0	978535.889	10.34	10.34	0.14	10.48	0.20	-13.22	23.71	30.14	1.77
1190	RD041	18 9.610	41 36.180	0.0	978546.399	17.18	17.18	0.14	17.32	0.21	-12.17	29.49	35.97	-3.73
1191	RD042	18 13.770	41 31.690	0.0	978549.944	16.35	16.35	0.10	16.45	0.21	-9.07	25.51	32.18	-13.62
1192	RD043	18 18.510	41 28.630	0.0	978557.021	19.71	19.71	0.22	19.93	0.21	-13.94	33.89	40.22	-4.72
1193	RD044	18 23.420	41 26.440	0.0	978559.737	18.19	18.19	0.16	18.35	0.22	-14.15	32.51	38.82	-8.13
1194	RD045	18 29.020	41 26.440	0.0	978559.558	13.60	13.60	0.13	13.73	0.23	-15.37	29.11	35.32	-12.60
1195	RD046	18 33.550	41 23.420	0.0	978565.224	14.21	14.21	0.45	14.66	0.23	-24.53	39.21	44.84	-1.02
1196	RD047	17 33.550	42 26.510	96.2	978485.926	13.67	2.91	0.22	2.99	0.24	-59.33	62.05	66.24	22.07
1197	RD048	17 30.310	42 22.680	44.0	978513.389	27.82	22.89	0.09	22.92	0.38	-46.16	68.96	73.64	26.21
1198	RD049	17 24.520	42 25.860	63.3	978516.782	42.15	35.06	0.03	35.00	0.24	-44.37	79.20	83.95	36.04
1199	RD050	17 28.060	42 29.350	90.5	978504.745	35.47	25.34	0.14	25.35	0.26	-57.09	82.19	86.46	41.00
1200	RD051	17 31.420	42 33.700	157.5	978440.420	-11.06	-28.70	0.34	-28.58	0.34	-72.02	43.00	46.69	9.70

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	OBS.	GRAV.	FAGA	SEGA	TTC	CRGA	S.D.CB	IS	GRAV	IGA1	IGA2	IGA3
		D	MIN	D	MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
1201	RD052	17 36.160	42 31.190	134.3	978426.857		-35.89	-50.92	0.46	-50.65	0.40	-73.79	22.76	26.39	-6.43	
1202	RD053	17 41.010	42 27.400	117.9	978429.919		-42.10	-55.30	0.63	-54.84	0.31	-72.91	17.75	21.41	-9.88	
1203	RD054	17 37.990	42 22.490	60.9	978489.766		2.77	-4.05	0.29	-3.85	0.29	-57.20	53.19	57.45	13.38	
1204	RD055	17 35.020	42 18.380	21.7	978523.739		27.21	24.78	0.16	24.91	0.26	-44.07	68.93	73.70	26.41	
1205	RD056	17 35.640	42 42.300	446.3	978335.123		-30.86	-80.81	3.06	-78.33	0.75	-91.88	12.32	14.97	9.26	
1206	RD057	17 34.020	42 38.230	198.5	978393.619		-47.45	-69.67	0.82	-69.13	0.59	-84.34	14.67	17.80	4.86	
1207	RD058	17 26.130	42 34.890	104.8	978482.362		19.16	7.43	0.22	7.50	0.56	-66.52	73.72	77.63	35.47	
1208	RD059	17 28.890	42 41.320	187.6	978396.306		-43.70	-64.70	0.68	-64.29	0.64	-83.50	18.69	21.86	6.39	
1209	RD060	17 32.080	42 45.790	377.7	978344.290		-39.79	-82.06	2.93	-79.63	0.77	-93.17	12.51	15.06	10.17	
1210	RD061	17 27.490	42 48.770	370.7	978341.113		-41.17	-82.66	1.52	-81.63	0.54	-92.93	10.25	12.82	7.49	
1211	RD062	17 31.260	42 53.890	909.0	978234.012		14.62	-87.10	10.94	-77.20	2.28	-100.01	20.42	22.24	25.01	
1212	RD063	17 36.760	42 49.170	782.0	978277.197		13.85	-73.65	3.78	-70.80	0.94	-99.45	26.44	28.35	29.92	
1213	RD064	17 24.920	43 5.460	911.8	978197.289		-15.77	-117.81	6.42	-112.43	1.44	-104.61	-10.32	-9.23	10.85	
1214	RD065	17 26.180	42 56.930	731.9	978255.821		-13.85	-95.75	3.06	-93.58	1.05	-99.78	4.13	6.00	8.84	
1215	RD066	17 20.670	42 59.040	397.7	978314.969		-53.13	-97.64	2.69	-95.47	1.12	-98.74	2.17	4.20	5.83	
1216	RD067	17 28.310	43 2.360	1581.0	978062.999		53.50	-123.41	10.71	-114.14	2.24	-103.39	-15.12	-13.95	2.40	
1217	RD068	17 30.120	43 7.220	1078.6	978157.731		-8.33	-129.04	6.31	-123.89	1.42	-106.65	-20.25	-19.71	6.30	
1218	RD069	17 29.180	43 13.290	1316.4	978119.085		27.20	-120.11	3.49	-117.93	0.96	-108.01	-13.70	-13.72	16.28	
1219	RD070	17 27.030	43 9.180	1265.3	978124.444		18.64	-122.94	5.72	-118.51	1.35	-106.43	-15.66	-15.11	11.16	
1220	RD071	17 23.630	43 13.320	1419.2	978087.973		32.57	-126.23	5.21	-122.39	1.32	-106.96	-19.47	-19.10	8.76	
1221	RD072	17 20.910	43 7.120	694.5	978237.810		-38.88	-116.60	3.65	-113.80	1.10	-104.31	-11.42	-10.22	9.50	
1222	RD073	17 16.730	43 2.010	381.4	978318.842		-50.92	-93.61	3.05	-91.06	1.02	-98.99	6.90	8.91	11.79	
1223	RD074	17 16.210	43 11.530	620.6	978236.852		-58.63	-128.09	4.57	-124.29	1.23	-105.13	-20.85	-19.77	2.81	
1224	RD075	17 13.210	43 10.010	516.9	978261.438		-63.50	-121.35	4.49	-117.52	1.21	-103.25	-15.66	-14.21	4.07	
1225	RD076	17 10.500	43 5.170	341.1	978322.483		-54.42	-92.60	2.57	-90.49	1.46	-98.17	6.76	8.88	11.46	
1226	RD077	17 37.960	43 16.160	1359.5	978096.420		10.24	-141.89	2.03	-141.19	0.91	-109.59	-35.56	-36.50	-2.90	
1227	RD078	17 35.740	43 11.220	1317.3	978121.143		23.87	-123.54	3.08	-121.77	1.05	-108.54	-17.03	-17.30	13.99	
1228	RD079	17 34.160	43 18.640	1763.4	978022.833		65.11	-132.42	2.48	-131.42	0.98	-109.26	-27.28	-28.20	4.96	
1229	RD080	17 35.870	43 23.000	1783.4	977995.716		42.12	-152.44	4.85	-154.07	1.29	-109.81	-49.39	-50.94	-16.97	
1230	RD081	17 39.420	43 20.390	1735.7	978013.107		41.72	-152.50	6.66	-147.32	1.56	-109.88	-42.37	-43.89	-9.30	
1231	RD082	17 44.380	43 17.650	1722.4	978030.445		50.64	-142.10	7.87	-135.70	1.80	-109.91	-30.65	-32.25	3.03	
1232	RD083	17 42.010	43 12.950	1317.9	978110.714		8.18	-139.29	1.86	-138.75	0.90	-109.56	-33.02	-33.91	-0.13	
1233	RD084	17 39.120	43 7.770	1135.6	978159.943		3.67	-123.40	2.38	-122.23	0.95	-108.44	-17.07	-17.22	13.49	
1234	RD085	17 35.170	43 3.550	943.1	978193.029		-19.21	-124.75	2.28	-123.54	0.96	-106.56	-19.69	-19.13	5.95	
1235	RD086	17 33.960	42 58.950	991.6	978199.877		3.64	-107.32	5.89	-102.53	1.45	-104.24	-1.05	0.07	13.66	
1236	RD087	17 42.910	42 51.350	856.7	978239.375		-6.25	-102.13	8.90	-94.22	1.88	-103.82	7.31	8.58	18.52	
1237	RD088	17 39.630	42 47.530	616.0	978307.095		-9.97	-78.91	5.55	-74.12	1.29	-100.03	24.24	26.12	28.02	
1238	RD089	17 39.100	42 55.210	1776.5	978044.778		86.26	-112.53	11.05	-102.97	2.29	-103.32	-4.59	-3.45	9.18	
1239	RD090	17 41.340	43 0.940	942.9	978197.300		-20.36	-125.88	8.04	-118.90	1.71	-107.08	-14.38	-13.99	12.53	
1240	RD091	17 45.910	42 57.710	645.4	978275.447		-38.01	-110.24	4.63	-106.41	1.15	-107.46	-0.71	-0.31	26.05	
1241	RD092	17 49.740	42 53.800	740.4	978248.324		-38.82	-121.67	5.18	-117.39	1.32	-107.06	-12.36	-11.80	12.74	
1242	RD093	17 46.920	42 49.570	464.1	978304.751		-65.55	-117.49	4.33	-113.77	1.24	-104.87	-10.13	-8.96	2.93	
1243	RD094	17 44.710	42 44.410	466.4	978330.728		-36.93	-89.13	2.17	-87.57	0.98	-100.65	11.28	13.62	15.92	
1244	RD095	17 41.580	42 39.900	328.7	978358.108		-49.33	-86.12	2.44	-84.12	0.77	-94.29	9.28	11.77	8.02	
1245	RD096	17 39.040	42 35.840	265.1	978383.581		-41.28	-70.96	0.95	-70.37	0.62	-86.17	15.06	18.09	8.00	
1246	RD097	17 52.540	43 6.160	1240.9	978138.354		2.85	-136.01	11.10	-126.18	2.40	-109.76	-19.78	-20.72	13.59	
1247	RD098	17 48.350	43 2.120	939.5	978199.819		-25.01	-130.15	2.11	-129.10	1.04	-108.77	-23.03	-23.25	7.89	
1248	RD099	17 51.770	42 57.960	946.6	978186.716		-38.92	-144.85	4.90	-141.02	1.36	-108.44	-35.24	-35.28	-5.32	
1249	RD100	17 56.200	43 4.600	1570.1	978062.122		24.97	-150.73	4.03	-148.12	1.22	-109.58	-43.06	-44.10	-9.42	
1250	RD101	17 59.120	43 8.910	2449.8	977884.747		116.35	-157.77	8.19	-151.05	1.89	-109.52	-48.52	-50.28	-13.89	

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA S.D.CB MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
1251	RD102	17 54.300	43 12.000	2394.5	977891.909	110.71	-157.23	19.08	-139.63	3.92	-109.54	-36.64	-2.20
1252	RD103	17 49.890	43 14.430	1472.7	978070.097	8.44	-156.36	10.72	-147.03	2.41	-110.20	-40.87	-6.72
1253	RD104	17 46.620	43 11.210	1100.8	978161.769	-11.77	-134.96	2.85	-133.29	1.16	-109.95	-26.49	6.90
1254	RD105	17 45.700	43 1.200	741.7	978238.427	-45.13	-128.13	7.15	-121.87	1.83	-108.25	-15.61	13.77
1255	RD106	17 44.540	43 5.740	880.6	978191.000	-48.67	-147.22	6.25	-141.99	1.61	-109.02	-35.38	-4.02
1256	RD107	17 56.990	42 43.550	1073.0	978172.641	-18.58	-138.66	11.16	-128.66	2.32	-105.11	-26.42	-11.49
1257	RD108	17 59.890	42 47.100	2451.3	977900.813	132.20	-142.09	14.09	-129.47	2.91	-105.88	-30.43	-5.38
1258	RD109	17 58.270	42 55.030	1106.1	978148.503	-33.63	-157.41	7.62	-150.98	1.65	-108.85	-45.18	-14.55
1259	RD110	17 56.110	42 51.370	1144.3	978172.596	4.14	-123.90	9.71	-115.40	2.04	-107.51	-11.01	-10.69
1260	RD111	17 52.230	42 47.740	699.3	978249.792	-52.57	-130.83	5.38	-126.30	1.28	-105.72	-22.49	-4.07
1261	RD112	17 49.490	42 41.700	514.5	978223.051	-33.94	-91.52	6.28	-85.90	1.57	-101.25	14.01	15.79
1262	RD113	17 53.750	42 38.740	814.3	978272.032	3.82	-87.30	3.18	-85.08	0.89	-101.09	13.70	15.48
1263	RD114	17 58.240	42 35.330	712.7	978295.142	-8.37	-88.13	8.09	-80.90	1.78	-101.22	18.44	22.14
1264	RD115	18 1.150	42 40.590	1184.1	978168.701	8.08	-124.42	5.46	-120.20	1.26	-105.10	-18.43	-5.68
1265	RD116	17 55.240	42 30.660	663.9	978309.786	-6.14	-80.44	7.24	-74.02	1.49	-94.72	18.95	18.41
1266	RD117	17 47.680	42 28.040	351.6	978370.521	-35.17	-74.52	2.63	-72.37	0.56	-83.32	10.00	2.88
1267	RD118	17 51.120	42 34.370	760.9	978283.038	0.66	-84.49	2.07	-83.33	0.83	-95.41	9.90	12.28
1268	RD119	17 46.490	42 36.860	590.7	978306.545	-24.30	-90.41	4.10	-87.05	0.86	-94.58	6.35	5.13
1269	RD120	17 43.310	42 32.290	283.3	978378.624	-44.34	-76.05	1.60	-74.83	0.44	-85.36	9.74	12.82
1270	RD121	17 45.130	42 23.690	168.5	978425.942	-34.04	-52.91	0.75	-52.40	0.25	-71.21	18.35	-8.29
1271	RD122	17 52.820	42 24.980	407.8	978360.132	-32.72	-78.36	2.36	-76.54	0.59	-84.25	6.58	1.64
1272	RD123	17 49.270	42 20.180	213.6	978415.007	-34.68	-58.59	0.94	-57.94	0.51	-69.90	11.36	-2.55
1273	RD124	17 47.060	42 15.120	97.3	978473.417	-10.24	-21.13	0.52	-20.75	0.30	-54.98	38.31	0.82
1274	RD125	17 43.210	42 10.190	37.5	978511.789	13.02	8.83	0.20	8.97	0.20	-39.47	48.35	7.66
1275	RD126	17 38.620	42 13.300	26.6	978523.256	25.12	22.14	0.13	22.23	0.30	-39.30	61.46	19.20
1276	RD127	17 54.710	42 9.910	136.5	978434.875	-43.39	-58.97	0.98	-57.88	0.29	-55.46	1.56	-12.57
1277	RD128	17 52.260	42 5.060	78.6	978476.622	-17.36	-26.17	0.46	-25.82	0.25	-41.86	15.84	-5.09
1278	RD129	17 56.630	42 2.010	105.8	978451.043	-38.39	-50.23	0.69	-49.70	0.38	-41.89	-8.08	-13.55
1279	RD130	17 54.010	41 57.850	59.0	978488.549	-13.02	-19.63	0.34	-19.38	0.36	-31.48	11.95	-13.08
1280	RD131	17 49.340	42 1.370	43.2	978509.281	6.92	2.09	0.24	2.26	0.22	-31.85	34.00	-2.71
1281	RD132	17 45.110	42 3.720	20.1	978522.536	16.74	14.49	0.15	14.61	0.24	-30.84	45.41	5.08
1282	RD133	18 4.210	42 25.360	891.4	978373.335	19.68	-80.06	1.60	-69.49	2.34	-95.64	23.61	23.50
1283	RD134	18 0.570	42 28.900	748.2	978396.942	2.32	-81.40	6.61	-75.69	1.55	-96.94	19.22	19.58
1284	RD135	18 2.980	42 32.000	1067.1	978328.689	40.35	-79.06	4.20	-76.02	0.90	-100.88	23.64	24.60
1285	RD136	18 6.880	42 28.470	1492.7	978159.130	88.65	-78.38	10.34	-69.44	2.09	-99.69	26.12	27.94
1286	RD137	18 11.510	42 26.030	2590.7	977954.789	218.85	-71.04	12.99	-59.48	2.64	-90.84	32.06	33.58
1287	RD138	18 8.800	42 22.080	1086.7	978322.864	35.40	-86.20	14.18	-73.19	2.86	-95.12	19.09	16.39
1288	RD139	18 4.910	42 16.650	631.1	978312.643	-21.96	-82.58	11.72	-81.65	2.38	-84.13	0.93	-1.76
1289	RD140	18 1.810	42 19.750	846.0	978276.235	10.70	-83.97	3.50	-81.45	0.75	-85.65	1.78	-0.86
1290	RD141	17 58.090	42 22.640	558.7	978332.710	-18.20	-83.83	3.78	-77.66	0.84	-86.51	7.32	10.35
1291	RD142	17 57.900	42 13.810	240.3	978392.100	-56.93	-83.83	2.19	-81.97	0.58	-69.28	-13.34	-13.58
1292	RD143	18 2.390	42 11.970	272.4	978392.044	-61.04	-81.53	4.37	-87.53	0.92	-71.91	-16.29	-20.37
1293	RD145	17 58.530	42 7.500	189.0	978413.562	-51.86	-73.02	1.69	-71.59	0.61	-56.08	-11.68	-22.60
1294	RD146	17 48.130	42 9.490	68.5	978489.757	-3.72	-11.40	0.39	-11.11	0.25	-44.74	33.46	-1.39
1295	RD147	17 54.120	42 18.730	196.6	978402.463	-56.73	-78.73	2.23	-76.78	0.55	-74.17	0.51	-9.71
1296	RD148	18 2.700	41 51.250	90.9	978474.444	-24.95	-35.13	0.72	-34.54	0.83	-30.38	-1.01	-11.72
1297	RD149	18 5.790	41 56.830	186.5	978435.074	-37.54	-58.42	1.80	-56.88	1.04	-43.64	-13.72	-18.78
1298	RD150	18 9.810	41 53.310	215.8	978439.398	-27.75	-51.90	2.26	-49.94	0.96	-41.90	-3.78	-13.42
1299	RD151	18 7.330	41 47.840	111.8	978470.359	-26.69	-39.21	0.84	-38.53	0.84	-29.75	-9.06	-15.47
1300	RD152	18 4.690	41 43.520	163.4	978477.032	-1.74	-20.03	0.46	-19.80	0.86	-21.17	6.81	-6.07

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	OBS. GRAV. MGAL	FAGA MGAL	SEGA MGAL	ITC MGAL	CRGA S.D.C.R MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL	
1301	RD153	17 59.540	41 46.110	58.6	978501.442	-5.13	-11.69	0.26	-11.52	1.08	-20.20	8.53	14.51	-5.64
1302	RD154	17 55.330	41 49.230	90.7	978505.159	12.20	2.05	0.27	2.19	1.14	-20.46	22.40	28.37	-7.73
1303	RD155	17 58.330	41 53.490	82.5	978483.160	-14.96	-24.20	0.45	-23.87	1.18	-29.42	5.34	10.80	-6.37
1304	RD156	18 1.730	41 59.580	149.7	978436.242	-44.14	-60.90	1.39	-59.72	1.08	-43.90	-16.20	-11.42	-22.40
1305	RD157	18 14.260	42 9.810	769.7	978287.643	-12.50	-98.64	12.01	-87.55	2.61	-82.36	-7.12	-3.96	-10.03
1306	RD158	18 18.980	42 7.020	768.7	978301.476	-3.21	-89.23	4.60	-85.55	1.44	-62.53	-5.16	-2.04	-8.27
1307	RD159	18 22.040	42 11.410	1186.5	978237.034	58.52	-74.24	7.62	-67.86	1.92	-91.57	20.39	22.91	18.01
1308	RD160	18 25.410	42 15.700	1172.2	978238.810	52.85	-78.31	11.37	-68.17	2.50	-98.25	26.91	28.79	25.70
1309	RD161	18 17.720	42 14.570	1044.3	978255.469	36.96	-79.90	7.61	-73.43	1.83	-92.62	16.31	18.81	14.41
1310	RD162	18 13.990	42 17.430	1299.3	978193.326	56.84	-88.55	13.50	-76.36	2.89	-93.10	13.27	15.75	11.80
1311	RD163	18 9.850	42 12.880	638.3	978310.422	-26.34	-97.78	7.75	-90.62	1.89	-83.13	-9.35	-6.18	-12.11
1312	RD164	18 7.950	42 8.600	376.3	978360.785	-55.16	-97.28	4.80	-92.98	1.47	-72.39	-21.54	-17.38	-25.07
1313	RD165	18 12.550	42 5.530	426.8	978361.591	-42.86	-90.63	7.15	-84.04	1.73	-72.08	-13.01	-9.36	-16.48
1314	RD166	18 8.660	42 1.280	269.7	978405.604	-43.88	-74.07	2.98	-71.46	1.15	-56.98	-15.17	-10.92	-19.31
1315	RD167	18 12.800	41 58.090	712.3	978327.553	10.98	-68.72	2.39	-67.19	1.21	-55.62	-13.61	-9.34	-17.70
1316	RD168	18 18.610	42 3.120	901.7	978279.058	15.74	-85.15	2.77	-83.42	1.18	-74.43	-11.58	-8.09	-15.11
1317	RD169	18 5.220	42 4.760	204.3	978408.585	-58.03	-80.90	2.69	-78.50	1.12	-59.86	-19.14	-14.98	-23.50
1318	RD170	18 16.030	41 42.800	236.2	978452.334	-14.07	-80.51	0.69	-40.14	0.33	-30.75	-10.05	-4.74	-18.47
1319	RD171	18 13.090	41 37.590	171.7	978495.248	11.55	-7.66	0.46	-7.44	0.37	-20.64	12.71	18.61	-9.92
1320	RD172	18 17.890	41 34.030	108.1	978518.323	10.70	-1.39	0.44	-1.11	0.32	-20.18	18.77	24.68	-16.56
1321	RD173	18 8.840	41 41.070	126.5	978492.233	-1.62	-15.78	0.42	-15.54	0.39	-21.50	5.61	11.47	-6.25
1322	RD174	18 11.960	41 46.050	183.8	978458.533	-20.41	-40.98	1.05	-40.19	0.44	-31.67	-9.01	-3.73	-15.50
1323	RD175	18 14.740	41 49.740	326.1	978424.972	-12.52	-49.02	2.19	-47.27	0.53	-41.19	-6.96	-2.13	-12.08
1324	RD176	18 19.520	41 47.350	349.3	978441.384	6.76	-32.33	1.63	-31.16	0.51	-42.67	10.52	15.27	4.83
1325	RD177	18 24.310	41 43.760	382.9	978439.219	10.66	-32.19	0.80	-31.89	0.59	-41.94	8.94	13.71	1.69
1326	RD178	18 21.120	41 38.700	280.6	978470.530	13.26	-18.14	0.52	-18.00	0.35	-29.71	10.89	16.24	-3.32
1327	RD179	18 26.590	41 56.980	682.4	978341.320	3.15	-73.21	1.53	-72.52	0.73	-72.18	-2.29	1.25	-6.45
1328	RD180	18 26.660	41 49.290	430.0	978410.420	-5.71	-53.84	1.69	-52.71	0.77	-56.41	2.49	6.68	-2.71
1329	RD181	18 22.630	41 51.740	707.6	978346.011	19.18	-60.00	1.27	-59.58	0.80	-55.74	-5.89	-1.67	-10.60
1330	RD182	18 18.120	41 54.940	551.1	978367.978	-3.09	-64.77	2.94	-62.53	0.91	-56.36	-7.69	-3.47	-11.96
1331	RD183	18 21.530	41 58.520	567.5	978353.211	-15.86	-79.37	3.57	-76.52	0.99	-68.81	-9.27	-5.56	-13.21
1332	RD184	18 24.330	42 4.320	579.3	978339.109	-28.84	-93.67	5.09	-89.31	1.23	-83.45	-7.42	-4.40	-10.82
1333	RD185	18 28.680	42 1.220	464.5	978372.078	-35.23	-87.21	3.70	-84.12	1.03	-82.39	-2.98	0.05	-6.77
1334	RD186	18 33.680	41 58.470	356.6	978399.265	-45.87	-85.79	4.10	-82.16	1.05	-83.63	0.54	3.50	-3.65
1335	RD187	18 31.030	41 54.080	371.5	978416.135	-22.00	-63.58	2.65	-61.43	0.85	-72.69	10.24	13.76	5.67
1336	RD188	18 31.830	42 6.700	566.3	978344.238	-34.50	-97.87	5.96	-92.63	1.41	-93.08	-1.05	1.26	-4.22
1337	RD189	18 35.900	42 2.010	462.7	978371.135	-43.27	-95.05	4.82	-90.84	1.22	-90.70	-1.36	1.13	-5.24
1338	RD190	18 39.570	42 7.290	596.6	978337.062	-39.35	-106.12	13.25	-93.62	2.76	-98.55	3.54	5.27	-0.29
1339	RD191	18 34.660	42 10.830	995.6	978272.193	23.37	-88.03	7.28	-81.86	1.76	-98.55	13.94	15.66	11.52
1340	RD192	18 32.240	42 8.740	1182.9	978233.245	44.42	-87.95	13.85	-75.33	2.87	-102.99	24.53	25.63	24.82
1341	RD193	18 27.030	42 8.850	661.2	978333.266	-11.84	-85.83	5.68	-80.97	1.38	-92.36	9.59	12.02	6.81
1342	RD194	18 30.650	42 13.970	936.5	978280.128	16.71	-88.09	14.53	-74.62	3.01	-99.29	22.29	23.98	20.70
1343	RD195	18 48.540	42 1.550	457.0	978372.728	-54.98	-106.12	7.81	-98.91	1.79	-98.76	-1.27	0.41	-5.65
1344	RD196	18 52.380	41 58.680	387.1	978397.176	-55.63	-98.96	7.18	-92.29	1.70	-98.75	5.52	7.21	0.71
1345	RD197	18 56.120	42 3.360	650.0	978335.124	-39.99	-112.73	12.44	-101.09	2.67	-102.73	0.05	1.01	-4.43
1346	RD198	18 50.860	42 5.850	682.1	978334.507	-25.85	-102.19	15.12	-87.90	3.19	-102.26	12.75	13.83	8.82
1347	RD199	18 48.020	42 9.040	812.0	978297.091	-18.41	-110.06	12.44	-98.59	2.81	-102.87	2.21	3.17	-1.02
1348	RD200	18 44.300	42 3.830	522.6	978356.834	-46.74	-105.23	7.03	-98.87	1.85	-98.23	-1.98	-0.23	-5.92
1349	RD201	18 41.430	41 59.380	363.7	978394.769	-55.23	-95.94	4.93	-91.49	1.44	-92.14	-0.28	2.09	-4.63
1350	RD202	18 45.490	41 56.190	333.1	978407.004	-56.15	-93.43	4.60	-89.28	1.17	-92.17	2.04	4.44	-2.75

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1351	R0203	18 49.930	41 53.570	276.0	978422.745	-62.11	-93.00	5.41	-87.97	1.42	4.26	6.61	-0.91
1352	R0204	18 39.250	41 46.120	221.9	978459.528	-32.25	-57.09	3.62	-53.78	0.98	14.57	18.27	8.44
1353	R0205	18 44.250	41 43.930	151.2	978476.063	-42.11	-59.04	3.85	-55.40	1.04	16.03	19.62	9.28
1354	R0206	18 47.420	41 48.720	243.9	978444.728	-47.73	-75.03	3.74	-71.63	1.00	12.09	15.05	6.44
1355	R0207	18 42.380	41 52.150	252.3	978435.697	-49.56	-77.80	3.60	-74.54	0.98	8.82	11.79	3.71
1356	R0208	18 37.890	41 54.030	299.6	978425.711	-40.85	-74.38	3.27	-71.52	0.98	9.34	12.43	4.57
1357	R0209	18 35.060	41 50.140	345.0	978426.772	-23.20	-61.81	2.47	-59.81	0.93	9.98	13.59	4.77
1358	R0210	18 31.950	41 45.460	438.1	978427.938	8.88	-40.14	1.79	-39.43	0.77	15.29	19.49	8.97
1359	R0211	18 36.510	41 41.070	429.5	978424.303	-0.27	-48.34	0.73	-48.17	0.61	4.33	8.62	-4.34
1360	R0212	18 40.690	41 39.070	234.2	978474.231	-15.07	-41.28	1.54	-40.07	0.73	15.16	19.38	4.92
1361	R0213	18 30.800	41 32.710	177.5	978496.240	-1.57	-21.45	0.38	-21.32	0.60	8.94	14.22	-26.82
1362	R0214	18 35.050	41 29.230	68.1	978523.471	-11.97	-19.60	0.40	-19.30	0.76	10.46	15.78	-29.93
1363	R0215	18 38.400	41 34.710	132.1	978505.827	-12.90	-27.69	0.88	-27.00	0.65	16.08	20.78	-6.25
1364	R0216	18 32.930	41 37.530	275.2	978462.053	-7.53	-38.34	0.61	-38.10	0.64	2.57	7.35	-11.61
1365	R0217	18 28.840	41 40.520	337.3	978454.052	7.33	-30.41	0.73	-30.14	0.68	10.42	15.19	0.61
1366	R0218	18 25.460	41 36.110	273.1	978473.387	9.90	-20.66	0.49	-20.54	0.73	8.90	14.21	-14.21
1367	R0219	18 22.930	41 32.250	141.6	978516.720	14.92	-0.93	0.39	-0.74	0.66	21.17	26.94	-16.56
1368	R0220	18 46.430	41 27.940	59.3	978541.188	-7.35	-14.00	0.77	-13.31	0.35	27.81	32.59	-12.23
1369	R0221	18 38.360	41 18.630	6.5	978580.877	23.40	22.67	0.05	22.71	0.55	40.80	46.78	-2.76
1370	R0222	18 48.420	41 20.360	28.0	978582.382	22.35	19.21	0.29	19.46	0.40	49.60	54.87	5.81
1371	R0223	18 51.620	41 24.660	62.4	978545.845	-6.50	-13.49	0.74	-12.84	0.39	41.74	28.75	-12.43
1372	R0224	18 54.390	41 29.830	157.3	978518.062	-7.54	-25.15	1.19	-24.18	0.46	32.19	36.37	8.65
1373	R0225	18 49.750	41 32.410	164.1	978512.253	-6.98	-25.35	1.18	-24.40	0.62	30.51		
1374	R0226	18 46.030	41 35.780	91.8	978515.893	-22.25	-32.53	2.08	-30.58	0.63	26.30	30.48	11.89
1375	R0227	18 41.890	41 31.820	108.7	978523.612	-5.52	-17.70	0.75	-17.10	0.65	25.36	30.09	-9.56
1376	R0228	18 40.150	41 26.760	45.1	978546.431	-0.75	-5.81	0.38	-5.49	0.35	26.01	31.24	-15.98
1377	R0229	18 57.060	41 43.040	214.0	978446.653	-63.91	-87.86	4.58	-83.58	1.19	2.11	4.97	-4.34
1378	R0230	18 59.470	41 47.800	278.8	978423.523	-69.26	-100.47	5.10	-95.75	1.27	-2.37	-0.11	-8.19
1379	R0231	19 3.710	41 44.100	538.3	978366.283	-50.33	-110.57	4.02	-107.24	1.10	-15.81	-13.49	-21.93
1380	R0232	19 0.540	41 39.680	167.3	978460.010	-68.18	-86.91	4.47	-82.68	1.17	1.78	4.72	-5.14
1381	R0233	18 57.250	41 34.340	164.4	978482.469	-43.58	-61.98	2.55	-59.66	0.91	10.86	14.48	0.73
1382	R0234	18 53.050	41 38.280	263.5	978453.866	-37.71	-67.21	2.77	-64.80	0.94	10.94	10.94	-1.18
1383	R0235	18 48.310	41 40.840	145.4	978485.450	-38.23	-54.51	3.66	-51.06	1.08	20.08	23.69	12.22
1384	R0236	18 52.240	41 45.960	287.2	978438.384	-45.13	-77.28	3.93	-73.74	1.09	13.81	13.81	4.83
1385	R0237	18 55.160	41 50.900	306.5	978420.925	-59.33	-93.63	5.32	-88.73	1.31	4.58	6.83	-0.94
1386	R0238	19 5.110	41 57.010	458.0	978399.613	-43.08	-94.34	13.89	-81.05	2.91	20.67	21.63	15.37
1387	R0239	19 0.610	41 59.210	589.5	978367.892	-30.04	-96.02	10.43	-86.33	2.31	14.52	15.58	9.49
1388	R0240	19 3.220	42 3.660	994.6	978278.139	2.80	-108.50	13.85	-95.76	3.02	5.99	6.40	1.31
1389	R0241	19 8.610	42 2.380	823.0	978321.728	-11.57	-103.67	24.74	-79.90	5.09	23.35	23.51	18.45
1390	R0242	19 7.950	41 58.790	632.8	978397.365	5.97	-64.84	16.03	-49.59	3.35	52.90	53.47	47.69
1391	R0243	19 12.570	41 58.080	684.2	978355.628	-24.20	-100.77	17.66	-83.95	3.67	19.01	19.32	13.78
1392	R0244	19 10.380	41 54.170	505.6	978387.103	-45.81	-102.39	10.94	-92.10	2.36	9.57	10.44	4.07
1393	R0245	19 5.810	41 49.710	330.4	978420.498	-62.24	-99.22	7.20	-92.46	1.67	5.88	7.52	0.16
1394	R0246	19 2.350	41 51.830	361.9	978409.901	-59.90	-100.40	6.65	-94.24	1.58	3.81	5.48	-1.76
1395	R0247	18 57.380	41 55.590	384.0	978409.266	-49.11	-92.09	7.51	-85.09	1.74	13.15	14.80	7.94
1396	R0248	19 3.820	41 23.220	121.6	978527.201	-18.14	-31.76	0.75	-31.18	0.26	24.87	29.04	-5.38
1397	R0249	19 1.250	41 19.070	54.2	978564.894	1.12	-4.95	0.50	-4.53	0.33	38.94	43.59	-2.48
1398	R0250	18 56.960	41 17.580	39.1	978593.442	28.97	24.60	0.29	24.83	0.23	59.93	64.94	16.40
1399	R0251	18 53.350	41 18.310	41.0	978590.733	30.18	25.59	0.25	25.78	0.25	57.91	63.06	14.09
1400	R0252	18 55.370	41 22.880	63.9	978552.507	-2.83	-9.99	0.75	-9.33	0.26	33.79	38.47	-7.22

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	OBS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA MGAL	S.D.CB MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
1401	RD253	18 58.630	41 26.930	97.1	978526.692	-21.40	-32.28	1.54	-30.88	0.41	-56.75	25.65	29.82	-1.08
1402	RD254	19 2.170	41 32.260	133.1	978493.356	-46.90	-61.81	2.38	-59.62	0.65	-73.59	13.67	17.17	3.97
1403	RD255	19 6.680	41 27.480	185.5	978491.354	-36.92	-57.69	1.04	-56.90	0.72	-70.07	12.66	16.29	0.95
1404	RD256	19 11.650	41 25.530	144.6	978502.384	-43.15	-59.34	1.39	-58.15	0.63	-73.03	14.51	18.01	3.76
1405	RD257	19 8.390	41 20.240	95.3	978544.081	-13.63	-24.30	0.74	-23.70	0.32	-56.58	32.64	36.79	1.38
1406	RD258	19 5.610	41 16.050	37.4	978569.545	-3.45	-7.65	0.37	-7.33	0.40	-43.45	36.03	40.67	-5.77
1407	RD259	19 13.820	41 37.480	265.9	978437.032	-73.08	-102.84	6.19	-97.02	1.42	-93.27	-4.35	-2.08	-10.75
1408	RD260	19 9.960	41 33.820	203.4	978463.256	-62.54	-85.31	3.12	-82.48	0.98	-85.57	2.59	5.45	-4.69
1409	RD261	19 5.770	41 37.110	196.3	978453.438	-70.65	-92.63	4.11	-88.79	1.12	-86.26	-2.97	-0.13	-9.97
1410	RD262	19 9.680	41 41.790	733.0	978325.717	-36.36	-118.39	6.20	-113.07	1.52	-94.31	-20.74	-18.60	-26.93
1411	RD263	19 10.660	41 47.120	362.7	978403.643	-73.64	-114.23	7.12	-107.60	1.61	-99.47	-9.00	-7.44	-14.83
1412	RD264	19 15.850	41 41.810	483.7	978387.563	-57.22	-111.35	5.25	-106.73	1.29	-97.98	-10.02	-8.30	-16.01
1413	RD265	19 20.380	41 39.200	401.5	978415.475	-58.93	-103.87	4.97	-99.43	1.29	-98.20	-2.26	-0.60	-8.19
1414	RD266	19 17.420	41 35.230	262.1	978454.222	-60.43	-89.77	4.42	-85.71	1.14	-93.39	7.04	9.28	0.61
1415	RD267	19 14.050	41 31.150	196.7	978479.149	-52.54	-74.56	2.89	-71.94	0.93	-85.68	13.25	16.09	5.86
1416	RD268	19 22.300	41 51.460	631.5	978378.345	-26.87	-97.55	10.08	-88.25	2.18	-104.20	14.36	14.64	9.31
1417	RD269	19 19.170	41 47.050	577.5	978377.146	-41.80	-106.43	5.49	-101.67	1.37	-102.03	-1.17	-0.21	-6.74
1418	RD270	19 14.270	41 51.610	774.6	978337.723	-15.80	-102.48	5.33	-98.08	1.35	-102.44	2.23	3.08	-3.33
1419	RD271	19 17.440	41 54.880	683.6	978356.346	-28.23	-104.73	14.80	-90.77	3.10	-104.31	11.92	12.20	6.66
1420	RD272	19 19.550	42 0.330	1037.3	978390.946	13.54	-102.54	16.55	-87.12	3.41	-105.53	15.78	15.37	11.13
1421	RD273	19 24.060	41 56.210	901.6	978315.122	-8.40	-109.29	15.20	-95.13	3.15	-105.30	7.92	7.61	3.53
1422	RD274	19 28.790	41 52.310	831.7	978328.525	-21.03	-114.10	14.75	-100.33	3.06	-105.05	2.66	2.40	-0.94
1423	RD275	19 34.080	41 49.980	847.6	978329.151	-20.51	-115.36	11.84	-104.51	2.52	-104.99	-1.69	-2.09	-0.21
1424	RD276	19 26.920	41 48.670	589.1	978378.869	-43.79	-109.72	7.63	-102.83	1.75	-104.19	-0.16	0.07	-4.67
1425	RD277	19 23.280	41 43.200	604.5	978366.622	-47.85	-115.50	5.27	-110.99	1.36	-101.30	-11.31	-10.26	-16.77
1426	RD278	19 15.870	41 21.690	119.6	978519.735	-37.46	-50.85	1.03	-49.99	0.47	-71.03	20.73	24.30	8.61
1427	RD279	19 13.060	41 16.720	71.3	978555.576	-13.90	-21.89	0.43	-21.56	0.43	-55.89	34.14	38.30	0.40
1428	RD280	19 9.860	41 8.860	17.9	978596.301	13.32	11.31	0.07	11.36	0.48	-35.14	46.46	51.43	2.57
1429	RD281	19 21.760	41 17.950	125.5	978521.880	-39.02	-53.07	0.53	-52.72	0.55	-71.56	18.50	22.03	6.10
1430	RD282	19 23.100	41 23.930	220.5	978482.796	-50.04	-74.72	0.98	-74.05	0.52	-83.83	9.17	12.08	1.20
1431	RD283	19 27.150	41 28.190	239.6	978474.475	-56.28	-83.10	2.38	-81.05	0.70	-92.79	11.11	13.36	4.58
1432	RD284	19 21.570	41 31.660	309.6	978443.218	-60.67	-95.32	4.75	-90.99	1.04	-92.53	0.77	3.07	-5.77
1433	RD285	19 19.540	41 27.790	196.1	978480.178	-56.84	-78.79	2.26	-76.81	0.75	-86.16	8.85	11.64	1.40
1434	RD286	19 32.800	41 37.780	447.0	978427.474	-44.61	-94.64	3.70	-91.52	1.26	-101.64	8.92	9.84	4.59
1435	RD287	19 29.600	41 33.660	464.9	978432.474	-31.05	-83.08	3.40	-80.29	1.28	-98.40	16.85	18.41	11.28
1436	RD288	19 34.190	41 31.060	762.8	978384.753	8.81	-76.54	1.44	-76.01	1.24	-98.21	19.99	21.48	14.62
1437	RD289	19 38.810	41 34.910	509.4	978420.714	-37.82	-94.83	4.92	-90.56	1.51	-101.84	9.91	10.68	7.30
1438	RD290	19 40.680	41 41.270	606.2	978377.331	-53.10	-120.95	7.36	-114.34	1.81	-103.98	-11.94	-11.94	-11.20
1439	RD291	19 43.560	41 45.750	893.7	978314.321	-30.13	-130.15	9.94	-121.23	2.36	-104.78	-18.82	-19.48	-16.73
1440	RD292	19 43.080	41 50.630	1032.8	978306.118	5.04	-110.53	11.60	-100.07	2.65	-105.25	2.43	1.30	5.03
1441	RD293	19 38.970	41 48.230	809.1	978343.735	-22.45	-113.00	9.80	-104.15	2.27	-104.98	-1.28	-1.86	0.24
1442	RD294	19 35.030	41 43.410	508.5	978406.455	-48.76	-105.67	5.25	-101.07	1.51	-103.92	1.50	1.68	-0.17
1443	RD295	19 31.010	41 47.000	736.2	978362.645	-18.48	-100.87	5.51	-96.25	1.52	-104.18	5.91	6.02	2.42
1444	RD296	19 28.870	41 41.310	462.8	978411.831	-51.65	-103.45	6.36	-97.69	1.63	-102.15	3.28	4.12	-1.53
1445	RD297	19 24.630	41 36.580	339.7	978440.660	-56.82	-94.84	4.10	-91.20	1.33	-98.37	6.30	7.92	0.50
1446	RD300	18 14.380	42 49.200	2048.7	977981.830	76.18	-153.07	2.12	-152.47	0.57	-108.95	-49.49	-50.23	-17.85
1447	RD300A	18 14.380	42 49.200	2048.7	977981.830	76.18	-153.07	2.12	-152.47	0.57	-108.95	-49.49	-50.23	-17.85
1448	RD301	17 42.530	43 29.800	2170.1	977942.280	102.18	-140.65	2.75	-139.41	1.07	-110.20	-35.53	-38.43	-3.49
1449	RD302	17 37.070	43 29.720	2358.0	977892.209	114.81	-149.05	3.81	-146.73	1.21	-109.90	-43.66	-46.10	-12.37
1450	RD303	17 37.280	43 25.170	2471.3	977853.946	111.30	-165.23	12.16	-154.53	2.60	-109.45	-52.03	-53.94	-19.67

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	ORIG. GRAV.	FAGA	SRGA	TTC	CRGA	S.D.C.R	IS.GRAV	IGA1	IGA2	IGA3
		D MIN	D MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
1451	R0304	17 42.170	43 24.290	2426.5	977875.110	114.40	-157.12	6.46	-152.14	1.58	-109.69	-49.41	-51.62	-16.33
1452	R0305	17 48.020	43 24.230	2484.9	977860.290	112.48	-165.58	11.01	-156.02	2.38	-109.85	-53.20	-55.88	-19.57
1453	R0306	17 47.960	43 29.770	2271.3	977933.071	119.44	-134.71	2.86	-133.36	1.08	-110.25	-29.72	-33.05	-23.80
1454	R0307	17 58.560	43 24.950	2180.9	977930.543	79.72	-164.32	3.75	-162.09	1.21	-110.46	-57.94	-61.56	-23.80
1455	R0308	18 3.940	43 29.690	2063.2	977968.033	76.14	-154.72	1.35	-154.89	1.08	-110.60	-50.34	-54.95	-16.77
1456	R0309	18 3.940	43 24.030	2128.3	977941.774	69.96	-168.19	1.65	-168.05	1.13	-110.51	-63.77	-67.72	-29.37
1457	R0310	18 4.210	43 18.580	2217.2	977935.898	91.27	-156.83	2.21	-156.13	1.13	-110.34	-52.25	-55.58	-17.35
1458	R0311	17 58.610	43 18.980	2382.4	977902.756	114.03	-152.56	6.22	-147.82	1.58	-110.15	-44.51	-47.43	-9.81
1459	R0312	17 53.320	43 18.350	2500.8	977874.132	126.58	-153.26	8.01	-146.70	2.03	-109.80	-44.04	-46.45	-9.58
1460	R0313	17 53.340	43 24.260	2421.6	977878.722	106.73	-164.25	12.53	-153.19	2.71	-110.10	-49.88	-53.00	-15.90
1461	R0314	17 53.370	43 29.940	2339.0	977915.624	118.13	-143.60	3.09	-142.00	1.13	-110.32	-38.48	-42.27	-5.45
1462	R0315	17 58.530	43 29.630	2275.4	977927.924	106.27	-148.35	3.35	-146.50	1.16	-110.50	-42.60	-46.77	-9.21
1463	R0316	18 14.480	43 24.740	2004.0	977980.311	60.78	-163.46	1.20	-163.78	1.17	-110.39	-59.26	-64.13	-24.87
1464	R0317	18 9.730	43 18.010	2146.5	977955.461	84.12	-156.07	1.73	-155.85	1.22	-110.39	-51.73	-55.44	-16.72
1465	R0318	18 9.670	43 24.310	1982.8	977973.388	51.61	-170.26	1.31	-170.47	1.17	-110.51	-65.76	-70.20	-31.32
1466	R0319	18 9.570	43 29.630	1960.4	977980.882	52.28	-167.08	1.12	-167.47	1.16	-110.55	-62.67	-67.72	-28.98
1467	R0320	18 14.840	43 29.510	1839.1	978014.090	43.37	-162.42	0.93	-162.99	1.22	-110.51	-57.87	-63.33	-24.15
1468	R0321	18 19.950	43 29.740	1787.1	978028.670	37.33	-162.64	0.93	-163.20	1.16	-110.41	-58.03	-63.94	-24.41
1469	R0322	18 19.480	43 24.000	2013.0	977988.239	67.01	-158.24	1.16	-158.60	1.17	-110.31	-54.18	-59.37	-19.78
1470	R0323	18 20.080	43 18.840	2037.9	977987.424	73.33	-154.70	1.30	-154.92	1.17	-110.18	-50.71	-55.34	-15.82
1471	R0324	18 14.730	43 18.430	2153.9	977958.887	85.37	-155.65	1.63	-155.54	1.25	-110.29	-51.54	-55.70	-16.56
1472	R0325	18 9.080	43 7.430	2314.7	977915.330	96.44	-162.57	2.71	-161.35	0.95	-109.94	-58.16	-60.56	-23.04
1473	R0326	18 8.590	43 1.570	2247.5	977926.140	86.96	-164.53	2.82	-163.21	1.02	-109.56	-60.19	-61.86	-25.66
1474	R0327	18 14.700	43 1.460	2162.6	977943.674	72.86	-169.13	2.02	-168.62	0.88	-109.77	-65.16	-67.31	-30.29
1475	R0328	18 14.760	43 7.060	2222.9	977937.670	85.44	-163.33	2.16	-162.68	0.90	-110.02	-59.16	-61.99	-23.92
1476	R0329	18 13.830	43 12.640	2227.9	977944.352	94.46	-154.84	2.14	-154.21	1.01	-110.17	-50.54	-53.95	-15.28
1477	R0330	18 9.480	43 13.090	2302.4	977922.838	99.80	-157.83	4.18	-155.15	1.24	-110.16	-51.66	-54.77	-16.45
1478	R0331	18 4.540	43 13.510	2350.8	977906.332	102.61	-160.44	2.96	-158.97	1.12	-110.16	-55.65	-58.41	-20.57
1479	R0332	18 4.730	43 6.190	2340.1	977903.081	95.89	-165.96	3.72	-163.73	1.04	-109.70	-60.82	-62.72	-26.01
1480	R0333	18 4.180	43 1.710	2360.0	977915.154	114.59	-149.49	5.01	-145.97	1.34	-109.25	-43.53	-44.86	-9.39
1481	R0334	18 25.870	43 24.510	1901.3	978014.232	52.80	-159.96	0.96	-160.50	1.19	-110.05	-56.02	-61.79	-21.85
1482	R0335	18 25.400	43 29.660	1839.7	978033.982	53.97	-151.89	0.80	-152.59	1.22	-110.22	-47.76	-54.14	-14.29
1483	R0336	18 25.920	43 18.770	1939.2	978010.747	60.96	-156.04	1.02	-156.53	1.22	-110.01	-52.20	-57.29	-17.46
1484	R0337	18 26.140	43 7.240	2001.9	978007.215	76.57	-147.44	1.24	-147.72	1.01	-109.83	-43.75	-47.52	-8.54
1485	R0338	18 25.400	43 1.570	1998.0	977993.826	62.64	-160.93	1.30	-161.15	1.05	-109.81	-57.19	-60.23	-22.14
1486	R0339	18 19.950	43 1.660	2108.4	977959.542	67.31	-168.61	1.72	-168.41	1.07	-109.81	-64.77	-67.38	-29.75
1487	R0340	18 20.330	43 7.340	2088.3	977973.294	74.52	-159.15	1.52	-159.15	1.06	-109.98	-55.28	-58.59	-20.00
1488	R0341	18 20.190	43 13.180	2034.7	977992.117	76.94	-150.74	1.30	-150.96	1.05	-110.14	-46.77	-50.75	-11.56
1489	R0342	18 25.980	43 13.260	1938.2	978020.702	70.55	-146.33	1.04	-146.80	1.00	-109.96	-42.52	-46.98	-7.44
1490	R0343	18 9.810	42 49.940	2076.6	977970.164	77.19	-155.17	2.69	-154.00	0.66	-108.64	-51.41	-51.90	-20.32
1491	R0344	18 9.290	42 44.860	2113.3	977970.690	89.50	-146.97	3.29	-145.20	0.79	-107.60	-43.73	-43.67	-16.42
1492	R0345	18 14.620	42 38.430	2075.1	978013.063	115.34	-116.86	2.97	-115.41	0.71	-108.93	-14.51	-14.18	-7.04
1493	R0346	18 14.240	42 33.940	2124.0	978029.627	147.32	-90.35	4.03	-87.83	0.91	-105.19	11.20	12.03	21.10
1494	R0347	18 10.030	42 33.800	2251.6	977997.872	158.68	-93.27	15.33	-79.45	3.14	-103.70	18.02	19.16	25.48
1495	R0348	18 9.700	42 39.430	2162.2	977988.977	122.51	-119.44	4.91	-116.05	1.09	-106.08	-16.19	-15.60	3.63
1496	R0349	18 3.720	42 44.830	2201.5	977960.226	111.19	-135.16	6.19	-130.48	1.39	-106.38	-30.42	-29.96	-5.76
1497	R0350	18 3.580	42 50.570	2369.4	977916.833	119.70	-145.43	6.78	-140.14	1.51	-107.65	-39.28	-39.40	-9.53
1498	R0351	18 4.210	42 56.200	2251.0	977923.806	89.60	-162.28	4.75	-159.04	1.11	-108.77	-56.78	-57.52	-24.12
1499	R0352	18 19.380	42 55.860	2199.8	977941.000	77.47	-168.58	2.61	-167.58	0.75	-109.57	-64.41	-66.28	-30.15
1500	R0353	18 14.270	42 54.830	2146.1	977952.862	77.35	-162.80	2.32	-161.99	0.64	-109.36	-58.88	-60.22	-25.22



SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	ORS.	GRAV.	FAGA	SRGA	TTC	CRGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3
		D MIN	D MIN	M	H	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
1501	RD354	18 14.810	42 44.290	2024.7	977994.939		81.50	-145.06	2.28	-144.30	0.68	-108.34	-41.85	-42.12	-13.18
1502	RD355	18 19.680	42 28.030	2233.8	978009.648		156.34	-93.62	5.19	-89.94	1.13	-103.87	7.48	8.52	12.40
1503	RD356	18 20.820	42 39.660	1959.1	978030.696		91.63	-127.59	3.07	-127.03	0.61	-108.21	-24.54	-24.76	1.77
1504	RD357	18 20.240	42 33.860	2063.6	978045.904		139.60	-91.32	3.28	-89.55	1.00	-106.55	11.00	11.40	25.31
1505	RD358	18 26.090	42 33.690	1998.4	978044.000		112.32	-111.30	2.52	-110.30	0.69	-107.44	-8.67	-8.66	11.41
1506	RD359	18 26.280	42 38.720	1938.4	978040.868		90.51	-126.40	1.85	-126.06	0.60	-108.46	-23.25	-23.76	3.81
1507	RD360	18 25.920	42 45.310	1935.8	978013.345		62.51	-154.11	1.50	-154.12	0.56	-109.20	-50.57	-51.75	-19.09
1508	RD361	18 20.410	42 45.230	2008.6	978007.032		83.61	-141.15	1.84	-140.83	0.60	-108.93	-37.75	-38.51	-7.12
1509	RD362	18 9.810	42 27.010	2673.6	977923.610		214.75	-84.42	19.05	-66.76	3.84	-98.70	24.57	26.41	26.25
1510	RD363	18 15.760	42 21.770	2944.5	977868.543		237.90	-91.59	26.44	-66.40	5.32	-96.94	22.58	24.53	22.75
1511	RD364	18 20.030	42 21.740	2472.9	977981.670		201.78	-74.93	8.94	-67.45	1.84	-99.47	24.97	26.63	25.69
1512	RD365	18 25.920	42 22.260	2403.7	977996.570		190.04	-78.93	9.45	-70.96	1.95	-102.01	24.22	25.41	26.01
1513	RD366	18 25.860	42 27.740	2146.2	978021.890		136.00	-104.16	3.99	-101.68	0.91	-105.29	-2.60	-1.97	4.02
1514	RD367	18 15.780	42 27.430	2430.1	977979.169		189.89	-82.03	6.84	-76.66	1.45	-102.01	18.37	19.75	21.72
1515	RD368	18 20.840	42 51.360	2027.6	977985.083		67.13	-159.75	1.80	-159.47	0.57	-109.49	-55.91	-57.38	-22.64
1516	RD369	18 25.900	42 51.000	1983.5	978000.985		64.88	-157.07	1.42	-157.17	0.55	-109.52	-53.45	-55.28	-19.95
1517	RD370	18 26.010	42 56.710	1990.1	977998.061		63.89	-158.80	1.33	-158.98	0.54	-109.65	-55.15	-57.67	-20.57
1518	RD371	18 20.760	42 56.660	2068.0	977967.767		62.35	-169.06	1.65	-168.92	0.82	-109.69	-65.27	-67.35	-30.82
1519	RD372	18 36.220	42 32.090	1968.4	978044.217		94.11	-126.15	2.23	-125.44	0.70	-107.96	-23.21	-23.75	-1.56
1520	RD373	18 31.410	42 32.200	2018.9	978030.474		100.30	-125.61	2.36	-124.76	0.74	-107.69	-22.96	-23.17	-2.68
1521	RD374	18 32.640	42 26.710	2160.2	978028.263		140.56	-101.16	4.13	-98.55	1.10	-105.94	1.14	1.39	8.66
1522	RD375	18 36.980	42 26.600	2034.9	978053.751		123.46	-104.24	3.55	-102.21	0.93	-106.61	-1.49	-1.53	6.78
1523	RD376	18 41.980	42 27.000	1928.8	978089.922		122.35	-93.48	2.57	-92.42	0.74	-107.16	9.13	8.69	18.03
1524	RD377	18 42.150	42 32.030	1854.5	978072.382		81.73	-125.78	1.70	-125.58	1.10	-108.18	-22.83	-23.80	-1.16
1525	RD378	18 42.610	42 32.910	1784.4	978052.910		40.22	-159.45	2.11	-158.83	0.71	-108.32	-55.70	-56.79	-32.72
1526	RD379	18 36.790	42 37.800	1868.7	978033.015		51.63	-157.47	1.44	-157.53	0.75	-108.71	-54.30	-55.49	-26.29
1527	RD380	18 31.490	42 37.800	1952.8	978031.394		80.76	-137.75	1.70	-137.56	0.71	-108.61	-34.66	-35.45	-7.27
1528	RD381	18 37.150	42 49.060	1835.1	978044.515		52.44	-152.90	0.98	-153.42	0.78	-109.16	-49.64	-52.17	-16.44
1529	RD382	18 31.490	42 48.710	1930.2	978027.068		69.47	-146.52	1.27	-146.76	1.17	-109.38	-43.02	-45.04	-9.94
1530	RD383	18 31.600	42 43.370	1883.3	978032.260		60.09	-150.65	1.39	-150.76	1.11	-109.15	-47.12	-48.53	-16.04
1531	RD384	18 36.980	42 43.370	1854.8	978040.737		54.89	-152.65	1.16	-152.99	0.82	-109.04	-49.39	-51.23	-18.08
1532	RD385	18 42.280	42 43.170	1794.5	978044.972		35.70	-165.10	0.97	-165.62	1.06	-108.82	-62.06	-64.31	-30.89
1533	RD386	18 42.200	42 49.030	1796.6	978052.556		44.00	-157.03	0.87	-157.65	0.30	-108.86	-54.06	-57.00	-20.99
1534	RD387	18 42.310	42 54.230	1791.6	978070.602		60.41	-140.07	0.80	-140.76	1.15	-108.79	-37.23	-40.79	-3.25
1535	RD388	18 37.170	42 54.080	1834.6	978049.437		57.19	-148.10	0.91	-148.68	0.90	-109.21	-44.86	-47.98	-10.71
1536	RD389	18 31.740	42 54.800	1909.4	978042.137		77.89	-135.76	1.11	-136.16	1.29	-109.48	-32.28	-35.05	2.05
1537	RD390	18 36.900	43 6.430	1863.7	978046.459		63.43	-145.11	0.94	-145.67	1.03	-109.21	-41.93	-46.47	-7.06
1538	RD391	18 37.090	43 0.230	1838.3	978046.119		55.09	-150.62	0.87	-151.24	1.25	-109.11	-47.52	-51.35	-12.80
1539	RD392	18 42.470	42 59.800	1784.1	978065.462		52.81	-146.83	0.75	-147.53	1.06	-108.68	-44.12	-48.34	-9.65
1540	RD393	18 42.230	43 6.370	1770.7	978072.937		56.37	-141.77	0.73	-142.53	1.02	-108.84	-38.88	-43.84	-4.27
1541	RD394	18 42.310	43 12.370	1708.2	978081.205		45.28	-145.86	0.56	-146.77	1.08	-109.03	-42.76	-48.43	-8.34
1542	RD395	18 37.200	43 11.970	1772.1	978061.405		49.85	-148.44	0.67	-149.26	1.02	-109.37	-45.09	-50.30	-10.38
1543	RD396	18 32.150	43 12.340	1836.2	978045.266		58.07	-147.40	0.79	-148.10	1.09	-109.65	-43.84	-48.68	-8.92
1544	RD397	18 31.630	43 6.660	1932.6	978024.995		68.01	-148.25	1.11	-148.65	1.13	-109.55	-44.75	-48.90	-9.69
1545	RD398	18 31.900	42 59.450	1892.9	978029.786		60.31	-151.50	1.02	-151.99	1.06	-109.46	-48.08	-51.40	-13.26
1546	RD399	18 37.040	43 23.510	1727.5	978076.510		51.34	-141.96	0.76	-142.67	1.09	-109.68	-38.06	-44.68	-4.31
1547	RD400	18 36.740	43 15.340	1726.3	978064.677		39.41	-153.76	0.66	-154.57	1.09	-109.46	-50.19	-55.76	-15.65
1548	RD401	18 42.340	43 17.710	1668.4	978085.611		37.38	-149.31	0.49	-150.28	1.08	-109.23	-45.95	-52.29	-11.92
1549	RD402	18 42.470	43 23.510	1652.2	978096.108		42.76	-142.11	0.74	-142.83	1.18	-109.48	-38.19	-45.31	-4.80
1550	RD403	18 42.200	43 29.860	1726.7	978087.248		57.13	-136.08	0.76	-136.80	1.09	-109.79	-32.07	-40.01	0.46

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	DBS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	YTC MGAL	CRGA MGAL	S.D.CB MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
1551	RD404	18 36.980	43 29.310	1914.0	978041.730	74.15	-140.02	1.00	-140.53	1.10	-109.80	-36.35	-43.74	-3.39
1552	RD405	18 31.680	43 29.630	1872.5	978044.643	69.07	-140.46	0.90	-141.06	1.16	-110.00	-36.56	-43.51	-3.37
1553	RD406	18 31.550	43 23.510	1809.3	978031.251	36.30	-166.15	0.76	-166.89	1.18	-109.91	-62.28	-68.41	-28.23
1554	RD407	18 31.820	43 17.830	1831.1	978034.861	46.39	-158.50	0.78	-159.22	1.35	-109.74	-54.85	-60.31	-20.26
1555	RD408	18 53.450	42 21.200	2200.8	978056.593	162.39	-83.87	3.57	-81.81	0.93	-106.27	18.06	17.40	19.42
1556	RD409	18 52.800	42 15.740	2599.3	977976.950	206.24	-84.62	7.30	-78.74	1.58	-104.54	18.35	18.29	16.84
1557	RD410	18 48.400	42 21.400	1971.9	978094.345	134.19	-86.46	4.23	-83.75	1.04	-106.22	16.77	16.45	18.67
1558	RD411	18 47.470	42 15.460	2471.3	978003.848	198.57	-77.97	8.29	-71.14	1.77	-103.76	25.56	25.90	24.21
1559	RD412	18 54.480	42 26.000	1804.0	978118.372	100.83	-101.03	2.40	-100.12	0.77	-107.37	1.99	0.74	7.76
1560	RD413	18 48.260	42 26.800	1803.5	978112.616	100.64	-101.16	2.51	-100.15	0.78	-107.50	2.09	1.22	9.88
1561	RD414	18 58.800	42 26.710	1720.6	978141.673	94.42	-98.11	2.17	-97.42	0.79	-107.43	5.00	3.33	11.05
1562	RD415	18 58.720	42 21.290	2181.1	978062.961	157.82	-86.24	3.09	-84.66	0.86	-106.47	15.46	14.40	16.43
1563	RD416	18 37.090	42 21.290	2436.2	977997.429	190.80	-81.80	6.72	-76.55	1.47	-104.19	20.64	21.13	22.80
1564	RD417	18 42.930	42 20.460	2175.7	978059.056	166.77	-76.69	5.27	-72.93	1.21	-105.14	25.93	26.08	27.43
1565	RD418	18 42.260	42 15.690	2593.0	977977.801	214.81	-75.34	9.57	-67.19	2.01	-102.59	28.02	28.71	26.97
1566	RD419	18 37.390	42 15.340	2704.5	977939.013	214.85	-87.78	16.06	-73.10	3.27	-100.90	20.26	21.34	19.18
1567	RD420	18 33.020	42 22.430	2452.0	977982.305	184.25	-90.13	9.82	-81.77	2.05	-103.85	15.11	15.77	17.92
1568	RD421	18 53.780	43 24.450	1468.3	978155.677	35.22	-129.08	1.15	-129.32	1.23	-109.29	-24.32	-32.59	8.07
1569	RD422	18 59.460	43 25.090	1408.5	978181.687	37.54	-120.07	0.34	-121.09	1.21	-109.26	-15.96	-24.83	15.83
1570	RD423	18 58.590	43 28.820	1399.4	978177.135	30.98	-125.61	2.02	-124.94	1.27	-109.82	-19.20	-28.49	12.14
1571	RD424	18 52.690	43 29.830	1628.4	978114.658	44.60	-137.62	0.74	-138.32	1.35	-109.81	-33.29	-42.17	-1.55
1572	RD425	18 47.690	43 29.940	1621.5	978118.282	50.69	-130.75	0.65	-131.55	1.25	-109.78	-26.53	-34.97	5.60
1573	RD426	18 47.260	43 23.390	1549.6	978127.805	38.42	-134.97	1.48	-134.91	1.31	-109.38	-30.06	-37.60	2.99
1574	RD427	18 47.580	43 16.840	1590.0	978111.375	34.16	-143.75	0.44	-144.75	1.34	-108.94	-40.49	-47.19	-6.76
1575	RD428	18 53.020	43 17.460	1516.9	978131.098	26.34	-143.40	0.32	-144.49	1.24	-108.76	-40.19	-47.47	-6.96
1576	RD429	18 58.670	43 17.900	1438.6	978169.131	35.00	-125.98	0.23	-127.12	1.31	-108.49	-22.86	-30.72	9.83
1577	RD430	18 53.400	42 37.970	1702.1	978095.533	47.56	-142.91	0.90	-143.47	0.60	-108.06	-40.39	-42.95	-13.08
1578	RD431	18 52.910	42 31.890	1727.4	978109.245	68.52	-124.77	1.46	-124.78	0.78	-107.99	-21.85	-23.65	-2.14
1579	RD432	18 47.720	42 32.190	1829.3	978084.463	80.94	-123.75	1.44	-123.81	1.18	-108.12	-21.04	-22.45	0.22
1580	RD433	18 47.530	42 38.600	1728.3	978073.252	38.75	-154.64	0.97	-155.15	0.60	-108.48	-51.73	-53.87	-23.37
1581	RD434	18 47.090	42 44.230	1830.4	978041.012	38.41	-166.41	1.04	-166.86	0.55	-108.47	-63.76	-66.54	-32.39
1582	RD435	18 53.070	43 6.350	1599.8	978112.120	32.89	-146.13	0.41	-147.15	0.37	-108.05	-43.81	-49.65	-9.88
1583	RD436	18 53.340	43 12.330	1542.5	978128.877	31.72	-140.88	1.06	-141.24	0.69	-108.35	-37.40	-44.03	-3.77
1584	RD437	18 58.480	43 12.040	1473.9	978150.835	27.77	-137.16	0.26	-138.29	0.54	-108.00	-34.62	-41.68	-1.41
1585	RD438	18 59.160	43 6.780	1510.0	978149.189	36.63	-132.33	0.27	-133.47	0.76	-107.59	-30.32	-36.75	3.11
1586	RD439	18 58.560	43 1.200	1560.5	978128.744	32.32	-142.29	0.36	-143.36	0.66	-107.35	-40.60	-46.28	-7.10
1587	RD440	18 53.290	43 0.570	1615.6	978105.683	31.12	-149.66	0.45	-150.65	0.28	-107.75	-47.66	-52.83	-13.79
1588	RD441	18 48.040	43 0.920	1700.1	978088.008	44.34	-145.90	0.57	-146.79	0.52	-108.23	-43.55	-48.34	-9.33
1589	RD442	18 47.930	43 6.320	1677.0	978094.479	43.79	-143.87	0.50	-144.83	0.64	-108.41	-41.34	-46.75	-7.05
1590	RD443	18 47.880	43 11.320	1618.2	978106.441	37.66	-143.42	0.39	-144.47	0.42	-108.66	-40.56	-46.57	-6.44
1591	RD444	18 53.180	42 49.690	1748.2	978065.996	32.44	-163.18	0.76	-163.90	0.30	-107.93	-61.10	-65.01	-28.50
1592	RD445	18 53.640	42 43.910	1847.0	978053.086	49.59	-157.09	1.14	-157.45	0.45	-107.94	-54.90	-58.17	-24.11
1593	RD446	18 47.120	42 49.710	1792.9	978053.782	39.59	-161.04	0.86	-161.67	0.77	-108.45	-58.47	-61.89	-25.48
1594	RD447	18 47.990	42 55.570	1723.5	978088.851	52.45	-140.41	1.07	-140.81	0.42	-108.30	-37.55	-41.72	-3.70
1595	RD448	18 53.340	42 55.170	1690.0	978086.374	34.72	-154.39	0.63	-155.22	0.33	-107.76	-52.42	-56.98	-18.95
1596	RD449	19 4.020	42 49.460	1702.8	978124.250	66.67	-123.87	0.68	-124.66	0.30	-106.77	-22.89	-27.64	8.83
1597	RD450	19 3.940	42 54.630	1591.2	978145.119	53.18	-124.87	0.43	-125.87	0.32	-106.59	-23.96	-29.30	8.67
1598	RD451	18 58.970	42 54.340	1642.2	978118.093	46.50	-137.26	0.55	-138.16	0.43	-107.31	-35.67	-40.58	-2.70
1599	RD452	18 58.590	42 49.740	1696.9	978106.340	51.97	-137.91	0.65	-138.73	0.31	-107.50	-36.21	-40.56	-4.00
1600	RD453	18 58.800	42 43.430	1729.8	978112.126	67.71	-125.85	0.74	-126.59	0.30	-107.58	-24.08	-27.71	6.06

SER #	IDENT.	LATITUDE	LONGITUDE	ALT.	QRS. GRAV.	FAGA	SRGA	TTC	CRGA	S.D.C.R	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
1601	RD454	19	5.080	42	44.510	1654.7	978141.207	67.80	-117.36	0.59	-118.22	0.41	-106.95	-16.13
1602	RD455	19	26.430	42	38.490	1562.3	978175.810	53.72	-121.10	0.51	-122.02	0.40	-105.66	-20.95
1603	RD456	19	26.580	42	43.860	1502.7	978181.557	41.13	-127.02	0.39	-128.04	0.30	-104.84	-27.61
1604	RD457	19	20.190	42	44.710	1516.6	978175.835	45.51	-124.20	0.39	-125.21	0.32	-105.38	-24.29
1605	RD458	19	19.700	42	37.660	1613.0	978165.505	65.58	-114.91	0.61	-115.75	0.33	-106.39	-14.09
1606	RD459	19	19.810	42	31.890	1453.5	978209.758	60.52	-102.12	2.60	-100.90	0.61	-107.25	2.12
1607	RD460	19	25.300	42	31.910	1412.6	978214.997	47.98	-110.09	1.06	-110.40	0.50	-106.99	-7.53
1608	RD461	19	31.900	42	32.360	1453.9	978213.557	53.04	-109.45	0.58	-110.45	0.31	-106.39	-8.32
1609	RD462	19	31.360	42	37.990	1488.2	978212.157	62.73	-103.79	0.45	-104.74	0.30	-105.47	-3.65
1610	RD463	19	31.360	42	44.280	1406.1	978202.816	28.06	-129.28	0.23	-130.41	0.45	-104.46	-30.08
1611	RD464	19	3.990	42	32.260	1582.1	978164.150	69.36	-107.67	1.61	-107.50	0.60	-107.67	-4.45
1612	RD465	19	3.970	42	38.430	1693.2	978129.721	69.22	-120.24	0.75	-120.96	0.56	-107.37	-18.56
1613	RD466	18	59.020	42	38.340	1712.9	978113.460	63.63	-128.04	0.84	-128.67	0.59	-107.66	-26.03
1614	RD467	18	58.340	42	32.630	1642.8	978138.553	67.72	-116.10	1.18	-116.37	0.64	-107.82	-13.36
1615	RD468	19	4.100	42	26.140	1766.1	978129.401	91.27	-106.35	2.16	-105.68	0.67	-107.43	-3.39
1616	RD469	19	8.900	42	26.370	1738.2	978138.595	87.39	-107.11	1.83	-106.75	0.63	-107.43	-5.43
1617	RD470	19	9.400	42	31.770	1540.7	978173.218	60.62	-111.78	1.29	-111.90	0.57	-107.56	-4.41
1618	RD471	19	9.180	42	38.140	1664.8	978135.109	61.01	-125.28	0.72	-126.02	0.56	-107.01	-23.88
1619	RD472	19	14.540	42	38.430	1603.5	978154.144	56.12	-123.30	0.60	-124.14	0.67	-106.62	-22.24
1620	RD473	19	14.700	42	32.430	1493.1	978202.552	70.32	-96.75	3.21	-94.94	0.82	-107.32	8.05
1621	RD474	19	14.840	42	26.140	1702.6	978158.760	91.03	-99.49	1.81	-99.15	0.65	-107.39	3.27
1622	RD475	19	14.760	42	49.430	1546.4	978175.387	59.55	-113.49	0.40	-114.51	0.32	-105.45	-13.61
1623	RD476	19	14.700	42	44.000	1545.2	978170.893	54.74	-118.17	0.45	-119.14	0.52	-106.07	-17.61
1624	RD477	19	8.290	42	43.910	1633.2	978146.245	63.22	-119.53	0.55	-120.43	0.52	-106.66	-18.56
1625	RD478	19	9.270	42	50.060	1626.4	978151.241	65.21	-116.78	0.50	-117.73	0.70	-106.07	-16.43
1626	RD479	19	9.350	42	55.090	1636.1	978155.152	72.04	-111.04	0.54	-111.95	0.67	-105.67	-11.08
1627	RD480	19	14.400	42	55.510	1609.8	978155.418	59.47	-120.66	0.73	-121.37	0.50	-104.87	-21.23
1628	RD481	19	20.000	42	55.570	1495.1	978169.963	33.38	-133.92	0.37	-134.95	0.34	-104.11	-35.23
1629	RD482	19	20.350	42	49.490	1472.5	978185.152	41.27	-123.50	0.28	-124.61	0.37	-104.78	-24.16
1630	RD483	19	25.680	42	54.910	1461.3	978171.009	18.65	-144.86	0.26	-145.99	0.37	-103.40	-46.89
1631	RD484	19	31.090	42	54.830	1500.8	978159.039	13.76	-154.18	0.43	-155.15	0.40	-102.77	-56.79
1632	RD485	19	30.820	42	49.080	1397.7	978184.171	7.34	-149.06	0.27	-150.15	0.48	-103.66	-50.60
1633	RD486	19	26.710	42	49.370	1423.0	978189.509	24.37	-134.87	0.21	-136.02	0.39	-104.01	-36.20
1634	RD487	19	25.650	42	20.230	1473.5	978211.129	62.57	-102.32	4.86	-98.85	1.13	-107.17	4.10
1635	RD488	19	30.980	42	26.870	1419.0	978223.219	52.80	-105.98	2.20	-105.14	0.74	-106.90	-2.37
1636	RD489	19	31.060	42	19.430	1405.2	978222.480	47.73	-109.51	1.95	-108.92	0.88	-106.90	-6.10
1637	RD490	19	31.300	42	14.710	1466.8	978211.728	55.76	-108.37	2.53	-107.23	0.76	-106.73	-4.75
1638	RD491	19	25.300	42	14.500	1897.6	978129.333	111.93	-100.41	2.74	-99.18	0.84	-106.64	1.94
1639	RD492	19	19.890	42	15.170	1912.3	978125.836	118.06	-95.93	3.63	-93.80	0.96	-106.65	7.30
1640	RD493	19	20.490	42	20.090	1560.9	978179.038	62.30	-112.36	4.33	-109.46	1.09	-107.24	-6.70
1641	RD494	19	19.430	42	25.630	1676.6	978166.134	86.08	-101.53	1.60	-101.39	0.79	-107.33	1.03
1642	RD495	19	25.710	42	26.260	1532.1	978196.632	66.09	-105.35	2.12	-104.64	0.71	-107.19	-1.91
1643	RD496	19	36.090	42	26.150	1294.7	978258.682	45.07	-99.80	5.59	-95.52	1.22	-106.54	7.34
1644	RD497	19	42.310	42	26.950	1435.2	978232.001	55.81	-104.78	0.95	-105.21	0.75	-105.93	-3.48
1645	RD498	19	42.390	42	22.130	1277.2	978272.583	47.57	-95.35	0.98	-95.66	0.44	-106.03	6.62
1646	RD499	18	58.1590	42	16.320	2046.2	978076.437	129.87	-99.12	4.68	-95.95	1.16	-105.87	4.01
1647	RD500	19	4.050	42	20.030	2042.2	978074.185	127.44	-103.32	2.56	-102.28	0.86	-106.72	-1.56
1648	RD501	19	2.960	42	14.540	2003.3	978080.379	116.47	-107.69	4.56	-104.65	1.32	-105.97	-4.46
1649	RD502	19	2.580	42	9.110	2428.7	978001.407	169.05	-102.72	12.20	-91.99	2.55	-104.37	5.55
1650	RD503	18	57.360	42	10.690	2221.8	978025.323	133.99	-114.62	7.01	-109.12	1.64	-104.19	-11.28
														-14.58

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA S.D.CB MGAL	IS. GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
1651	R0504	18 52.610	42 11.410	2394.4	977992.474	158.75	-109.17	11.07	-99.59	2.355	-103.39	-2.95	-5.86
1652	R0505	19 13.560	42 15.340	1976.3	978103.298	121.19	-99.95	4.43	-97.04	1.135	-106.61	3.86	1.47
1653	R0506	19 8.530	42 15.060	2046.0	978082.269	126.36	-102.59	5.26	-98.84	1.155	-106.96	1.62	-0.86
1654	R0507	19 9.270	42 20.340	1990.0	978094.574	120.70	-101.98	2.44	-101.05	1.122	-106.95	0.10	-0.22
1655	R0508	19 15.000	42 21.430	1769.3	978138.660	91.36	-106.62	3.66	-104.45	1.255	-107.17	-2.38	-2.17
1656	R0509	19 20.080	42 9.140	2104.8	978099.270	150.69	-84.84	5.27	-81.08	1.149	-105.96	18.82	15.45
1657	R0510	19 14.700	42 9.480	2219.1	978057.734	149.45	-98.87	7.41	-92.96	1.800	-105.77	6.46	2.69
1658	R0511	19 9.510	42 9.200	2337.8	978027.886	161.06	-100.54	7.63	-94.40	1.183	-105.29	4.20	0.27
1659	R0512	19 13.290	42 5.140	2465.7	978009.117	178.20	-97.71	8.73	-90.44	2.09	-104.69	7.22	2.71
1660	R0513	19 36.300	42 43.330	1354.2	978225.539	30.09	-121.45	0.18	-122.60	0.122	-104.50	-22.08	5.16
1661	R0514	19 41.490	42 44.050	1330.3	978229.905	22.14	-126.72	0.15	-127.90	0.151	-104.34	-27.47	-0.57
1662	R0515	19 42.070	42 38.070	1297.1	978248.420	29.85	-115.29	0.26	-116.33	0.122	-105.01	-15.14	8.96
1663	R0516	19 37.390	42 37.590	1371.6	978238.518	47.40	-106.08	0.32	-107.11	0.226	-105.32	-5.81	18.32
1664	R0517	19 25.050	42 4.490	1991.1	978122.772	134.44	-88.36	8.49	-81.38	2.01	-105.70	18.67	15.54
1665	R0518	19 25.000	42 9.030	1827.6	978149.353	110.64	-93.87	6.67	-88.69	1.78	-106.31	12.40	10.64
1666	R0519	19 32.240	42 9.400	1557.8	978198.867	70.08	-104.23	7.74	-97.92	1.89	-106.37	4.06	1.66
1667	R0520	19 30.710	42 3.360	1944.8	978119.230	111.27	-106.35	4.64	-103.22	1.45	-105.71	-3.12	-4.69
1668	R0521	19 30.820	41 57.300	2055.5	978095.507	121.59	-108.42	6.52	-103.41	1.76	-104.90	-4.40	-5.31
1669	R0522	19 20.600	42 4.310	2443.3	978031.168	186.49	-86.91	8.25	-80.13	1.97	-105.04	17.93	13.88
1670	R0523	19 9.510	43 24.230	1310.3	978223.106	39.33	-107.29	0.43	-108.18	1.121	-108.87	-3.15	-12.83
1671	R0524	19 3.720	43 23.860	1394.0	978181.320	28.75	-127.24	1.02	-127.57	1.29	-108.98	-22.67	8.85
1672	R0525	19 3.570	43 29.540	1327.9	978188.477	15.65	-132.94	0.25	-134.01	1.121	-109.88	-28.04	2.68
1673	R0526	19 8.410	43 29.830	1270.1	978221.709	26.55	-115.57	0.16	-116.70	1.24	-109.91	-10.53	19.59
1674	R0527	19 14.380	43 29.730	1213.5	978233.272	15.08	-120.71	0.10	-121.87	1.24	-109.79	-15.65	13.73
1675	R0528	19 14.430	43 24.530	1235.5	978224.440	12.99	-125.26	1.77	-124.76	1.29	-108.84	-19.52	10.69
1676	R0529	19 14.420	43 18.940	1344.3	978213.710	33.84	-114.59	0.40	-115.52	1.21	-107.70	-11.77	19.19
1677	R0530	19 9.500	43 18.650	1374.8	978196.960	35.09	-120.75	0.76	-121.33	1.22	-107.88	-17.48	14.06
1678	R0531	19 3.990	43 18.770	1377.4	978179.458	21.52	-132.61	0.27	-133.69	1.24	-108.26	-29.47	2.63
1679	R0532	19 25.720	43 24.300	1185.1	978238.101	0.49	-132.12	0.19	-133.17	1.31	-108.20	-28.46	0.23
1680	R0533	19 20.380	43 24.480	1231.8	978245.188	27.01	-110.82	0.28	-111.81	1.31	-108.56	-6.87	22.57
1681	R0534	19 20.080	43 29.500	1152.3	978247.873	17.79	-115.62	0.09	-116.78	1.31	-109.52	-10.77	17.84
1682	R0535	19 25.700	43 29.820	1119.5	978260.956	3.12	-122.15	0.11	-123.23	1.40	-109.30	-17.23	10.45
1683	R0536	19 31.390	43 24.070	1147.7	978255.613	1.10	-127.32	0.14	-128.40	1.37	-107.73	-24.04	3.79
1684	R0537	19 9.950	43 7.210	1389.0	978183.184	23.28	-132.15	0.15	-133.35	0.98	-106.22	-31.23	-1.03
1685	R0538	19 4.080	43 6.720	1479.2	978156.693	30.07	-135.44	0.24	-136.60	1.18	-106.94	-34.02	2.37
1686	R0539	19 4.080	43 11.400	1464.1	978162.743	31.47	-132.36	0.28	-133.47	1.21	-107.40	-30.37	15.85
1687	R0540	19 9.510	43 11.600	1421.0	978190.839	41.21	-117.79	0.23	-118.93	1.01	-106.78	-16.33	9.61
1688	R0541	19 14.890	43 11.000	1342.8	978205.971	27.19	-123.06	0.11	-124.28	1.08	-106.18	-22.06	30.48
1689	R0542	19 14.760	43 6.780	1355.4	978196.107	24.42	-128.36	0.14	-129.56	1.05	-105.53	-28.05	3.87
1690	R0543	19 14.210	43 0.720	1534.2	978162.090	43.00	-128.67	0.67	-129.42	1.31	-104.67	-29.25	2.82
1691	R0544	19 9.620	43 0.520	1602.7	978149.343	55.67	-123.67	0.58	-124.53	1.02	-105.38	-23.85	8.67
1692	R0545	19 4.100	43 0.490	1528.3	978157.174	45.69	-125.33	0.30	-126.44	1.18	-106.40	-24.53	8.50
1693	R0546	19 19.960	43 6.340	1283.7	978218.867	17.10	-126.54	0.06	-127.78	1.05	-104.80	-26.76	4.63
1694	R0547	19 19.950	43 12.110	1261.3	978239.179	30.51	-110.63	0.05	-111.86	1.05	-105.95	-9.62	21.39
1695	R0548	19 25.760	43 7.070	1296.4	978218.923	25.83	-129.45	2.20	-128.55	0.77	-104.29	-28.02	2.66
1696	R0549	19 20.580	43 1.590	1343.5	978213.726	29.83	-120.51	0.12	-121.72	0.63	-103.89	-21.78	9.64
1697	R0550	19 25.560	43 0.690	1369.5	978195.117	14.55	-138.69	0.15	-139.88	0.82	-102.96	-40.95	-10.08
1698	R0551	19 31.020	43 1.280	1369.4	978190.934	5.18	-148.05	0.15	-149.25	0.76	-102.46	-50.81	-20.58
1699	R0552	19 31.060	43 6.550	1349.7	978201.964	10.09	-140.94	0.17	-142.10	0.66	-103.67	-42.40	-51.71
1700	R0553	19 25.570	43 12.390	1222.2	978242.268	16.25	-120.52	0.01	-121.77	1.14	-105.54	-19.82	10.49

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	OBS. GRAV.	FAGA	SRGA	TTC	CRGA	S.D.C.R	IS.GRAV	IGA1	IGA2	IGA3
		D	D	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
1701	RD554	19 20.030	43 18.190	1573.5	978181.415	68.99	-107.08	2.41	-106.10	1.27	-107.06	-3.60	-13.45	26.77
1702	RD555	19 25.620	43 18.040	1212.1	978246.195	17.01	-118.62	0.67	-119.21	1.18	-106.81	-15.95	-26.31	13.70
1703	RD556	19 31.350	43 17.360	1167.2	978261.728	13.27	-117.33	-0.01	-118.57	1.21	-106.36	-15.66	-26.48	13.25
1704	RD557	19 31.030	43 11.020	1255.5	978239.173	18.27	-122.22	0.04	-123.46	1.14	-104.83	-22.32	-32.23	7.39
1705	RD558	19 58.040	42 38.450	1169.6	978276.794	3.56	-127.32	0.01	-128.54	0.39	-104.88	-27.10	-35.21	-7.57
1706	RD559	19 41.820	43 23.680	1125.5	978288.733	17.46	-108.48	0.26	-109.42	1.37	-107.24	-5.48	-18.17	20.49
1707	RD560	19 36.730	43 23.680	1089.1	978286.798	9.14	-112.73	0.08	-113.83	1.44	-107.50	-9.53	-21.73	17.44
1708	RD561	19 32.530	43 28.420	1115.3	978259.034	-6.54	-131.35	0.96	-131.59	1.39	-108.54	-26.29	-38.74	0.49
1709	RD562	19 36.170	43 29.090	1103.7	978275.048	2.43	-121.08	0.05	-122.21	1.41	-108.39	-17.07	-29.97	8.84
1710	RD563	19 42.270	43 28.850	1040.0	978308.717	10.63	-105.74	0.19	-106.70	1.47	-107.88	-1.88	-15.35	22.72
1711	RD564	19 47.090	43 29.540	1021.5	978316.241	7.84	-106.47	0.11	-107.48	1.44	-107.56	-2.93	-17.01	20.17
1712	RD565	19 47.260	43 24.340	1049.6	978323.532	23.64	-93.81	0.17	-94.79	1.37	-107.14	9.27	-4.04	33.87
1713	RD566	19 47.390	43 18.390	1097.2	978309.427	24.09	-98.68	0.09	-99.77	1.41	-106.52	3.50	-8.99	29.38
1714	RD567	19 42.500	43 17.420	1165.1	978282.509	22.80	-107.57	0.26	-108.54	1.41	-106.33	-5.63	-17.52	21.40
1715	RD568	19 36.430	43 18.090	1140.2	978276.177	14.57	-113.02	0.16	-114.07	1.41	-106.45	-10.96	-22.37	17.03
1716	RD569	19 36.440	43 11.210	1213.7	978256.019	17.08	-118.73	0.28	-119.71	1.44	-105.05	-18.22	-28.68	10.66
1717	RD570	19 42.430	43 11.930	1221.6	978266.057	23.85	-112.84	1.44	-112.66	1.43	-105.42	-10.80	-21.93	17.02
1718	RD571	19 46.660	43 11.950	1178.5	978269.364	9.82	-122.06	0.00	-123.29	1.41	-105.59	-21.17	-32.71	5.86
1719	RD572	19 41.930	43 1.080	1333.0	978237.880	30.52	-118.64	0.14	-119.82	0.79	-103.37	-20.38	-29.97	8.34
1720	RD573	19 36.740	43 0.810	1381.7	978200.792	13.40	-141.21	0.19	-142.36	1.05	-102.79	-43.64	-52.72	-14.15
1721	RD574	19 35.460	43 6.180	1359.3	978202.399	9.32	-142.79	0.22	-143.90	0.98	-103.84	-44.06	-53.73	-14.59
1722	RD575	19 42.230	43 6.650	1279.6	978238.016	13.90	-129.29	0.12	-130.46	0.79	-104.42	-29.80	-40.18	-1.42
1723	RD576	19 47.400	43 6.720	1225.3	978255.601	9.78	-127.32	0.02	-128.57	0.79	-104.89	-27.29	-38.18	0.15
1724	RD577	19 47.420	43 1.410	1297.2	978238.690	15.04	-130.12	0.11	-131.31	0.85	-104.02	-31.11	-41.27	-3.38
1725	RD578	19 47.550	42 55.290	1333.9	978236.622	24.17	-125.09	0.24	-126.18	0.82	-103.86	-26.23	-35.57	1.43
1726	RD579	19 47.390	42 49.800	1323.8	978227.749	12.33	-135.80	0.10	-137.02	0.85	-104.08	-36.84	-45.45	-9.69
1727	RD580	19 41.820	42 49.910	1391.7	978211.053	21.91	-133.82	0.20	-134.97	0.82	-103.77	-35.30	-43.42	-7.16
1728	RD581	19 36.740	42 49.340	1407.0	978187.946	8.36	-149.08	0.20	-150.24	0.79	-103.68	-50.69	-58.27	-21.96
1729	RD582	19 36.900	42 54.450	1459.3	978174.783	11.18	-152.11	0.34	-153.15	0.79	-103.05	-54.40	-62.66	-25.10
1730	RD583	19 41.600	42 55.110	1383.5	978234.598	43.14	-111.67	0.18	-112.84	0.92	-103.35	-13.55	-22.32	15.13
1731	RD584	19 37.310	42 32.670	1373.1	978230.527	39.94	-113.70	0.44	-114.61	0.64	-105.98	-12.66	-18.16	5.64
1732	RD585	19 42.070	42 33.250	1302.9	978236.778	20.00	-125.79	0.32	-126.78	0.30	-105.60	-25.01	-30.98	-5.56
1733	RD586	19 46.820	42 33.360	1239.6	978261.636	20.79	-117.92	0.19	-119.00	0.23	-105.35	-17.30	-23.71	1.99
1734	RD587	19 47.770	42 37.820	1250.2	978257.879	19.39	-120.50	0.17	-121.61	0.22	-104.92	-20.37	-27.45	2.74
1735	RD588	19 47.420	42 43.970	1327.1	978233.406	18.98	-129.52	0.14	-130.70	0.25	-104.43	-30.18	-38.04	-4.30
1736	RD589	19 36.470	42 20.550	1412.8	978242.765	65.23	-92.86	1.37	-92.85	0.53	-106.44	9.46	5.42	15.85
1737	RD590	19 36.440	42 14.600	1421.2	978230.563	55.65	-103.38	4.05	-100.70	0.91	-106.40	1.61	-1.74	6.17
1738	RD591	19 36.7300	42 9.140	1544.2	978199.981	63.15	-109.65	4.91	-106.16	1.11	-106.18	4.38	-7.09	-0.94
1739	RD592	19 41.440	42 8.620	1734.4	978167.296	84.24	-109.84	2.27	-109.04	0.70	-105.68	-8.41	-11.48	-4.43
1740	RD593	19 41.200	42 15.000	1447.8	978225.276	54.03	-107.97	1.47	-107.88	0.70	-106.03	-6.08	-10.87	-1.06
1741	RD594	19 46.630	42 14.660	1453.3	978239.016	64.28	-98.34	1.17	-98.55	0.51	-105.56	2.75	-1.44	7.69
1742	RD595	19 52.580	42 14.310	1355.2	978258.378	47.67	-103.98	0.89	-104.42	0.66	-105.19	-3.20	-7.83	1.32
1743	RD596	19 52.200	42 20.340	1296.1	978269.683	41.11	-103.93	0.44	-104.79	0.61	-105.25	-3.34	-8.63	2.50
1744	RD597	19 52.260	42 26.490	1242.4	978278.211	33.01	-106.02	0.21	-107.08	0.40	-105.28	-5.45	-11.47	3.21
1745	RD598	19 47.310	42 26.380	1278.2	978266.811	37.40	-105.63	0.33	-106.59	0.43	-105.62	-4.73	-10.32	4.57
1746	RD599	19 46.740	42 20.200	1301.5	978269.678	48.00	-97.63	0.70	-98.24	0.42	-105.65	3.57	-1.26	9.88
1747	RD600	19 52.280	42 37.900	1203.4	978264.604	7.35	-127.31	0.04	-128.52	0.23	-104.90	-27.16	-34.67	-5.15
1748	RD601	19 52.660	42 32.590	1191.1	978262.379	20.96	-112.32	0.14	-113.42	0.39	-105.18	-11.75	-18.59	5.43
1749	RD602	19 58.320	42 32.300	1178.1	978302.850	31.97	-99.86	0.15	-100.94	0.34	-105.05	0.64	-6.69	14.01
1750	RD603	20 3.670	42 32.170	1162.6	978315.179	34.34	-95.75	0.53	-96.45	0.49	-104.89	5.02	-2.79	11.96

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SEGA MGAL	TTC MGAL	CRGA S.D.CR MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
1751	RD604	20 3.750	42 37.570	1144.2	978302.001	15.41	-112.63	0.50	-113.34	0.31	-104.92	-11.77	-0.97
1752	RD605	20 3.400	42 43.330	1154.8	978289.745	6.76	-122.46	0.38	-123.30	0.43	-105.03	-21.66	-3.66
1753	RD606	19 58.370	42 43.480	1219.9	978266.432	8.40	-128.10	0.07	-129.30	0.42	-104.93	-27.95	-6.00
1754	RD607	19 53.150	42 43.650	1270.2	978251.707	14.22	-127.91	0.04	-129.16	0.25	-104.62	-28.28	-4.00
1755	RD608	20 14.840	42 54.600	1098.2	978356.088	44.51	-78.37	0.32	-79.23	0.79	-105.66	23.20	34.72
1756	RD609	20 14.510	43 1.610	1141.9	978299.507	1.74	-126.04	0.13	-127.12	0.82	-105.64	-24.83	-6.20
1757	RD610	20 9.810	43 13.050	1095.1	978312.648	5.02	-117.52	0.19	-118.51	0.82	-105.77	-15.96	4.67
1758	RD611	20 9.540	43 7.410	1101.6	978312.539	7.18	-116.09	0.28	-116.99	0.79	-105.76	-14.47	6.96
1759	RD612	20 9.270	43 1.240	1149.2	978300.259	9.85	-118.74	0.24	-119.72	0.82	-105.56	-17.53	3.61
1760	RD613	20 8.890	42 54.880	1117.0	978308.209	8.23	-116.76	0.34	-117.61	0.79	-105.49	-15.40	4.03
1761	RD614	20 9.080	42 49.110	1105.2	978309.638	5.84	-117.83	0.52	-118.50	0.83	-105.44	-16.30	-0.81
1762	RD615	20 14.460	42 47.630	1077.6	978340.022	22.46	-98.12	0.49	-98.80	0.80	-105.55	-3.58	9.82
1763	RD616	20 20.220	42 48.900	1057.0	978347.679	18.13	-100.15	0.45	-100.85	1.05	-105.75	1.80	4.95
1764	RD617	20 14.730	42 43.220	1087.8	978334.126	19.45	-102.27	0.42	-103.03	0.80	-105.35	-0.86	3.29
1765	RD618	20 19.920	42 43.180	1078.2	978340.732	18.02	-102.63	0.39	-103.41	0.79	-105.54	-1.03	0.54
1766	RD619	20 20.140	42 37.730	1096.5	978339.853	22.57	-100.13	0.39	-100.92	0.79	-105.27	1.12	1.71
1767	RD620	20 14.860	42 37.980	1098.3	978337.024	25.46	-97.44	0.45	-98.17	0.80	-105.08	-5.91	6.32
1768	RD621	20 9.590	42 37.690	1117.1	978321.366	20.74	-104.26	0.55	-104.91	0.80	-104.97	-3.21	2.20
1769	RD622	20 8.830	42 43.250	1115.5	978309.677	9.30	-115.53	0.40	-116.32	0.89	-105.22	-24.11	-5.30
1770	RD623	19 57.980	43 0.460	1246.2	978259.807	10.27	-129.18	0.06	-130.40	0.34	-105.04	-29.03	-3.77
1771	RD624	19 53.370	43 0.850	1267.2	978249.012	10.39	-131.41	0.13	-132.56	0.48	-104.58	-31.72	-5.24
1772	RD625	19 52.910	43 6.620	1207.5	978265.697	9.10	-126.02	0.00	-127.27	0.69	-105.28	-25.55	0.76
1773	RD626	19 58.520	43 7.000	1176.6	978278.098	6.56	-125.10	0.06	-126.27	0.48	-105.77	-23.96	0.96
1774	RD627	20 3.530	43 7.870	1152.8	978289.460	5.73	-123.26	0.22	-124.26	0.34	-105.86	-21.79	1.64
1775	RD628	20 4.540	43 1.470	1180.3	978292.191	15.97	-116.10	0.17	-117.17	0.42	-105.55	-15.09	8.04
1776	RD629	20 3.670	42 54.860	1187.0	978285.783	12.47	-120.35	0.21	-121.38	0.40	-105.34	-19.53	3.05
1777	RD630	19 58.940	42 53.220	1202.8	978270.629	6.77	-127.82	0.08	-128.99	0.37	-105.11	-27.42	-3.56
1778	RD631	19 53.020	42 54.830	1257.7	978248.901	7.69	-133.05	0.02	-134.31	0.37	-104.49	-33.53	-7.14
1779	RD632	19 52.770	42 49.250	1288.3	978256.104	24.57	-119.59	0.05	-120.84	0.34	-104.51	-20.12	5.66
1780	RD633	19 58.320	42 49.170	1245.2	978269.423	19.25	-120.09	0.14	-121.23	0.34	-105.01	-19.87	3.94
1781	RD634	20 3.860	42 48.870	1178.8	978283.857	7.83	-124.07	0.25	-125.06	0.37	-105.24	-23.29	-2.68
1782	RD635	19 58.510	43 18.190	1069.1	978318.023	13.32	-106.31	0.09	-107.38	0.48	-106.39	-4.14	19.01
1783	RD636	20 3.780	43 18.530	1183.7	978330.144	55.71	-76.74	0.12	-77.86	0.51	-106.02	24.66	46.04
1784	RD637	20 4.020	43 25.090	1014.8	978339.402	12.62	-100.94	0.10	-101.96	0.48	-106.03	1.07	19.87
1785	RD638	19 58.340	43 24.890	1012.2	978325.379	3.29	-109.98	0.09	-111.01	0.54	-106.57	-7.41	13.72
1786	RD639	19 58.630	43 29.860	961.4	978339.321	1.27	-106.31	0.17	-107.22	0.54	-106.49	-3.55	15.29
1787	RD640	19 53.560	43 29.300	992.4	978322.244	-1.34	-112.40	0.00	-113.50	0.60	-106.92	-9.49	11.61
1788	RD641	19 52.690	43 24.810	1023.7	978316.991	3.89	-110.66	0.03	-111.76	0.51	-106.88	-7.90	15.09
1789	RD642	19 53.100	43 18.060	1090.3	978313.019	20.08	-101.93	0.00	-103.10	0.57	-106.46	0.14	-12.85
1790	RD643	19 52.770	43 12.460	1174.0	978277.008	10.21	-121.16	0.00	-122.39	0.79	-105.92	-19.93	5.77
1791	RD644	19 58.720	43 12.560	1125.7	978291.909	4.47	-121.49	0.09	-122.60	0.85	-106.16	-19.75	4.48
1792	RD645	20 3.910	43 13.160	1144.7	978293.626	7.03	-121.06	0.14	-122.13	0.48	-106.03	-19.47	3.16
1793	RD646	20 3.720	42 20.570	1243.7	978284.811	28.95	-110.22	0.42	-111.07	0.78	-104.54	-10.19	-6.40
1794	RD647	20 3.800	42 26.380	1192.9	978308.318	36.70	-96.78	0.43	-97.59	0.89	-104.71	3.61	8.42
1795	RD648	19 58.530	42 26.750	1230.7	978297.137	42.28	-95.43	0.19	-96.51	0.73	-104.98	4.84	11.84
1796	RD649	19 58.260	42 19.400	1269.7	978282.846	40.29	-101.79	0.37	-102.71	0.86	-104.86	-1.57	3.11
1797	RD650	19 57.990	42 14.110	1323.3	978266.847	41.08	-106.99	1.20	-107.11	0.83	-104.83	-6.15	-2.20
1798	RD651	20 3.670	42 14.340	1304.0	978265.213	28.00	-117.91	0.64	-118.58	0.86	-104.45	-17.95	-23.48
1799	RD652	20 9.050	42 14.310	1316.5	978253.793	15.22	-132.10	0.41	-133.00	0.76	-104.10	-32.76	-30.30
1800	RD653	20 8.910	42 20.060	1250.0	978285.374	26.42	-113.46	0.30	-114.43	0.76	-104.24	-20.56	-11.23

SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	DRS. GRAV. MGAL	FAGA MGAL	SROA MGAL	TTC MGAL	CRGA S.D.CB MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
1801	RD654	20 8.560	42 26.580	1188.2	978315.491	37.81	-95.15	0.35	-96.04	0.86	5.00	-2.53	8.07
1802	RD655	20 9.350	42 31.470	1170.1	978325.029	40.99	-89.94	0.38	-90.79	0.76	10.51	2.28	14.15
1803	RD656	20 25.460	43 42.160	846.4	978409.987	10.30	-84.41	-0.09	-85.48	0.51	13.17	-6.78	-3.31
1804	RD657	20 21.660	43 48.560	852.4	978406.729	12.63	-82.75	-0.09	-83.83	0.51	14.45	-6.07	-3.53
1805	RD658	20 18.150	43 46.150	864.9	978405.038	18.24	-78.54	-0.08	-79.63	0.51	19.57	-0.21	4.05
1806	RD659	20 20.240	43 40.980	868.0	978398.152	10.26	-86.87	-0.07	-87.94	0.60	11.65	-7.57	-1.82
1807	RD660	20 15.730	43 37.130	897.4	978389.931	15.52	-84.89	-0.05	-85.97	0.60	14.77	-3.38	7.82
1808	RD661	20 12.010	43 41.700	898.1	978382.256	11.70	-88.80	-0.07	-89.90	0.60	10.82	-7.64	2.18
1809	RD662	20 8.670	43 47.900	889.8	978388.229	18.36	-81.21	-0.08	-82.31	0.51	18.33	-0.72	6.57
1810	RD663	20 13.820	43 49.660	863.6	978401.858	18.89	-77.75	-0.09	-78.84	0.63	20.81	0.95	5.25
1811	RD664	20 19.080	43 54.860	861.1	978399.738	10.85	-85.50	0.01	-86.49	0.79	11.39	-9.81	-8.24
1812	RD665	20 25.870	43 54.540	825.6	978411.168	4.66	-87.72	-0.09	-88.78	1.37	7.92	-13.96	-13.27
1813	RD666	20 29.080	43 50.520	823.0	978409.618	-0.84	-92.94	-0.10	-94.01	0.51	2.78	-18.82	-17.91
1814	RD667	20 30.920	43 44.430	841.0	978403.186	-3.53	-97.65	-0.10	-98.73	0.51	-1.17	-22.03	-20.34
1815	RD668	20 24.810	43 28.560	916.3	978368.941	-8.52	-111.06	0.06	-112.05	0.51	-11.31	-29.12	-16.99
1816	RD669	20 20.300	43 27.820	941.9	978385.056	19.91	-85.49	0.08	-86.47	0.51	14.71	-2.52	18.33
1817	RD670	20 18.130	43 33.190	907.2	978393.260	19.53	-81.98	0.01	-83.01	0.51	17.86	0.05	13.49
1818	RD671	20 23.070	43 35.140	886.2	978387.243	2.19	-96.97	-0.04	-98.03	0.85	1.93	-16.69	-8.98
1819	RD672	20 27.450	43 36.320	876.5	978407.119	14.77	-83.31	-0.05	-84.37	0.51	14.84	-4.43	0.58
1820	RD673	20 31.550	43 39.340	857.8	978411.035	8.87	-87.12	-0.08	-88.19	0.54	10.22	-9.94	-7.21
1821	RD674	20 34.810	43 32.960	870.4	978407.083	5.58	-91.81	-0.04	-92.86	0.60	6.50	-13.04	-9.29
1822	RD675	20 31.110	43 30.660	898.0	978398.424	9.10	-91.39	0.00	-92.42	0.51	7.35	-11.44	-5.29
1823	RD676	20 34.340	43 21.730	935.2	978397.531	16.49	-88.15	0.14	-89.07	0.26	11.56	-6.22	4.18
1824	RD677	20 30.570	43 18.850	969.5	978391.793	25.06	-83.42	0.22	-84.29	0.35	16.72	-0.25	20.67
1825	RD678	20 31.730	43 13.460	972.7	978375.153	8.27	-100.58	0.31	-101.36	0.35	0.31	-16.00	8.95
1826	RD679	20 34.510	43 8.080	991.4	978372.479	8.61	-102.32	0.33	-103.10	0.35	-1.08	-16.90	8.18
1827	RD680	20 29.760	43 6.240	1021.7	978344.306	-5.51	-119.84	0.32	-120.65	0.26	-18.39	-33.44	-6.21
1828	RD681	20 27.040	43 11.780	996.8	978357.571	2.75	-108.79	0.45	-109.45	0.33	-7.53	-23.13	5.25
1829	RD682	20 24.290	43 16.320	989.6	978364.325	9.98	-100.75	0.31	-101.54	0.26	0.17	-15.81	12.51
1830	RD683	20 22.260	43 21.440	1005.1	978357.444	19.88	-93.59	0.19	-93.52	0.26	7.84	-8.67	17.81
1831	RD684	20 26.820	43 23.990	947.7	978391.993	22.23	-83.81	0.09	-84.79	0.32	16.02	-1.32	15.24
1832	RD685	20 32.210	43 26.830	915.9	978400.287	15.40	-87.09	0.08	-88.05	0.51	12.13	-6.20	1.64
1833	RD686	20 36.600	43 28.520	882.4	978405.545	5.98	-92.76	0.01	-93.77	0.30	6.19	-12.86	-8.07
1834	RD687	20 39.240	43 23.070	917.2	978411.492	20.04	-82.59	0.04	-83.59	0.32	16.73	-1.77	4.42
1835	RD688	20 42.110	43 18.110	944.2	978412.085	26.12	-79.54	0.07	-80.53	0.28	20.18	2.13	9.74
1836	RD689	20 39.460	43 9.880	971.3	978381.403	6.43	-102.26	0.14	-103.20	0.37	-1.54	-18.11	3.15
1837	RD690	20 36.670	43 15.070	965.3	978385.703	11.65	-96.37	0.28	-97.17	0.37	4.02	-13.02	5.02
1838	RD691	20 26.010	42 15.380	1258.0	978305.624	32.41	-108.36	0.25	-109.39	0.82	-9.51	-17.19	-9.97
1839	RD692	20 25.620	42 20.750	1200.6	978348.264	57.72	-76.62	0.40	-77.47	0.83	22.91	14.58	22.05
1840	RD693	20 30.870	42 20.380	1263.9	978328.792	52.61	-88.82	0.34	-89.77	0.83	10.39	-9.27	-2.52
1841	RD694	20 36.520	42 20.660	1147.6	978345.819	28.16	-100.25	0.76	-100.71	0.90	0.05	-10.09	-9.86
1842	RD695	20 36.790	42 15.030	1197.5	978335.934	33.41	-100.59	0.34	-101.50	0.89	-1.48	-10.09	-9.86
1843	RD696	20 30.970	42 14.190	1306.7	978302.133	39.06	-107.16	0.22	-108.25	0.82	-8.70	-16.68	-9.86
1844	RD697	20 27.730	42 7.980	1247.1	978307.371	29.10	-110.45	0.33	-111.40	0.83	-11.83	-18.70	-11.73
1845	RD698	20 20.160	42 14.710	1290.3	978380.562	33.06	-121.33	0.21	-122.42	0.89	-22.52	-29.56	-21.84
1846	RD699	20 19.890	42 9.160	1304.2	978382.988	30.04	-115.90	0.28	-116.93	0.92	-17.23	-23.53	-16.17
1847	RD700	20 14.780	42 8.280	1321.7	978267.945	25.39	-122.51	0.42	-123.40	0.83	-23.51	-29.25	-21.76
1848	RD701	20 14.620	42 3.050	1335.2	978274.922	36.69	-112.72	0.66	-113.38	0.86	-13.51	-18.63	-11.64
1849	RD702	20 14.460	42 13.940	1306.8	978248.822	1.98	-144.25	0.27	-145.29	0.82	-45.31	-51.73	-43.68
1850	RD703	20 20.000	42 26.350	1175.9	978334.607	41.96	-89.62	0.31	-90.54	0.79	10.37	1.83	10.39

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	OBS. GRAV.	FAGA	SAGA	TTC	CEGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3
		D MIN	D MIN	H	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
1851	R0704	20	20.520	42	20.170	1229.1	978310.274	33.53	-104.00	0.29	-104.98	0.79	-103.92	-4.67
1852	R0705	20	14.670	42	20.690	1237.8	978291.742	23.41	-115.10	0.25	-116.12	0.82	-104.05	-15.71
1853	R0706	20	14.270	42	26.380	1189.5	978326.984	44.14	-88.97	0.29	-89.92	0.82	-104.43	-23.03
1854	R0707	20	14.460	42	31.850	1148.2	978323.138	27.36	-101.12	0.31	-102.02	0.82	-104.71	-11.01
1855	R0708	20	20.080	42	31.240	1145.1	978325.220	22.99	-105.14	0.30	-106.06	0.89	-104.85	-0.68
1856	R0709	20	25.820	42	36.970	1087.1	978352.947	27.19	-94.46	0.57	-95.06	0.77	-105.36	-4.57
1857	R0710	20	25.730	42	31.880	1118.0	978343.441	27.30	-97.80	0.53	-98.46	0.80	-105.01	-3.39
1858	R0711	20	31.250	42	31.610	1137.4	978352.788	37.20	-90.08	0.60	-90.68	0.90	-105.17	-6.54
1859	R0712	20	32.170	42	26.030	1159.9	978346.587	37.03	-92.76	0.73	-93.25	0.84	-104.61	0.86
1860	R0713	20	25.230	42	26.010	1159.8	978345.588	42.84	-86.94	0.55	-87.61	0.83	-104.49	-1.67
1861	R0714	20	4.860	42	3.760	1525.7	978235.127	65.16	-105.56	0.82	-106.15	0.96	-104.31	4.50
1862	R0715	20	3.370	42	8.560	1396.3	978243.926	35.48	-120.76	0.94	-121.17	1.22	-104.45	-10.74
1863	R0716	20	8.750	42	8.590	1367.0	978248.262	25.56	-127.41	0.58	-128.17	1.18	-104.12	-25.66
1864	R0717	20	9.240	42	2.590	1495.5	978242.970	59.43	-107.91	0.77	-108.54	1.06	-104.05	-33.34
1865	R0718	20	8.970	41	56.810	1517.2	978244.950	68.37	-101.40	1.42	-101.39	1.24	-104.13	-13.52
1866	R0719	20	3.860	41	56.780	1477.1	978244.522	60.53	-104.75	2.54	-103.60	1.14	-104.48	-5.65
1867	R0720	19	58.480	41	52.470	1541.0	978225.362	66.29	-106.14	4.62	-102.94	1.35	-104.80	-0.71
1868	R0721	19	58.860	41	57.210	1513.3	978235.567	67.58	-101.75	3.74	-99.42	1.26	-104.71	0.61
1869	R0722	19	58.450	42	3.100	1687.4	978207.207	93.33	-95.49	1.71	-95.24	1.10	-104.62	0.40
1870	R0723	19	57.690	42	9.450	1332.2	978274.076	51.35	-97.72	1.34	-97.70	1.02	-104.84	7.72
1871	R0724	19	45.530	41	56.150	1759.8	978178.643	99.52	-97.40	4.72	-94.16	1.39	-105.03	6.84
1872	R0725	19	41.470	42	2.730	1881.5	978141.628	103.92	-106.62	3.14	-104.98	1.22	-105.34	9.02
1873	R0726	19	36.770	42	4.740	1724.3	978161.406	79.68	-113.26	8.19	-106.55	1.93	-105.82	-7.47
1874	R0727	19	36.780	41	56.640	1625.5	978124.713	116.46	-103.14	6.25	-98.41	1.61	-104.95	-2.70
1875	R0728	19	41.960	41	58.790	1946.8	978136.373	118.34	-99.50	3.58	-97.44	1.24	-105.09	-0.37
1876	R0729	19	42.260	41	53.880	1893.3	978141.441	106.62	-105.24	5.21	-101.53	1.45	-104.80	5.13
1877	R0730	19	46.930	41	51.580	1806.5	978158.988	92.93	-109.22	3.78	-106.93	1.27	-104.65	0.62
1878	R0731	19	52.640	41	52.440	1649.9	978204.633	84.78	-99.84	4.69	-96.60	1.38	-104.80	-4.50
1879	R0732	19	52.660	41	56.440	1611.5	978211.105	79.39	-100.93	4.61	-97.76	1.37	-104.94	6.58
1880	R0733	19	52.550	42	3.050	1481.5	978229.094	57.38	-108.40	5.21	-104.58	1.45	-105.09	5.84
1881	R0734	19	52.230	42	8.680	1452.8	978243.945	63.68	-98.88	1.95	-98.31	1.12	-105.11	-0.13
1882	R0735	19	46.470	42	8.510	1621.0	978195.700	72.86	-108.53	2.19	-107.79	1.19	-105.45	6.49
1883	R0736	19	47.340	42	3.760	1650.3	978188.341	73.70	-110.96	4.48	-107.94	1.35	-105.25	-2.95
1884	R0737	20	32.340	43	51.090	802.4	978417.546	-2.49	-92.28	-0.12	-93.35	0.51	-99.05	-3.71
1885	R0738	20	23.990	43	3.450	1053.9	978327.715	-6.48	-124.42	0.32	-125.25	0.35	-105.58	-18.22
1886	R0739	20	22.500	43	9.200	1024.6	978353.155	11.37	-103.28	0.29	-104.12	0.35	-105.34	-8.23
1887	R0740	20	42.300	43	14.400	969.3	978411.012	32.60	-75.86	0.09	-76.86	0.26	-103.89	14.01
1888	R0741	20	37.530	42	25.750	1098.6	978363.557	29.78	-93.15	0.79	-93.54	0.90	-104.81	17.46
1889	R0742	20	35.140	42	30.360	1130.9	978360.392	38.95	-87.60	0.62	-88.18	0.93	-105.15	4.91
1890	R0743	20	30.490	42	38.930	1080.9	978368.978	36.70	-84.25	1.00	-84.42	0.94	-105.53	10.64
1891	R0744	20	27.850	42	45.200	1092.6	978354.599	28.54	-93.72	0.50	-94.40	0.89	-105.73	15.78
1892	HANDARAS	18	54.710	43	41.200	1352.0	978175.187	17.99	-133.29	0.37	-134.46	0.39	-110.06	7.28
1893	JED APT	21	30.129	39	12.343	15.2	978741.035	19.83	18.13	0.37	18.48	0.67	-6.16	-39.00
1894	J0001	19	41.590	40	58.810	75.5	978586.431	-8.69	-17.15	0.23	-17.02	0.40	-59.70	1.15
1895	J0002	19	19.900	41	6.230	26.0	978608.404	18.53	15.62	0.06	15.64	0.23	-43.07	-18.59
1896	J0003	19	20.340	40	57.340	0.0	978619.019	20.70	20.70	0.00	20.70	0.21	-27.42	30.65
1897	J0004	19	16.690	41	1.200	3.0	978615.611	21.64	21.31	0.00	21.30	0.21	-29.73	46.43
1898	J0005	19	11.320	41	2.890	4.0	978607.638	19.00	18.55	0.00	18.55	0.21	-26.66	63.26
1899	J0006	19	14.890	41	9.100	21.0	978597.771	11.05	8.70	0.12	8.79	0.23	-42.06	58.65
1900	J0007	19	18.160	41	13.160	58.7	978559.066	-19.07	-25.65	0.29	-25.45	0.40	-55.65	3.87
														51.03
														6.75
														3.87
														6.75
														1.01
														50.57
														55.47
														8.06
														-5.05



SEQ #	IDENT.	LATITUDE D MIN	LONGITUDE D MIN	ALT. M	ORS. GRAV. MGAL	FAGA MGAL	SRGA MGAL	TTC MGAL	CRGA MGAL	S.D.C.B. MGAL	IS.GRAV MGAL	IGA1 MGAL	IGA2 MGAL	IGA3 MGAL
1901	JQ008	19 23.240	41 10.120	56.5	978574.118	-9.47	-15.81	0.18	-15.71	0.39	-56.54	40.70	44.80	5.64
1902	JQ009	19 27.650	41 7.890	67.1	978576.822	-7.66	-15.18	0.18	-15.09	0.24	-58.42	43.14	47.17	9.30
1903	JQ010	19 23.320	41 2.260	20.8	978622.013	27.31	24.99	0.03	24.99	0.60	-39.77	64.70	69.43	21.09
1904	JQ011	19 33.020	41 17.010	146.5	978532.370	-32.68	-49.08	0.90	-48.39	0.43	-83.54	34.76	37.66	26.32
1905	JQ012	19 29.940	41 11.840	114.3	978543.653	-28.42	-41.22	0.34	-41.04	0.40	-70.41	29.06	32.61	14.94
1906	JQ013	19 26.420	41 14.900	94.9	978548.231	-26.50	-37.13	0.44	-36.83	0.61	-71.73	34.66	38.16	21.91
1907	JQ014	19 28.750	41 19.300	146.7	978513.041	-47.90	-64.33	0.75	-63.79	0.59	-82.60	18.42	21.39	9.94
1908	JQ015	19 31.570	41 24.410	225.5	978497.686	-41.60	-66.84	1.64	-65.52	0.68	-91.79	25.67	27.98	18.95
1909	JQ016	19 36.010	41 21.580	258.0	978497.988	-35.48	-64.36	1.65	-63.06	0.61	-91.84	28.08	30.36	21.25
1910	JQ017	19 41.950	41 31.290	418.8	978434.365	-55.12	-102.00	6.21	-96.34	1.34	-101.20	3.80	4.71	-0.47
1911	JQ018	19 44.430	41 36.470	897.6	978327.755	-16.33	-116.78	4.83	-112.98	1.25	-102.93	-12.35	-12.35	-12.84
1912	JQ019	19 47.600	41 40.330	1120.5	978285.513	7.17	-118.21	12.41	-107.00	2.67	-103.95	-6.03	-6.43	-4.59
1913	JQ020	19 39.800	41 27.000	452.8	978448.916	-28.03	-78.70	3.52	-75.78	0.87	-98.19	21.18	22.68	15.56
1914	JQ021	19 44.640	41 15.690	551.1	978450.110	-1.11	-62.79	2.43	-61.06	0.77	-91.31	28.70	30.95	21.42
1915	JQ022	19 51.980	41 16.850	706.9	978403.980	-6.19	-85.30	4.58	-81.56	1.10	-96.28	12.74	14.38	5.92
1916	JQ023	19 46.830	41 20.280	541.6	978434.052	-22.20	-82.81	4.14	-79.36	1.02	-96.50	15.66	17.32	9.19
1917	JQ024	19 42.570	41 24.270	285.8	978482.039	-49.09	-81.08	6.16	-75.31	1.37	-97.71	21.73	23.30	15.75
1918	JQ025	19 40.540	41 19.180	278.7	978493.852	-37.54	-68.73	2.59	-66.52	0.82	-92.41	25.14	27.34	18.22
1919	JQ026	19 37.090	41 14.610	228.2	978521.623	-22.07	-47.61	1.24	-46.69	0.74	-83.96	36.65	39.50	28.13
1920	JQ027	19 41.550	41 11.620	221.9	978516.324	-33.56	-58.40	2.86	-55.85	0.79	-84.02	27.60	30.43	18.84
1921	JQ028	19 46.860	41 7.890	220.0	978525.323	-30.22	-54.85	1.59	-53.57	0.74	-83.86	29.70	32.52	20.55
1922	JQ029	19 49.720	41 12.060	865.7	978389.576	30.57	-66.30	4.00	-63.30	1.04	-90.64	24.89	27.14	17.30
1923	JQ030	19 35.070	41 0.830	43.7	978607.437	8.70	3.81	0.17	3.91	0.51	-53.96	57.76	61.93	18.35
1924	JQ031	19 38.950	41 5.930	124.3	978546.655	-30.88	-44.80	0.59	-44.39	0.52	-71.00	26.28	29.78	11.23
1925	JQ032	19 43.450	41 2.900	91.7	978563.640	-28.25	-38.52	0.55	-38.10	0.58	-71.21	32.87	36.35	17.18
1926	JQ033	19 34.780	41 8.790	96.0	978546.468	-35.84	-46.59	0.50	-46.23	0.55	-70.97	24.49	28.00	10.09
1927	JQ034	19 31.440	41 4.150	51.6	978593.051	0.19	-5.58	0.16	-5.50	0.54	-55.87	50.23	54.34	12.79
1928	JQ035	19 27.020	40 57.320	1.1	978629.644	25.37	25.25	0.00	25.25	0.60	-35.24	60.49	65.40	16.16
1929	JQ036	19 31.710	40 54.050	0.0	978634.590	25.55	25.55	0.01	25.56	0.22	-35.11	60.68	65.58	16.13
1930	JQ037	19 34.350	40 48.480	0.0	978634.837	23.29	23.29	0.00	23.29	0.22	-28.64	51.94	57.13	7.13
1931	JQ038	19 38.410	40 53.870	23.5	978646.328	38.18	35.55	0.08	35.59	0.54	-43.92	79.46	84.00	35.75
1932	JQ039	19 49.490	40 51.890	85.7	978605.403	5.87	-3.72	0.25	-3.60	0.54	-56.71	52.88	56.93	12.93
1933	JQ040	19 44.680	40 55.100	52.2	978603.739	-1.52	-7.37	0.24	-7.21	0.67	-56.27	48.94	53.01	9.48
1934	JQ041	19 42.060	40 47.540	1.0	978658.488	39.91	39.80	0.03	39.83	0.22	-36.52	76.35	81.18	31.35
1935	JQ042	19 45.810	40 45.640	0.0	978666.493	44.03	44.03	0.04	44.07	0.22	-38.00	82.08	86.84	37.01
1936	JQ043	19 47.880	40 38.740	0.0	978651.283	26.83	26.83	0.00	26.83	0.63	-28.41	55.26	60.44	9.77
1937	JQ044	19 50.930	40 43.290	15.0	978670.548	47.80	46.12	0.08	46.18	0.57	-40.54	86.69	91.35	41.67
1938	JQ045	19 53.600	40 49.040	78.1	978606.896	1.07	-7.67	0.22	-7.57	0.54	-56.90	49.12	53.16	8.68
1939	JQ046	19 57.760	40 54.050	161.6	978540.354	-43.70	-61.79	0.67	-61.35	0.59	-73.51	11.72	15.08	-4.38
1940	JQ047	19 52.490	40 56.560	177.8	978540.592	-33.38	-53.29	0.65	-52.89	0.62	-71.12	17.75	21.22	0.15
1941	JQ048	19 47.310	41 1.430	125.9	978547.276	-37.75	-51.85	0.61	-51.42	0.58	-73.50	21.74	25.11	7.45
1942	JQ049	19 58.770	41 5.850	253.8	978510.762	-45.80	-74.21	1.93	-72.63	0.80	-91.27	17.96	20.18	9.91
1943	JQ050	19 55.490	41 1.040	175.7	978523.403	-54.11	-73.78	1.22	-72.80	0.77	-82.59	9.31	12.19	-0.85
1944	JQ051	19 50.840	41 5.060	257.5	978516.114	-31.67	-60.50	1.06	-59.79	0.73	-83.68	23.17	25.99	13.73
1945	JQ052	19 53.380	41 9.320	242.9	978504.136	-44.43	-73.85	2.57	-71.64	0.87	-91.07	18.73	20.99	10.90
1946	JQ053	19 56.960	41 13.390	391.1	978470.568	-41.87	-85.64	5.77	-80.39	1.35	-96.48	15.11	16.74	7.96
1947	JQ054	20 1.750	41 10.580	442.0	978467.808	-33.54	-83.01	5.81	-77.78	1.42	-96.62	17.70	19.26	10.31
1948	JQ055	20 6.300	41 7.690	360.5	978488.825	-42.09	-82.44	4.59	-78.33	1.15	-96.72	17.47	19.00	9.89
1949	JQ056	20 3.320	41 3.150	336.2	978494.730	-40.80	-78.43	3.10	-75.78	0.93	-91.56	14.88	17.05	6.72
1950	JQ057	20 0.240	40 58.430	449.9	978459.171	-38.28	-88.64	1.28	-87.94	0.80	-83.28	-5.94	-3.13	-16.00

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	ORS.	GRAV.	FAGA	SEGA	TTC	CRGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	D	MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
1951	JQ058	20	3.880	41	16.190	887.2	978360.555	-5.46	-104.74	17.94	-87.83	3.72	-99.89	9.92	2.96
1952	JQ059	20	9.230	41	14.100	892.2	978351.393	-18.27	-118.12	21.63	-97.51	4.44	-100.28	0.71	-6.54
1953	JQ060	19	58.900	41	20.270	719.6	978406.234	-6.69	-87.22	9.25	-78.84	2.14	-100.49	19.77	13.33
1954	JQ061	19	50.180	41	23.860	464.4	978450.418	-32.87	-84.85	6.16	-79.29	1.40	-99.98	19.49	13.64
1955	JQ062	19	46.370	41	27.920	386.7	978453.189	-50.43	-93.71	6.20	-88.03	2.99	-100.64	11.95	6.89
1956	JQ063	19	47.420	41	33.260	758.7	978360.025	-29.79	-114.69	14.28	-101.32	2.99	-102.65	-0.52	-3.15
1957	JQ064	19	53.510	41	30.050	913.7	978343.632	-4.19	-106.44	17.62	-89.87	3.63	-102.65	10.56	4.46
1958	JQ065	19	58.660	41	26.480	1031.3	978321.992	5.48	-109.92	14.86	-96.19	3.20	-102.30	3.45	-1.82
1959	JQ066	19	54.980	41	21.530	710.4	978407.105	-4.87	-84.38	11.23	-74.01	2.34	-100.07	24.27	18.05
1960	JQ067	19	58.770	40	37.170	25.1	978652.459	25.28	-22.47	0.06	22.50	0.22	-39.49	61.91	16.89
1961	JQ068	19	59.090	40	46.090	81.7	978600.378	-9.62	-18.78	0.23	-18.66	0.23	-58.97	40.10	0.42
1962	JQ069	20	4.000	40	44.010	113.2	978592.975	-12.05	-24.73	0.28	-24.61	0.51	-62.15	37.24	0.04
1963	JQ070	20	7.380	40	39.110	116.6	978596.221	-11.04	-24.09	0.29	-23.97	0.40	-56.72	32.43	-5.32
1964	JQ071	20	4.600	40	34.180	28.1	978646.787	14.90	11.75	0.15	11.86	0.22	-41.91	53.70	10.15
1965	JQ072	20	0.300	40	27.860	0.2	978672.315	35.97	35.95	0.01	35.96	0.22	-25.34	61.31	16.06
1966	JQ073	19	57.920	40	32.250	0.3	978665.594	31.58	31.55	0.01	31.56	0.22	-29.59	61.16	66.28
1967	JQ074	19	52.700	40	34.610	0.2	978654.209	25.19	25.17	0.00	25.17	0.22	-27.32	52.50	57.73
1968	JQ075	19	55.700	40	40.570	29.0	978651.426	28.42	25.17	0.06	25.19	0.24	-41.91	67.03	22.11
1969	JQ076	20	8.430	40	52.870	164.1	978538.165	-55.45	-73.82	1.44	-72.61	0.70	-83.79	10.75	0.68
1970	JQ077	20	7.340	40	59.350	203.9	978511.607	-68.66	-91.49	1.52	-90.25	0.73	-90.61	-0.17	-8.60
1971	JQ078	20	5.090	40	54.890	180.3	978523.455	-61.91	-82.10	0.81	-81.54	0.65	-83.35	1.31	-8.99
1972	JQ079	20	1.880	40	49.640	97.7	978565.720	-42.04	-52.98	0.51	-52.61	0.52	-70.67	17.80	-2.93
1973	JQ080	20	5.760	40	46.910	114.5	978575.079	-31.25	-44.08	0.53	-43.71	0.64	-70.72	26.70	5.52
1974	JQ081	20	10.660	40	43.510	163.8	978559.110	-36.77	-55.10	0.82	-54.51	0.69	-70.87	15.91	-0.30
1975	JQ082	20	13.260	40	48.850	217.4	978514.876	-66.99	-91.32	3.44	-88.19	0.94	-82.95	-5.76	-15.50
1976	JQ083	20	15.680	40	53.250	258.6	978497.191	-74.32	-103.26	1.75	-101.87	0.72	-90.21	-12.36	-20.69
1977	JQ084	20	11.700	40	56.650	364.7	978463.724	-71.15	-111.97	3.41	-109.05	0.93	-90.71	-19.30	-27.68
1978	JQ085	20	14.090	41	1.130	335.9	978478.971	-67.12	-104.72	2.99	-102.18	0.92	-95.68	-7.40	-15.28
1979	JQ086	20	17.840	40	58.120	318.9	978480.335	-74.67	-110.36	3.00	-107.80	0.92	-95.39	-13.24	-21.17
1980	JQ087	20	22.950	41	2.620	701.3	978409.684	-32.30	-110.79	10.33	-101.31	2.19	-99.00	-4.09	-12.05
1981	JQ088	20	18.040	41	6.460	587.7	978447.741	-24.49	-90.26	8.18	-82.82	1.78	-99.55	15.22	7.42
1982	JQ089	20	13.670	41	9.960	564.9	978429.277	-45.72	-108.95	14.92	-94.74	3.06	-99.99	3.99	-3.59
1983	JQ090	20	10.410	41	3.940	291.5	978499.190	-57.02	-89.65	2.72	-87.33	0.88	-96.09	7.99	0.19
1984	JQ091	20	26.780	40	52.340	480.7	978470.457	-43.38	-97.18	4.92	-92.88	1.12	-95.39	1.23	-6.66
1985	JQ092	20	34.690	40	52.660	1223.9	978312.806	-20.50	-116.45	10.87	-106.84	2.24	-97.42	-12.74	-20.83
1986	JQ093	20	30.770	40	56.820	744.1	978425.442	-11.03	-94.31	8.07	-87.13	1.70	-98.59	9.49	1.39
1987	JQ094	20	26.830	40	59.160	785.1	978404.299	-15.64	-103.50	6.34	-98.09	1.50	-98.42	-1.80	-9.83
1988	JQ095	20	18.680	40	24.860	91.8	978616.374	-9.56	-19.84	0.42	-19.55	0.40	-43.68	23.88	8.43
1989	JQ096	20	23.070	40	54.560	384.5	978472.586	-67.30	-110.33	6.66	-104.18	1.44	-95.24	-9.89	-17.80
1990	JQ097	20	20.050	40	50.120	304.7	978501.364	-60.19	-94.29	2.14	-92.57	0.93	-90.03	-3.36	-1.10
1991	JQ098	20	24.310	40	47.180	521.6	978451.517	-47.27	-105.64	4.52	-101.79	1.01	-89.88	-13.31	-11.07
1992	JQ099	20	29.020	40	43.980	488.2	978471.716	-42.01	-96.65	3.13	-94.15	0.85	-89.98	-5.51	-3.29
1993	JQ100	20	32.970	40	48.850	855.8	978389.073	-15.10	-110.88	6.71	-105.16	1.56	-95.38	-12.11	-10.63
1994	JQ101	20	18.690	40	38.550	143.6	978559.694	-50.26	-66.33	1.47	-65.07	0.52	-72.46	7.02	-2.71
1995	JQ102	20	21.830	40	42.140	303.6	978508.866	-54.77	-88.75	5.60	-83.56	1.23	-81.99	-2.30	-10.59
1996	JQ103	20	26.710	40	38.910	687.1	978440.638	-9.43	-86.32	3.66	-83.50	0.88	-81.91	-3.51	-11.26
1997	JQ104	20	23.270	40	34.510	150.8	978568.132	-44.09	-60.97	1.66	-59.52	0.59	-70.99	11.07	14.52
1998	JQ105	20	20.900	40	29.380	159.8	978583.258	-23.86	-41.75	2.12	-39.85	0.60	-56.79	16.53	20.56
1999	JQ106	20	15.650	40	33.290	95.3	978596.373	-25.52	-36.19	0.63	-35.70	0.41	-57.07	21.12	6.01
2000	JQ107	20	10.910	40	35.950	100.8	978594.550	-21.02	-32.31	0.47	-31.98	0.46	-55.35	23.10	-8.07

SEQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	ORIG. GRAV.	FAGA	SRGA	TTC	CRGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	M	HGAL	HGAL	HGAL	HGAL	HGAL	HGAL	HGAL	HGAL	HGAL	HGAL
2001	JQ108	20	14.380	40	39.490	152.6	978560.780	-42.18	-59.26	0.73	-58.75	9.03	12.61	-4.07
2002	JQ109	20	17.750	40	45.860	349.9	978494.001	-51.35	-90.51	2.97	-88.01	-5.86	-3.06	-14.71
2003	JQ110	20	9.630	40	23.460	29.4	978671.531	35.16	31.87	0.18	32.00	60.90	66.04	18.15
2004	JQ111	20	9.570	40	31.560	59.8	978638.143	11.21	4.52	0.27	4.70	48.48	53.00	8.81
2005	JQ112	20	13.540	40	26.890	63.0	978634.815	5.01	-2.04	0.25	-1.89	38.21	42.87	3.45
2006	JQ113	20	14.730	40	19.140	35.4	978668.541	29.05	25.09	0.28	25.32	53.16	58.35	14.46
2007	JQ114	20	11.050	40	14.240	0.1	978682.236	35.43	35.42	0.08	35.50	52.44	58.24	9.26
2008	JQ115	20	6.000	40	17.080	0.2	978675.979	34.12	34.09	0.03	34.12	50.09	55.95	5.88
2009	JQ116	20	3.780	40	23.300	0.0	978682.537	42.77	42.77	0.02	42.79	65.07	70.56	20.29
2010	JQ117	20	6.300	40	27.200	29.4	978672.807	39.67	36.38	0.18	36.52	67.69	72.73	23.70
2011	JQ118	20	20.180	40	8.350	67.6	978648.915	14.03	6.47	0.55	6.92	24.57	30.30	-11.20
2012	JQ119	20	24.960	40	5.880	77.2	978632.079	-4.52	-13.17	0.31	-12.97	5.97	11.62	-12.52
2013	JQ120	20	28.210	40	9.880	131.8	978615.560	-7.38	-22.14	0.45	-21.88	6.45	11.59	-4.04
2014	JQ121	20	23.510	40	13.730	80.1	978632.016	-2.26	-11.24	0.52	-10.83	18.39	23.50	4.20
2015	JQ122	20	18.670	40	17.270	65.2	978651.738	17.59	10.30	0.44	10.64	40.01	45.12	11.62
2016	JQ123	20	16.080	40	12.030	17.7	978673.798	27.52	25.54	0.23	25.75	44.58	50.25	4.29
2017	JQ124	20	13.280	40	8.120	0.0	978679.557	30.55	30.55	0.09	30.64	42.04	48.18	-0.66
2018	JQ125	20	16.970	40	4.050	0.0	978672.196	19.59	19.59	0.12	19.71	29.34	35.18	-12.28
2019	JQ126	20	17.860	39	59.290	0.0	978678.101	24.62	24.62	0.11	24.73	29.72	36.27	-12.13
2020	JQ127	20	23.130	40	1.360	26.0	978651.234	0.62	-2.29	0.21	-2.12	9.39	15.50	-26.75
2021	JQ128	20	30.260	40	22.300	283.8	978569.147	-8.89	-40.66	1.09	-39.96	15.30	19.35	7.72
2022	JQ129	20	27.410	40	18.630	212.1	978587.738	-9.63	-33.37	1.32	-32.35	10.92	15.43	2.18
2023	JQ130	20	30.920	40	15.300	185.9	978587.062	-21.85	-42.66	0.85	-42.07	-0.38	4.19	-8.35
2024	JQ131	20	33.290	40	19.510	320.4	978551.636	-18.10	-53.96	0.97	-53.43	0.34	4.44	-6.91
2025	JQ132	20	36.900	40	24.080	335.7	978554.091	-20.67	-56.01	1.27	-55.16	13.68	17.17	6.66
2026	JQ133	20	31.700	40	27.970	253.1	978555.634	-33.31	-61.64	2.28	-59.71	9.69	13.17	2.38
2027	JQ134	20	22.000	40	21.560	122.4	978615.389	-4.35	-18.06	1.43	-16.80	24.76	29.35	12.72
2028	JQ135	20	25.350	40	26.400	154.5	978588.280	-24.84	-42.14	0.98	-41.38	15.52	19.53	6.96
2029	JQ136	20	27.660	40	31.120	279.5	978546.962	-29.84	-61.13	2.31	-59.20	10.61	14.07	2.87
2030	JQ137	20	39.060	40	37.410	779.1	978432.369	-1.51	-88.70	7.97	-81.65	6.44	8.59	-1.07
2031	JQ138	20	35.760	40	32.070	412.5	978513.686	-30.07	-76.23	2.77	-74.01	6.60	9.46	-0.65
2032	JQ139	20	40.040	40	29.220	380.7	978526.689	-31.12	-73.73	4.22	-70.02	11.08	13.92	3.93
2033	JQ140	20	43.080	40	34.070	461.5	978504.651	-31.24	-82.89	3.98	-79.51	9.38	11.57	1.94
2034	JQ141	20	45.990	40	38.560	727.9	978446.404	-10.17	-91.63	7.11	-85.40	7.34	8.90	-0.44
2035	JQ142	20	41.580	40	42.230	952.0	978391.075	-8.04	-98.49	3.39	-96.17	0.79	-2.52	-11.86
2036	JQ143	20	37.360	40	45.460	707.2	978421.925	-32.46	-111.60	8.60	-103.86	-10.36	-8.86	-18.21
2037	JQ144	20	34.600	40	39.840	841.6	978401.238	-8.93	-103.12	3.31	-100.79	-13.75	-11.52	-21.29
2038	JQ145	20	30.930	40	35.980	753.2	978428.044	-5.78	-90.07	5.13	-85.84	-5.94	-3.11	-13.40
2039	JQ146	20	43.870	40	46.050	1217.4	978315.606	12.19	-124.04	13.55	-111.75	-17.81	-16.84	-25.93
2040	JQ147	20	39.920	40	49.870	1270.5	978292.508	9.40	-132.77	14.57	-119.49	-25.21	-24.33	-33.37
2041	JQ148	20	48.580	40	43.840	1307.4	978313.110	32.76	-113.53	12.65	-102.19	-97.39	-7.47	-16.51
2042	JQ149	20	55.690	40	32.040	873.0	978426.037	4.53	-93.15	6.24	-87.92	4.08	5.59	-3.69
2043	JQ150	20	59.390	40	29.100	1466.0	978302.941	60.69	-103.35	8.13	-96.61	-7.46	-5.93	-15.20
2044	JQ151	20	56.300	40	24.590	616.5	978461.272	-39.99	-108.99	7.80	-100.96	-13.19	-11.02	-20.61
2045	JQ152	20	52.330	40	27.730	1330.2	978338.467	61.40	-87.44	7.04	-81.73	3.58	5.73	-3.85
2046	JQ153	20	47.570	40	31.180	560.1	978481.158	-28.78	-91.46	3.93	-88.24	0.45	2.61	-6.98
2047	JQ154	20	50.560	40	36.100	796.0	978419.759	-20.36	-109.44	8.53	-101.85	-8.99	-7.51	-16.80
2048	JQ155	20	53.730	40	40.750	1177.3	978352.254	26.61	-105.12	6.66	-99.70	-5.48	-4.69	-13.68
2049	JQ156	20	57.600	40	36.460	1192.1	978365.148	40.19	-93.20	6.66	-87.88	5.57	6.50	-2.53
2050	JQ157	21	2.550	40	33.280	1507.2	978314.217	81.50	-87.16	5.29	-83.27	8.65	9.54	0.58

REQ #	IDENT.	LATITUDE	LONGITUDE	ALT.	OBS.	GRAV.	FAGA	SRGA	TTC	CRGA	S.D.CB	IS.GRAV	IGA1	IGA2	IGA3
		D	MIN	D	MIN	M	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL	MGAL
2051	JQ158	20 46.000	40 17.900	525.9	978500.176		-18.75	-77.61	3.28	-75.00	1.21	-70.00	-6.45	-3.00	-13.38
2052	JQ159	20 50.600	40 14.840	517.6	978489.952		-36.13	-94.06	5.60	-89.12	1.51	-70.27	-20.21	-16.79	-27.25
2053	JQ160	20 53.370	40 19.560	429.1	978501.242		-54.93	-102.95	3.33	-100.18	1.24	-81.31	-20.03	-17.20	-27.17
2054	JQ161	20 48.570	40 23.250	897.0	978430.135		23.16	-77.21	4.42	-73.82	1.40	-81.43	5.08	7.89	-2.04
2055	JQ162	20 44.460	40 26.300	507.4	978503.032		-20.07	-76.86	2.50	-75.01	1.16	-82.15	5.72	8.53	-1.40
2056	JQ163	20 41.280	40 21.390	388.8	978539.627		-16.92	-60.43	2.53	-58.42	1.25	-70.43	10.94	14.39	4.02
2057	JQ164	20 38.170	40 16.140	488.3	978518.248		-4.50	-59.15	1.24	-58.54	1.05	-54.85	-5.08	-1.00	-12.09
2058	JQ165	20 43.030	40 13.580	1374.4	978340.937		86.79	-67.00	14.27	-54.07	3.03	-56.39	-1.36	2.64	-8.36
2059	JQ166	20 46.950	40 10.560	560.1	978450.651		-18.67	-81.35	6.71	-75.35	1.70	-56.14	-20.67	-16.66	-27.87
2060	JQ167	20 36.880	40 4.250	203.9	978584.567		-24.68	-47.51	1.27	-46.52	1.05	-29.56	-17.50	-12.41	-27.19
2061	JQ168	20 41.750	40 0.450	216.1	978589.239		-21.08	-45.27	2.27	-43.30	1.11	-28.88	-14.97	-9.87	-27.04
2062	JQ169	20 44.970	40 5.040	353.2	978541.877		-29.33	-68.86	2.09	-67.24	1.13	-41.55	-26.66	-22.09	-35.03
2063	JQ170	20 40.200	40 8.410	997.4	978416.091		48.44	-63.17	10.34	-53.94	2.38	-41.57	-15.03	-10.45	-22.74
2064	JQ171	20 35.300	40 11.800	534.4	978522.513		16.83	-42.97	4.04	-39.61	1.30	-41.40	0.32	4.91	-7.26
2065	JQ172	20 32.660	40 6.780	163.7	978595.316		-22.17	-40.50	1.30	-39.43	1.14	-28.77	-11.08	-5.95	-20.46
2066	JQ173	20 29.050	40 2.170	142.4	978616.127		-4.37	-20.31	0.96	-19.56	1.19	-17.98	-1.94	3.76	-17.54
2067	JQ174	20 34.730	39 59.110	84.6	978652.145		8.18	-1.28	0.67	-0.73	0.42	-19.28	18.31	23.92	0.66
2068	JQ175	20 38.320	39 55.900	124.9	978654.570		19.49	5.52	0.41	5.75	1.25	-18.28	23.68	29.34	-6.91
2069	JQ176	20 27.130	39 50.030	28.7	978687.066		33.35	30.14	0.17	30.27	0.40	-2.09	32.27	39.00	-10.01
2070	JQ177	20 31.360	39 46.340	36.3	978687.635		32.09	28.03	0.20	28.18	0.40	-1.34	29.41	36.18	-13.61
2071	JQ178	20 35.920	39 51.280	83.4	978681.639		36.13	26.80	0.29	26.97	0.40	-10.30	37.04	43.20	-4.10
2072	JQ179	20 30.910	39 53.680	61.7	978678.464		31.21	24.30	0.21	24.43	0.40	-9.04	33.30	39.56	-6.49
2073	JQ180	20 25.830	39 58.670	40.3	978656.140		7.28	2.77	0.27	2.99	0.40	-10.67	13.55	19.71	-20.85
2074	JQ181	20 23.250	39 51.860	9.9	978695.932		40.23	39.12	0.16	39.26	0.40	-1.17	40.41	47.21	-1.55
2075	JQ182	20 20.310	39 48.750	0.0	978680.193		24.31	24.31	0.17	24.48	0.23	4.01	20.47	27.64	-20.69
2076	JQ183	20 23.370	39 43.840	0.0	978680.729		21.85	21.85	0.20	22.05	0.23	6.73	15.33	22.69	-25.42
2077	JQ184	20 28.190	39 39.740	0.0	978688.881		25.26	25.26	0.22	25.48	0.24	7.38	18.11	25.50	-23.19
2078	JQ185	19 38.450	40 36.210	0.0	978623.889		8.44	8.44	0.04	8.48	0.22	-15.24	23.74	29.67	-19.61
2079	JQ186	19 1.880	40 18.820	0.0	978588.314		7.22	7.22	0.44	7.66	0.23	-24.24	-16.56	-7.44	15.34
2080	JQ187	19 30.950	40 44.460	0.0	978626.320		18.00	18.00	0.02	18.02	0.22	-19.17	37.20	42.90	-6.35
2081	JQ188	19 26.320	40 49.480	0.0	978623.903		19.95	19.95	0.01	19.96	0.22	-21.63	41.60	47.17	-2.14
2082	JQ189	19 17.160	40 53.430	1.3	978612.568		17.44	17.29	0.04	17.33	0.23	-18.55	35.89	41.67	-6.94
2083	JQ190	19 38.720	40 44.790	0.0	978637.019		21.32	21.32	0.00	21.32	0.22	-27.65	48.98	54.21	3.96
2084	JQ191	19 42.730	40 41.310	0.0	978639.769		20.24	20.24	0.00	20.24	0.22	-26.67	46.92	52.20	1.72
2085	JQ192	19 46.550	40 34.640	0.0	978635.431		12.25	12.25	0.00	12.25	0.22	-20.84	33.10	38.69	-11.85
2086	JQ193	19 58.500	40 6.950	0.0	978654.981		20.32	20.32	0.61	20.93	0.25	1.28	19.67	26.69	-19.52
2087	JQ194	19 49.910	39 54.110	0.0	978615.151		-11.24	-11.25	0.31	-10.94	0.23	18.52	-29.43	-21.05	-7.40
2088	JQ195	19 47.620	39 57.700	0.0	978613.813		-10.38	-10.39	0.29	-10.10	0.24	16.89	-26.96	-18.72	-6.31
2089	JQ196	19 45.000	39 54.260	0.0	978612.641		-9.04	-9.05	0.34	-8.71	0.24	21.11	-29.79	-21.16	-3.37
2090	JQ197	19 31.310	40 1.490	0.0	978599.440		-9.22	-9.23	0.51	-8.72	0.24	22.87	-31.56	-22.73	-1.93
2091	JQ198	19 26.430	40 3.490	0.0	978595.553		-8.49	-8.50	0.43	-8.07	0.25	23.79	-31.83	-22.88	-1.34
2092	JQ199	20 15.000	39 29.570	0.0	978653.935		3.25	3.25	0.49	3.74	0.25	23.87	-20.11	-11.29	-2.40
2093	JQ200	20 41.190	39 39.380	32.9	978696.487		30.16	26.48	0.29	26.72	0.40	-1.00	27.63	34.38	-16.61
2094	JQ201	20 45.450	39 37.120	51.2	978691.551		26.63	20.90	0.29	21.12	0.40	-1.68	22.66	29.34	-21.99
2095	JQ202	20 48.960	39 42.410	76.9	978689.419		28.93	20.33	0.24	20.46	0.40	-10.29	30.54	36.64	-14.15
2096	JQ203	20 44.250	39 44.360	60.0	978676.409		15.40	8.69	0.30	8.90	0.40	-8.83	17.56	23.78	-26.58
2097	JQ204	20 39.700	39 47.200	50.4	978673.855		14.41	8.77	0.26	8.96	0.40	-8.58	17.39	23.65	-25.85
2098	JQ205	20 37.130	39 41.770	21.8	978697.979		32.25	29.82	0.22	30.00	0.40	-0.66	30.60	37.39	-13.20
2099	JQ206	20 32.740	39 35.850	0.0	978695.115		27.01	27.01	0.23	27.24	0.24	8.17	19.07	26.50	-22.64
2100	JQ207	20 37.330	39 33.390	0.0	978703.406		30.75	30.75	0.24	30.99	0.24	7.49	23.51	30.88	-18.94

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2101	J0208	20 41.430	39 30.510	0.0	978709.285	32.56	32.56	0.25	32.81	0.24	25.11	32.46	-17.65
2102	J0209	20 50.510	39 54.100	167.6	978628.211	-5.81	-24.58	0.71	-24.10	0.42	3.84	-8.94	-21.01
2103	J0210	20 54.630	39 50.870	172.6	978646.139	9.52	-9.79	0.49	-9.54	0.41	17.67	22.78	-18.76
2104	J0211	20 51.860	39 46.130	116.8	978675.722	24.66	11.59	0.36	11.78	0.40	17.12	34.76	-14.19
2105	J0212	20 47.310	39 49.450	127.9	978656.614	13.52	-0.79	0.43	-0.54	0.41	17.93	22.67	-24.12
2106	J0213	20 42.890	39 52.250	126.0	978644.329	5.05	-9.05	0.40	-8.83	0.41	8.53	14.21	-29.83
2107	J0214	20 45.410	39 57.280	165.3	978614.933	-14.71	-33.22	0.78	-32.67	0.43	-5.26	-0.12	-21.64
2108	J0215	20 48.920	40 2.010	228.2	978580.883	-32.85	-58.39	1.23	-57.48	0.57	-17.11	-12.53	-26.60
2109	J0216	20 52.810	39 58.830	280.6	978579.502	-21.94	-53.35	4.15	-49.58	0.92	-10.31	-5.71	-21.81
2110	J0217	20 57.890	39 55.230	254.9	978609.011	-5.46	-33.99	0.77	-33.58	0.43	5.58	10.17	-9.84
2111	J0218	20 59.580	40 10.150	711.4	978464.318	-10.96	-90.57	2.35	-89.08	0.67	-18.34	-15.08	-25.70
2112	J0219	21 2.930	40 13.060	806.3	978436.682	-12.68	-102.91	9.32	-94.54	1.94	-15.91	-13.13	-23.26
2113	J0220	21 8.330	40 9.320	937.3	978416.929	2.53	-102.35	12.42	-90.99	2.60	-13.24	-10.48	-20.77
2114	J0221	21 4.640	40 4.940	546.2	978499.991	-31.37	-92.49	3.43	-89.76	0.91	-21.69	-18.31	-29.60
2115	J0222	21 1.110	40 0.560	378.7	978548.776	-30.72	-73.11	3.46	-70.15	0.88	-15.33	-11.36	-24.59
2116	J0223	20 56.410	40 4.870	793.8	978454.530	7.86	-80.96	2.22	-79.68	0.91	-24.10	-20.20	-32.12
2117	J0224	20 52.030	40 6.690	355.5	978538.883	-38.66	-78.45	2.28	-76.65	0.66	-22.02	-18.00	-29.73
2118	J0225	20 54.950	40 11.660	418.1	978514.225	-46.92	-93.72	4.82	-89.45	1.09	-20.51	-17.09	-27.72
2119	J0226	20 58.350	40 17.230	677.9	978449.155	-35.12	-111.09	4.12	-107.80	0.99	-27.21	-24.50	-34.46
2120	J0227	20 53.920	39 30.220	21.5	978717.801	35.25	32.85	0.24	33.05	0.25	33.26	39.99	-11.73
2121	J0228	20 58.980	39 27.080	28.2	978717.343	31.78	28.63	0.24	28.83	0.26	29.13	35.81	-16.03
2122	J0229	21 1.370	39 31.650	54.9	978699.217	19.49	13.35	0.21	13.48	0.26	20.58	26.80	-25.27
2123	J0230	20 57.730	39 34.280	51.0	978703.852	26.59	20.88	0.25	21.06	0.26	28.47	34.69	-17.22
2124	J0231	20 53.920	39 38.990	54.1	978711.955	39.47	33.42	0.29	33.63	0.43	43.62	49.70	-1.71
2125	J0232	20 50.300	39 33.650	20.2	978713.802	34.47	32.21	0.24	32.42	0.25	33.74	40.41	-11.21
2126	J0233	20 45.390	39 27.020	0.0	978710.578	29.91	29.91	0.26	30.17	0.24	21.67	29.06	-21.05
2127	J0234	20 50.600	39 24.100	0.0	978716.520	30.66	30.66	0.28	30.94	0.24	22.85	30.18	-20.22
2128	J0235	20 54.140	39 20.660	0.0	978719.886	30.48	30.48	0.31	30.79	0.25	21.58	28.96	-21.17
2129	J0236	21 4.070	39 44.320	189.0	978652.710	11.66	-9.49	0.49	-9.26	0.41	17.60	22.68	-25.70
2130	J0237	20 59.550	39 47.460	190.6	978653.096	17.10	-4.23	0.71	-3.79	0.42	23.23	28.32	-17.73
2131	J0238	21 2.460	39 52.220	252.4	978614.395	-5.45	-33.70	0.63	-33.42	0.42	5.87	10.43	-15.55
2132	J0239	21 6.510	39 49.620	230.3	978631.251	0.49	-25.28	0.73	-24.87	0.53	14.85	19.38	-17.53
2133	J0240	21 11.050	39 46.690	204.2	978645.496	2.08	-20.77	0.34	-20.71	0.41	19.37	23.87	-19.02
2134	J0241	21 7.910	39 41.510	135.3	978666.458	4.96	-10.18	0.26	-10.12	0.40	16.46	21.53	-28.18
2135	J0242	21 5.350	39 36.670	93.1	978685.768	13.82	3.41	0.23	3.50	0.40	20.15	25.75	-25.80
2136	J0243	21 0.660	39 39.450	119.4	978687.423	28.33	14.97	0.33	15.13	0.55	31.34	36.99	-14.14
2137	J0244	20 56.080	39 43.090	118.6	978692.162	37.42	24.15	0.38	24.36	0.61	17.33	41.36	-3.19
2138	J0245	21 12.880	39 58.620	294.9	978587.766	-22.49	-62.50	1.39	-61.51	0.67	5.96	9.37	-3.32
2139	J0246	21 9.700	39 54.450	257.3	978603.135	-22.51	-51.31	0.75	-50.91	0.62	55.37	7.68	-9.12
2140	J0247	21 5.170	39 57.270	316.9	978576.722	-25.94	-61.42	0.99	-60.85	0.64	-54.69	-3.05	-17.92
2141	J0248	21 8.270	40 1.340	401.3	978536.381	-43.37	-88.28	3.51	-85.30	0.93	-67.42	-15.49	-27.55
2142	J0249	21 12.170	40 7.880	631.3	978492.096	-20.61	-91.26	5.17	-86.88	1.20	-6.70	-4.06	-14.32
2143	J0250	21 15.680	40 3.520	441.5	978554.589	-20.26	-69.68	4.18	-66.07	1.05	11.98	14.78	4.01
2144	J0251	21 21.560	40 13.210	791.1	978471.724	-1.22	-89.75	8.35	-82.34	1.89	7.11	8.60	-0.38
2145	J0252	21 26.330	40 9.420	570.5	978543.111	-2.79	-66.63	3.33	-64.02	1.14	25.28	26.80	17.92
2146	J0253	21 23.380	40 5.610	760.7	978504.018	19.83	-65.30	2.88	-63.32	1.06	21.05	23.14	13.44
2147	J0254	21 19.270	40 8.110	518.4	978525.453	-29.32	-87.34	5.22	-82.78	1.39	2.82	4.96	-4.76
2148	J0255	21 14.760	40 11.330	1335.6	978345.050	47.03	-102.42	5.77	-97.97	1.46	-86.57	-13.04	-22.72
2149	J0256	21 16.890	40 16.830	1944.9	978233.514	121.29	-96.34	8.94	-88.91	2.03	-3.43	-1.95	-11.01
2150	J0257	21 21.240	40 20.580	1788.5	978280.385	115.49	-84.64	4.10	-82.03	1.23	6.84	7.63	-0.76

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2151	J0258	21 29.620	40 18.150	1695.1	978320.588	118.31	-71.37	5.10	-67.73	-94.22	21.62	22.04	14.65
2152	J0259	21 28.510	40 13.090	964.6	978476.860	50.34	-57.59	8.36	-50.32	-92.98	40.04	41.04	32.87
2153	J0260	21 16.440	39 33.850	134.0	978688.074	17.52	2.53	0.23	2.57	-23.77	25.96	31.14	-20.32
2154	J0261	21 23.220	39 34.830	189.4	978672.784	12.42	-8.77	0.26	-8.77	-33.47	24.14	28.85	-21.70
2155	J0262	21 19.480	39 37.960	200.5	978668.330	15.21	-7.22	0.25	-7.25	-34.66	26.83	31.52	-18.40
2156	J0263	21 15.430	39 41.390	161.7	978669.303	8.33	-9.77	0.23	-9.76	-36.03	25.81	30.46	-18.10
2157	J0264	21 12.810	39 37.980	137.2	978679.297	13.42	-1.93	0.21	-1.92	-26.57	24.26	29.33	-21.38
2158	J0265	21 10.740	39 32.870	88.4	978690.738	11.89	2.00	0.20	2.07	-16.58	18.40	23.98	-27.93
2159	J0266	21 14.520	39 28.250	64.2	978710.328	20.18	12.99	0.22	13.12	-13.64	26.58	32.30	-19.80
2160	J0267	21 17.910	39 25.400	100.9	978707.999	25.73	14.44	0.27	14.57	-12.78	27.06	32.81	-19.21
2161	J0268	21 20.930	39 31.490	178.2	978685.289	23.81	3.87	0.30	3.92	-24.78	28.19	33.29	-18.17
2162	J0269	21 7.850	39 19.750	25.4	978728.033	32.66	29.82	0.28	30.07	1.40	28.59	35.32	-16.33
2163	J0270	21 11.340	39 25.230	46.9	978719.255	26.99	21.74	0.22	21.89	-7.20	28.96	35.10	-17.06
2164	J0271	21 6.600	39 28.770	60.4	978693.332	10.03	3.27	0.22	3.41	-7.87	11.10	17.24	-34.93
2165	J0272	21 2.950	39 23.640	28.9	978719.593	30.25	27.02	0.25	27.23	0.55	26.60	33.32	-18.47
2166	J0273	21 0.350	39 16.770	0.0	978726.753	31.11	31.11	0.34	31.45	9.20	22.26	29.59	-20.59
2167	J0274	21 4.100	39 14.080	0.0	978733.067	33.64	33.64	0.38	34.02	9.52	24.52	31.84	-18.20
2168	J0275	21 9.150	39 12.140	0.0	978729.338	24.81	24.81	0.40	25.21	8.34	16.88	24.08	-26.20
2169	J0276	21 12.020	39 17.110	15.8	978734.071	31.52	29.75	0.30	30.03	1.42	28.57	35.27	-16.25
2170	J0277	21 14.920	39 20.400	31.2	978731.946	31.20	27.71	0.27	27.94	-4.24	32.08	38.39	-13.52
2171	J0278	21 17.550	39 13.420	13.9	978730.973	22.22	20.66	0.36	21.00	1.71	19.26	25.93	-25.18
2172	J0279	21 21.960	39 10.350	0.0	978731.684	14.14	14.14	0.45	14.59	2.01	12.59	19.24	-31.21
2173	J0280	21 18.600	39 6.600	0.0	978735.058	20.94	20.94	0.69	21.63	7.22	14.43	21.52	-28.12
2174	J0281	21 14.080	39 9.080	0.0	978728.496	18.97	18.97	0.51	19.48	8.41	11.08	18.23	-31.79
2175	J0282	21 20.220	39 17.880	39.6	978733.195	29.65	25.22	0.33	25.49	-5.17	30.55	36.75	-14.82
2176	J0283	21 24.660	39 15.900	35.3	978735.899	26.50	22.55	0.37	22.87	-6.24	29.02	35.11	-15.89
2177	J0284	21 30.260	39 24.720	161.2	978695.604	19.33	1.30	0.36	1.43	-23.82	24.79	29.88	-20.76
2178	J0285	21 27.470	39 19.870	82.8	978722.798	25.19	15.92	0.35	16.15	-13.63	29.56	35.18	-15.76
2179	J0286	21 22.540	39 23.080	70.1	978717.385	20.89	13.05	0.34	13.29	-13.67	26.77	32.43	-19.27
2180	J0287	21 25.180	39 27.520	109.8	978698.734	11.80	-0.49	0.64	0.00	-22.92	22.62	27.78	-23.61
2181	J0288	21 28.860	39 32.770	158.6	978686.089	10.45	-7.30	0.89	-6.63	-36.96	29.89	34.44	-15.77
2182	J0289	21 33.340	39 29.710	223.9	978673.531	13.45	-11.60	0.38	-11.53	-37.08	24.90	29.43	-20.31
2183	J0290	21 37.890	39 26.310	168.6	978697.583	15.75	-3.11	0.34	-3.01	-36.60	33.10	37.63	-10.45
2184	J0291	21 34.620	39 21.310	97.3	978719.597	19.12	8.24	0.37	8.47	-23.08	31.28	36.38	-12.68
2185	J0292	21 31.710	39 16.690	56.6	978733.105	23.06	16.72	0.35	16.99	-13.04	29.88	35.50	-14.00
2186	JT001	16 58.120	42 56.790	451.9	978382.583	50.32	-0.25	9.18	8.34	-71.74	79.00	82.68	40.34
2187	JT004	16 52.400	43 1.040	770.5	978269.056	39.91	-46.31	14.71	-32.51	-72.46	38.06	41.72	-0.54
2188	JT031	16 58.470	42 59.450	569.0	978331.548	35.13	-28.54	10.02	-19.24	-77.62	56.97	60.40	21.76
2189	KG002	18 43.860	41 24.330	47.0	978559.082	9.09	3.83	0.34	4.10	-31.63	35.61	40.82	-7.35
2190	KG003	20 9.330	40 17.110	8.3	978681.028	38.43	37.50	0.07	37.56	-19.15	56.70	62.36	13.08
2191	KG016	18 17.580	42 40.300	211.2	978002.257	113.39	-122.99	2.73	-121.77	-107.84	-20.08	-20.14	5.72
2192	KG016A	18 17.580	42 40.300	211.3	978002.130	113.48	-122.98	2.74	-121.75	-107.84	-20.06	-20.12	5.74
2193	KG017	19 38.120	43 15.270	132.4	978259.856	25.09	-112.81	0.04	-114.04	-105.89	-11.78	-22.96	16.34
2194	SGN47	17 41.670	42 17.600	135.6	978485.356	18.22	3.05	1.46	4.31	-52.17	56.14	60.59	16.41
2195	SPEC FLT	21 29.417	39 12.672	15.0	978740.935	20.40	18.72	0.37	19.07	-5.95	24.98	31.05	-18.50
2196	US05X	21 31.416	39 10.593	5.6	978738.979	13.49	12.86	0.42	13.27	-5.03	18.30	24.41	-23.86