

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Principal Facts for Gravity Stations

in Part of

West-Central Massachusetts

by

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Open File Report 84-636

This report is preliminary and has not been edited or reviewed for conformity with U.S. Geological Survey standards and stratigraphic nomenclature. Any use of trade names is for descriptive purposes only and does not imply endorsement by the U.S. Geological Survey.

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INTRODUCTION

Principal facts for 734 new gravity measurements recorded in parts of seven 7.5 minute quadrangles located in west-central Massachusetts are reported here (see Figure 1 for location, quadrangle identification, and station distribution). These measurements are part of a study designed to provide a complete transect across the Mesozoic Hartford Basin in this part of Massachusetts, extending from Paleozoic rocks on the western margin of the basin to Paleozoic rocks on the eastern margin of the basin. Gravity measurements in this area previously were determined by Kick (1975) and Foose and Cunningham (1968). The locations for new measurements were based on the distribution of previous measurements. For example, many measurements were obtained for the Easthampton Quadrangle for which previous data was very sparse relative to the Mount Holyoke Quadrangle for which Kick's thesis provided numerous values.

Elevation control for gravity stations in the Easthampton, Woronoco, Mount Tom, Williamsburg, and Westhampton Quadrangles was based on alidade and stadia-rod surveys tied to local bench marks (46 percent), state engineering surveys tied to local bench marks (21 percent), and road intersections with elevations marked on U. S. Geological Survey Quadrangle maps (20 percent). The remaining stations were occupied at bench marks and by interpolating between contours (see discussion below). Accuracy for the alidade surveys is estimated at ± 0.5 foot and better than this for the state surveys. Accuracy for spot elevations is believed to be no worse than ± 3 feet and in areas undisturbed since base map revision to be close to ± 1 foot. This assertion is based on leveling to 16 spot elevations as a check. Elevation control for stations in the Mount Holyoke Quadrangle was based on interpolation between contours (62 percent), road intersections (21 percent), and alidade and stadia-rod surveys tied to local bench marks, state engineering surveys, and local bench marks (17 percent). In order to assess the accuracy of interpolation between contour lines, 25 estimates were checked by leveling. Eighty-two percent of the estimates had errors of less than 3 feet. As this method was used only in open areas along roads with low grades and with clear landmarks for precise location, it is believed that more than 90 percent of these estimated elevations have errors of less than ± 3 feet.

All stations were tied to a base station (designated "U.S.G.S. Gravity Station") at Morrill Science Center at the University of Massachusetts, Amherst, Massachusetts (see Figure 2 for location). This station has a gravity value of 980374.41 milligals (pre-IGSN71) (oral communication, Randolph W. Bromery, Department of Geology and Geography University of Massachusetts, Amherst, Massachusetts) and is tied to a base station located in the Commerce Building, Washington, D.C. Base stations were established at convenient locations in each quadrangle by a standard looping procedure. Drift corrections were made by

returning to base stations within one hour intervals and assuming linear drift. Station latitude and longitude were scaled directly from topographic maps to a precision of ± 0.01 minute.

Anomalies are expressed relative to International Gravity Standardization Net 1971 (IGSN71) values. They were calculated using the 1930 International Gravity Formula (IGF) and were converted to International Gravity Standardization Net 1971 values by following the method of Woollard (1979). This method employs corrections for the difference in theoretical sea level gravity using the IGF as opposed to the new Geodetic Reference System 1967 (GRS 67) formula and for the difference in the base value used relative to the IGSN 71 value for the base. Terrain corrections were calculated except in areas of very gentle topography where tests demonstrated that no corrections were necessary. The gravity meter used was a Worden Prospector Model #989.

REFERENCES CITED

- Foose, R.M., and Cunningham, C.G., 1968, Pre-glacial Connecticut River course near Amherst, Massachusetts: Geol. Soc. America Bull., v. 79, p. 1415-1418.
- Kick, J.F., 1975, A gravity study of the gneiss dome terrain of north-central Massachusetts: Ph.D. thesis, Univ. of Massachusetts, 179 p.
- Woollard, G.P., 1979, The new gravity system--changes in international gravity base values and anomaly values: Geophysics, v. 44, p. 1352-1366.

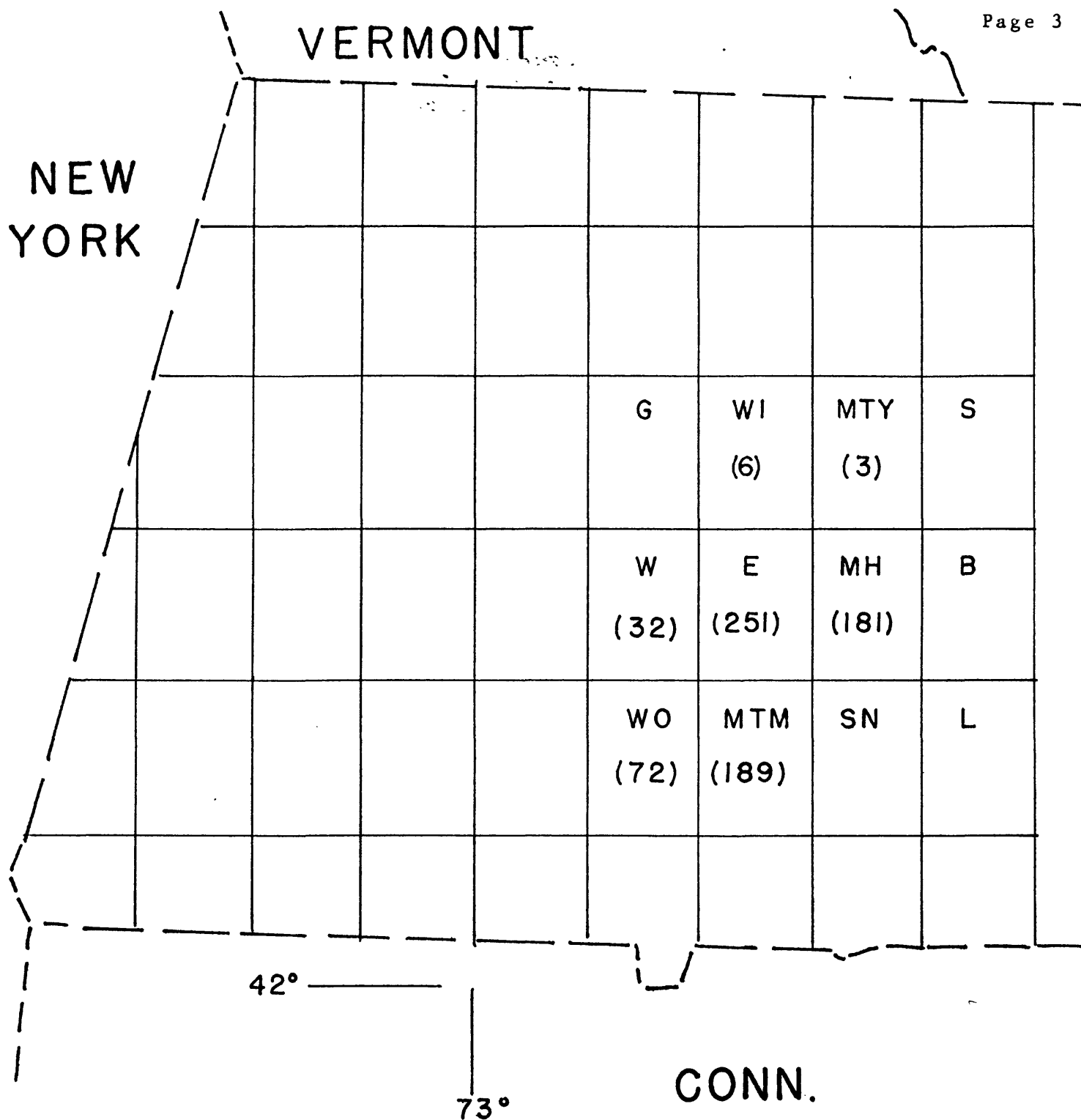


Figure 1: Locations of quadrangles in Massachusetts for which new gravity data are reported. The number of new gravity measurements for each quadrangle is shown in parentheses. G = Goshen, WI = Williamsburg, MTY = Mount Toby, S = Sunderland, W = Westhampton, E = Easthampton, MH = Mount Holyoke, B = Belchertown, WO = Woronoco, MTM = Mount Tom, SN = Springfield North, and L = Ludlow.

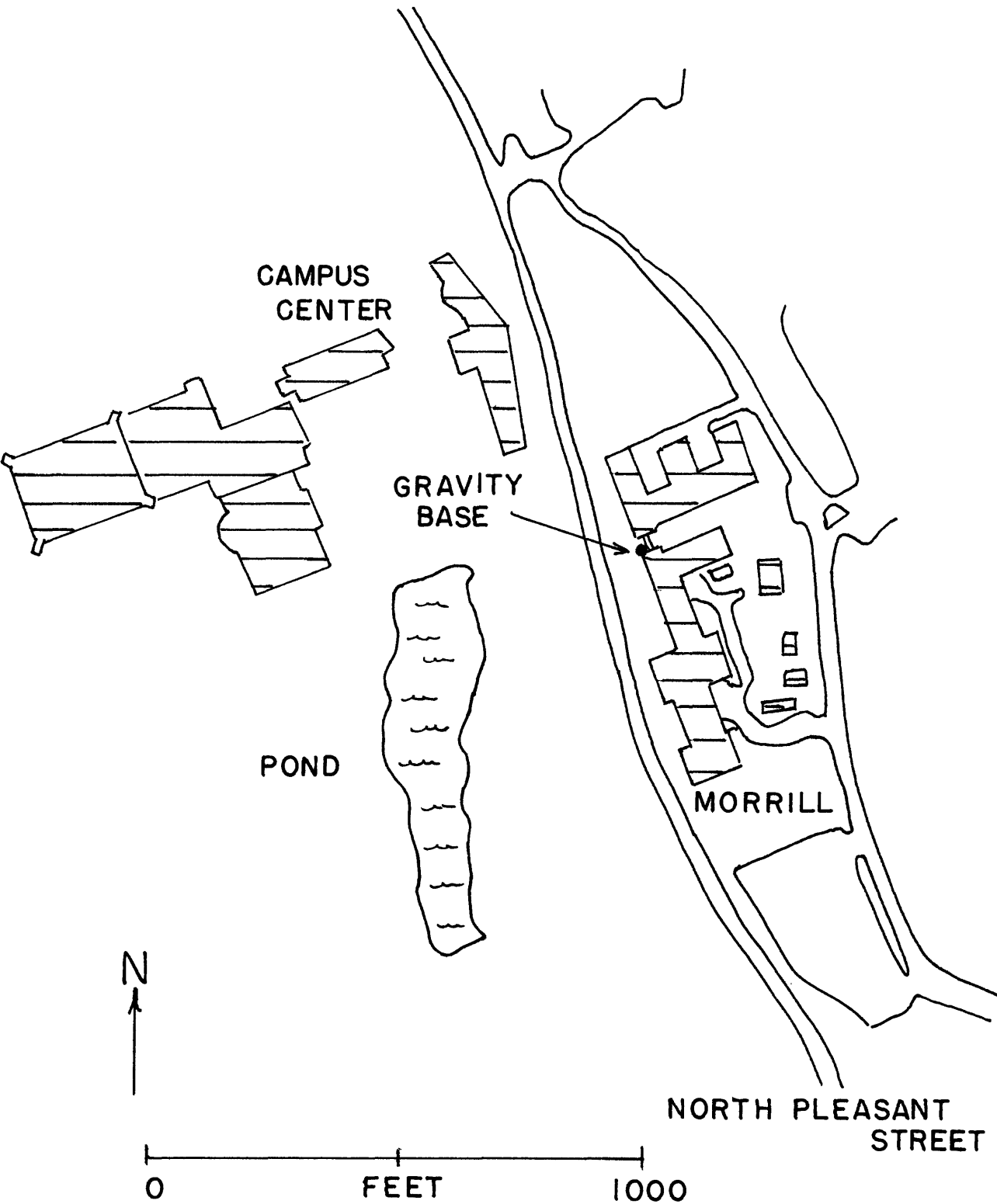


Figure 2: Location of gravity base station at the University of Massachusetts, Amherst, Massachusetts.

PRINCIPAL FACTS FOR GRAVITY DATA

GRAVITY BASE - LOCATED AT MORRILL SCIENCE CENTER, UNIVERSITY
OF MASSACHUSETTS, AMHERST, MASSACHUSETTS

OBSERVED GRAVITY AT BASE: 980374.41 MGALS (PRE-IGSN71)

BOUGUER REDUCTION DENSITY: 2.67 GM/CC

LATITUDE AND LONGITUDE IN DEGREES AND MINUTES

ELEVATIONS IN FEET

GRAVITY IN MILLIGALS

OBSERVED GRAVITY VALUES ARE PRE-IGSN71

GRAVITY ANOMALIES ARE IGSN71

MOUNT TOBY QUADRANGLE

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
MTY18	42 22.57	72 36.95	129.00	980381.45	0.11	0.69	-6.38
MTY19	42 22.60	72 37.13	159.00	980379.89	0.11	1.89	-6.21
MTY20	42 22.61	72 35.74	129.00	980384.23	0.10	3.40	-3.68

WESTHAMPTON QUADRANGLE

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
W37	42 15.08	72 46.31	789.69	980333.13	0.24	25.72	-3.97
W32	42 15.13	72 45.70	815.28	980329.66	0.31	24.59	-5.91
W33	42 15.30	72 45.90	794.35	980331.56	0.28	24.26	-5.55
W30	42 15.40	72 45.05	1139.56	980306.58	0.29	31.60	-10.10
W35	42 15.45	72 46.10	902.72	980325.79	0.30	28.46	-5.07
W34	42 15.53	72 46.00	827.49	980330.32	0.27	25.79	-5.17
W28	42 15.85	72 45.34	858.90	980328.28	0.27	26.23	-5.82
W31	42 16.03	72 46.24	886.98	980330.19	0.31	30.51	-2.47
W27	42 16.15	72 45.64	795.85	980331.65	0.28	23.21	-6.65
W24	42 16.16	72 46.34	844.96	980330.47	0.26	26.64	-4.94
W25	42 16.24	72 45.80	773.14	980333.43	0.29	22.73	-6.35
W26	42 16.25	72 45.65	779.73	980333.15	0.28	23.05	-6.26
W3	42 16.65	72 45.18	611.69	980342.30	0.35	15.80	-7.65
W4	42 16.80	72 45.27	585.44	980344.09	0.31	14.90	-7.69
W5	42 16.93	72 45.45	626.29	980341.80	0.32	16.25	-7.74
W18	42 16.96	72 47.14	697.59	980341.37	0.29	22.48	-3.99
W17	42 17.04	72 46.72	619.88	980345.17	0.60	18.85	-4.63
W6	42 17.10	72 45.60	632.13	980341.74	0.36	16.48	-7.66
W16	42 17.10	72 46.49	572.00	980347.40	0.31	16.49	-5.63
W20	42 17.20	72 45.18	554.34	980344.42	0.31	11.70	-9.81
W15	42 17.22	72 46.08	627.88	980342.60	0.36	16.76	-7.23
W7B	42 17.25	72 45.67	681.02	980338.80	0.28	17.92	-7.99
W8	42 17.55	72 45.71	638.72	980342.18	0.33	16.87	-7.53
W9	42 17.86	72 45.78	622.58	980342.99	0.38	15.70	-8.09
W10	42 18.10	72 45.70	532.12	980348.30	0.44	12.14	-8.48
W23	42 18.18	72 45.17	437.36	980352.31	0.92	7.12	-9.75
W11	42 18.27	72 45.95	500.83	980350.71	0.43	11.35	-8.20

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
W22	42 18.34	72 45.33	453.93	980 352.26	0.46	8.39	-9.52
W12	42 18.34	72 45.60	462.06	980 352.11	0.44	9.00	-9.21
W21	42 18.56	72 45.54	482.72	980 350.91	0.42	9.42	-9.52
W13	42 18.60	72 46.12	578.05	980 344.20	0.44	11.62	-10.59
W14	42 18.78	72 45.85	521.17	980 349.45	0.67	11.25	-8.77

MOUNT HOLYOKE QUADRANGLE

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
bes5	42 15.01	72 33.80	240.00	980 360.41	0.00	1.41	-9.57
bes1	42 15.02	72 34.78	190.00	980 363.23	0.00	-0.50	-9.75
bes6	42 15.06	72 33.46	230.00	980 360.88	0.00	0.85	-9.78
ye.i6	42 15.07	72 30.85	260.00	980 358.87	0.00	1.65	-10.01
ye.i3	42 15.09	72 32.12	250.00	980 359.88	0.00	1.69	-9.63
bes0	42 15.09	72 35.08	160.00	980 365.07	0.00	-1.59	-9.80
bes3	42 15.13	72 34.32	220.00	980 362.36	0.00	1.29	-8.99
ye.i2	42 15.15	72 32.60	280.00	980 357.65	0.00	2.19	-10.16
ye.u4	42 15.15	72 36.68	130.00	980 366.31	0.00	-3.25	-10.44
ye.u3	42 15.17	72 36.38	140.00	980 366.39	0.00	-2.26	-9.79
bes2	42 15.18	72 34.67	210.00	980 362.49	0.00	0.41	-9.53
ye.u2	42 15.21	72 35.87	150.00	980 365.65	0.00	-2.12	-9.99
ye.i4	42 15.27	72 31.90	240.00	980 360.57	0.00	1.17	-9.80
ye.i5	42 15.29	72 31.54	270.00	980 359.67	0.00	3.07	-8.95
bes7	42 15.29	72 33.28	350.00	980 353.57	0.00	4.49	-10.28
bes4	42 15.34	72 34.06	250.00	980 359.61	0.00	1.04	-10.28
ye.i7	42 15.40	72 30.55	300.00	980 357.42	0.00	3.47	-9.58
ye.i1	42 15.40	72 32.51	310.00	980 356.61	0.00	3.60	-9.79
yr.i8	42 15.47	72 31.43	260.00	980 359.55	0.00	1.73	-9.93
bes9	42 15.48	72 33.61	300.00	980 356.98	0.00	2.91	-10.13
bes8	42 15.49	72 33.26	330.00	980 355.49	0.00	4.22	-9.86
baseSH	42 15.50	72 34.55	257.45	980 359.77	0.00	1.67	-9.91
ye.i9	42 15.53	72 31.98	280.00	980 358.29	0.00	2.27	-10.09
ye.b1	42 15.58	72 31.40	260.00	980 359.59	0.00	1.61	-10.06
dort2	42 15.61	72 32.48	280.00	980 358.82	0.00	2.68	-9.68
ye.b8	42 15.62	72 30.78	300.00	980 357.38	0.00	3.10	-9.94
ye.b2	42 15.62	72 31.11	300.00	980 357.41	0.00	3.13	-9.91
dort1	42 15.64	72 32.66	290.00	980 358.41	0.00	3.16	-9.54
ye.u1	42 15.65	72 36.09	140.00	980 367.01	0.00	-2.37	-9.90
iki1	42 15.68	72 34.37	240.00	980 361.26	0.00	1.24	-9.73
iki4	42 15.70	72 33.33	350.00	980 355.53	0.10	5.84	-8.83
iki3	42 15.70	72 33.65	250.00	980 360.82	0.00	1.72	-9.61
iki2	42 15.72	72 34.12	230.00	980 362.12	0.00	1.10	-9.53
iki5	42 15.77	72 33.07	340.00	980 355.40	0.00	4.66	-9.76
dort3	42 15.83	72 32.16	330.00	980 356.31	0.00	4.54	-9.54
ucl	42 15.86	72 34.34	270.00	980 359.56	0.00	2.10	-9.91
ye.b9	42 15.88	72 30.47	280.00	980 358.65	0.00	2.10	-10.26
ye.b7	42 15.88	72 30.86	320.00	980 356.27	0.00	3.48	-10.26
ye.b3	42 15.88	72 31.20	270.00	980 359.21	0.00	1.72	-10.29
bir11	42 15.90	72 35.10	190.00	980 363.20	0.00	-1.80	-11.10
iki6	42 16.00	72 32.70	280.00	980 358.86	0.00	2.13	-10.23

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
ye.b6	42 16.07	72 30.73	290.00	980 358.71	0.00	2.82	-9.88
ye.bl0	42 16.09	72 30.42	270.00	980 359.24	0.00	1.44	-10.58
dort4	42 16.09	72 31.97	290.00	980 358.41	0.00	2.49	-10.21
uc2	42 16.11	72 34.30	300.00	980 357.83	0.00	2.82	-10.23
iki12	42 16.18	72 34.00	260.00	980 360.64	0.00	1.76	-9.91
bir10	42 16.21	72 35.25	119.55	980 367.73	0.15	-4.41	-11.08
ye.bl1	42 16.31	72 30.57	260.00	980 359.87	0.00	0.80	-10.88
iki7	42 16.33	72 32.70	270.00	980 359.81	0.00	1.65	-10.36
uc3	42 16.33	72 34.30	280.00	980 358.99	0.00	1.76	-10.60
ye.b4	42 16.38	72 31.30	260.00	980 359.25	0.00	0.07	-11.60
alti1	42 16.42	72 31.80	270.00	980 360.02	0.00	1.72	-10.30
iki8	42 16.49	72 33.08	220.00	980 362.65	0.00	-0.46	-10.75
iki11	42 16.51	72 33.93	220.00	980 362.51	0.00	-0.62	-10.92
ye.b5	42 16.53	72 30.92	260.00	980 359.96	0.00	0.56	-11.11
alti2	42 16.53	72 31.52	260.00	980 360.50	0.00	1.10	-10.57
uc4	42 16.53	72 34.40	200.00	980 364.23	0.00	-0.82	-10.42
alti7	42 16.62	72 30.38	260.00	980 360.18	0.10	0.64	-10.93
iki9	42 16.62	72 33.23	190.00	980 365.02	0.00	-1.10	-10.35
alti3	42 16.66	72 31.34	250.00	980 360.75	0.00	0.21	-11.12
iki10	42 16.66	72 33.77	180.00	980 365.47	0.00	-1.65	-10.57
dort5	42 16.67	72 31.94	290.00	980 358.82	0.00	2.03	-10.68
uc5	42 16.72	72 34.55	140.00	980 368.26	0.00	-2.71	-10.25
bir9	42 16.73	72 35.34	220.00	980 361.99	0.20	-1.48	-11.57
alti8	42 16.80	72 30.16	270.00	980 358.95	0.15	0.08	-11.78
alti6	42 16.82	72 30.75	260.00	980 360.11	0.10	0.27	-11.30
uc6	42 16.87	72 34.61	190.00	980 364.97	0.00	-1.52	-10.78
alti4	42 16.89	72 31.15	260.00	980 360.87	0.15	0.93	-10.59
dort11	42 16.90	72 33.27	250.00	980 360.88	0.10	-0.01	-11.24
uc12	42 16.94	72 33.68	240.00	980 361.86	0.10	-0.04	-10.92
uc8	42 16.96	72 35.11	180.00	980 366.10	0.10	-1.47	-10.28
uc10	42 16.97	72 34.44	200.00	980 364.38	0.10	-1.33	-10.83
uc9	42 16.97	72 35.27	120.00	980 370.09	0.10	-3.14	-9.88
alti5	42 17.02	72 30.94	290.00	980 359.35	0.15	2.04	-10.52
uc11	42 17.02	72 34.05	210.00	980 363.74	0.10	-1.10	-10.95
bir8	42 17.02	72 35.60	220.00	980 364.92	0.46	1.03	-8.81
dort6	42 17.03	72 31.95	260.00	980 361.09	0.10	0.94	-10.63
dort10	42 17.03	72 33.00	260.00	980 360.22	0.10	0.07	-11.50
bir7	42 17.16	72 36.12	185.00	980 365.14	0.46	-2.26	-10.89
dort9	42 17.18	72 32.52	230.00	980 360.53	0.10	-2.67	-13.21
dort8	42 17.27	72 32.30	300.00	980 359.41	0.10	2.66	-10.29
bir6.5	42 17.28	72 36.14	180.00	980 365.73	0.46	-2.32	-10.78
dort7	42 17.39	72 31.92	330.00	980 356.98	0.10	2.87	-11.12
a3	42 17.54	72 32.43	334.00	980 357.44	0.45	3.48	-10.29
al	42 17.54	72 33.76	234.29	980 360.17	1.23	-3.16	-12.72
MH45	42 17.57	72 37.14	118.50	980 368.69	0.21	-5.58	-12.17
a2	42 17.69	72 33.63	283.06	980 360.87	1.23	1.90	-9.34
a7	42 17.74	72 35.86	262.18	980 359.77	3.00	-1.24	-9.99
bir6	42 17.75	72 36.17	118.00	980 370.07	0.46	-4.51	-10.83
a4	42 17.87	72 32.00	391.00	980 354.20	0.60	5.11	-10.48
MH44	42 17.99	72 37.28	119.50	980 368.26	0.12	-6.54	-13.25
a8	42 18.05	72 35.29	932.60	980 315.32	7.10	16.91	-10.86
a9	42 18.24	72 33.91	919.00	980 318.78	7.45	18.81	-8.14
al0	42 18.34	72 30.64	1115.00	980 303.51	9.81	21.82	-9.53

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
MH41	42 18.48	72 36.28	119.90	980 371.87	0.16	-3.63	-10.32
bir5	42 18.50	72 35.46	200.00	980 367.76	0.74	-0.24	-9.11
MH42	42 18.50	72 36.97	116.00	980 370.48	0.13	-5.42	-12.00
a5	42 18.55	72 31.77	422.58	980 351.90	0.45	4.77	-12.07
sekiz7	42 18.65	72 34.97	225.00	980 365.73	0.74	-0.14	-9.87
a6	42 18.82	72 31.85	299.46	980 360.61	0.45	1.49	-11.11
sekiz4	42 18.90	72 34.13	180.00	980 366.41	0.67	-4.07	-12.32
sekiz5	42 18.91	72 33.56	180.00	980 366.40	0.67	-4.09	-12.34
sekiz6	42 18.94	72 33.13	260.00	980 363.85	0.67	0.84	-10.17
MH40	42 18.95	72 36.48	118.00	980 371.87	0.12	-4.51	-11.17
bir4	42 19.14	72 34.55	200.00	980 368.08	0.10	-0.87	-10.38
onbl4	42 19.19	72 32.67	230.00	980 366.36	0.12	0.16	-10.37
onbl6	42 19.21	72 31.07	250.00	980 364.33	0.12	-0.03	-11.24
onbl5	42 19.21	72 31.93	290.00	980 362.46	0.12	1.87	-10.73
onbl7	42 19.45	72 30.38	200.00	980 368.75	0.50	-0.67	-9.78
MH39	42 19.46	72 35.92	114.00	980 374.18	0.11	-3.34	-9.88
E201	42 19.46	72 37.13	115.76	980 374.76	0.11	-2.60	-9.20
onbl3	42 19.50	72 33.38	180.00	980 370.52	0.00	-0.85	-9.78
MH38	42 19.51	72 36.39	118.67	980 373.08	0.10	-4.07	-10.78
ondor4	42 19.52	72 32.19	240.00	980 366.37	0.00	0.61	-10.38
bir3	42 19.53	72 34.55	180.00	980 370.80	0.00	-0.62	-9.54
ondor5	42 19.58	72 31.84	260.00	980 366.09	0.00	2.12	-9.56
onbl10	42 19.59	72 31.48	220.00	980 368.01	0.00	0.26	-10.04
MH37	42 19.63	72 36.58	116.00	980 373.92	0.10	-3.67	-10.29
E200	42 19.68	72 37.07	118.50	980 375.52	0.11	-1.91	-8.61
E203	42 19.71	72 37.49	136.00	980 373.92	0.19	-1.91	-9.13
onbl2	42 19.77	72 33.68	170.00	980 372.10	0.00	-0.62	-9.20
onbl1	42 19.81	72 34.30	170.00	980 371.97	0.00	-0.81	-9.39
bir2	42 19.87	72 34.66	150.00	980 381.92	0.00	7.17	-0.72
onbl8	42 19.96	72 30.33	200.00	980 370.91	0.00	0.72	-8.89
onb8.5	42 19.96	72 30.63	170.00	980 372.17	0.00	-0.84	-9.42
onbl9	42 19.97	72 30.78	160.00	980 373.03	0.00	-0.93	-9.17
MH43	42 20.01	72 36.89	135.00	980 374.56	0.11	-1.81	-9.08
E202	42 20.03	72 37.24	140.28	980 374.88	0.11	-1.03	-8.47
onbs19	42 20.07	72 34.12	130.00	980 376.16	0.00	-0.77	-7.97
onbs11	42 20.11	72 33.00	160.00	980 374.31	0.00	0.14	-8.10
ondor3	42 20.12	72 31.95	170.00	980 372.85	0.00	-0.39	-8.98
sekiz1	42 20.17	72 35.80	120.00	980 376.18	0.00	-1.84	-8.70
bir1	42 20.22	72 35.36	130.00	980 375.65	0.00	-1.51	-8.71
sekiz2	42 20.23	72 36.17	120.00	980 375.79	0.00	-2.32	-9.18
sekiz3	42 20.29	72 34.92	130.00	980 376.19	0.00	-1.07	-8.27
MTY34	42 20.37	72 36.72	123.34	980 376.89	0.11	-1.11	-7.98
onbs18	42 20.38	72 34.04	160.00	980 374.67	0.00	0.10	-8.14
onbs17	42 20.41	72 33.43	130.00	980 377.09	0.00	-0.35	-7.55
onbs12	42 20.43	72 32.30	140.00	980 376.24	0.00	-0.29	-7.84
MTY29	42 20.43	72 37.00	123.95	980 377.32	0.15	-0.72	-7.56
onbs14	42 20.44	72 30.73	150.00	980 375.26	0.00	-0.35	-8.24
onbs13	42 20.44	72 31.73	160.00	980 374.69	0.00	0.03	-8.21
MTY33	42 20.44	72 37.00	120.14	980 377.14	0.11	-1.27	-8.03
MTY26	42 20.50	72 35.40	128.66	980 376.76	0.11	-0.94	-7.99
MTY28	42 20.61	72 36.23	123.99	980 377.57	0.11	-0.74	-7.62
oniki4	42 20.64	72 33.06	140.00	980 377.43	0.00	0.59	-6.96
MTY27	42 20.64	72 35.82	123.82	980 377.96	0.11	-0.41	-7.29

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
MTY30	42 20.72	72 37.36	119.63	980 378.18	0.10	-0.70	-7.45
onbs16	42 20.74	72 31.25	160.00	980 375.11	0.00	0.00	-8.24
oniki1	42 20.77	72 34.50	130.00	980 377.01	0.00	-0.97	-8.17
MTY36	42 20.77	72 36.42	126.10	980 378.21	0.10	-0.13	-7.10
onbs15	42 20.86	72 30.77	220.00	980 372.15	0.00	2.50	-7.81
oniki5	42 20.88	72 32.63	130.00	980 376.24	0.00	-1.90	-9.11
MTY35	42 20.88	72 36.78	125.62	980 377.85	0.10	-0.71	-7.66
oniki2	42 20.97	72 33.55	150.00	980 377.56	0.00	1.17	-6.73
oniki6	42 21.07	72 32.00	200.00	980 375.46	0.00	3.62	-6.00
MTY10	42 21.09	72 36.41	114.76	980 379.97	0.09	0.08	-6.51
oniki7	42 21.10	72 31.54	150.00	980 376.41	0.00	-0.18	-8.08
oniki3	42 21.20	72 33.10	155.00	980 377.12	0.00	0.85	-7.22
MTY9	42 21.23	72 35.98	116.23	980 380.61	0.09	0.65	-5.99
MTY23	42 21.32	72 37.41	117.29	980 379.71	0.11	-0.29	-6.95
MTY21	42 21.33	72 36.36	123.00	980 380.26	0.09	0.78	-6.10
MTY15	42 21.33	72 36.95	118.39	980 379.53	0.10	-0.38	-7.09
ondor2	42 21.42	72 30.31	180.00	980 374.85	0.00	0.60	-8.33
ondor1	42 21.42	72 30.78	190.00	980 374.91	0.00	1.60	-7.68
MTY12	42 21.47	72 36.02	123.68	980 381.11	0.09	1.49	-5.41
MTY8	42 21.53	72 35.29	123.00	980 381.73	0.09	1.95	-4.93
MTY25	42 21.55	72 36.49	126.70	980 380.64	0.10	1.18	-5.81
oniki8	42 21.62	72 31.28	220.00	980 373.65	0.00	2.86	-7.45
MTY37	42 21.62	72 37.40	153.50	980 377.85	0.10	0.81	-7.11
MTY6	42 21.67	72 36.95	155.84	980 378.06	0.10	1.16	-6.84
MTY11	42 21.73	72 36.05	121.00	980 382.09	0.11	1.83	-4.96
oniki9	42 21.93	72 31.28	250.00	980 372.34	0.00	3.91	-7.44
onik10	42 21.97	72 31.67	240.00	980 373.81	0.00	4.38	-6.63
MTY5	42 22.00	72 36.32	125.53	980 383.06	0.12	2.82	-4.11
MTY4	42 22.01	72 35.82	122.89	980 383.16	0.10	2.66	-4.21
MTY22	42 22.01	72 37.32	148.02	980 379.05	0.10	0.91	-6.82
MTY13	42 22.27	72 37.34	150.43	980 379.36	0.11	1.06	-6.75
MTY7	42 22.30	72 36.86	151.27	980 380.47	0.10	2.20	-5.65
MTY3	42 22.34	72 36.52	142.80	980 383.03	0.10	3.90	-3.65
MTY1	42 22.39	72 35.78	125.55	980 384.00	0.09	3.18	-3.79

WILLIAMSBURG QUADRANGLE

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
E132	42 22.52	72 38.44	168.98	980 379.39	0.17	2.45	-5.93
WI2	42 22.66	72 38.80	162.21	980 380.42	0.27	2.64	-5.42
WI1	42 22.70	72 38.00	153.65	980 379.71	0.26	1.06	-6.71
WI4	42 22.75	72 39.35	247.64	980 375.52	0.42	5.64	-5.21
WI5	42 22.75	72 39.61	284.56	980 372.89	0.36	6.48	-5.70
WI3	42 22.78	72 39.06	211.23	980 378.09	0.47	4.74	-4.81

MOUNT TOM QUADRANGLE

STATION	LATITUDE		LONGITUDE		ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
mt102	42	10.24	72	41.46	263.00	980 353.34	0.16	3.63	-7.96
mt101	42	10.35	72	41.87	250.00	980 353.07	0.10	1.98	-9.23
mt99	42	10.46	72	42.77	275.00	980 354.14	0.07	5.23	-6.86
mt100	42	10.49	72	42.06	270.00	980 351.96	0.09	2.54	-9.36
mt103	42	10.53	72	43.68	270.00	980 355.97	0.13	6.49	-5.37
mt104	42	10.60	72	44.09	277.00	980 356.60	0.13	7.67	-4.43
mt77	42	10.63	72	41.82	254.30	980 352.70	0.10	1.59	-9.76
mt105	42	10.64	72	44.41	255.00	980 358.44	0.26	7.38	-3.83
mt78	42	10.65	72	41.69	261.00	980 352.82	0.05	2.31	-9.32
mt76	42	10.66	72	41.94	255.80	980 352.72	0.09	1.71	-9.70
mt81	42	10.67	72	41.28	264.00	980 352.58	0.16	2.32	-9.30
mt79	42	10.67	72	41.58	262.50	980 352.10	0.06	1.70	-9.97
mt80	42	10.68	72	41.46	264.90	980 352.26	0.09	2.08	-9.65
mt82	42	10.69	72	41.18	266.50	980 352.54	0.19	2.49	-9.19
mt75	42	10.69	72	42.06	257.70	980 352.75	0.09	1.87	-9.61
mt106	42	10.69	72	44.75	220.00	980 359.77	0.28	5.35	-4.64
mt74	42	10.71	72	42.11	260.70	980 352.98	0.09	2.35	-9.23
mt73	42	10.73	72	42.28	272.60	980 352.69	0.09	3.15	-8.84
mt83	42	10.74	72	41.08	269.40	980 352.31	0.27	2.46	-9.24
mt72	42	10.75	72	42.42	280.70	980 352.79	0.08	3.99	-8.29
mt71	42	10.76	72	42.51	273.70	980 353.61	0.07	4.13	-7.92
mt70	42	10.77	72	42.66	274.80	980 354.19	0.07	4.80	-7.29
mt84	42	10.82	72	40.96	273.30	980 352.26	0.45	2.65	-9.00
mt69	42	10.83	72	42.77	274.60	980 354.66	0.07	5.16	-6.92
mt68	42	10.83	72	42.91	274.70	980 354.53	0.07	5.04	-7.05
mt67	42	10.86	72	43.11	266.50	980 354.94	0.13	4.64	-7.10
mt66	42	10.87	72	43.25	269.00	980 355.12	0.13	5.04	-6.79
mt85	42	10.89	72	40.85	304.90	980 350.52	0.50	3.79	-8.91
mt65	42	10.91	72	43.36	269.00	980 355.36	0.13	5.22	-6.61
mt64	42	10.93	72	43.47	270.20	980 355.89	0.13	5.83	-6.04
mt63	42	10.95	72	43.56	284.00	980 355.48	0.15	6.68	-5.64
mt62	42	10.96	72	43.67	298.00	980 355.03	0.12	7.54	-5.30
mt93	42	10.99	72	41.27	268.00	980 352.37	0.09	2.02	-9.82
mt61	42	11.03	72	43.84	292.06	980 355.78	0.14	7.62	-4.99
mt60	42	11.03	72	44.07	311.70	980 354.74	0.16	8.43	-4.84
mt59	42	11.05	72	44.21	310.44	980 355.21	0.58	8.75	-4.05
mt92	42	11.06	72	40.86	276.00	980 352.25	0.31	2.54	-9.35
mt86	42	11.08	72	40.09	433.00	980 343.55	0.12	8.58	-8.92
mt58	42	11.08	72	44.53	243.87	980 359.47	0.33	6.71	-4.05
mt57	42	11.13	72	44.68	262.73	980 358.60	0.28	7.54	-3.93
mt90	42	11.15	72	40.77	287.00	980 351.56	0.22	2.75	-9.61
mt56	42	11.16	72	44.70	233.75	980 360.47	0.30	6.64	-3.81
mt54	42	11.17	72	44.96	225.13	980 360.40	0.30	5.74	-4.41
mt87	42	11.18	72	40.11	460.00	980 350.69	0.17	18.11	-0.27
mt94	42	11.18	72	41.24	274.00	980 351.80	0.09	1.72	-10.32
mt55	42	11.18	72	44.83	220.00	980 361.19	0.33	6.04	-3.90
mt112	42	11.20	72	43.60	310.00	980 354.42	0.12	7.70	-5.55
mt91	42	11.25	72	40.96	270.00	980 352.53	0.13	1.97	-9.89
mt89	42	11.36	72	40.62	320.00	980 350.02	0.16	4.00	-9.56
mt150	42	11.36	72	42.00	265.00	980 353.67	0.09	2.47	-9.26

STATION	LATITUDE		LONGITUDE		ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
mt151	42	11.37	72	42.43	330.00	980 351.00	0.07	5.91	-8.09
mt107	42	11.39	72	44.73	234.50	980 360.68	0.33	6.57	-3.87
mt113	42	11.43	72	43 -61	322.00	980 354.01	0.12	8.07	-5.59
mt95	42	11.46	72	41 -26	274.00	980 351.96	0.08	1.46	-10.59
mt98	42	11.52	72	42.28	275.00	980 353.72	0.08	3.23	-8.86
mt108	42	11.59	72	44.69	245.00	980 360.00	0.42	6.58	-4.14
mtb88	42	11.64	72	40.58	315.04	980 350.44	0.14	3.53	-9.88
mt114	42	11.64	72	43 -61	340.00	980 353.53	0.15	8.97	-5.29
mt152	42	11.65	72	42.42	359.00	980 349.73	0.23	6.94	-7.89
mt97	42	11.67	72	41 -63	280.00	980 351.08	0.07	0.84	-11.43
mt153	42	11.77	72	42.59	260.00	980 355.92	0.19	3.65	-7.81
mt124	42	11.78	72	44.31	318.00	980 355.43	0.15	8.59	-4.91
mt157	42	11.82	72	42.02	410.00	980 345.24	0.26	7.00	-9.56
mt125	42	11.82	72	43 -91	388.00	980 350.38	0.18	10.06	-5.82
mt156	42	11.85	72	42.24	410.00	980 345.90	0.21	7.62	-9.00
mt115	42	11.85	72	43 -66	348.00	980 352.51	0.13	8.39	-6.17
mt109	42	11.87	72	44.70	235.00	980 360.80	0.27	6.02	-4.50
mt126	42	11.88	72	43 -38	270.00	980 356.97	0.22	5.47	-6.31
mt128	42	11.89	72	43 -04	260.00	980 355.63	0.11	3.17	-8.37
mt127	42	11.91	72	43 -19	210.00	980 359.47	0.25	2.28	-7.40
mt148	42	11.92	72	40.82	275.00	980 352.61	0.15	1.52	-10.50
mt169	42	11.96	72	40.32	350.00	980 348.19	0.14	4.09	-10.53
mt158	42	11.99	72	41 -79	275.00	980 353.27	0.21	2.07	-9.89
mt155	42	12.00	72	42.38	325.00	980 351.58	0.18	5.08	-8.64
mt149	42	12.01	72	40.99	249.00	980 354.18	0.12	0.51	-10.65
mt96	42	12.04	72	42.35	275.00	980 351.19	0.10	-0.08	-12.15
mt129	42	12.06	72	42.92	270.00	980 354.72	0.11	2.95	-8.94
mt147	42	12.18	72	40.82	280.00	980 352.65	0.15	1.64	-10.55
mt110	42	12.18	72	44.64	215.00	980 361.92	0.29	4.80	-5.01
mt160	42	12.20	72	41 -36	280.00	980 351.06	0.09	0.02	-12.24
mt116	42	12.21	72	43 -61	362.00	980 352.18	0.17	8.84	-6.16
mt154	42	12.22	72	42.68	280.00	980 354.71	0.15	3.64	-8.55
mt123	42	12.23	72	44.81	200.00	980 363.01	0.39	4.40	-4.79
mt130	42	12.32	72	42.89	228.00	980 358.20	0.23	2.09	-8.23
mt170	42	12.33	72	40.16	462.00	980 341.12	0.06	7.01	-11.55
mt145	42	12.39	72	40.92	236.90	980 354.10	0.23	-1.28	-11.91
mt122	42	12.43	72	44.44	230.00	980 361.18	0.31	5.09	-5.22
mt144	42	12.46	72	40.99	243.20	980 353.52	0.13	-1.37	-12.31
mt135	42	12.47	72	42.25	302.00	980 352.97	0.19	3.59	-9.32
mt117	42	12.47	72	43 -59	295.00	980 355.66	0.23	5.63	-7.00
mt134	42	12.48	72	42.73	345.00	980 350.91	0.22	5.57	-8.80
mt176	42	12.54	72	39.45	510.00	980 338.55	0.17	8.63	-11.47
mt143	42	12.55	72	41 -07	249.70	980 351.57	0.14	-2.84	-14.00
mt161	42	12.55	72	41 -41	290.00	980 351.14	0.08	0.52	-12.09
mt121	42	12.58	72	44.15	293.00	980 357.41	0.29	7.02	-5.48
mt118	42	12.59	72	43 -61	286.00	980 356.75	0.29	5.69	-6.57
mt142	42	12.60	72	41 -14	294.20	980 350.17	0.09	-0.13	-12.88
mt131	42	12.61	72	42.97	264.00	980 355.88	0.13	2.72	-8.94
mt177	42	12.65	72	40.47	240.00	980 354.75	0.26	-0.73	-11.43
mt171	42	12.66	72	39.95	520.00	980 337.55	0.20	8.40	-12.02
mt136	42	12.68	72	42.16	300.00	980 352.43	0.37	2.56	-10.11
mt141	42	12.71	72	41 -34	287.70	980 351.19	0.07	0.11	-12.43
mt140	42	12.77	72	41 -46	277.00	980 352.19	0.18	0.01	-12.05

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
mt119	42 12.78	72 43 -77	266.00	980 358.30	0.23	5.08	-6.55
mt146	42 12.80	72 40.87	281.20	980 351.56	0.16	-0.26	-12.49
mt120	42 12.80	72 44.04	252.00	980 359.69	0.39	5.12	-5.87
mt111	42 12.80	72 44.85	282.00	980 359.27	0.27	7.52	-4.62
mt133	42 12.81	72 43.05	251.00	980 357.09	0.17	2.41	-8.77
mt137	42 12.87	72 42.07	343.00	980 350.37	0.10	4.26	-10.16
mt172	42 12.88	72 39.78	540.00	980 336.74	0.20	9.13	-11.98
mt139	42 12.91	72 41.68	330.00	980 350.46	0.22	3.06	-10.79
mt132	42 12.92	72 43 65	211.00	980 361.48	0.28	2.88	-6.81
mt178	42 12.93	72 40.87	230.00	980 354.69	0.15	-2.15	-12.62
mt175	42 13.00	72 39.99	505.00	980 338.86	0.40	7.78	-11.92
mtb162	42 13.00	72 41.47	260.00	980 353.88	0.17	-0.24	-11.73
mtb9	42 13.01	72 43.89	196.77	980 362.69	0.43	2.61	-6.44
mt32	42 13.04	72 42.59	228.99	980 358.13	0.13	1.03	-9.43
mt138	42 13.05	72 42.31	235.00	980 357.10	0.35	0.56	-9.89
mt30	42 13.07	72 43 17	210.75	980 360.74	0.17	1.89	-7.90
mt179	42 13.10	72 40.95	240.00	980 355.28	0.15	-0.87	-11.68
mt167	42 13.15	72 41.25	270.00	980 354.77	0.10	1.37	-10.53
mt16	42 13.16	72 43.98	247.80	980 359.41	0.33	3.90	-7.00
mt20	42 13.16	72 44.83	293.10	980 359.57	0.32	8.32	-4.16
mt163	42 13.20	72 41.38	276.00	980 353.66	0.13	0.75	-11.33
MT17	42 13.20	72 44.25	277.70	980 357.70	0.34	4.95	-6.98
MT18	42 13.20	72 44.40	281.44	980 358.40	0.50	6.00	-5.90
MT19	42 13.20	72 44.65	287.50	980 358.77	0.36	6.94	-5.30
mt173	42 13.21	72 39.51	535.10	980 336.90	0.23	8.34	-12.57
MT31	42 13.25	72 42.75	217.93	980 359.06	0.34	0.61	-9.26
MT29	42 13.35	72 43.25	176.86	980 362.68	0.31	0.21	-8.27
MT37	42 13.40	72 43.65	192.79	980 360.27	0.40	-0.77	-9.71
mt174	42 13.41	72 39.24	525.34	980 337.65	0.43	7.88	-12.50
MT49	42 13.45	72 43.90	235.67	980 359.63	0.49	2.55	-7.78
MT48	42 13.45	72 44.10	277.92	980 358.25	0.39	5.15	-6.74
mt164	42 13.48	72 41 25	273.00	980 353.12	0.10	-0.50	-12.50
MT15	42 13.50	72 43.50	201.85	980 361.42	0.31	1.08	-8.26
mt180	42 13.53	72 40.73	280.00	980 351.51	0.09	-1.52	-13.78
mt181	42 13.57	72 40.26	221.00	980 356.52	0.49	-2.12	-11.95
MT38	42 13.58	72 42.40	192.05	980 359.44	0.39	-1.94	-10.87
MT33	42 13.65	72 43.65	223.39	980 360.10	0.32	1.57	-8.51
MT39	42 13.75	72 42.20	229.79	980 357.88	0.30	-0.20	-10.52
MT34	42 13.75	72 43.72	229.34	980 360.79	0.33	2.66	-7.61
MT46	42 13.80	72 44.05	311.16	980 356.01	0.38	5.51	-7.54
mt182	42 13.84	72 40.39	270.00	980 352.69	0.13	-1.74	-13.62
MT189	42 13.86	72 38.89	542.00	980 338.32	0.35	9.44	-11.60
MT40	42 13.90	72 41.96	242.49	980 356.93	0.30	-0.18	-10.94
MT43	42 13.90	72 44.95	335.66	980 357.05	0.47	8.70	-5.10
mt165	42 13.93	72 41.19	270.00	980 353.15	0.22	-1.42	-13.21
MT45	42 13.95	72 44.20	432.36	980 349.43	0.55	10.10	-6.95
mt188	42 13.99	72 39.94	210.00	980 356.44	0.51	-3.86	-13.29
MT44	42 14.00	72 44.55	472.04	980 347.94	0.28	12.27	-6.42
mt41	42 14.03	72 41.82	288.83	980 355.56	0.09	2.61	-9.96
MT14	42 14.05	72 43.00	201.94	980 360.18	0.41	-0.97	-10.22
MT47	42 14.05	72 43 65	268.69	980 358.24	0.44	3.37	-8.16
MT53	42 14.10	72 43.35	274.33	980 357.33	0.37	2.91	-8.87
mt183	42 14.13	72 40.72	240.00	980 354.63	0.11	-3.06	-13.93

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
mt166	42 14.15	72 41.25	253.00	980355.72	0.11	-0.78	-12.09
MT51	42 14.15	72 41.87	264.67	980357.47	0.28	2.07	-9.48
MT11	42 14.15	72 43.60	284.58	980357.03	0.35	3.50	-8.66
mt187	42 14.21	72 39.85	220.00	980355.82	0.40	-3.87	-13.76
MT190	42 14.24	72 39.13	596.70	980333.88	1.29	9.57	-12.41
MT50	42 14.27	72 44.35	492.14	980347.13	0.25	12.94	-6.48
MT36	42 14.30	72 41.53	267.58	980355.43	0.28	0.08	-11.57
MT10	42 14.30	72 43.55	286.18	980356.63	0.33	3.03	-9.21
mt184	42 14.34	72 40.65	240.00	980355.31	0.12	-2.69	-13.55
MT28	42 14.35	72 42.55	188.21	980361.32	0.33	-1.58	-10.43
mt185	42 14.39	72 40.23	210.00	980357.11	0.22	-3.79	-13.51
MT27	42 14.40	72 42.75	223.21	980358.94	0.35	-0.74	-10.78
MT35	42 14.43	72 42.03	247.52	980357.65	0.46	0.22	-10.55
mt186	42 14.45	72 39.75	217.00	980356.12	0.43	-4.22	-13.97
MT13B	42 14.45	72 42.35	156.98	980362.88	0.36	-3.10	-10.85
MT25	42 14.55	72 43.45	289.35	980356.05	0.31	2.37	-10.00
MT52	42 14.60	72 43.18	248.80	980358.45	0.21	0.89	-10.18
MT22	42 14.63	72 42.35	151.08	980363.05	0.33	-3.75	-11.33
MT42	42 14.65	72 41.67	294.00	980354.53	0.29	1.14	-11.41
MT1	42 14.65	72 43.60	294.33	980356.46	0.31	3.10	-9.44
mt168	42 14.66	72 40.96	245.00	980356.75	0.23	-1.26	-12.18
MT23	42 14.70	72 42.65	197.50	980359.72	0.37	-2.82	-11.96
MT3	42 14.70	72 43.80	322.25	980354.80	0.41	3.99	-9.41
MT4	42 14.70	72 43.95	387.24	980351.75	0.30	7.06	-8.69
MT5	42 14.75	72 44.20	456.88	980348.35	0.25	10.13	-8.07
MT191	42 14.77	72 39.32	199.85	980358.02	1.23	-4.41	-12.77
MT2	42 14.80	72 43.50	293.26	980356.26	0.32	2.58	-9.91
MT12	42 14.82	72 42.40	153.86	980363.12	0.43	-3.70	-11.28
MT7	42 14.85	72 43.90	423.15	980350.17	0.42	8.63	-8.24
MT6	42 14.85	72 44.45	425.40	980350.15	0.23	8.82	-8.32
MT21	42 14.90	72 41.78	244.93	980358.22	0.28	-0.16	-11.03
MT24	42 14.90	72 42.90	205.33	980360.16	0.61	-1.94	-11.11
MT8	42 15.00	72 43.85	440.04	980348.39	0.27	8.21	-9.39

WORONOCO QUADRANGLE

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
wo32	42 10.26	72 46.69	366.00	980355.20	0.56	15.15	0.41
wo58	42 10.65	72 45.61	280.00	980358.72	0.41	10.00	-1.93
wo31	42 10.70	72 46.67	380.00	980354.33	0.58	14.94	-0.26
wo30	42 10.85	72 46.70	390.00	980353.84	0.68	15.17	-0.28
wo57	42 10.86	72 45.60	270.00	980359.39	0.44	9.42	-2.14
wo72	42 10.92	72 45.03	218.00	980360.70	0.33	5.75	-4.13
wo35	42 10.93	72 48.03	1051.00	980317.63	1.46	41.01	3.55
wo56	42 11.02	72 45.62	268.00	980359.72	0.43	9.31	-2.18
wo36	42 11.04	72 48.02	1064.00	980317.28	1.15	41.72	3.50
wob29	42 11.05	72 46.72	410.39	980353.06	0.75	16.01	-0.08
wo28	42 11.08	72 46.80	409.82	980353.43	0.81	16.28	0.28
wo27	42 11.22	72 46.96	451.87	980351.75	1.22	18.35	1.30
wo71	42 11.27	72 45.24	229.92	980360.32	0.34	5.97	-4.31

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
wo70	42 11.27	72 45.41	250.23	980359.87	0.36	7.42	-3.53
wo69	42 11.27	72 45.57	241.83	980361.36	0.52	8.12	-2.38
wo62	42 11.28	72 46.59	426.00	980352.31	0.86	16.38	-0.13
wo55	42 11.32	72 45.72	275.00	980359.90	0.47	9.71	-1.99
wo61	42 11.34	72 46.39	392.00	980354.32	0.51	15.10	-0.59
wo26	42 11.34	72 47.02	500.07	980349.26	1.34	20.21	1.62
wo59	42 11.36	72 45.98	302.00	980359.01	0.58	11.29	-1.23
wo60	42 11.38	72 46.18	353.00	980356.13	0.48	13.18	-1.19
wo54	42 11.51	72 45.78	272.00	980360.58	0.51	9.82	-1.73
wo63	42 11.54	72 46.52	380.00	980355.91	0.78	15.26	0.26
wo34	42 11.61	72 48.21	994.00	980323.11	0.57	40.11	3.72
wo25	42 11.62	72 47.14	600.62	980343.79	1.52	23.77	1.90
wo53	42 11.64	72 45.88	280.00	980360.42	0.50	10.22	-1.62
wo24	42 11.76	72 47.24	699.66	980339.33	0.99	28.42	2.60
wo23	42 11.81	72 47.37	734.61	980337.51	1.02	29.81	2.81
wo52	42 11.84	72 46.05	284.00	980360.98	0.65	10.85	-0.98
wo64	42 11.89	72 46.40	328.00	980359.22	0.89	13.16	0.05
wo33	42 11.89	72 48.29	1025.00	980321.44	0.61	40.94	3.52
wo22	42 11.97	72 47.62	805.08	980334.35	0.57	33.04	3.16
wo51	42 11.99	72 46.14	262.00	980362.69	0.99	10.27	-0.46
wo37	42 12.07	72 48.29	1062.00	980319.53	0.92	42.24	3.86
wo48	42 12.09	72 46.08	261.00	980362.94	0.82	10.28	-0.59
wo47	42 12.12	72 46.39	355.00	980359.21	0.76	15.34	1.17
wo73	42 12.13	72 45.02	200.00	980363.83	0.80	5.37	-3.42
wo65	42 12.16	72 45.84	275.00	980361.64	0.77	10.19	-1.21
wo21	42 12.18	72 47.79	916.29	980327.90	0.63	36.74	3.09
wo41	42 12.20	72 49.00	1055.00	980322.29	0.41	44.15	5.49
wo66	42 12.27	72 45.79	298.00	980360.24	0.71	10.79	-1.46
wo20	42 12.36	72 48.07	996.17	980324.16	0.76	40.25	3.97
wo49	42 12.39	72 46.24	337.00	980359.64	0.85	13.68	0.22
wo19	42 12.43	72 48.35	1044.20	980321.57	0.61	42.06	3.98
wo45	42 12.44	72 46.92	533.00	980351.15	0.74	23.55	3.22
wo44	42 12.46	72 47.06	568.00	980348.17	0.77	23.83	2.33
wo46	42 12.49	72 46.55	435.00	980354.93	0.77	18.04	1.12
wo42	42 12.49	72 47.39	875.00	980331.36	0.74	35.86	3.74
wo67	42 12.60	72 45.55	441.00	980351.85	0.50	15.35	-2.05
wo43	42 12.63	72 47.56	664.00	980343.43	0.81	27.86	3.09
wo50	42 12.64	72 46.48	353.00	980359.53	1.03	14.70	0.86
wo38	42 12.66	72 48.29	1040.00	980322.17	0.96	41.93	4.34
wo40	42 12.74	72 49.00	1093.00	980320.97	0.43	45.59	5.65
wo68	42 12.77	72 45.43	445.00	980351.68	0.42	15.31	-2.30
wo39	42 12.86	72 48.16	1050.00	980322.26	1.11	42.66	4.87
wo15	42 12.97	72 45.32	400.24	980354.45	0.33	13.57	-2.59
wo14	42 13.11	72 45.25	374.34	980356.05	0.35	12.52	-2.73
WO1B	42 13.45	72 45.15	363.00	980355.97	0.33	10.87	-4.01
WO9	42 13.55	72 45.65	476.34	980351.54	0.37	16.94	-1.81
WO9A	42 13.65	72 45.85	505.00	980350.07	0.35	18.02	-1.74
WO10	42 13.80	72 46.05	564.97	980346.79	0.35	20.16	-1.66
WO3	42 14.00	72 45.23	509.60	980348.37	0.45	16.23	-3.58
WO12	42 14.19	72 46.54	661.87	980341.86	0.29	23.76	-1.47
WO4	42 14.25	72 45.45	604.14	980342.81	0.31	19.19	-4.02
WO13	42 14.35	72 46.64	652.31	980342.40	0.27	23.16	-1.76
WO5	42 14.40	72 45.64	675.15	980338.84	0.29	21.68	-4.01

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
W06	42 14.55	72 46 -00	627.89	980 342.41	0.29	20.57	-3.49
W07	42 14.57	72 46.34	697.42	980 339.51	0.13	24.18	-2.43
W016	42 14.61	72 45.64	717.25	980 336.17	0.30	22.65	-4.48
W08	42 14.65	72 46.46	385.94	980 355.92	0.41	11.18	-4.41
W018	42 14.67	72 46.47	687.75	980 340.01	0.21	23.62	-2.58
W017	42 14.86	72 45.75	729.91	980 335.00	0.28	22.29	-5.29

EASTHAMPTON QUADRANGLE

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
MT8	42 15.00	72 43 -85	440.04	980 348.39	0.27	8.21	-9.39
E192	42 15.05	72 41 -74	195.18	980 361.26	0.28	-2.02	-11.17
E183	42 15.08	72 43 -03	249.63	980 357.61	0.39	-0.60	-11.52
E177	42 15.10	72 43 -30	282.50	980 356.34	0.53	1.20	-10.71
E150	42 15.20	72 43 18	255.51	980 357.89	0.39	0.05	-11.07
E212	42 15.22	72 40.77	238.00	980 358.69	0.13	-0.82	-11.60
E210	42 15.23	72 39.32	195.30	980 358.57	0.60	-4.97	-13.81
E191	42 15.23	72 41 -75	209.98	980 360.47	0.24	-1.69	-11.39
E190	42 15.25	72 43 -94	419.34	980 349.94	0.32	7.44	-9.40
E216	42 15.30	72 41 55	210.00	980 360.66	0.14	-1.61	-11.41
E57	42 15.33	72 43 -21	261.50	980 357.79	0.51	0.33	-10.88
E181	42 15.36	72 42.40	188.66	980 360.26	0.22	-4.11	-13.09
E151	42 15.38	72 42.81	208.23	980 360.14	0.40	-2.41	-11.90
E152	42 15.48	72 42.69	209.76	980 359.33	0.39	-3.22	-12.77
E56	42 15.50	72 43 -63	305.30	980 356.34	0.39	2.74	-10.10
E55	42 15.50	72 43 -96	375.56	980 352.93	0.55	5.94	-9.17
E58	42 15.53	72 43 -15	225.34	980 359.74	0.37	-1.43	-11.53
E153	42 15.58	72 42.49	209.95	980 359.83	0.21	-2.86	-12.59
E196	42 15.60	72 44.94	1169.75	980 304.86	0.33	32.42	-10.28
E213	42 15.61	72 41 -15	202.00	980 360.63	0.12	-2.85	-12.39
E211	42 15.64	72 39.63	183.96	980 359.89	0.29	-5.33	-14.09
E59	42 15.64	72 43 -16	206.38	980 361.11	0.49	-2.00	-11.33
E182	42 15.65	72 42.69	224.54	980 360.96	0.37	-0.46	-10.53
E51	42 15.65	72 44.25	412.95	980 350.83	0.41	7.14	-9.40
E154	42 15.69	72 42.33	202.58	980 360.22	0.22	-3.32	-12.79
E214	42 15.81	72 41 -27	197.20	980 361.03	0.12	-3.21	-12.59
E60	42 15.81	72 43 -10	256.13	980 359.07	0.44	0.38	-10.71
E50	42 15.83	72 44.21	390.53	980 352.17	0.36	6.10	-9.71
E155	42 15.84	72 42.13	197.63	980 360.94	0.31	-3.29	-12.50
E215	42 15.94	72 40.14	158.00	980 363.06	0.23	-5.05	-12.98
E156	42 15.94	72 41 -96	188.17	980 361.73	0.23	-3.55	-12.51
E52	42 15.95	72 44.52	484.57	980 347.85	0.47	10.44	-8.50
E180	42 16.00	72 41 -50	151.20	980 363.59	0.31	-5.25	-12.86
E157	42 16.00	72 41 84	149.70	980 364.86	0.26	-4.12	-11.73
E49	42 16.00	72 44.00	377.52	980 352.83	0.37	5.28	-10.07
E158	42 16.11	72 41 67	155.07	980 364.63	0.33	-4.01	-11.73
E61	42 16.13	72 43 -00	242.82	980 359.90	0.47	-0.52	-11.13
E53	42 16.16	72 44.70	531.45	980 345.79	0.27	12.48	-8.28
E164	42 16.23	72 41 -60	148.51	980 364.61	0.33	-4.83	-12.33
E48	42 16.23	72 44.02	370.24	980 353.26	0.37	4.67	-10.43

STATION	LATITUDE	LONGITUDE	ELEV	OBS	GRAV	T C	FREE AIR	BOUGUER
E159	42 16.26	72 41 83	187.65	980	363.16	0.51	-2.65	-11.31
E217	42 16.28	72 40.35	188.36	980	363.15	0.19	-2.62	-11.63
E62	42 16.33	72 43 06	254.44	980	359.20	0.39	-0.42	-11.51
E165	42 16.35	72 41 35	183.18	980	362.46	0.23	-3.90	-12.69
E54	42 16.35	72 44.94	561.94	980	344.03	0.27	13.30	-8.51
E218	42 16.36	72 39.88	177.06	980	363.15	0.23	-3.80	-12.38
E160	42 16.36	72 42.02	195.83	980	362.57	0.23	-2.61	-11.84
E161	42 16.46	72 42.20	206.75	980	361.31	0.21	-3.00	-12.63
E173	42 16.46	72 42.25	213.58	980	361.73	0.24	-1.94	-11.77
E166	42 16.49	72 41 37	181.14	980	362.91	0.25	-3.85	-12.55
E47	42 16.52	72 44.08	398.31	980	351.83	0.56	5.45	-10.43
E219	42 16.56	72 39.45	163.13	980	365.17	0.21	-3.39	-11.51
E178B	42 16.57	72 43 00	188.51	980	363.26	0.41	-2.93	-11.72
E220	42 16.58	72 38.94	148.00	980	364.57	0.19	-5.44	-13.06
E222	42 16.59	72 38.34	173.65	980	365.26	0.71	-2.35	-10.33
E167	42 16.65	72 41 65	189.31	980	362.82	0.23	-3.41	-12.41
E221	42 16.66	72 38.52	162.34	980	365.18	0.29	-3.61	-11.62
E162	42 16.66	72 42.43	224.27	980	360.18	0.67	-2.78	-12.55
E195	42 16.67	72 44.25	427.94	980	350.45	0.76	6 64	-10.07
E171	42 16.74	72 41 93	202.58	980	362.22	0.23	-2.90	-12.36
E64	42 16.82	72 42.95	182.53	980	363.91	0.86	-3.21	-11.35
E225	42 16.83	72 39.26	123.27	980	366.86	0.22	-5.85	-12.59
E172	42 16.83	72 42.05	202.91	980	362.25	0.21	-2.97	-12.46
E32	42 16.84	72 40.24	187.00	980	364.96	0.19	-1.78	-10.74
E163	42 16.84	72 42.58	249.80	980	358.82	0.77	-2.01	-12.56
E86	42 16.84	72 44.14	341.79	980	355.45	0.72	3.28	-10.49
E194	42 16.90	72 44.43	450.52	980	349.87	0.31	7.84	-10.09
E223	42 16.92	72 37.80	146.98	980	366.23	0.41	-4.39	-11.75
E168	42 16.92	72 41 63	190.80	980	364.10	0.25	-2.39	-11.43
E68	42 16.94	72 43 83	308.15	980	357.16	0.37	1.67	-11.29
E66	42 16.95	72 43 16	293.38	980	356.58	0.64	-0.32	-12.50
E65	42 16.97	72 42.86	250.46	980	359.37	1.06	-1.59	-11.87
E67	42 16.98	72 43 42	298.78	980	357.21	0.33	0.78	-11.90
E224	42 17 01	72 38.47	115.27	980	367.82	0.35	-5.92	-12.25
E85	42 17 04	72 44.20	304.65	980	358.34	0.76	2.37	-10.08
E174	42 17 06	72 42.27	208.76	980	362.30	0.31	-2.72	-12.31
E175	42 17 06	72 42.66	197.63	980	363.01	0.33	-3.05	-12.24
E226	42 17 08	72 39.23	144.00	980	366.55	0.14	-4.59	-12.12
E169	42 17.13	72 41 67	261.02	980	359.77	0.24	-0.44	-11.91
E193	42 17 20	72 44.64	427.32	980	351.73	0.37	7 07	-10.01
E176	42 17 23	72 42.86	224.93	980	361.63	0.40	-2.12	-12.19
E170	42 17 24	72 41 64	291.14	980	358.33	0.35	0.79	-11.61
E33	42 17 27	72 40 34	238.00	980	362.64	0.21	0.06	-10.65
E46	42 17 31	72 44.72	475.00	980	348.96	0.27	8.61	-10.20
E114	42 17 40	72 42.20	303.13	980	358.04	0.37	1.39	-11.40
E113	42 17 43	72 41 69	304.00	980	358.16	0.21	1.55	-11.44
E227	42 17 45	72 38.41	106.10	980	369.75	0.14	-5.51	-11.74
E41	42 17 46	72 43 00	302.30	980	357.74	0.37	0.93	-11.84
E111	42 17 47	72 43 00	206.48	980	364.63	0.29	-1.22	-10.76
E231	42 17 52	72 39.48	161.00	980	367.94	0.13	-2.25	-10.39
E43	42 17 56	72 43 82	413.00	980	353.20	0.40	6.65	-9.90
E44	42 17 64	72 44.10	395.69	980	353.63	0.64	5.33	-10.39
E112	42 17 65	72 41 18	188.50	980	365.21	0.30	-2.59	-11.50

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
E42	42 17.73	72 43.56	302.30	980 357.30	0.98	0.08	-12.08
E228	42 17.79	72 38.62	112.00	980 371.26	0.12	-3.95	-10.40
E34	42 17.83	72 40.23	261.30	980 361.85	0.26	0.63	-10.84
E84	42 17.83	72 44.34	399.09	980 353.94	0.31	5.68	-10.48
E185	42 17.84	72 43.36	428.72	980 352.24	0.40	6.74	-10.35
E186	42 17.91	72 43.66	589.27	980 343.65	0.60	13.16	-9.27
E39A	42 17.92	72 42.41	289.10	980 357.91	0.26	-0.84	-13.26
E40	42 17.92	72 43.05	305.00	980 359.26	0.34	2.01	-10.88
E83	42 18.00	72 44.62	407.61	980 353.77	0.40	6.05	-10.31
E36	42 18.06	72 40.46	259.00	980 362.47	0.21	0.69	-10.75
E39B	42 18.06	72 42.45	305.78	980 357.44	0.24	0.05	-12.96
E230	42 18.07	72 39.37	150.80	980 368.90	0.23	-3.08	-10.76
E229	42 18.08	72 38.86	113.30	980 371.98	0.13	-3.54	-10.03
E38	42 18.10	72 41.80	272.81	980 360.23	0.28	-0.31	-12.15
E82	42 18.13	72 44.78	424.19	980 353.78	0.36	7.43	-9.55
E37	42 18.17	72 41.27	210.19	980 364.65	0.29	-1.89	-11.56
E77	42 18.20	72 43.01	310.42	980 359.19	0.31	2.03	-11.08
E702	42 18.29	72 40.77	317.06	980 359.50	0.15	2.83	-10.67
E74	42 18.34	72 43.00	294.50	980 360.31	0.39	1.44	-11.04
E184	42 18.39	72 43.19	450.97	980 350.29	0.37	6.07	-11.83
E27	42 18.41	72 38.02	109.20	980 373.18	0.13	-3.22	-9.57
E73	42 18.58	72 43.00	319.65	980 359.61	0.72	2.75	-10.27
E75	42 18.59	72 43.35	378.40	980 357.01	0.50	5.66	-9.61
E189	42 18.60	72 44.87	800.72	980 330.25	0.95	18.61	-10.77
E705	42 18.61	72 43.88	257.46	980 362.46	0.22	-0.30	-11.67
E72	42 18.62	72 42.36	300.35	980 358.47	0.25	-0.27	-13.09
E71	42 18.64	72 41.73	277.50	980 360.18	0.23	-0.74	-12.79
E76	42 18.66	72 43.83	469.90	980 351.89	0.55	9.04	-9.33
E701	42 18.68	72 40.40	296.57	980 360.71	0.19	1.53	-11.22
E692	42 18.74	72 39.19	227.85	980 366.72	0.13	0.98	-9.46
E188	42 18.74	72 44.48	449.72	980 351.42	0.47	6.55	-11.20
E125	42 18.75	72 37.55	116.00	980 372.91	0.13	-3.36	-9.95
E691	42 18.82	72 39.53	274.91	980 363.63	0.13	2.20	-9.87
E103	42 18.82	72 42.02	292.88	980 359.66	0.21	-0.08	-12.68
WD5	42 18.82	72 42.68	525.70	980 346.40	1.64	8.56	-10.65
E187	42 18.87	72 44.80	612.83	980 341.52	0.35	11.80	-11.70
E69	42 18.93	72 39.88	274.00	980 363.28	0.11	1.60	-10.45
E70	42 18.93	72 40.33	314.50	980 359.78	0.19	1.91	-11.46
E124	42 18.97	72 38.08	148.01	980 372.13	0.17	-1.46	-9.11
WD6	42 18.98	72 43.59	785.00	980 331.25	3.02	17.56	-9.20
E78	42 18.99	72 43.06	341.00	980 359.29	0.51	3.82	-10.14
BSBRD	42 19.00	72 38.44	173.65	980 370.57	0.26	-0.65	-9.10
SRB	42 19.05	72 38.40	173.65	980 370.57	0.23	-0.73	-9.20
E104	42 19.07	72 41.71	294.00	980 359.49	0.26	-0.52	-13.11
E105	42 19.13	72 41.31	281.40	980 360.74	0.21	-0.54	-12.75
E123	42 19.14	72 37.79	133.56	980 373.09	0.11	-2.11	-9.32
E875	42 19.15	72 39.15	194.24	980 369.22	0.14	-0.29	-9.56
E110	42 19.16	72 40.40	325.50	980 359.44	0.19	2.26	-11.49
E118	42 19.25	72 39.88	207.57	980 366.96	0.14	-1.45	-11.18
E79	42 19.25	72 43.06	340.00	980 360.07	0.43	4.12	-9.89
E122	42 19.26	72 38.11	149.44	980 373.01	0.11	-0.88	-8.64
E87	42 19.36	72 38.69	206.00	980 369.50	0.11	0.78	-8.93
E205	42 19.43	72 37.61	138.50	980 373.06	0.11	-2.12	-9.50

STATION	LATITUDE		LONGITUDE		ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
E207	42	19.44	72	38.30	206.00	980 369.82	0.17	0.98	-8.67
E206	42	19.45	72	38.02	135.37	980 373.48	0.11	-2.02	-9.29
E109	42	19.45	72	40.63	279.69	980 361.82	0.65	-0.10	-11.81
E107	42	19.46	72	40.84	239.53	980 364.04	0.35	-1.68	-12.31
E117	42	19.47	72	39.48	174.11	980 370.66	0.11	-1.23	-9.84
E119	42	19.50	72	40.31	233.00	980 365.12	0.20	-1.27	-11.83
E88	42	19.54	72	39.08	199.80	980 369.77	0.15	0.20	-9.26
E106	42	19.54	72	41.08	306.73	980 359.34	0.25	-0.17	-13.21
E80	42	19.57	72	43.26	374.83	980 358.13	0.55	4.98	-10.12
WD3	42	19.65	72	42.36	571.40	980 345.50	1.07	10.72	-10.63
E144	42	19.71	72	38.07	144.44	980 373.99	0.11	-1.04	-8.63
WD4	42	19.71	72	42.90	615.20	980 342.92	1.09	12.16	-10.68
E209	42	19.72	72	38.45	171.00	980 372.04	0.11	-0.51	-9.01
E121	42	19.72	72	38.81	204.00	980 371.05	0.10	1.61	-8.05
E89	42	19.73	72	39.61	197.40	980 369.34	0.18	-0.75	-10.09
E108	42	19.83	72	40.81	237.94	980 365.22	0.15	-1.20	-11.97
E204	42	19.85	72	37.65	144.50	980 373.73	0.11	-1.51	-9.10
E140	42	19.97	72	38.16	147.72	980 374.56	0.10	-0.55	-8.27
E905	42	19.97	72	40.36	279.50	980 362.50	0.17	-0.22	-12.41
E895	42	19.98	72	39.41	225.20	980 368.35	0.14	0.51	-9.83
E90	42	20.00	72	39.96	269.05	980 362.93	0.16	-0.82	-12.66
E92	42	20.03	72	41.03	247.00	980 364.50	0.32	-1.37	-12.29
E81	42	20.03	72	43.27	422.50	980 356.02	0.49	6.66	-10.14
E138	42	20.05	72	38.65	186.85	980 372.10	0.11	0.55	-8.50
WD2	42	20.08	72	42.47	527.90	980 348.72	0.54	9.20	-11.19
E1005	42	20.09	72	38.99	206.50	980 370.57	0.11	0.80	-8.93
E91	42	20.15	72	40.41	280.12	980 362.89	0.18	-0.04	-12.24
E1025	42	20.25	72	39.79	251.00	980 366.11	0.13	0.29	-10.95
E925	42	20.25	72	41.39	292.90	980 361.63	0.37	-0.25	-12.70
E141	42	20.28	72	38.23	147.72	980 374.97	0.10	-0.61	-8.33
E100	42	20.28	72	38.90	199.15	980 370.65	0.11	-0.09	-9.57
E139	42	20.32	72	38.52	182.31	980 372.51	0.11	0.13	-8.77
E99	42	20.33	72	39.33	249.00	980 367.74	0.10	1.62	-9.59
E142	42	20.37	72	37.90	137.96	980 375.56	0.11	-1.07	-8.44
E15	42	20.37	72	43.53	422.77	980 356.82	0.59	6.97	-9.74
TL2	42	20.41	72	39.49	251.00	980 369.03	0.23	2.97	-8.18
E97	42	20.42	72	40.43	283.50	980 363.41	0.19	0.39	-11.92
E102	42	20.43	72	40.12	312.51	980 362.34	0.17	2.03	-11.30
E14	42	20.43	72	43.17	412.50	980 356.51	0.29	5.61	-11.04
E133	42	20.46	72	38.72	180.69	980 369.53	0.12	-3.21	-12.05
E93	42	20.48	72	41.65	314.00	980 360.81	0.36	0.57	-12.62
E150A	42	20.53	72	39.72	261.43	980 366.72	0.15	1.46	-10.13
E13	42	20.53	72	43.02	408.00	980 357.19	0.49	5.72	-10.58
E945	42	20.55	72	42.67	506.65	980 350.94	0.21	8.72	-11.26
BLKPK	42	20.60	72	40.92	287.77	980 362.47	0.26	-0.41	-12.80
E94	42	20.60	72	42.35	431.81	980 354.94	0.43	5.60	-11.58
E134	42	20.63	72	38.85	224.42	980 372.18	0.17	3.29	-7.00
E16	42	20.63	72	43.36	444.65	980 355.88	0.67	7.71	-9.67
TL1	42	20.64	72	39.43	268.30	980 367.81	0.17	3.03	-8.77
E96	42	20.66	72	40.45	284.45	980 363.23	0.21	-0.06	-12.38
E98	42	20.67	72	40.12	283.97	980 364.35	0.21	1.01	-11.30
E1904	42	20.71	72	37.82	115.59	980 378.51	0.10	-0.73	-7.34
E1906	42	20.72	72	38.14	118.76	980 378.14	0.11	-0.82	-7.52

STATION	LATITUDE	LONGITUDE	ELEV	OBS GRAV	T C	FREE AIR	BOUGUER
E935	42 20.73	72 41.95	308.23	980361.71	0.33	0.56	-12.47
E190	42 20.83	72 38.59	175.98	980374.75	0.17	1.00	-7.62
E8	42 20.87	72 41.59	275.50	980363.90	0.29	-0.55	-12.48
E135	42 20.90	72 39.04	233.75	980371.30	0.15	2.88	-7.75
E145	42 20.92	72 40.30	267.12	980365.22	0.22	-0.09	-11.80
E17	42 20.94	72 43.28	499.50	980352.92	0.81	9.44	-9.70
E10	42 20.96	72 42.04	324.20	980361.93	0.39	1.94	-11.58
E6	42 21.09	72 41.44	298.20	980363.17	0.27	0.53	-12.20
E189	42 21.10	72 38.57	198.73	980374.37	0.14	2.36	-7.07
E7	42 21.10	72 40.95	408.90	980355.66	0.59	3.42	-12.82
E136	42 21.17	72 39.23	265.29	980370.65	0.15	4.79	-6.93
E143	42 21.19	72 37.55	146.32	980375.33	0.13	-1.74	-9.38
E146	42 21.19	72 40.44	222.83	980368.55	0.19	-1.33	-11.55
E18	42 21.19	72 43.18	507.50	980352.77	0.49	9.67	-10.07
E95	42 21.25	72 42.08	348.04	980361.67	0.52	3.48	-10.73
BE126	42 21.29	72 38.43	204.16	980374.28	0.16	2.50	-7.11
E1915	42 21.31	72 37.98	111.83	980380.24	0.12	-0.26	-6.72
E137	42 21.33	72 39.25	213.66	980373.66	0.20	2.71	-7.18
E9	42 21.34	72 41.71	385.30	980358.77	0.21	3.96	-11.85
E23	42 21.34	72 42.37	371.38	980360.94	0.31	4.81	-10.41
E12	42 21.38	72 42.64	405.70	980358.70	0.73	5.74	-10.24
E22	42 21.39	72 42.71	447.00	980355.96	0.35	6.87	-10.92
TL3	42 21.40	72 39.53	207.60	980371.88	0.24	0.26	-9.39
E19	42 21.45	72 43.23	519.85	980353.22	0.50	10.90	-9.25
E127	42 21.49	72 38.55	236.08	980373.90	0.16	4.82	-5.89
E191	42 21.52	72 37.96	146.75	980378.65	0.11	1.13	-6.55
E5	42 21.53	72 41.58	404.00	980357.91	0.15	4.57	-11.94
E11	42 21.58	72 42.11	365.00	980361.33	0.35	4.24	-10.72
E147	42 21.62	72 40.30	245.75	980368.43	0.39	0.07	-10.74
E183	42 21.64	72 37.68	148.30	980377.97	0.11	0.41	-7.32
E185	42 21.65	72 38.30	165.11	980377.18	0.23	1.19	-7.00
E21	42 21.72	72 43.04	491.00	980355.52	0.31	10.08	-9.27
E128	42 21.73	72 38.58	263.52	980373.08	0.18	6.22	-5.41
E4	42 21.75	72 41.65	379.50	980359.82	0.16	3.84	-11.81
E148	42 21.78	72 40.32	322.24	980364.72	0.33	3.31	-10.20
TL4	42 21.82	72 39.45	197.30	980374.19	0.23	0.97	-8.34
E20	42 21.87	72 43.43	568.10	980351.44	0.45	13.02	-8.84
E184	42 21.92	72 37.83	156.77	980379.25	0.12	2.06	-5.95
E129	42 21.92	72 38.80	291.10	980371.28	0.19	6.73	-5.84
E186	42 21.94	72 38.30	152.85	980379.23	0.21	1.65	-6.14
E1	42 22.04	72 42.15	390.56	980360.97	0.42	5.60	-10.18
E3	42 22.05	72 41.58	379.90	980360.83	0.25	4.44	-11.14
E149	42 22.09	72 40.25	388.47	980361.70	0.54	6.06	-9.52
E130	42 22.15	72 38.75	267.72	980373.26	0.26	6.17	-5.53
TL5	42 22.15	72 39.38	323.40	980369.25	0.34	7.40	-6.14
E1845	42 22.24	72 37.74	133.74	980380.22	0.11	0.39	-6.84
E187	42 22.27	72 38.16	149.40	980378.86	0.16	0.46	-7.26
E131	42 22.44	72 38.79	187.30	980378.23	0.25	3.14	-5.80
E188	42 22.47	72 38.10	153.65	980382.05	0.16	3.75	-4.12
TL6	42 22.47	72 39.36	279.70	980372.68	0.28	6.23	-5.86
MTY2	42 22.48	72 40.17	136.55	980381.58	0.11	1.66	-5.67
E2	42 22.49	72 42.24	428.00	980359.57	0.55	7.05	-9.89