DEPARTMENT OF THE INTERIOR
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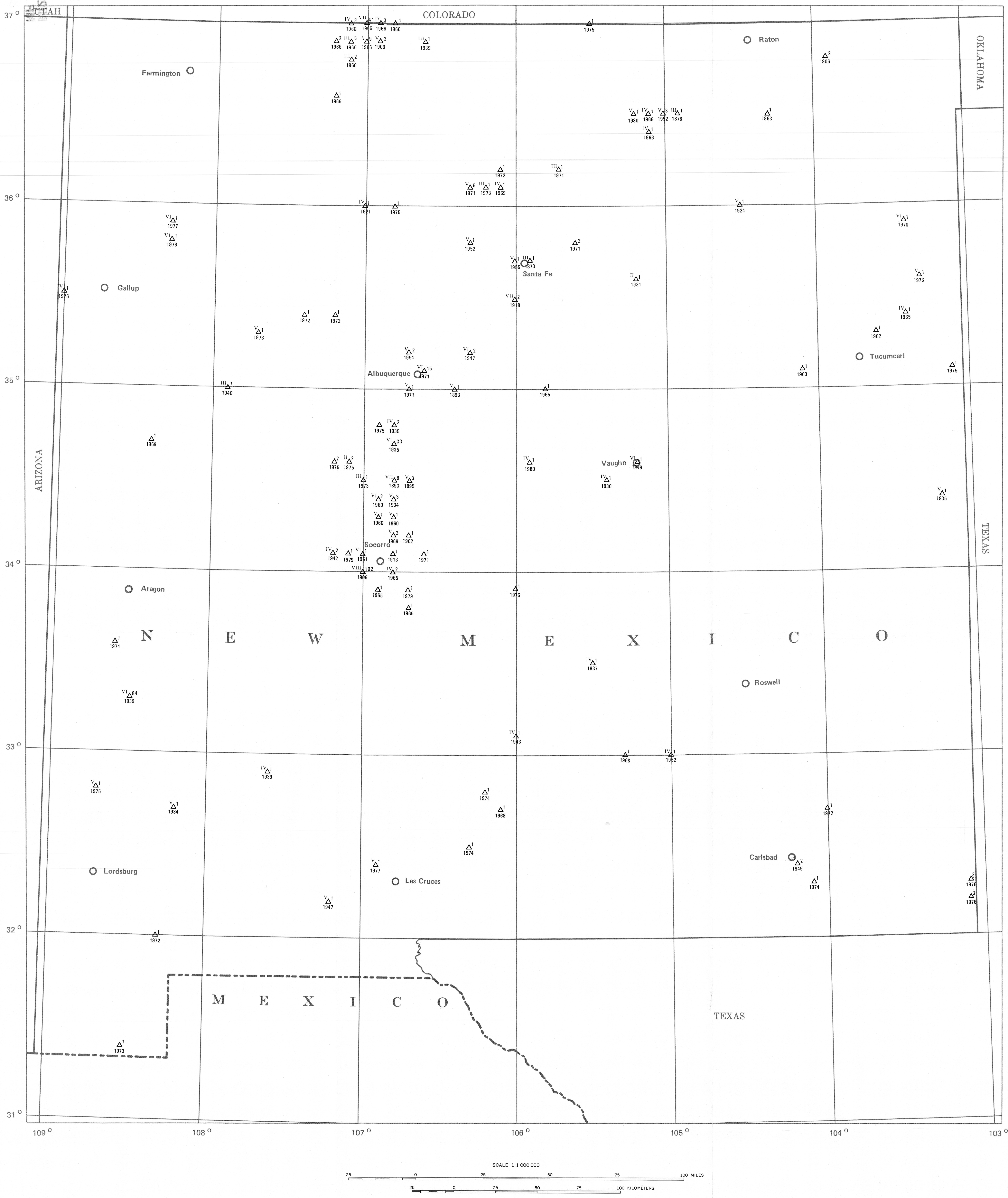
MISCELLANEOUS FIELD STUDIES
MAP MF-1660



SEISMICITY MAP OF THE STATE OF NEW MEXICO

By

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INTRODUCTION

The data shown on this map and listed in table 1 are for earthquakes that were originally included in a study of seismic risk in the United States (Algermissen, 1969). This data file has been recompiled and updated through 1980. Some revisions of epicenters and intensities in the original file have been made, and intensities have been assigned to earthquakes that previously had none assigned. Only earthquakes that had epicenters within the boundary of the State are listed in table 1, even though earthquakes that had epicenters in bordering states or countries may have been felt or may have caused damage in the State. Intensity values were updated from data sources that were not available at the time of original compilation. Some epicenters were relocated on the basis of new information. The data shown in table 1 represent best estimates of the epicenter, magnitude, and intensity of each earthquake on the basis of historical and current information. Some of the aftershocks from large earthquakes are listed, but not all, especially for the earthquakes that occurred before seismic intruments were universally used.

New Mexico has a history of earthquake swarms (Sanford and others, 1981); all except two occurred in the Rio Grande rift. The swarms were in 1849-50, 1893, 1904, 1906-07, 1935, 1938-39, and 1966. The 1938-39 swarm occurred in the western part of the State near the Arizona border, and the 1966 one occurred near Dulce along the Colorado border. Table 1 lists some of the earthquakes of each swarm, however, the published literature is incomplete and it is not possible to list every event.

The data in table 1 were used to compile the seismicity map. The latitude and longitude coordinates of each epicenter were rounded to the nearest tenth of a degree, and the number of events that had identical locations were counted. The triangles on the map represent epicenters plotted to the nearest tenth of a degree. The number of earthquakes at each location is shown on the map by the number to the right of the triangle. A Roman numeral to the left of a triangle is the maximum Modified Mercalli intensity (Wood and Neumann, 1931) of all earthquakes at that geographic location. The absence of an intensity value indicates that no intensities have been assigned to earthquakes at that location. The four-digit number shown below each triangle is the latest year for which the maximum intensity was recorded.

EXPLANATION OF THE TABLES

The data are listed chronologically in table 1 in the following categories: date, origin time, N. latitude, W. longitude, depth, hypocenter quality and referenced data sources, magnitude, and intensity (Modified Mercalli) and intensity source references. Table 1 has some basic limitations in terms of the size (magnitude or intensity) of the earthquakes listed. Prior to 1965 all recorded felt earthquakes are listed; after 1965 only felt earthquakes or those with magnitudes greater than the 2.5-3.0 range are listed. If no magnitude was computed and the earthquake was felt, it was included in the earthquake list. The low-magnitude events located in recent years using data from dense seismograph networks have not been included.

Listed below is an explanation of the symbols and codes used in the tables:

1. Leaders (..) indicate information not available.
2. Latitude and longitude are listed to a hundredth of a degree if they have been published with that degree of accuracy, or greater; however, most historical events have been published only to the nearest degree or tenth of a degree and are therefore listed at this accuracy in table 1. An asterisk (*) to the right of the longitude indicates that the latitude and longitude were not given in the source reference, but were assigned by the compilers of the data file. An (x) to the right of the longitude indicates that the event is an explosion, a suspected explosion, rockburst, or a nontectonic event; these have not been plotted on the map.
3. The letter code in the HYPOCENTER, QUAL column is defined below:
   a. Determinations of instrumental hypocenters are estimated to be accurate within the ranges of latitude and longitude listed below; each range is letter coded as indicated:
      A 0.0°-0.1°
      B 0.1°-0.2°
      C 0.2°-0.5°
      D 0.5°-1.0°
      E 1.0° or larger
   b. Determinations of noninstrumental epicenters from felt data are estimated to be accurate within the ranges of latitude and longitude listed below; each range is letter coded as indicated:
      F 0.0°-0.5°
      G 0.5°-1.0°
      H 1.0°-2.0°
      I 2.0° or larger
4. The reference identification numbers in the HYPOCENTER, REF and INTENSITY, REF columns indicate the sources of the hypocenter and intensity. They are listed in numerical order in table 2.
5. The magnitudes listed under USGS are mb values (Gutenberg and Richter, 1956) published in the Preliminary Determination of Epicenters (PDE) by the National Earthquake Information Service, U. S. Geological Survey and predecessor organizations. Associated with the magnitude values listed under OTHER are the source code and type. Type is defined by 1 = ML (Richter, 1958), 2 = mbLg (Nuttli, 1973), 3 = MS (Bath, 1966 or Gutenberg, 1945), 4 = mb (Gutenberg and Richter, 1956), 5 = mbLg modified, 6 = duration or coda length, 7 = m3Hz (Lawson and others, 1979), and 9 = unknown. The source codes are listed below:
   GS - National Earthquake Information Service (and predecessor organizations), U. S. Geological Survey, Golden, Colo.
   NMI - New Mexico Institute of Mining Technology, Socorro, N. Mex.
   NUT - Nuttli, O. W., Bollinger, G. A., and Griffiths, D. W., 1979, Seismological Society of America Bulletin, v. 69, no. 3, p. 893-909.
   RO - Rogers, A. M., and Malkiel, A., 1979, Seismological Society of America, v. 69, no. 3, p. 843-865.
   TAG - Taggart, James, and Baldwin, Frank, 1982, New Mexico Geology, v. 4, no. 4, p. 50-52.
   TGG - Taggart, James, 1982, U. S. Geological Survey (unpub. data).
6. An asterisk (*) in the INTENSITY, MM column indicates that the intensity was assigned by the compiler on the basis of the available data at the time the catalog was compiled.

ACKNOWLEDGMENTS

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MODIFIED MERCALLI INTENSITY SCALE OF 1931

I. Not felt - or, except rarely under especially favorable circumstances. Under certain conditions, at and outside the boundary of the area in which a great shock is felt: sometimes birds, animals, reported uneasy or disturbed; sometimes dizziness or nausea experienced; sometimes trees, structures, liquids, bodies of water, may sway--doors may swing, very slowly.

II. Felt indoors by few, especially on upper floors, or by sensitive, or nervous persons. Also, as in grade I, but often more noticeably: sometimes hanging objects may swing, especially when delicately suspended; sometimes trees, structures, liquids, bodies of water, may sway, doors may swing, very slowly; sometimes birds, animals, reported uneasy or disturbed; sometimes dizziness or nausea experienced.

III. Felt indoors by several, motion usually rapid vibration. Sometimes not recognized to be an earthquake at first. Duration estimated in some cases. Vibration like that due to passing of light, or lightly loaded trucks, or heavy trucks some distance away. Hanging objects may swing slightly. Movements may be appreciable on upper levels of tall structures. Rocked standing motor cars slightly.

IV. Felt indoors by many, outdoors by few. Awakened few, especially light sleepers. Frightened no one, unless apprehensive from previous experience. Vibration like that due to passing of heavy or heavily loaded trucks. Sensation like heavy body striking building or falling of heavy objects inside. Rattling of dishes, windows, doors; glassware and crockery clink and clash. Creaking of walls, frame, especially in the upper range of this grade. Hanging objects swung, in numerous instances. Disturbed liquids in open vessels slightly. Rocked standing motor cars noticeably.

V. Felt indoors by practically all, outdoors by many or most: outdoors direction estimated. Awakened many, or most. Frightened few--slight excitement, a few ran outdoors. Buildings trembled throughout. Broke dishes, glassware, to some extent. Cracked windows--in some cases, but not generally. Overturned vases, small or unstable objects, in many instances, with occasional fall. Hanging objects, doors, swing generally or considerably. Knocked pictures against walls, or swung them out of place. Opened, or closed, doors, shutters, abruptly. Pendulum clocks stopped, started or ran fast, or slow. Moved small objects, furnishings, the latter to slight extent. Spilled liquids in small amounts from well-filled open containers. Trees, bushes, shaken slightly.

VI. Felt by all, indoors and outdoors. Frightened many, excitement general, some alarm, many ran outdoors. Awakened all. Persons made to move unsteadily. Trees, bushes, shaken slightly to moderately. Liquid set in strong motion. Small bells rang--church, chapel, school, etc. Damage slight in poorly built buildings. Fall of plaster in small amount. Cracked plaster somewhat, especially fine cracks chimneys in some instances. Broke dishes, glassware, in considerable quantity, also some windows. Fall of knick-knacks, books, pictures. Overturned furniture in many instances. Moved furnishings of moderately heavy kind.

VII. Frightened all--general alarm, all ran outdoors. Some, or many, found it difficult to stand. Noticed by persons driving motor cars. Trees and bushes shaken moderately to strongly. Waves on ponds, lakes, and running water. Water turbid from mud stirred up. Incaving to some extent of sand or gravel stream banks. Rang large church bells, etc. Suspended objects made to quiver. Damage negligible in buildings of good design and construction, slight to moderate in well-built ordinary buildings, considerable in poorly built or badly designed buildings, adobe houses, old walls (especially where laid up without mortar), spires, etc. Cracked chimneys to considerable extent, walls to some extent. Fall of plaster in considerable to large amount, also some stucco. Broke numerous windows, furniture to some extent. Shook down loosened brickwork and tiles. Broke weak chimneys at the roof-line (sometimes damaging roofs). Fall of cornices from towers and high buildings. Dislodged bricks and stones. Overturned heavy furniture, with damage from breaking. Damage considerable to concrete irrigation ditches.

VIII. Fright general--alarm approaches panic. Disturbed persons driving motor cars. Trees shaken strongly--branches, trunks, broken off, especially palm trees. Ejected sand and mud in small amounts. Changes: temporary, permanent; in flow of springs and wells; dry wells renewed flow; in temperature of spring and well waters. Damage slight in structures (brick) built especially to withstand earthquakes. Considerable in ordinary substantial buildings, partial collapse: racked, tumbled down, wooden houses in some cases; threw out panel walls in frame structures, broke off decayed piling. Fall of walls. Cracked, broke, solid stone walls seriously. Wet ground to some extent, also ground on steep slopes. Twisting, fall, of chimneys, columns, monuments, also factory stacks, towers. Moved conspicuously, overturned, very heavy furniture.

IX. Panic general. Cracked ground conspicuously. Damage considerable in (masonry) structures built especially to withstand earthquakes: Threw out of plumb some wood-frame houses built especially to withstand earthquakes; great in substantial (masonry) buildings, some collapse in large part; or wholly shifted frame buildings off foundations, racked frames; serious to reservoirs; underground pipes sometimes broken.

X. Cracked ground, especially when loose and wet, up to widths of several inches; fissures up to a yard in width ran parallel to canal and stream banks. Landslides considerable from river banks and steep coasts. Shifted sand and mud horizontally on beaches and flat land. Changed level of water in wells. Threw water on banks of canals, lakes, rivers, etc. Damage serious to dams, dikes, embankments. Severe to well-built wooden structures and bridges, some destroyed. Developed dangerous cracks in excellent brick walls. Destroyed most masonry and frame structures, also their foundations. Bent railroad rails slightly. Tore apart, or crushed endwise, pipe lines buried in earth. Open cracks and broad wavy folds in cement pavements and asphalt road surfaces.

XI. Disturbances in ground many and widespread, varying with ground material. Broad fissures, earth slumps, and land slips in soft, wet ground. Ejected water in large amounts charged with sand and mud. Caused sea-waves ("tidal" waves) of significant magnitude. Damage severe to wood-frame structures, especially near shock centers. Great to dams, dikes, embankments often for long distances. Few, if any (masonry) structures remained standing. Destroyed large well-built bridges by the wrecking of supporting piers, or pillars. Affected yielding wooden bridges less. Bent railroad rails greatly, and thrust them endwise. Put pipe lines buried in earth completely out of service.

XII. Damage total--practically all works of construction damaged greatly or destroyed. Disturbances in ground great and varied, numerous shearing cracks. Landslides, falls of rock of significant character, slumping of river banks, etc., numerous and extensive. Wrenched loose, tore off, large rock masses. Fault slips in firm rock, with notable horizontal and vertical offset displacements. Water channels, surface and underground, disturbed and modified greatly. Dammed lakes, produced waterfalls, deflected rivers, etc. Waves seen on ground surfaces (actually seen, probably, in some cases). Distorted lines of sight and level. Threw objects upward into the air.

Table 1.--Chronological listing of earthquakes for the State of New Mexico

DATE			ORIGIN TIME(UTC)			LAT.	LONG.	DEPTH	HYPOCENTER		MAGNITUDE		INTENSITY	
YEAR	MONTH	DAY	H	M	S	(N.)	(W.)	(KM)	QUAL	REF	USGS	OTHER	MM	REF
1849	DEC	11	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	V*	269
1849	DEC	28	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1849	DEC	28	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1849	DEC	28	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1849	DEC	28	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1849	DEC	28	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1849	DEC	29	13	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1849	DEC	30	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1849	DEC	30	03	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	01	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	02	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	02	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	04	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	04	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	04	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	05	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	05	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	06	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	06	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	10	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	JAN	12	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	FEB	08	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	AUG	10	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	AUG	10	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	OCT	02	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1850	OCT	18	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1851	JAN	23	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1851	FEB	13	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1851	FEB	14	..	..	..	34.0	107.0 *	..	G	269	..	.. ..	...	..
1855	APR	20	05	..	..	34.0	107.0 *	..	G	269	..	.. ..	VI*	269
1868	APR	28	..	..	..	34.0	107.0	..	G	38	..	.. ..	V	38
1869	APR	18	13	..	..	34.0	107.0	..	G	38	..	.. ..	VII	38
1869	APR	20	..	..	..	34.0	107.0 *	..	G	270	..	.. ..	VI*	270
1873	AUG	03	05	..	..	35.7	105.9 *	..	G	133	..	.. ..	III*	133
1878	JUN	14	..	..	..	36.5	104.9 *	..	G	254	..	.. ..	III*	254
1879	...	..	..	..	..	34.0	107.0	..	G	38	..	.. ..	V	38
1886	JUL	06	..	..	..	34.0	107.0	..	G	38	..	.. ..	V	38
1893	APR	07	03	..	..	34.5	106.8 *	..	G	270	..	.. ..	IV	270
1893	APR	08	03	20	..	34.5	106.8 *	..	G	270	..	.. ..	VI*	255
1893	APR	08	10	..	..	34.5	106.8 *	..	G	270	..	.. ..	V*	270
1893	APR	08	11	..	..	34.5	106.8 *	..	G	270	..	.. ..	V*	255
1893	JUL	12	13	40	..	35.0	106.4	..	G	38	..	.. ..	V	38
1893	SEP	07	..	..	..	34.5	106.8 *	..	G	255	..	.. ..	VII	38
1895	OCT	05	02	44	..	34.5	106.7	..	G	38	..	.. ..	V	38
1895	OCT	05	05	25	..	34.5	106.7 *	..	G	270	..	.. ..	V	270
1895	OCT	05	10	15	..	34.5	106.7 *	..	G	270	..	.. ..	V	270
1897	...	..	..	..	..	34.0	107.0	..	G	38	..	.. ..	VI	38
1899	FEB	09	..	..	..	34.5	106.8 *	..	G	58	..	.. ..	IV*	58
1900	MAY	..	..	..	..	36.9	106.9 *	..	G	270	..	.. ..	V*	270
1904	JAN	20	02	10	..	34.0	107.0	..	G	38	..	.. ..	V	84
1904	JAN	20	07	..	..	34.0	107.0 *	..	G	270	..	.. ..	IV*	270
1904	JAN	30	12	25	..	34.0	107.0 *	..	G	256	..	.. ..	V	84
1904	JAN	30	14	00	..	34.0	107.0 *	..	G	270	..	.. ..	III	270
1904	JAN	30	14	15	..	34.0	107.0 *	..	G	270	..	.. ..	V	270
1904	FEB	22	06	30	..	34.0	107.0 *	..	G	256	..	.. ..	V	84
1904	MAR	09	07	26	..	34.0	107.0 *	..	G	256	..	.. ..	V	84
1904	SEP	06	18	30	..	34.0	107.0 *	..	G	270	..	.. ..	V	261
1906	APR	20	..	..	..	36.8	103.9 *	..	H	58	..	.. ..	...	..
1906	APR	21	..	..	..	36.8	103.9 *	..	H	58	..	.. ..	...	..
1906	JUL	02	10	15	..	34.0	107.0 *	..	F	257	..	.. ..	V	257
1906	JUL	02	10	30	..	34.0	107.0 *	..	F	257	..	.. ..	V*	257
1906	JUL	07	07	30	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1906	JUL	07	10	00	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1906	JUL	07	11	10	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1906	JUL	12	12	15	..	34.0	107.0	..	F	38	..	.. ..	VII	257
1906	JUL	12	13	05	..	34.0	107.0 *	..	F	270	..	.. ..	VI*	270
1906	JUL	16	13	00	..	34.0	107.0 *	..	F	257	..	.. ..	V*	257
1906	JUL	16	17	00	..	34.0	107.0 *	..	F	257	..	.. ..	III*	257
1906	JUL	16	19	00	..	34.0	107.0	..	F	38	..	.. ..	VIII	38
1906	JUL	16	19	05	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	16	19	08	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	16	19	30	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	16	20	00	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	16	20	30	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	16	21	40	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	16	22	00	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	16	23	10	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	17	01	00	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	17	03	45	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	17	05	00	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	17	06	20	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	17	07	00	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	17	10	00	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	17	11	20	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	17	13	00	..	34.0	107.0 *	..	F	257	..	.. ..	...	..
1906	JUL	18	23	00	..	34.0	107.0 *	..	F	270	..	.. ..	V	270
1906	JUL	25	18	50	..	34.0	107.0 *	..	F	257	..	.. ..	V*	257
1906	JUL	30	22	00	..	34.0	107.0 *	..	F	257	..	.. ..	V*	257
1906	AUG	06	06	20	..	34.0	107.0 *	..	F	257	..	.. ..	V*	257
1906	AUG	21	10	30	..	34.0	107.0 *	..	F	257	..	.. ..	V*	257
1906	SEP	15	10	30	..	35.5	106.0 *	..	H	58	..	.. ..	...	..
1906	OCT	12	20	45	..	34.0	107.0 *	..	G	257	..	.. ..	IV*	257
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1906	DEC	19	12	00	..	34.0	107.0 *	..	G	257	..	.. ..	V*	257
1907	JUN	06	..	..	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1907	JUN	16	..	..	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1907	JUN	17	..	..	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1907	JUN	28	..	..	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1907	JUN	29	..	..	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1907	JUL	07	..	..	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1907	JUL	11	..	..	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1907	JUL	21	..	..	..	34.0	107.0 *	..	F	257	..	.. ..	IV*	257
1913	JUL	18	..	..	..	34.0	107.0	..	G	38	..	.. ..	...	..
1913	DEC	06	00	15	..	34.1	106.8	..	G	261	..	.. ..	...	..
1916	JUL	01	08	05	..	34.0	107.0 *	..	G	58	..	.. ..	III	58
1918	MAY	28	11	30	..	35.5	106.0	..	F	84	..	.. ..	VII*	38
1919	FEB	01	04	30	..	34.0	107.0	..	F	38	..	.. ..	IV*	58
1919	FEB	01	20	30	..	34.0	107.0	..	F	38	..	.. ..	V	38
1921	JUL	31	03	55	..	36.0	107.0	..	G	84	..	.. ..	IV	58
1924	AUG	13	04	23	..	36.0	104.5	..	G	38	..	.. ..	V	38
1928	MAR	15	13	30	..	34.4	106.8	..	F	1	..	.. ..	III*	1
1928	MAR	15	17	40	..	34.4	106.8	..	F	1	..	.. ..	IV	1
1930	MAR	23	18	56	..	35.1	106.6 *	..	F	3	..	.. ..	IV*	3
1930	OCT	04	03	25	..	34.5	105.4	..	F	3	..	.. ..	IV*	3
1930	DEC	03	21	36	..	35.1	106.6 *	..	F	3	..	.. ..	V*	3
1930	DEC	04	22	30	..	35.1	106.6 *	..	F	3	..	.. ..	III*	3
1931	JAN	28	04	28	..	35.1	106.6 *	..	F	4	..	.. ..	III	270
1931	FEB	03	23	45	..	35.1	106.6 *	..	F	4	..	.. ..	IV*	270
1931	FEB	05	04	48	..	35.1	106.6 *	..	F	4	..	.. ..	VI	38
1931	FEB	12	20	40	..	35.6	105.2 *	..	F	4	..	.. ..	II*	4
1931	APR	07	09	25	..	34.0	107.0 *	..	F	4	..	.. ..	II*	4
1934	JAN	08	01	32	..	34.0	107.0	..	F	38	..	.. ..	V	38
1934	FEB	28	..	..	..	34.4	106.8 *	..	F	7	..	.. ..	V*	7
1934	MAY	07	05	22	..	32.7	108.2	..	F	38	..	.. ..	V	7
1934	MAY	08	01	12	..	34.0	107.0 *	..	F	7	..	.. ..	III	7
1934	MAY	08	04	00	..	34.1	107.2 *	..	F	7	..	.. ..	IV*	7
1935	JAN	17	14	35	..	34.0	107.0 *	..	F	8	..	.. ..	III	8
1935	JAN	17	14	50	..	34.0	107.0 *	..	F	8	..	.. ..	III	8
1935	JAN	20	02	25	..	34.0	107.0 *	..	F	8	..	.. ..	IV	8
1935	FEB	21	01	25	..	34.5	106.8	..	F	38	..	.. ..	VI	38
1935	FEB	21	03	05	..	34.5	106.8 *	..	F	8	..	.. ..	V	261
1935	DEC	13	06	30	..	34.7	106.8 *	..	F	8	..	.. ..	IV	270
1935	DEC	15	06	45	..	34.8	106.8 *	..	F	8	..	.. ..	IV	270
1935	DEC	15	09	..	..	34.7	106.8 *	..	F	270	..	.. ..	IV	270
1935	DEC	15	10	..	..	34.7	106.8 *	..	F	270	..	.. ..	IV	270
1935	DEC	15	18	..	..	34.7	106.8 *	..	F	270	..	.. ..	III	270
1935	DEC	16	13	45	..	34.7	106.8 *	..	F	270	..	.. ..	IV	270
1935	DEC	16	18	..	..	34.7	106.8 *	..	F	270	..	.. ..	VI	270
1935	DEC	16	22	00	..	34.7	106.8 *	..	F	270	..	.. ..	III	270
1935	DEC	17	04	30	..	34.7	106.8 *	..	F	270	..	.. ..	III	270
1935	DEC	17	14	30	..	34.7	106.8 *	..	F	270	..	.. ..	V*	270
1935	DEC	17	15	00	..	34.7	106.8 *	..	F	270	..	.. ..	III	270
1935	DEC	18	05	33	18	34.7	106.8	..	F	38	..	.. ..	VI	270
1935	DEC	19	01	57	00	34.7	106.8	..	F	266	..	.. ..	V	270
1935	DEC	19	20	30	..	34.7	106.8 *	..	F	270	..	.. ..	V	270
1935	DEC	20	01	30	..	34.7	106.8 *	..	F	270	..	.. ..	IV	270
1935	DEC	20	05	30	..	34.4	103.2	..	F	268	..	.. ..	V*	268
1935	DEC	20	08	00	..	34.7	106.8 *	..	F	270	..	.. ..	V*	270
1935	DEC	20	10	30	..	34.7	106.8 *	..	F	270	..	.. ..	VI*	270
1935	DEC	21	05	20	..	34.7	106.8 *	..	F	270	..	.. ..	IV*	270
1935	DEC	21	07	30	..	34.7	106.8 *	..	F	270	..	.. ..	III	270
1935	DEC	21	11	30	..	34.7	106.8 *	..	F	270	..	.. ..	III	270
1935	DEC	21	12	00	..	34.7	106.8 *	..	F	270	..	.. ..	III	270
1935	DEC	22	01	56	..	34.7	106.8 *	..	F	8	..	.. ..	V*	8
1935	DEC	23	00	15	..	34.7	106.8 *	..	F	270	..	.. ..	IV*	270
1935	DEC	23	06	00	..	34.7	106.8 *	..	F	270	..	.. ..	III	270
1935	DEC	23	12	00	..	34.7	106.8 *	..	F	270	..	.. ..	IV*	270
1935	DEC	24	11	45	..	34.7	106.8 *	..	F	270	..	.. ..	III*	270
1935	DEC	24	18	50	..	34.7	106.8 *	..	F	270	..	.. ..	IV*	270
1935	DEC	24	19	15	..	34.7	106.8 *	..	F	270	..	.. ..	IV*	270
1935	DEC	27	15	00	..	34.7	106.8 *	..	F	270	..	.. ..	III	270
1935	DEC	28	19	05	..	34.7	106.8 *	..	F	270	..	.. ..	V*	270
1935	DEC	28	22	15	..	34.7	106.8 *	..	F	270	..	.. ..	IV*	270
1935	DEC	31	05	10	..	34.7	106.8 *	..	F	8	..	.. ..	IV*	8
1936	JAN	02	17	30	..	34.7	106.8 *	..	F	270	..	.. ..	III	270
1936	JAN	04	16	30	..	34.7	106.8 *	..	F	270	..	.. ..	III*	270
1936	JAN	08	06	44	..	32.4	104.2	..	F	105	..	.. ..	II*	9
1936	SEP	09	12	55	..	35.1	106.6 *	..	F	9	..	.. ..	IV*	270
1936	SEP	09	12	57	..	35.1	106.6 *	..	F	9	..	.. ..	II*	9
1936	SEP	11	23	54	..	35.1	106.6 *	..	F	270	..	.. ..	III	270
1936	SEP	12	00	00	..	35.1	106.6 *	..	F	270	..	.. ..	III	270
1936	SEP	12	00	05	..	35.1	106.6 *	..	F	270	..	.. ..	III	270
1937	SEP	30	06	15	..	33.5	105.5	..	F	105	..	.. ..	IV	105
1938	MAR	23	06	00	..	34.8	106.8 *	..	F	11	..	.. ..	III*	11
1938	APR	15	21	00	..	35.1	106.6 *	..	F	11	..	.. ..	III*	11
1938	APR	16	08	15	..	35.1	106.6 *	..	F	11	..	.. ..	III*	11
1938	SEP	05	00	34	30	33.3	108.5	..	F	277	..	3.4TAG 2	...	..
1938	SEP	17	17	20	17	33.3	108.5	..	F	277	..	4.9TAG 2	VI	38
1938	SEP	17	18	29	54	33.3	108.5	..	F	277	..	2.6TAG 2	...	..
1938	SEP	17	19	38	24	33.3	108.5	..	F	277	..	3.4TAG 2	IV*	259
1938	SEP	18	01	21	00	33.3	108.5	..	F	277	..	3.7TAG 2	...	..
1938	SEP	18	01	48	54	33.3	108.5	..	F	277	..	2.6TAG 2	...	..
1938	SEP	18	16	19	06	33.3	108.5	..	F	277	..	3.8TAG 2	...	..
1938	SEP	19	00	25	33	33.3	108.5	..	F	277	..	2.7TAG 2	IV*	259
1938	SEP	19	10	42	59	33.3	108.5	..	F	277	..	3.7TAG 2	...	..
1938	SEP	20	05	39	00	33.3	108.5	..	F	277	..	4.3TAG 2	VI*	259
1938	SEP	21	05	54	05	33.3	108.5	..	F	277	..	2.7TAG 2	...	..
1938	SEP	21	17	09	04	33.3	108.5	..	F	277	..	2.6TAG 2	...	..
1938	SEP	22	20	12	31	33.3	108.5	..	F	277	..	3.0TAG 2	...	..
1938	SEP	22	20	15	15	33.3	108.5	..	F	277	..	2.9TAG 2	...	..
1938	SEP	23	03	59	41	33.3	108.5	..	F	277	..	3.1TAG 2	...	..
1938	SEP	23	10	26	11	33.3	108.5	..	F	277	..	3.0TAG 2	...	..
1938	SEP	24	00	23	37	33.3	108.5	..	F	277	..	2.7TAG 2	...	..
1938	SEP	24	15	23	36	33.3	108.5	..	F	277	..	3.4TAG 2	IV*	259
1938	SEP	26	23	28	27	33.3	108.5	..	F	277	..	2.5TAG 2	...	..
1938	SEP	29	23	31	44	33.3	108.5	..	F	277	..	4.3TAG 2	V*	259
1938	SEP	29	23	34	57	33.3	108.5	..	F	277	..	4.8TAG 2	VI*	259
1938	SEP	29	23	44	15	33.3	108.5	..	F	277	..	3.3TAG 2	...	..
1938	SEP	30	00	46	11	33.3	108.5	..	F	277	..	2.9TAG 2	...	..
1938	OCT	01	13	14	38	33.3	108.5	..	F	277	..	3.6TAG 2	...	..
1938	OCT	08	08	30	39	33.3	108.5	..	F	277	..	3.7TAG 2	...	..
1938	OCT	10	03	35	27	33.3	108.5	..	F	277	..	2.8TAG 2	...	..
1938	OCT	11	09	53	54	33.3	108.5	..	F	277	..	2.6TAG 2	...	..
1938	OCT	15	17	00	..	33.3	108.5 *	..	F	259	..	.. ..	IV*	259
1938	OCT	17	17	45	..	33.3	108.5 *	..	F	259	..	.. ..	IV*	259
1938	OCT	20	17	00	..	33.3	108.5 *	..	F	259	..	.. ..	IV*	259
1938	OCT	30	22	10	46	33.3	108.5	..	F	277	..	3.3TAG 2	IV*	259
1938	NOV	01	03	15	..	33.3	108.5 *	..	F	259	..	.. ..	V*	259
1938	NOV	01	08	26	06	33.3	108.5	..	F	277	..	3.8TAG 2	VI*	11
1938	NOV	02	08	59	58	33.3	108.5	..	F	277	..	4.3TAG 2	VI*	259
1938	NOV	09	22	25	..	33.3	108.5 *	..	F	259	..	.. ..	IV*	259
1938	NOV	10	10	45	..	33.3	108.5 *	..	F	259	..	.. ..	IV*	259
1938	NOV	11	10	26	18	33.3	108.5	..	F	277	..	3.9TAG 2	IV*	259
1938	NOV	22	18	11	43	33.3	108.5	..	F	277	..	2.6TAG 2	...	..
1938	NOV	26	23	00	37	33.3	108.5	..	F	277	..	3.2TAG 2	III*	259
1938	NOV	27	00	12	39	33.3	108.5	..	F	277	..	4.6TAG 2	V*	11
1938	NOV	27	00	18	40	33.3	108.5	..	F	277	..	2.7TAG 2	...	..
1938	DEC	11	04	23	25	33.3	108.5	..	F	277	..	2.6TAG 2	...	..
1938	DEC	16	12	45	..	33.3	108.5 *	..	F	259	..	.. ..	IV*	259
1938	DEC	28	22	07	05	33.3	108.5	..	F	277	..	3.9TAG 2	IV*	259
1939	JAN	01	04	42	35	33.3	108.5	..	F	277	..	2.9TAG 2	...	..
1939	JAN	02	13	15	28	33.3	108.5	..	F	277	..	2.6TAG 2	...	..
1939	JAN	18	11	52	47	33.3	108.5	..	F	277	..	2.9TAG 2	...	..
1939	JAN	18	13	57	11	33.3	108.5	..	F	277	..	2.6TAG 2	IV*	259
1939	JAN	20	12	17	20	33.3	108.5	..	F	277	..	3.7TAG 2	VI*	259
1939	JAN	29	04	30	..	36.9	106.6 *	..	G	12	..	.. ..	III*	12
1939	JAN	29	23	50	20	33.3	108.5	..	F	277	..	2.9TAG 2	...	..
1939	JAN	31	17	10	..	32.9	107.6 *	..	G	12	..	.. ..	IV*	12
1939	FEB	03	15	57	51	33.3	108.5	..	F	277	..	3.4TAG 2	...	..
1939	FEB	07	09	12	20	33.3	108.5	..	F	277	..	3.0TAG 2	...	..
1939	FEB	12	01	56	37	33.3	108.5	..	F	277	..	2.7TAG 2	...	..
1939	FEB	14	05	53	31	33.3	108.5	..	F	277	..	2.9TAG 2	...	..
1939	FEB	18	04	13	36	33.3	108.5	..	F	277	..	3.3TAG 2	...	..
1939	FEB	22	15	20	35	33.3	108.5	..	F	277	..	3.1TAG 2	...	..
1939	FEB	24	12	02	02	33.3	108.5	..	F	277	..	3.4TAG 2	...	..
1939	FEB	25	23	21	48	33.3	108.5	..	F	277	..	2.5TAG 2	...	..
1939	MAR	06	23	10	34	33.3	108.5	..	F	277	..	3.0TAG 2	...	..
1939	MAR	20	21	18	28	33.3	108.5	..	F	277	..	2.7TAG 2	...	..
1939	MAR	24	12	11	44	33.3	108.5	..	F	277	..	2.5TAG 2	...	..
1939	MAR	24	19	21	55	33.3	108.5	..	F	277	..	2.5TAG 2	...	..
1939	MAR	25	15	06	27	33.3	108.5	..	F	277	..	2.9TAG 2	...	..
1939	APR	08	09	42	24	33.3	108.5	..	F	277	..	2.5TAG 2	...	..
1939	APR	25	17	16	50	33.3	108.5	..	F	277	..	2.9TAG 2	III*	259
1939	APR	26	01	57	06	33.3	108.5	..	F	277	..	2.0TAG 2	III*	259
1939	MAY	05	21	57	..	33.3	108.5 *	..	F	259	..	.. ..	IV*	259
1939	MAY	05	22	05	..	33.3	108.5 *	..	F	259	..	.. ..	III*	259
1939	MAY	05	22	30	..	33.3	108.5 *	..	F	259	..	.. ..	III*	259
1939	MAY	10	08	00	..	33.3	108.5 *	..	F	259	..	.. ..	II*	259
1939	MAY	21	21	00	..	33.3	108.5 *	..	F	259	..	.. ..	III*	259
1939	MAY	22	00	16	39	33.3	108.5	..	F	277	..	2.8TAG 2	IV*	259
1939	MAY	23	15	19	33	33.3	108.5	..	F	277	..	2.7TAG 2	IV*	259
1939	JUN	04	01	19	10	33.3	108.5	..	F	277	..	4.6TAG 2	VI*	259
1939	JUN	04	01	27	04	33.3	108.5	..	F	277	..	3.4TAG 2	...	..
1939	JUN	04	09	08	00	33.3	108.5	..	F	277	..	2.8TAG 2	...	..
1939	JUN	05	05	07	39	33.3	108.5	..	F	277	..	3.3TAG 2	...	..
1939	JUN	07	06	02	16	33.3	108.5	..	F	277	..	2.5TAG 2	...	..
1939	JUL	01	20	32	23	33.3	108.5	..	F	277	..	4.0TAG 2	...	..
1939	JUL	01	20	36	41	33.3	108.5	..	F	277	..	3.0TAG 2	...	..
1939	JUL	02	13	08	01	33.3	108.5	..	F	277	..	2.7TAG 2	...	..
1939	JUL	17	06	58	25	33.3	108.5	..	F	277	..	3.7TAG 2	...	..
1939	JUL	22	06	40	59	33.3	108.5	..	F	277	..	2.2TAG 2	III*	259
1939	JUL	29	00	24	05	33.3	108.5	..	F	277	..	2.7TAG 2	IV*	259
1940	MAY	17	05	10	..	35.0	107.9 *	..	G	259	..	.. ..	III*	259
1941	AUG	04	07	39	..	34.0	107.0 *	..	F	14	..	.. ..	V*	259
1942	DEC	28	03	45	..	34.1	107.2 *	..	F	15	..	.. ..	IV	259
1943	DEC	27	04	00	..	33.1	106.0 *	..	F	259	..	.. ..	IV	259
1947	NOV	06	16	50	..	35.2	106.3 *	..	F	259	..	.. ..	VI	259
1947	DEC	15	01	30	..	32.2	107.2 *	..	F	20	..	.. ..	V	259
1949	FEB	02	23	00	..	32.4	104.2	..	F	105	..	.. ..	IV*	105
1949	MAY	23	07	22	..	34.6	105.2	..	F	38	..	.. ..	VI	38
1952	MAY	22	04	20	..	33.0	105.0 *	..	G	25	..	.. ..	IV	259
1952	AUG	04	03	42	..	36.5	105.0	..	C	38	..	.. ..	V	38
1952	AUG	17	10	45	..	35.8	106.3 *	..	F	25	..	.. ..	V	25
1954	NOV	02	17	..	..	35.2	106.7 *	..	F	27	..	.. ..	IV	27
1954	NOV	03	20	39	..	35.2	106.7 *	..	F	27	..	.. ..	V	27
1955	AUG	12	16	20	..	35.7	106.0 *	..	F	28	..	.. ..	V	28
1956	APR	26	03	30	..	35.2	106.3 *	..	F	29	..	.. ..	V	29
1960	JUL	22	15	49	30	34.30	106.85	..	C	261	..	.. ..	V	33
1960	JUL	23	14	15	..	34.35	106.85	..	C	261	..	.. ..	VI	33
1960	JUL	24	10	37	..	34.3	106.8	..	C	261	..	.. ..	V	33
1960	OCT	25	19	20	..	34.0	107.0	..	F	259	..	.. ..	III	33
1960	DEC	19	23	29	..	34.0	107.0 *	..	F	259	..	.. ..	V	259
1961	JAN	28	06	33	..	34.0	107.0 *	..	F	259	..	.. ..	IV	34
1961	JUL	03	07	06	..	34.10	106.95	..	C	261	..	.. ..	VI	34
1961	DEC	10	19	00	00.0	32.26	103.86x	000	A	74	..	.. ..	...	..
1962	JAN	03	23	29	52.6	35.32	103.64	..	B	261	..	2.6NMI 1	...	..
1962	SEP	01	16	15	07.9	34.16	106.66	..	B	261	..	3.0NMI 1	...	..
1963	JUN	06	08	05	36.3	36.5	104.3	033	C	74	3.8	2.7NMI 1	...	..
1963	DEC	19	16	47	28.4	35.14	104.13	..	B	261	..	2.9NMI 1	...	..
1964	JAN	17	22	00	42.8	36.71	108.25x	033	D	299	..	.. ..	...	..
1965	FEB	03	11	32	35	35.4	103.4	..	G	268	..	2.9NMI 1	IV	75
1965	MAR	09	19	04	48.5	33.87	106.90	..	B	261	..	2.5NMI 1	...	..
1965	JUL	28	04	38	53.4	33.80	106.70	..	B	261	..	2.6NMI 1	...	..
1965	DEC	22	03	33	29.6	34.02	106.78	..	C	261	..	2.2NMI 1	IV	75
1965	DEC	22	04	04	51.9	34.02	106.78	..	C	261	..	1.9NMI 1	IV	75
1965	DEC	29	00	05	24.1	35.03	105.78	..	B	261	..	2.6NMI 1	...	..
1966	JAN	23	01	56	38.1	36.98	107.02	003	A	264	5.1	5.1NUT 2	VII	81
1966	JAN	23	02	08	34.7	36.98	107.03	007	A	264	2.8	3.0TGG 2	IV*	81
1966	JAN	23	02	13	14.1	36.95	107.05	010	A	264	2.7	2.8TGG 2	III*	81
1966	JAN	23	02	14	04	36.98	107.02	005	A	295	..	2.5TGG 2	...	..
1966	JAN	23	06	14	15.5	36.95	107.06	011	A	264	3.3	2.8TGG 2	IV*	81
1966	JAN	23	08	58	20	36.98	107.02	010	A	295	..	1.6TGG 2	III*	81
1966	JAN	23	09	51	29	36.98	107.02	010	A	295	..	1.3TGG 2	III*	81
1966	JAN	23	10	53	09.8	36.97	107.06	009	A	264	..	2.4TGG 2	III*	81
1966	JAN	23	11	01	06.6	36.98	107.07	010	A	264	3.3	2.8TGG 2	IV*	81
1966	JAN	23	12	14	36.3	36.98	106.99	015	A	264	2.5	2.2TGG 2	III*	81
1966	JAN	23	14	22	50	36.98	107.00	005	A	295	..	1.7TGG 2	III*	81
1966	JAN	23	19	43	19.3	36.98	107.03	009	A	264	3.0	3.0TGG 2	III*	81
1966	JAN	23	20	42	17.8	36.99	107.08	010	A	264	..	2.3TGG 2	...	..
1966	JAN	23	23	48	09.3	36.98	107.01	012	A	264	3.8	3.9TGG 2	V	38
1966	JAN	24	01	31	27.7	36.98	107.06	011	A	264	..	1.9TGG 2	III*	81
1966	JAN	24	09	00	31.0	37.00	107.06	013	A	264	..	2.3TGG 2	III*	81
1966	JAN	24	22	06	49.3	36.96	106.98	005	A	264	..	2.4TGG 2	III*	81
1966	JAN	25	10	38	05.1	37.00	106.99	013	A	264	3.3	3.2TGG 2	IV*	81
1966	JAN	25	15	06	37	36.98	107.02	005	A	295	2.5	2.6TGG 2	...	..
1966	JAN	25	15	32	47.3	36.98	106.94	012	A	264	..	2.3TGG 2	III*	81
1966	JAN	25	15	45	..	37.0	107.0 *	..	F	81	..	.. ..	III*	81
1966	JAN	25	19	53	06.3	36.99	106.98	012	A	264	..	2.5TGG 2	...	..
1966	JAN	26	00	25	28	36.98	107.02	005	A	295	..	2.4TGG 2	III*	81
1966	JAN	27	03	59	00.8	37.03	106.97	003	A	264	..	2.4TGG 2	III*	81
1966	JAN	27	04	20	21	36.98	107.02	005	A	295	..	2.1TGG 2	III*	81
1966	JAN	27	07	48	29.5	36.97	106.97	001	A	264	2.5	2.4TGG 2	IV	81
1966	JAN	27	07	48	44	36.98	107.02	005	A	295	..	2.6TGG 2	IV	81
1966	JAN	27	09	28	58.9	37.02	107.03	003	A	264	..	2.0TGG 2	IV	81
1966	JAN	27	09	29	31	36.98	107.02	005	A	295	..	2.7TGG 2	IV	81
1966	JAN	27	09	31	14	36.98	107.02	005	A	295	..	2.2TGG 2	III*	259
1966	JAN	27	12	46	47	36.98	107.02	005	A	295	..	1.6TGG 2	III*	259
1966	JAN	28	05	32	20.0	37.01	107.03	014	A	264	..	1.8TGG 2	III*	81
1966	JAN	28	06	55	28.9	36.94	106.99	002	A	264	..	2.0TGG 2	IV*	81
1966	JAN	28	14	53	01.7	36.98	106.94	009	A	264	..	2.2TGG 2	IV*	81
1966	JAN	29	11	21	51.2	36.98	106.98	000	A	264	3.0	3.0TGG 2	IV*	259
1966	JAN	29	18	38	48.3	36.98	106.99	000	A	264	..	2.3TGG 2	III*	81
1966	JAN	29	19	25	06.0	36.96	106.97	000	A	264	..	2.3TGG 2	III*	81
1966	JAN	29	20	01	53.7	36.8	107.1	005	C	266	..	1.6TGG 2	III	81
1966	JAN	31	15	43	52.8	36.94	106.93	004	A	264	2.3	2.4TGG 2	IV	81
1966	FEB	02	21	11	00	36.98	107.02	005	A	295	..	1.4TGG 2	IV	81
1966	FEB	06	12	03	52.4	36.9	107.1	005	B	266	..	2.1TGG 2	III	81
1966	FEB	06	12	06	18	36.98	107.02	005	A	295	..	2.2TGG 2	III	81
1966	FEB	11	06	22	18.4	36.99	107.03	002	A	264	..	1.9TGG 2	III*	81
1966	FEB	11	12	08	44.3	36.96	106.99	000	A	264	..	2.0TGG 2	III*	81
1966	FEB	13	06	01	27.9	36.97	106.96	003	A	264	..	2.2TGG 2	III*	81
1966	FEB	13	06	21	31.2	36.97	106.98	004	A	264	..	1.9TGG 2	III*	81
1966	FEB	13	06	32	21.4	36.9	106.9	005	B	74	..	1.7TGG 2	III*	81
1966	FEB	17	00	27	14	36.98	107.02	005	A	295	2.5	2.8TGG 2	...	..
1966	FEB	18	17	56	14	36.98	107.02	005	A	295	2.6	2.6TGG 2	...	..
1966	FEB	26	18	07	00	36.98	107.02	005	A	295	..	1.2TGG 2	III	259
1966	FEB	27	18	07	51.5	36.9	107.0	005	B	74	3.2	2.8TGG 2	IV*	81
1966	MAR	22	04	39	50	36.98	107.02	005	A	295	2.8	2.7TGG 2	...	..
1966	MAR	24	08	24	04.5	37.0	107.1	005	B	74	..	2.3TGG 2	...	..
1966	MAR	24	20	10	59.3	36.8	108.3 x	005	C	266	..	.. ..	...	..
1966	APR	14	15	07	29.5	37.0	107.0	005	A	266	3.3	3.2TGG 2	...	..
1966	APR	28	11	07	28.9	37.0	107.1	033	A	266	..	2.3TGG 2	...	..
1966	MAY	04	05	40	37.5	36.8	107.1	005	C	74	2.4	2.5TGG 2	...	..
1966	MAY	08	17	23	38.3	36.9	107.0	005	B	266	3.5	3.5TGG 2	...	..
1966	MAY	08	17	50	36.8	37.0	107.0	005	A	266	3.2	3.4TGG 2	...	..
1966	MAY	09	01	26	45.0	37.0	106.8	005	B	74	2.5	2.7TGG 2	...	..
1966	MAY	09	02	08	53.6	36.9	107.0	005	B	266	2.5	2.7TGG 2	...	..
1966	MAY	09	02	57	23.6	37.0	106.9	005	B	74	3.0	3.3TGG 2	...	..
1966	MAY	19	00	26	42.2	36.9	107.0	005	B	266	3.3	3.3TGG 2	V*	81
1966	JUN	01	17	17	12.9	36.9	107.0	005	B	266	3.0	3.4TGG 2	...	..
1966	JUN	02	21	59	11.6	36.9	107.0	005	B	266	3.3	3.3TGG 2	...	..
1966	JUN	04	10	29	39.6	36.9	107.0	005	B	266	3.0	3.1TGG 2	...	..
1966	JUN	08	23	33	14.9	36.9	107.1	005	B	266	..	2.4TGG 2	...	..
1966	JUN	21	05	24	38.2	36.9	107.1	005	B	266	3.0	2.8TGG 2	...	..
1966	JUN	26	18	41	40.5	36.9	107.2	005	B	266	..	2.3TGG 2	...	..
1966	JUL	24	02	48	50.2	36.9	107.0	005	B	266	2.4	2.6TGG 2	...	..
1966	AUG	02	13	54	38.2	36.9	107.2	005	B	266	..	2.4TGG 2	...	..
1966	AUG	12	09	18	53.9	36.6	107.2	005	C	266	2.8	2.4TGG 2	...	..
1966	SEP	09	17	43	58.4	36.7	108.3 x	033	C	266	..	.. ..	...	..
1966	SEP	24	07	33	46.4	36.5	105.0	018	C	266	3.8	2.7NMI 1	IV	81
1966	SEP	24	08	27	10.2	36.5	105.0	033	C	266	3.4	2.4NMI 1	...	..
1966	SEP	25	10	10	40.9	36.4	105.1	020	C	74	3.8	2.7NMI 1	IV*	81
1966	SEP	25	12	22	40.5	36.5	105.1	020	C	266	3.6	2.8NMI 1	IV*	81
1966	DEC	16	02	00	40	36.98	107.02	005	A	295	4.1	3.2TGG 2	...	..
1967	JAN	06	15	41	13	36.98	107.02	005	A	295	3.4	3.1TGG 2	...	..
1967	DEC	10	19	30	00.1	36.68	107.21x	000	A	74	5.1	.. ..	...	..
1968	MAR	09	21	54	25.7	32.70	106.05	..	B	261	..	2.9NMI 1	...	..
1968	MAY	02	02	56	43.8	33.02	105.27	..	B	261	..	2.6NMI 1	...	..
1969	JAN	30	05	17	38.4	34.22	106.75	..	B	261	4.1	3.4NMI 1	V	42
1969	JUL	04	14	43	34.0	36.1	106.1	010	B	74	4.4	2.8NMI 1	IV	42
1969	AUG	23	21	41	54.2	34.70	108.44	..	B	261	3.9	2.7NMI 1	...	..
1970	JAN	12	11	21	15.1	35.89	103.40	..	C	261	3.5	3.3NMI 1	VI	43
1970	NOV	28	07	40	11.8	35.10	106.61	..	B	261	4.5	3.8GS 1	VI	43
1971	JAN	04	07	39	07.0	35.10	106.60	..	B	261	4.7	3.5NMI 1	VI	44
1971	JAN	04	13	15	..	35.0	106.7 *	..	F	44	..	.. ..	V	44
1971	JAN	06	10	56	31.5	34.15	106.79	..	B	261	..	2.7NMI 1	IV*	44
1971	JAN	27	07	56	28.3	34.06	106.60	..	B	261	..	2.6NMI 1	...	..
1971	FEB	18	11	28	13.7	36.22	105.71	005	C	74	3.7	2.8NMI 1	III*	44
1971	APR	28	11	36	52.7	35.79	105.56	005	C	74	4.0	2.7NMI 1	...	..
1971	JUN	04	03	55	15.9	35.8	105.6	005	C	44	3.8	.. ..	...	..
1971	DEC	06	05	18	13.7	36.06	106.32	005	B	74	4.2	3.2GS 1	V	44
1971	DEC	06	05	30	..	36.1	106.3	..	F	72	..	.. ..	IV*	72
1971	DEC	06	11	20	..	36.1	106.3	..	F	72	..	.. ..	III*	72
1971	DEC	06	22	40	..	36.1	106.3	..	F	72	..	.. ..	III*	72
1971	DEC	10	..	..	..	36.1	106.3	..	F	72	..	.. ..	III*	72
1971	DEC	10	05	45	..	36.1	106.3	..	F	72	..	.. ..	III*	72
1972	MAR	28	01	53	33.7	36.17	106.06	..	B	261	..	2.7NMI 1	...	..
1972	MAY	20	19	15	45.7	35.40	107.36	..	B	261	..	2.7NMI 1	...	..
1972	JUL	26	04	35	43.9	32.68	103.98	..	B	261	..	2.9NMI 1	...	..
1972	NOV	24	01	13	33.2	32.03	108.34	..	B	261	..	2.7NMI 1	...	..
1972	DEC	18	04	07	36.2	35.42	107.16	..	B	261	..	2.7NMI 1	...	..
1973	MAR	17	07	43	05.5	36.09	106.17	006	C	74	4.5	2.4NMI 1	III*	46
1973	MAR	22	02	45	50.0	31.35	108.50	..	B	261	..	2.9NMI 1	...	..
1973	SEP	10	20	29	23.7	34.42	106.85	..	B	261	..	2.4NMI 1	III*	46
1973	SEP	22	23	38	35.8	34.47	106.95	005	C	74	..	3.1GS 1	III*	46
1973	DEC	24	02	20	14.9	35.26	107.74	018	B	74	4.4	4.1GS 1	VI	46
1974	SEP	26	23	44	08.5	32.80	106.20	..	B	261	..	3.0NMI 1	...	..
1974	SEP	29	13	13	49.1	33.60	108.61	005	C	47	..	3.2NMI 1	...	..
1974	NOV	21	16	22	58.6	32.50	106.30	..	B	261	..	2.7NMI 1	...	..
1974	NOV	28	03	35	20.5	32.31	104.14	005	B	47	3.9	3.7GS 1	...	..
1975	FEB	02	20	39	22.6	35.10	103.10	..	B	261	..	2.9NMI 1	...	..
1975	MAR	05	03	48	04.9	34.55	107.05	005	B	48	..	2.7GS 1	II	48
1975	MAR	06	07	56	55.9	34.55	107.14	..	A	261	..	2.8GS 1	...	..
1975	MAR	07	03	16	13.0	34.55	107.16	..	A	261	..	3.0GS 1	...	..
1975	MAR	07	17	36	08.7	34.55	107.16	..	B	261	..	2.9NMI 1	...	..
1975	JUN	26	07	03	43.4	36.95	105.45	..	B	261	..	2.9NMI 1	...	..
1975	JUN	28	07	20	30.4	34.76	106.90	005	C	48	..	.. ..	...	..
1975	SEP	29	11	09	42.9	35.96	106.79	005	B	48	..	2.8GS 1	...	..
1975	DEC	03	10	12	22.8	32.83	108.66	027	B	48	..	3.9GS 1	V	48
1976	JAN	05	06	23	32.9	35.84	108.34	025	A	49	5.0	4.6GS 1	VI	49
1976	JAN	14	07	01	32.0	34.17	106.81	000	B	49	..	2.2NMI 1	II	49
1976	APR	06	18	09	00.2	33.[illegible]0	106.00	..	B	261	..	2.7NMI 1	...	..
1976	APR	21	08	40	07.4	32.21	103.10	000	A	170	..	2.5RO 6	...	..
1976	MAY	01	11	13	40.8	32.27	103.14	..	A	170	..	3.0RO 6	...	..
1976	MAY	20	19	43	21.9	35.47	109.04	005	C	49	..	2.5GS 1	IV	49
1976	JUN	24	15	27	32.0	35.62	103.28	005	B	49	..	3.5GS 1	V	49
1976	SEP	17	02	47	45.4	32.21	103.10	000	A	170	..	3.0RO 6	...	..
1976	DEC	19	23	56	46.5	32.26	103.08	001	A	170	..	2.9RO 6	...	..
1977	JAN	04	18	31	37.6	32.36	106.92	005	B	39	..	3.2GS 1	V	39
1977	MAR	05	03	00	54.7	35.91	108.29	022	A	39	4.6	4.2GS 1	VI	39
1977	APR	07	05	45	39.4	32.23	103.07	002	A	170	..	2.9RO 6	...	..
1979	OCT	20	21	05	34.0	33.90	106.72	..	B	286	..	2.9NMI 1	...	..
1979	OCT	25	22	12	08.7	34.05	107.05	..	B	286	..	3.0NMI 1	...	..
1980	MAR	22	00	49	12.5	34.59	105.91	005	B	300	..	3.4GS 1	IV	300
1980	SEP	11	17	34	37.5	36.46	105.19	005	B	300	..	3.1GS 1	V	300

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