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**Daily Climate Data from the Fort Collins,
Colorado, Weather Station on the Campus
of Colorado State University**

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Climatology Report #93-2

**DEPARTMENT OF ATMOSPHERIC SCIENCE
COLORADO STATE UNIVERSITY
FORT COLLINS, COLORADO**

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Summary

A project to evaluate climate data resources for Fort Collins, Colorado has been completed. A high quality digital data set of basic climate elements observed daily from 1889 through 1992 is now available. This data set is the most accurate and complete source of data for evaluating climatic conditions and variations in Fort Collins and its surroundings over the past century. These data provide an incredible information resource for research, design, planning, management and historical documentation for northern Colorado.

Station History

Uninterrupted daily observations of basic climate variables such as temperature, humidity, precipitation and snowfall from Colorado State University, Fort Collins, Colorado date back to January 1889. This is one of the longest continuously operated weather stations in Colorado. Data from this site have become of extreme interest to climatologists, ecologists, hydrologists and others interested in long-term changes and variations in climatic conditions affecting Colorado. Incomplete records of selected variables go back into the early 1870s. The success in maintaining the Fort Collins Weather Station for more than a century can be directly attributed to the Colorado Agricultural Experiment Station. Their financial support, through thick and thin, has permitted high quality weather observations to continue through several generations.

All data have been gathered on the Main Campus of Colorado State University (formerly known as Colorado Agricultural College, 1879-1935 and Colorado A&M, 1935-1957). For optimum consistency, weather stations should not be relocated and their environments should not be modified. This has been accomplished to the extent possible. But dramatic changes during the past 100 years both to the campus and throughout the surrounding community have affected the weather station. The station was originally located near Old Main, a famous original campus facility that was destroyed by fire in 1970. It was relocated in 1910 to the southwest corner of the campus "oval". The construction of what is now called the Wagar building forced another relocation in 1940. From 1940 to June 1960 the station was just west of the current location of the Lory Student Center. Construction of the Student Center caused the final relocation to its present location northwest of the Student Center. Station locations are shown in Figure 1.

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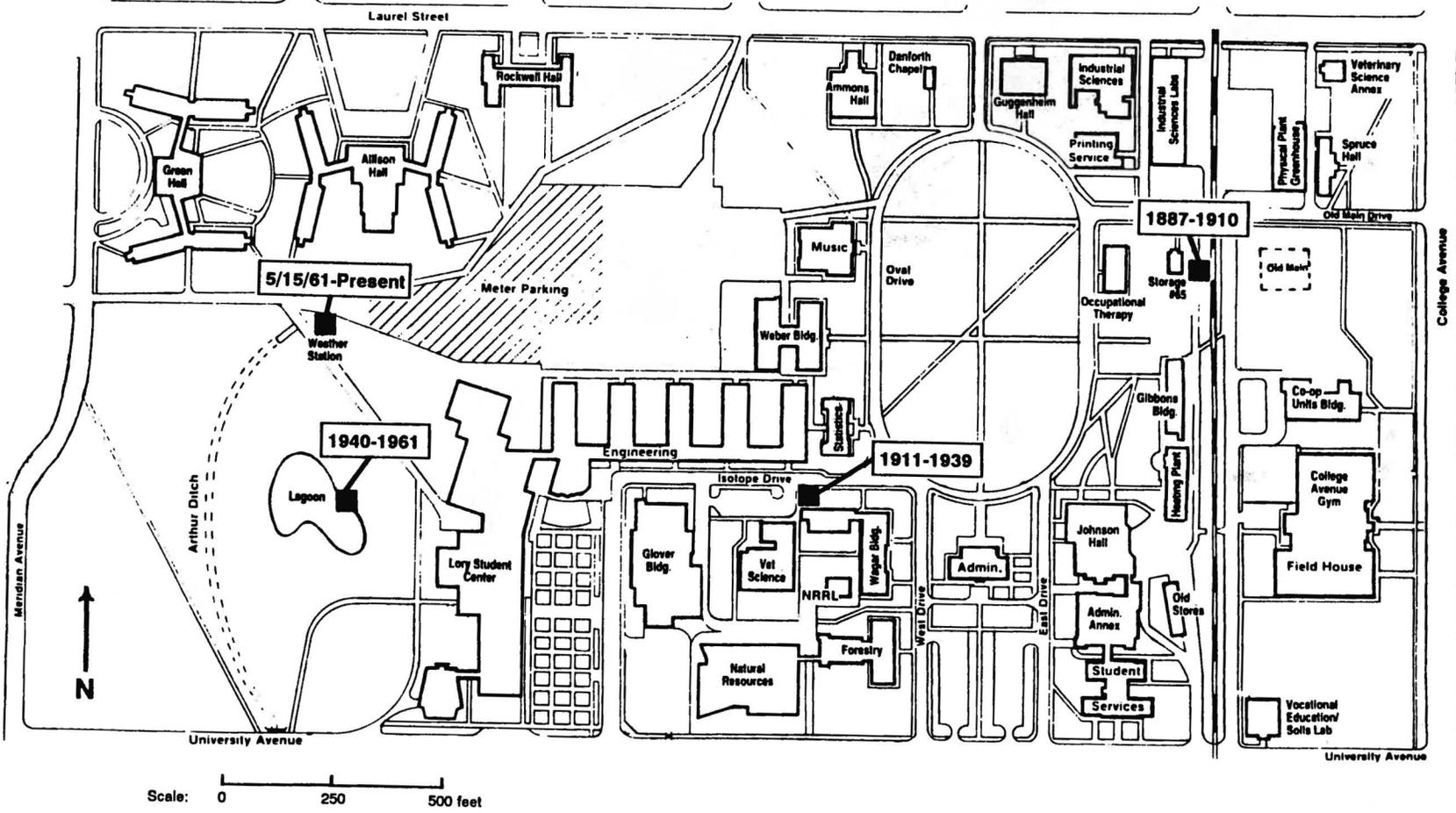


Figure 1. Fort Collins, Colorado, weather station locations.

Data and Data Sources

Procedures, instruments and schedules for monitoring climatic conditions have been preserved as consistently as possible since 1889 in order to maintain quality long-term climate records. Data currently being collected include instrument measurements of air temperature, soil temperature at various depths, dew point, relative humidity, wind speed, wind direction, wind gusts, solar radiation, precipitation (amounts and intensities), snowfall, snowdepth, pan evaporation and pressure. Visual evaluations are made of cloud height, cloud amount, cloud types, horizontal visibility, weather conditions, types and intensities of precipitation and other significant meteorological phenomena. Many of the instrumental observations have been taken continuously since 1889. Wind measurements have not always been consistent. Solar radiation measurements are difficult and have only been made since 1985. Most of the detailed visual evaluations began in 1937 when Fort Collins began aviation weather observations in cooperation with the National Weather Service (then called the U.S. Weather Bureau).

Observations of air and soil temperatures, precipitation, snow, pressure, and evaporation use the observational day ending at 1900 MST (7:00 PM). Supplemental observations have been taken daily at 0700 MST (7:00 AM). This observational period has remained consistent throughout history with one exception. In an effort to be more consistent with NWS procedures, precipitation data was compiled for 24-hours ending at 5:00 PM MST for the period 1973-1981. As a part of this effort, data for 1981 was adjusted to the 1900 MST observation time. It was found to be very time consuming. As a result, the 1973-1980 period was not changed and remains slightly incompatible with the remainder of the record. These observation time differences do not affect total accumulated precipitation and snowfall, but may result in slightly different precipitation frequencies.

Data have been recorded on a variety of forms and have been published in many places. It would be a difficult effort to inventory all records and sources. Most of the original data can be found at the Colorado Climate Center, Department of Atmospheric Science, Colorado State University and in the Archives of the CSU Morgan Library. Throughout the long history, monthly forms containing daily records of temperature, precipitation and snow have also been sent to the National Weather Service. Paper originals and microfiche copies of these daily compilations currently reside at the National Climatic Data Center, Asheville, North Carolina.

The following is a list of some of the publications we are aware of which contain data and/or summarized climate information for the Fort Collins Weather Station.

1. Meteorology of 1897, with illustrations, by L.G. Carpenter and R.E. Trimble, Colorado Agricultural Experiment Station Bulletin No. 49, Fort Collins, Colorado, September 1898.
2. Meteorological Observations 1902, by L.G. Carpenter and R.E. Trimble, Colorado Agricultural Experiment Station, Fort Collins, Colorado, 1903.

3. Climate of Colorado Temperature 21 Years' Record at Fort Collins, by L.G. Carpenter and R.E. Trimble, Colorado Agricultural Experiment Station Bulletin No. 127, Fort Collins, Colorado, January 1908.
4. Colorado Climatology, by R.E. Trimble, Colorado Agricultural Experiment Station Bulletin No. 182, Fort Collins, Colorado, April 1912.
5. Colorado Climatology, by R.E. Trimble, Colorado Agricultural Experiment Station Bulletin No. 245, Fort Collins, Colorado, June 1918.
6. The Climate of Colorado, A Forty-One Year Record, by R.E. Trimble, Colorado Agricultural Experiment Station Bulletin No. 340, Fort Collins, Colorado, December 1928.
7. Analysis of Fifty Year's Record of Meteorological Data Taken at the Colorado Experiment Station, Fort Collins, Colorado, by M. Parshall, Colorado Agricultural Experiment Station Bulletin No. 456, Fort Collins, Colorado, October 1939.
8. Summary of Meteorological Data at Colorado Agricultural Experiment Station, Fort Collins, Colorado, from 1887 to 1947, by M. Parshall, Colorado Agricultural Experiment Station and Extension Service Bulletin No. 402A, Fort Collins, Colorado, June 1948.
9. Meteorological Data, 1887-1957, A summary of 71 years of meteorological data at the Colorado Agricultural Experiment Station Fort Collins, Colorado, by M. Parshall, Agricultural Experiment Station Bulletin 509-S, Fort Collins, Colorado, June 1961.
10. Daily Weather Records, Fort Collins, Colorado, 1887-1975, by J.F. Wirshborn, Mountain States Weather Services, Fort Collins, Colorado, 1977.
11. The Climate of Fort Collins. Local Climatological Data, Annual Summary with Comparative Data, 1977 Fort Collins, Colorado, by Mountain States Weather Services (J.F. Wirshborn, Director), Fort Collins, Colorado, 80521, 1978.
12. Cooperative Weather Observations in Colorado, by N.J. Doesken, T.B. McKee, and J. Hersch, Colorado Centennial 1891-1991, Colorado State University, June 1991.
13. The Climate of Fort Collins, Colorado, The Year in Review - 1992 Water Year (1 October 1991-30 September 1992), by N.J. Doesken and T.B. McKee, Climatology Report 92-3, Colorado Climate Center, Atmospheric Science Department, Colorado State University, Fort Collins, CO, December 1992.
14. Climate Analysis for Operation and Planning of Street Maintenance and Repair, by I. Durre, N. Doesken and T. McKee, Preprints, 8th AMS Conference on Applied Climatology, Anaheim, CA, 17-22 January 1993.

15. Colorado Climate Water-Year Series, by N. Doesken and T. McKee, Department of Atmospheric Science, Colorado State University, Fort Collins, CO as follows:
(Jan. 1977-Sep. 1977; Oct. 1977-Sep. 1978), Climo Report 78-3, December 1978.
(October 1978-September 1979), Climo Report 79-1, December 1979.
(October 1979-September 1980), Climo Report 80-3, December 1980.
(October 1980-September 1981), Climo Report 81-3, December 1981.
(October 1981-September 1982), Climo Report 82-3, December 1982.
(October 1982-September 1983), Climo Report 84-1, March 1984.
(October 1983-September 1984), Climo Report 85-1, February 1985.
(October 1984-September 1985), Climo Report 86-1, June 1986.
(October 1985-September 1986), Climo Report 87-3, November 1987.
(October 1986-September 1987), Climo Report 88-1, January 1988.
(October 1987-September 1988), Climo Report 89-1, March 1989.
(October 1988-September 1989), Climo Report 90-2, October 1990.
(October 1989-September 1990), Climo Report 91-1, January 1991.
(October 1990-September 1991), Climo Report 92-2, June 1992.
(October 1991-September 1992), Climo Report 93-1, January 1993.
16. Climatological Data—Colorado, by U.S. Department of Commerce, NOAA, National Climatic Data Center, Asheville, North Carolina, for years 1889 through present, monthly and annual summaries.
17. Hourly Precipitation Data—Colorado, by U.S. Department of Commerce, NOAA, National Climatic Data Center, Asheville, NC, for years 1951 through present, monthly and annual summaries.
18. Climatology of the United States No. 20, Climatic Summaries for Selected Sites, 1951-73, for Colorado, by U.S. Department of Commerce, NOAA, National Climatic Data Center, Asheville, NC, 1975.
19. Climatology of the United States No. 20, Climatic Summaries for Selected Sites, 1951-80, for Colorado, by U.S. Department of Commerce, NOAA, National Climatic Data Center, Asheville, NC, 1985.
20. Climatology of the United States No. 81, Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days, 1941-1970, for Colorado, by U.S. Department of Commerce, NOAA, National Climatic Data Center, Asheville, NC, August 1973.
21. Climatology of the United States No. 81, Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days, 1951-1980, for Colorado, by U.S. Department of Commerce, NOAA, National Climatic Data Center, Asheville, NC, September 1982.
22. Climatology of the United States No. 81, Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days, 1961-1990, for

Colorado, by J.R. Owenby and D.S. Ezell, U.S. Department of Commerce, NOAA, National Climatic Data Center, Asheville, NC, January 1992.

23. Colorado Temperatures with Degree Day and Growing Season Data, by N. Doesken, J. Kleist, and T. McKee, Climatology Report 89-2, Department of Atmospheric Science, Colorado State University, Fort Collins, CO, March 1989.
24. Cooperative Solar Radiation Data Collection Program, Fort Collins, Colorado, June 1985-May 1986, by N. Doesken, J. Kleist, and D. Swartz, Climatology Report 86-5, Department of Atmospheric Science, Colorado State University, Fort Collins, CO, September 1986.
25. Colorado Solar Radiation Data with Supplemental Climatic Data, by N.J. Doesken, T.B. McKee, and D.M. Ebel, Climatology Report No. 82-2, Department of Atmospheric Science, Colorado State University, Fort Collins, CO, August 1982.
26. Precipitation Probabilities for Selected Colorado Locations, by J. Kleist, N. Doesken, and T.B. McKee, Climatology Report No. 86-2, Atmospheric Science, Colorado State University, Fort Collins, CO, July 1986.

Digital Data Records

A great deal of the Fort Collins data have been digitized for computer storage and analysis. We are aware of 3 data sets that reside in digital form that were derived from CSU weather station records. These sets are similar but not identical. The most comprehensive digital data set is maintained by the Colorado Climate Center and is called the Fort Collins Experiment Station Data Set. This data set is complete from 1889 to present and includes the variables shown in Table 1.

The most widely distributed digital data set containing basic daily Fort Collins data is the National Climatic Data Center's TD-3200 Summary of the Day data set. This data set contains Fort Collins daily maximum and minimum temperature, precipitation, snowfall and snowdepth data for the period 1900–present keyed from forms mailed monthly to the National Weather Service by Fort Collins Weather Station staff. Data from this source has been commercially marketed on a CD-ROM product available in many libraries and used by many businesses.

The third digital data set was prepared by Mountain States Weather Services in Fort Collins predominantly for the purpose of publishing climate records (MSWS, 1977). This data set has not been widely distributed, and will not be discussed further in this report.

Table 1.
Fort Collins Experiment Station
Inventory of Digital Data

Variable	Begin	End
Daily Max Temperature	1889	Present
Daily Min Temperature	1889	Present
7 AM Max Temperature (past 12 hours)	1889	Present
7 AM Min Temperature (past 12 hours)	1889	Present
7 PM Max Temperature (past 12 hours)	1980	Present
7 PM Min Temperature (past 12 hours)	1980	Present
7 AM Dry Bulb Temperature	1889	Present
7 AM Wet Bulb Temperature	1889	Present
7 PM Dry Bulb Temperature	1889	Present
7 PM Wet Bulb Temperature	1889	Present
Daily Precip Begin and End Times	1889	Present
Daily Precipitation	1889	Present
Daily Snowfall	1889	present
Daily Snowdepth	1949	Present
7 AM Precip Begin and End Times (past 12 hours)	1895	Present
7 AM Precipitation (past 12 hours)	1889	Present
7 AM Snowfall (past 12 hours)	1980	Present
7 AM Snowdepth	1980	Present
7 PM Precip Begin and End Times (past 12 hours)	1895	Present
7 PM Precipitation (past 12 hours)	1889	Present
7 PM Snowfall (past 12 hours)	1980	Present
7 PM Snowdepth	1980	Present
Class A Pan Evaporation	1980	Present
7 AM and 7 PM Station Pressure	1889	Present
Dew and Frost	1889	Present
Character of the Day (CLR, PC, CLDY)	1895	Present
Peak Wind Gusts (Direction and Speed)	1964	Present
Bihourly Observations:		
Old format (visibility, wet/dry bulb temperature, wind direction/speed, peak wind, sky cover)	1968	1977
Current format (temperature, dewpoint, relative humidity, wind direction/speed, visibility pressure, sky cover, and weather remarks)	1987	Present
Total Hemispheric Solar Radiation (hourly and daily)	1985	Present

Comparison of Experiment Station Data to Digital Data Provided by the National Climatic Data Center

Nearly all analyses of climate information are now performed by computer. Originally, all data were processed by hand and stored as written records. Later, large main-frame computers were required. It is still important to maintain written records for historical documentation, but it is now feasible to process and display nearly all data from the Fort Collins Weather Station on a personal computer.

Since there is more than one digital Fort Collins data set available to data users, it is important to know the accuracy of digital records and if differences exist between digital files. If differences exist, how great are the differences and why do differences exist? During the summer of 1993, staff at the Colorado Climate Center performed a detailed comparison between the Fort Collins Experiment Station Data set and the "Summary of the Day" digital data available from the National Climatic Data Center. A computer program was written to identify all discrepancies between daily values of maximum temperature, minimum temperature, precipitation, snowfall and snowdepth for the 1900-1991 period. Out of approximately 168,000 pairs of data that were compared, 5,297 discrepancies were found. Each discrepancy was individually investigated using original handwritten forms: Experiment Station log books, worksheets (most worksheets prior to 1980 have been discarded), Climatological Observation Forms (the records mailed to the National Weather Service which form the basis for NCDC digital data) and Fort Collins Surface Aviation weather reports NWS Form MF1-10C). Published records and computer listings from each data set were also examined.

The process of data verification was objective but contained elements of interpretation and subjectivity as well. For each discrepancy, if the data in either of the two digital data sets was the same as on the official forms, and all available official forms were consistent, then that data was judged to be correct. When digital data matched one of the forms, but the various available written records did not agree, then climatological expertise was used to judge the most likely correct observation. When neither digital data point agreed with original written records, evidence of previous editing or keying errors was explored. The successful completion of this project required a great deal of observational and climatological expertise. Automation of this process was practically impossible.

Of the 5,927 discrepancies identified, 5,746 were judged to be errors in the NCDC Summary of the Day data. Of these, 52% were differences in maximum temperatures, 23% were differences in minimum temperatures, 13% related to precipitation and the remaining 12% were associated with snowfall or depth. Experiment Station temperature data are read to the nearest 0.1°F and NCDC Summary of the Day data are only to the nearest whole degree. Twenty-six percent of all discrepancies could be explained simply by rounding differences in which NCDC data were truncated instead of rounded to the nearest whole degree. Nine percent of the discrepancies resulted from failures to report trace precipitation amounts. Seven percent of the discrepancies were cases where data were reported as missing in the NCDC files even though there was no evidence of missing data. Possibly a few monthly forms over the past century had been lost in the mail or mishandled. Six

percent were caused by keying errors. The most common error found in the NCDC data was, in fact, caused by how Fort Collins weather observers had filled out forms in the past. Numerous examples were found where observers had reported the 12-hour 7 AM - 7 PM daytime maximum temperature as the maximum for the day when the actual maximum had occurred during the previous 12 hours, 7 PM - 7 AM. Experiment Station data properly presented the 24-hour values for these cases. Other problems in NCDC data included precipitation and snow reported on the wrong day, and several cases where NCDC automated areal editing procedures, that have been in use for about a decade, had modified Fort Collins data from what they should have been. Finally, many of the discrepancies could not be readily explained. In many of these cases, the Experiment Station Data were judged to be correct simply because those data were subjected to more care when originally collected than the forms sent later to the NWS.

Of the 5,927 total discrepancies, only 181 were found to be problems in the Experiment Station data set. These errors included keying errors, missing snowdepth errors and an unusual inconsistency that was found in any multiple of 0.52" or 0.58" of daily precipitation. That problem appeared to be introduced by a computer problem when a 1889-1979 digital data set was created from punched cards.

In the process of verifying these discrepancies, an additional 1,025 modifications were made to the Experiment Station data set that had not appeared as discrepancies. These included corrections to begin and end times of precipitation, proper designation of which 12-hour period precipitation and snow actually occurred in, the introduction of a new code to distinguish hail events from snow, and corrections to 12-hour maximum and minimum temperatures that had not resulted in discrepancies in 24-hour values.

All necessary changes were made to the Experiment Station Fort Collins data set to make this the most accurate data set possible. Appendix 1 contains an inventory of all modifications that were made to the digital files. Changes were not made to the TD3200 data set from the National Climatic Center, but a computer file will be maintained for future reference. NCDC will be provided with a complete set of Fort Collins daily data, 1889-1992 and a copy of this report. NCDC data will no longer be distributed by the Colorado Climate Center. The Experiment Station data set will become the sole source for Fort Collins climate records provided by this office.

An evaluation was performed to see what impact on climatic data the discrepancies and data changes have had. Over the 92-year comparison period, the 5,746 discrepancies make a small but detectable difference. NCDC Summary of the Day data generally produce slightly lower average temperature results, especially for winter months. Differences for individual months were usually less than one degree F, and impacts on long-term averages were on the order of just a few tenths of a degree. Precipitation and snowfall totals were slightly lower with NCDC data than with Experiment Station data. Listings of monthly values of average maximum temperature, average minimum temperature, precipitation and snowfall for all years of data from each of the two data sets have been produced and are available at the Colorado Climate Center for inspection.

Conclusion

A complete and thoroughly verified digital set of daily climate observations for Fort Collins, Colorado for the period 1889 through 1992 is now available. This data set will be updated regularly and will be the sole source for long-term Fort Collins data provided from the Colorado Climate Center. Original records and published documents based on these data will continue to be maintained at the Colorado Climate Center.

Acknowledgments

Support for the Fort Collins Weather Station has been provided each year for more than a century by the Colorado Agricultural Experiment Station. The benefits from such an amazing long-term commitment both to the community and to the State and nation have been invaluable. Additional support was provided for this project by the City of Fort Collins Water and Wastewater Utility. Our thanks go to those many unnamed individuals who have served as weather observers at the Fort Collins Weather Station for these many years.

Appendix 1.

CHANGES TO DATA FROM THE EXPERIMENT STATION IN FORT COLLINS, COLORADO

August 1993

Changes to Data from the Experiment Station

in Fort Collins, CO

August 1993

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1991	5	15	sfl 7pm	9998	8887	Hail
1991	5	26	sfl 7am	9998	8887	Hail
1991	5	28	sfl 7pm	9998	8887	Hail
1991	6	2	sfl 7pm	9998	8887	Hail
1991	6	21	sfl 7pm	9998	8887	Hail
1991	6	22	sfl 7pm	9998	8887	Hail
1991	8	8	sfl 7pm	9998	8887	Hail
1990	7	24	beg 7am	220	2020	Keying
1989	4	25	sfl 7am	9998	8887	Hail
1989	5	10	sfl 7pm	9998	8887	Hail
1989	5	30	sfl 7pm	9998	8887	Hail
1989	6	3	beg 7pm	0	1415	Missing time
			end 7pm	0	1900	Missing time
			sfl 7pm	9998	8887	Hail
1989	7	18	tmx 7am	95.5	85.5	Keying
1989	9	8	sfl 7am	9998	8887	Hail
1988	4	17	sfl 7pm	9998	8887	Hail
1988	4	21	sfl 7pm	9998	8887	Hail
1988	9	27	sfl 7pm	9998	8887	Hail
1987	5	5	sfl 7pm	9998	8887	Hail
1987	5	17	sfl 7pm	9998	8887	Hail
1987	5	18	sfl 7pm	9998	8887	Hail
1987	5	23	sfl 7am	9998	8887	Hail
1987	5	26	sfl 7pm	9998	8887	Hail
1987	8	9	sfl 7pm	9998	8887	Hail
1986	1	22	tmx 7pm	30.8	38.0	Keying
1986	6	20	sfl 7pm	9998	8887	Hail
1986	8	2	sfl 7pm	10	8810	Hail
1986	8	3	sfl 7am	4	8804	Hail
1985	4	20	tmn 7am	40.4	37.8	Keying
1985	6	3	sfl 7pm	1	8801	Hail
1985	8	12	prc 7am	0	9998	Trace
1984	12	22	tmn 7am	16.5	13.5	Keying

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1982	1	1	sdp 7am	0	2	Missing sdp
			sdp 7pm	0	2	Missing sdp
1982	1	2	sdp 7am	0	3	Missing sdp
			sdp 7pm	0	3	Missing sdp
1982	1	3	sdp 7am	0	3	Missing sdp
			sdp 7pm	0	3	Missing sdp
1982	1	4	sdp 7am	0	3	Missing sdp
			sdp 7pm	0	2	Missing sdp
1982	1	6	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	1	Missing sdp
1982	1	7	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	1	Missing sdp
1982	1	8	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	1	Missing sdp
1982	1	12	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	2	Missing sdp
1982	1	13	sdp 7am	0	2	Missing sdp
			sdp 7pm	0	2	Missing sdp
1982	1	14	sdp 7am	0	2	Missing sdp
			sdp 7pm	0	1	Missing sdp
1982	1	22	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	1	Missing sdp
1982	2	1	tmx 7am	40.6	44.6	Keying
1982	2	3	sdp 7pm	0	1	Missing sdp
1982	2	4	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	1	Missing sdp
1982	2	5	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	1	Missing sdp
1982	2	8	sdp 7pm	0	1	Missing sdp
1982	2	9	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	1	Missing sdp
1982	3	3	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	2	Missing sdp
1982	3	4	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	2	Missing sdp
1982	3	5	sdp 7am	0	4	Missing sdp
			sdp 7pm	0	1	Missing sdp
1982	3	6	sdp 7am	0	1	Missing sdp
1982	3	26	sdp 7am	0	2	Missing sdp
1982	6	9	tmn 7pm	51.0	50.1	Keying
1982	10	19	tmn 7am	50.1	54.5	Unknown
			prc 7am	52	53	Prc 52
			sdp 7am	0	4	Missing sdp
1982	10	27	tmn 7pm	42.1	41.3	Unknown
1982	10	28	tmn 7am	37.3	35.4	Unknown
1982	11	22	sdp 7pm	0	5	Missing sdp
1982	11	23	sdp 7am	0	5	Missing sdp
			sdp 7pm	0	3	Missing sdp

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1982	12	7	sdp 7pm	0	3	Missing sdp
1982	12	8	sdp 7am	0	6	Missing sdp
			sdp 7pm	0	4	Missing sdp
1982	12	9	sdp 7am	0	4	Missing sdp
			sdp 7pm	0	2	Missing sdp
1982	12	10	tmx 7am	39.6	39.4	Keying
			sdp 7am	0	1	Missing sdp
1982	12	24	sdp 7am	0	2	Missing sdp
			sdp 7pm	0	3	Missing sdp
1982	12	25	sdp 7am	0	1	Missing sdp
			sdp 7pm	0	1	Missing sdp
1981	1	1	sdp 7am	9999	0	Missing sdp
1981	1	2	tmx 7am	32.1	32.3	Obs.
			sdp 7am	9999	0	Missing sdp
1981	1	3	sdp 7am	9999	0	Missing sdp
1981	1	4	tmx 7am	38.9	39.5	Obs.
			sdp 7am	9999	0	Missing sdp
1981	1	5	sdp 7am	9999	0	Missing sdp
1981	1	6	sdp 7am	9999	0	Missing sdp
1981	1	7	sdp 7am	9999	0	Missing sdp
1981	1	8	sdp 7am	9999	0	Missing sdp
1981	1	9	sdp 7am	9999	0	Missing sdp
1981	1	10	sdp 7am	9999	0	Missing sdp
1981	1	11	sdp 7am	9999	0	Missing sdp
1981	1	12	sdp 7am	9999	0	Missing sdp
1981	1	13	sdp 7am	9999	0	Missing sdp
1981	1	14	sdp 7am	9999	0	Missing sdp
1981	1	15	beg 7pm	0	1840	Period
			end 7pm	0	1900	Period
			prc 7pm	0	1	Period
			sfl 7pm	0	2	Period
			sdp 7pm	0	9998	Period
1981	1	16	beg 7am	1840	1900	Period
			end 7am	0500	0700	Period
			prc 7am	34	41	Period
			sfl 7am	70	87	Period
			sdp 7am	9999	9	Missing sdp
			beg 7pm	0500	0700	Period
			end 7pm	1700	1730	Period
			prc 7pm	17	9	Period
			sfl 7pm	32	13	Period
			sdp 7pm	10	9	Period
1981	1	17	beg 7am	1700	0	Period
			end 7am	9999	0	Missing time
			prc 7am	9998	0	Period
			sfl 7am	9998	0	Period
			sdp 7am	9999	7	Missing sdp
			sdp 7pm	7	6	Morning

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	1	18	sdp 7am	9999	5	Missing sdp
1981	1	19	sdp 7am	9999	4	Missing sdp
1981	1	20	sdp 7am	9999	3	Missing sdp
1981	1	21	sdp 7am	9999	2	Missing sdp
1981	1	22	sdp 7am	9999	2	Missing sdp
1981	1	23	sdp 7am	9999	1	Missing sdp
			sdp 7pm	0	9998	Trace
1981	1	24	sdp 7am	9999	9998	Missing sdp
			sdp 7pm	0	9998	Trace
1981	1	25	tmx 7am	43.8	43.9	Obs.
			sdp 7am	9999	9998	Missing sdp
			sdp 7pm	0	9998	Trace
1981	1	26	sdp 7am	9999	9998	Missing sdp
			sdp 7pm	0	9998	Trace
1981	1	27	sdp 7am	9999	9998	Missing sdp
1981	1	28	sdp 7am	9999	0	Missing sdp
1981	1	29	sdp 7am	9999	0	Missing sdp
1981	1	30	sdp 7am	9999	0	Missing sdp
1981	1	31	end 7pm	9999	1730	Missing time
1981	2	1	sdp 7am	9999	0	Missing sdp
1981	2	2	tmx 7am	22.7	23.2	Obs.
			sdp 7am	9999	0	Missing sdp
1981	2	3	sdp 7am	9999	0	Missing sdp
1981	2	4	sdp 7am	9999	0	Missing sdp
1981	2	5	tmx 7am	25.5	26.3	Obs.
			sdp 7am	9999	0	Missing sdp
1981	2	6	tmx 7am	29.6	29.8	Obs.
			sdp 7am	9999	0	Missing sdp
1981	2	7	sdp 7am	9999	0	Missing sdp
1981	2	8	tmx 7am	21.4	21.6	Obs.
			sdp 7am	9999	0	Missing sdp
1981	2	9	tmx 7am	25.8	26.2	Obs.
			sdp 7am	9999	0	Missing sdp
1981	2	10	end 7am	0500	0700	Period
			sdp 7am	9999	2	Missing sdp
			beg 7pm	0500	0700	Period
			end 7pm	9999	1000	Missing time
1981	2	11	sdp 7am	9999	2	Missing sdp
			sdp 7pm	2	1	Morning
1981	2	12	sdp 7am	9999	1	Missing sdp
			sdp 7pm	1	9998	Morning
1981	2	13	tmx 7am	37.8	38.2	Obs.
			sdp 7am	9999	9998	Missing sdp
			tmx 7pm	57.0	57.3	Obs.
			sdp 7pm	0	9998	Trace
1981	2	14	tmx 7am	40.1	40.8	Obs.
			sdp 7am	9999	9998	Missing sdp
1981	2	15	sdp 7am	9999	0	Missing sdp
1981	2	16	sdp 7am	9999	0	Missing sdp

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	2	17	beg 7am	1708	0	Keying
			end 7am	1711	0	Keying
			prc 7am	9998	0	Keying
			sdp 7am	9999	0	Missing sdp
			beg 7pm	0	1708	Keying
			end 7pm	0	1711	Keying
			prc 7pm	0	9998	Keying
1981	2	18	tmx 7am	45.8	46.0	Obs.
			sdp 7am	9999	0	Missing sdp
1981	2	19	sdp 7am	9999	0	Missing sdp
1981	2	20	tmx 7am	54.0	54.9	Obs.
			sdp 7am	9999	0	Missing sdp
1981	2	21	tmx 7am	41.7	41.8	Obs.
			beg 7am	0325	2025	Conversion
			end 7am	0335	2035	Conversion
			sdp 7am	9999	0	Missing sdp
1981	2	22	sdp 7am	9999	0	Missing sdp
1981	2	23	sdp 7am	9999	0	Missing sdp
1981	2	24	tmx 7am	43.6	44.0	Obs.
			sdp 7am	9999	0	Missing sdp
1981	2	25	sdp 7am	9999	0	Missing sdp
1981	2	26	sdp 7am	9999	0	Missing sdp
1981	2	27	tmx 7am	43.6	43.9	Obs.
			sdp 7am	9999	0	Missing sdp
1981	2	28	sdp 7am	9999	0	Missing sdp
1981	3	1	sdp 7am	9999	0	Missing sdp
			beg 7pm	0	1735	Period
			end 7pm	0	1810	Period
			prc 7pm	0	9998	Period
1981	3	2	tmx 7am	43.4	41.8	Unknown
			beg 7am	1735	0	Period
			end 7am	1810	0	Period
			prc 7am	9998	0	Period
			sdp 7am	9999	0	Missing sdp
			beg 7pm	9999	0730	Missing time
			end 7pm	9999	1000	Missing time
1981	3	3	tmx 7am	41.5	41.9	Obs.
			beg 7am	9999	0000	Missing time
			end 7am	9999	0130	Missing time
			sdp 7am	9999	0	Missing sdp
			beg 7pm	9999	0830	Missing time
			end 7pm	1700	1900	Period
			prc 7pm	32	46	Period
			sfl 7pm	9998	6	Period
			sdp 7pm	0	1	Period

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	3	4	beg 7am	1700	1900	Period
			end 7am	0500	0600	Period
			prc 7am	61	47	Period
			sfl 7am	40	34	Period
			sdp 7am	9999	4	Missing sdp
			beg 7pm	0500	0	Period
			end 7pm	9999	0	Missing time
			prc 7pm	9998	0	Period
			sfl 7pm	9998	0	Period
			sdp 7pm	4	2	Morning
1981	3	5	tmx 7am	33.1	33.5	Obs.
			sdp 7am	9999	1	Missing sdp
			sdp 7pm	1	9998	Morning
1981	3	6	tmx 7am	38.8	39.0	Obs.
			sdp 7am	9999	9998	Missing sdp
			tmn 7pm	32.8	32.6	Obs.
			beg 7pm	1510	1410	Conversion
			end 7pm	1700	1900	Period
			sdp 7pm	0	9998	Trace
1981	3	7	beg 7am	1700	1900	Period
			end 7am	0500	0700	Period
			prc 7am	13	15	Period
			sfl 7am	16	18	Period
			sdp 7am	9999	2	Missing sdp
			beg 7pm	0500	0700	Period
			end 7pm	1700	1730	Period
			prc 7pm	7	5	Period
			sfl 7pm	8	6	Period
1981	3	8	beg 7am	1700	0	Period
			end 7am	9999	0	Period
			prc 7am	9998	0	Period
			sfl 7am	9998	0	Period
			sdp 7am	9999	1	Missing sdp
			beg 7pm	9999	0715	Missing time
			end 7pm	9999	0945	Missing time
			sfl 7pm	0	9998	Trace
1981	3	9	sdp 7am	9999	1	Missing sdp
			sdp 7pm	0	9998	Trace
1981	3	10	tmx 7am	39.2	39.4	Obs.
			sdp 7am	9999	9998	Missing sdp
1981	3	11	tmx 7am	40.5	41.0	Obs.
			sdp 7am	9999	0	Missing sdp
1981	3	12	tmn 7am	24.1	23.8	Obs.
			sdp 7am	9999	0	Missing sdp
			tmn 7pm	27.6	27.5	Obs.
1981	3	13	sdp 7am	9999	0	Missing sdp
1981	3	14	tmx 7am	43.1	43.2	Obs.
			sdp 7am	9999	0	Missing sdp
1981	3	15	sdp 7am	9999	0	Missing sdp
1981	3	16	sdp 7am	9999	0	Missing sdp

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	3	17	sdp 7am	9999	0	Missing sdp
			beg 7pm	0	1730	Period
			end 7pm	0	1900	Period
			prc 7pm	0	9998	Period
1981	3	18	beg 7am	9999	1900	Missing time
			end 7am	0500	0700	Period
			sfl 7am	22	25	Period
			sdp 7am	9999	2	Missing sdp
			beg 7pm	0500	0700	Period
			end 7pm	0714	1840	Period
			sfl 7pm	3	9998	Period
			sdp 7pm	2	9998	Morning
1981	3	19	beg 7am	1819	1930	Period
			end 7am	9999	2000	Missing time
			sfl 7am	0	9998	Period
			sdp 7am	9999	0	Missing sdp
1981	3	20	tmx 7am	44.0	44.4	Obs.
			sdp 7am	9999	0	Missing sdp
			end 7pm	1700	1730	Period
1981	3	21	beg 7am	1700	1930	Missing time
			end 7am	9999	2000	Period
			sdp 7am	9999	0	Missing time
			sdp 7pm	0	9998	Trace
1981	3	22	tmx 7am	35.2	35.8	Obs.
			sdp 7am	9999	9998	Missing sdp
1981	3	23	sdp 7am	9999	0	Missing sdp
1981	3	24	end 7pm	1700	1730	Period
			sdp 7am	9999	0	Missing sdp
1981	3	25	tmx 7am	38.9	39.0	Obs.
			beg 7am	1700	0	Period
			end 7am	9999	0	Period
			prc 7am	9998	0	Period
			sdp 7am	9999	0	Missing sdp
1981	3	26	tmx 7am	52.6	53.0	Obs.
			sdp 7am	9999	0	Missing sdp
1981	3	27	tmx 7am	57.3	57.6	Obs.
			sdp 7am	9999	0	Missing sdp
1981	3	28	beg 7am	0	0630	Period
			end 7am	0	0700	Period
			prc 7am	0	9998	Period
			sdp 7am	9999	0	Missing sdp
			beg 7pm	9999	0700	Missing time
			end 7pm	9999	1000	Missing time
1981	3	29	sdp 7am	9999	0	Missing sdp
1981	3	30	sdp 7am	9999	0	Missing sdp
1981	3	31	sdp 7am	9999	0	Missing sdp
1981	4	1	tmx 7am	47.8	48.1	Obs.
			sdp 7am	9999	0	Missing sdp
1981	4	2	sdp 7am	9999	0	Missing sdp

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	4	3	tmx 7am	66.2	66.7	Obs.
			beg 7am	0	0547	Period
			end 7am	0	0700	Period
			prc 7am	0	20	Period
			sfl 7am	0	9998	Period
			sdp 7am	9999	9998	Missing sdp
			beg 7pm	0547	0700	Period
			end 7pm	9999	1615	Missing time
			prc 7pm	88	68	Period
1981	4	4	tmx 7am	35.4	35.6	Obs.
			sdp 7am	9999	4	Missing sdp
1981	4	5	sdp 7am	9999	9998	Missing sdp
1981	4	6	sdp 7am	9999	0	Missing sdp
1981	4	7	sdp 7am	9999	0	Missing sdp
1981	4	8	sdp 7am	9999	0	Missing sdp
			end 7pm	1019	1119	Conversion
1981	4	9	tmx 7am	43.8	44.0	Obs.
			sdp 7am	9999	0	Missing sdp
1981	4	10	sdp 7am	9999	0	Missing sdp
1981	4	11	sdp 7am	9999	0	Missing sdp
1981	4	12	sdp 7am	9999	0	Missing sdp
1981	4	13	tmx 7am	62.5	63.3	Obs.
			sdp 7am	9999	0	Missing sdp
1981	4	14	tmx 7am	53.3	53.9	Obs.
			sdp 7am	9999	0	Missing sdp
1981	4	15	tmx 7am	65.0	59.1	Obs.
			sdp 7am	9999	0	Missing sdp
1981	4	16	sdp 7am	9999	0	Missing sdp
1981	4	17	sdp 7am	9999	0	Missing sdp
1981	4	18	tmx 7am	68.0	68.7	Obs.
			sdp 7am	9999	0	Missing sdp
1981	4	19	tmx 7am	62.8	63.4	Obs.
			beg 7am	0	0445	Period
			end 7am	0	0700	Period
			prc 7am	0	9998	Period
			sdp 7am	9999	0	Missing sdp
			beg 7pm	9999	0700	Missing time
			end 7pm	1700	1900	Period
			prc 7pm	10	16	Period
1981	4	20	beg 7am	1700	1900	Period
			end 7am	0500	0700	Period
			prc 7am	14	8	Period
			sdp 7am	9999	0	Missing sdp
			beg 7pm	0500	0700	Period
			end 7pm	9999	1600	Missing time
1981	4	21	sdp 7am	9999	0	Missing sdp
1981	4	22	tmn 7am	42.7	43.0	Obs.
			sdp 7am	9999	0	Missing sdp
1981	4	23	tmx 7am	56.5	57.0	Obs.
			sdp 7am	9999	0	Missing sdp

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	4	24	sdp 7am	9999	0	Missing sdp
1981	4	25	tmx 7am	69.5	70.3	Obs.
			sdp 7am	9999	0	Missing sdp
1981	4	26	sdp 7am	9999	0	Missing sdp
1981	4	27	sdp 7am	9999	0	Missing sdp
1981	4	28	beg 7am	9999	0000	Missing time
			end 7am	9999	0130	Missing time
			sdp 7am	9999	0	Missing sdp
?1981	4	29	sdp 7am	9999	0	Missing sdp
			beg 7pm	0	1700	Period
			end 7pm	0	1835	Period
			prc 7pm	0	9998	Period
?1981	4	30	sdp 7am	9999	0	Missing sdp
			beg 7pm	1700	0	Period
			end 7pm	1835	0	Period
			prc 7pm	9998	0	Period
1981	5	1	tmx 7am	64.0	64.5	Obs.
1981	5	2	tmx 7am	73.1	73.8	Obs.
			beg 7pm	0	1840	Period
			end 7pm	0	1900	Period
			prc 7pm	0	2	Period
1981	5	3	tmx 7am	72.8	67.1	Obs.
			beg 7am	1840	1900	Period
			end 7am	9999	0045	Missing time
			prc 7am	11	9	Period
			end 7pm	1640	1900	Period
			prc 7pm	9998	49	Period
1981	5	4	tmx 7am	50.9	51.0	Obs.
			beg 7am	1640	1900	Period
			end 7am	9999	2000	Missing time
			prc 7am	61	12	Period
1981	5	5	end 7pm	1700	1900	Period
			prc 7pm	46	62	Period
1981	5	6	tmx 7am	52.8	52.9	Obs.
			beg 7am	1700	1900	Period
			end 7am	9999	2200	Missing time
			prc 7am	24	8	Period
			end 7pm	9999	1830	Missing time
			prc 7pm	7	8	Period
1981	5	7	tmx 7am	56.8	53.8	Obs.
			beg 7am	1700	0200	Period
			end 7am	9999	0330	Missing time
			prc 7am	1	9998	Period
1981	5	11	tmx 7am	64.6	63.0	Obs.
			end 7pm	9999	1330	Missing time
1981	5	12	tmx 7am	53.4	53.9	Obs.
			end 7pm	1700	1900	Period
			prc 7pm	1	4	Period

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	5	13	beg 7am	1700	1900	Period
			end 7am	2005	0600	Period
			prc 7am	6	3	Period
			beg 7pm	1300	0755	Period
1981	5	14	end 7am	9999	2330	Missing time
1981	5	15	tmx 7am	63.9	64.2	Obs.
1981	5	16	tmx 7am	58.0	58.6	Obs.
			beg 7am	0	0615	Period
			end 7am	0	0700	Period
			prc 7am	0	9998	Period
			beg 7pm	9999	0700	Period
			end 7pm	1700	1900	Period
			prc 7pm	7	15	Period
1981	5	17	beg 7am	1700	1900	Period
			end 7am	0500	0700	Period
			prc 7am	39	37	Period
			beg 7pm	0500	0700	Period
			end 7pm	1700	1900	Period
			prc 7pm	93	97	Period
1981	5	18	beg 7am	1700	1900	Period
			end 7am	0500	0700	Period
			prc 7am	16	6	Period
			beg 7pm	0500	0700	Period
			end 7pm	1115	1900	Period
1981	5	19	beg 7am	9999	1900	Missing time
			end 7am	9999	2330	Missing time
1981	5	20	dryb 7am	41.3	41.2	Keying
1981	5	21	tmx 7am	61.8	62.5	Obs.
1981	5	23	tmx 7am	62.4	63.0	Obs.
			end 7pm	1650	1900	Period
			prc 7pm	9998	1	Period
1981	5	24	beg 7am	1700	1930	Period
			prc 7am	2	1	Period
			beg 7pm	9999	1658	Missing time
			end 7pm	1700	1900	Period
			prc 7pm	3	15	Period
1981	5	25	beg 7am	1700	1900	Period
			end 7am	9999	2000	Missing time
			prc 7am	18	6	Period
			beg 7pm	9999	1600	Missing time
			end 7pm	1638	1900	Period
			prc 7pm	9998	4	Period
1981	5	26	beg 7am	1840	2200	Period
			end 7am	1855	0015	Period
			prc 7am	6	2	Period
			end 7pm	1700	1800	Period

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	5	27	tmx 7am	67.8	62.9	Obs.
			beg 7am	1700	0230	Period
			end 7am	0500	0520	Period
			beg 7pm	0500	0	Period
			end 7pm	0520	0	Period
			prc 7pm	9998	0	Period
1981	5	28	tmx 7am	67.0	67.8	Obs.
			beg 7am	9999	1930	Period
			end 7am	2250	0130	Period
			end 7pm	1700	1730	Period
1981	5	29	tmx 7am	58.6	58.8	Obs.
			beg 7am	1700	1950	Period
			end 7am	9999	0700	Missing time
			beg 7pm	0502	0700	Period
			end 7pm	1700	1745	Period
			prc 7pm	0	0	Period
1981	5	30	tmx 7am	56.7	57.0	Obs.
			beg 7am	1700	0	Period
			end 7am	9999	0	Period
			prc 7am	9998	0	Period
1981	5	31	tmx 7am	71.2	69.2	Obs.
			beg 7pm	9999	1215	Missing time
			end 7pm	9999	1520	Missing time
1981	6	1	tmx 7am	60.7	61.8	Unknown
1981	6	3	beg 7pm	1520	1510	Keying
1981	6	4	beg 7am	9999	2030	Missing time
			end 7am	9999	0100	Missing time
1981	6	5	tmx 7am	68.9	69.4	Obs.
			tmn 7pm	58.9	64.0	Obs.
1981	6	6	tmx 7am	72.2	72.4	Obs.
1981	6	7	tmx 7am	83.9	79.9	Obs.
			end 7am	9999	0315	Missing time
1981	6	9	tmn 7pm	70.4	70.0	Obs.
			end 7pm	1500	1710	Period
1981	6	10	prc 7pm	1	3	Period
1981	6	11	tmn 7pm	56.2	61.0	Obs.
			beg 7am	9999	0	Period
			end 7am	9999	0	Period
			prc 7am	2	0	Period
1981	6	12	tmn 7pm	67.4	67.0	Obs.
1981	6	13	beg 7pm	9999	1430	Missing time
			end 7pm	9999	1630	Missing time
1981	6	14	tmx 7am	66.5	66.9	Obs.
			beg 7pm	9999	1330	Missing time
			end 7pm	9999	1415	Missing time
1981	6	18	tmx 7am	73.9	74.2	Obs.
1981	6	19	tmn 7pm	63.3	63.0	Obs.
1981	6	22	tmx 7am	76.0	76.3	Obs.
			tmn 7pm	61.5	62.3	Obs.

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	6	23	tmn 7pm	64.9	64.2	Obs.
1981	6	26	end 7pm	1700	1830	Period
			prc 7pm	2	4	Period
1981	6	27	tmx 7am	74.1	74.3	Obs.
			beg 7am	1700	0	Period
			end 7am	1830	0	Period
			prc 7am	9998	0	Period
			end 7pm	1450	1530	Period
			prc 7pm	2	9998	Keying
1981	6	28	beg 7pm	9999	1630	Missing time
			end 7pm	9999	1800	Missing time
1981	6	29	beg 7am	9999	0	Missing time
			end 7am	9999	0	Missing time
			prc 7am	9998	0	Period
			end 7pm	9999	1300	Missing time
1981	6	30	tmx 7am	72.2	72.6	Obs.
1981	7	1	beg 7pm	0	1712	Period
			end 7pm	0	1900	Period
			prc 7pm	0	8	Period
1981	7	2	tmx 7am	71.3	72.8	Obs.
			beg 7am	1712	0	Period
			end 7am	9999	0	Period
			prc 7am	8	0	Period
			end 7pm	1700	1900	Period
			prc 7pm	1	2	Period
1981	7	3	beg 7am	1700	1900	Period
			end 7am	9999	0000	Missing time
			prc 7am	9	8	Period
1981	7	4	beg 7am	9999	1930	Missing time
			end 7pm	1251	1705	Period
1981	7	5	beg 7am	1645	0	Period
			end 7am	1705	0	Period
			prc 7am	9998	0	Period
1981	7	7	tmn 7pm	70.4	70.1	Obs.
1981	7	8	beg 7am	9999	2000	Missing time
1981	7	10	tmx 7am	76.2	77.2	Keying
1981	7	11	tmx 7am	82.1	83.0	Obs.
1981	7	12	end 7am	9999	2350	Missing time
			beg 7pm	0	1730	Period
			end 7pm	0	1900	Period
			prc 7pm	0	12	Period
1981	7	13	beg 7am	1800	1900	Period
			end 7am	0220	2320	Conversion
			prc 7am	95	83	Period
			beg 7pm	0	1730	Period
			end 7pm	0	1900	Period
			prc 7pm	0	9998	Period
1981	7	14	beg 7am	1730	0	Period
			end 7am	9999	0	Period
			prc 7am	9998	0	Period

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	7	15	tmx 7am	79.3	80.1	Obs.
1981	7	16	tmx 7am	82.5	83.0	Obs.
			beg 7am	0	0614	Period
			end 7am	0	0700	Period
			prc 7am	0	9998	Period
			beg 7pm	0614	0	Period
			end 7pm	9999	0	Period
			prc 7pm	9998	0	Period
1981	7	17	tmx 7am	77.9	78.5	Obs.
1981	7	18	end 7pm	9999	1530	Missing time
1981	7	19	tmx 7am	66.1	66.0	Obs.
			beg 7am	0	2215	Period
			end 7am	0	2257	Period
			prc 7am	0	9998	Period
1981	7	21	tmx 7am	84.0	84.6	Obs.
			tmn 7pm	65.8	65.2	Obs.
1981	7	22	tmx 7am	89.3	89.8	Obs.
1981	7	23	tmx 7am	77.2	77.4	Obs.
1981	7	24	tmn 7pm	65.0	64.2	Obs.
			beg 7pm	0	1830	Period
			end 7pm	0	1900	Period
			prc 7pm	0	2	Period
1981	7	25	beg 7am	1830	1900	Period
			prc 7am	3	1	Period
			end 7pm	1105	1740	Period
1981	7	26	beg 7am	1703	2050	Period
			end 7pm	9999	1900	Missing time
			prc 7pm	8	22	Period
1981	7	27	tmx 7am	58.0	58.2	Obs.
			beg 7am	1905	1900	Period
			end 7am	9999	1930	Missing time
			prc 7am	16	2	Period
1981	7	28	tmx 7am	69.7	70.1	Obs.
			tmn 7pm	59.2	59.0	Obs.
1981	7	29	tmx 7am	77.3	77.7	Obs.
1981	7	30	tmn 7am	56.3	56.5	Keying
1981	8	1	end 7pm	9999	1315	Missing time
1981	8	4	tmx 7am	82.1	82.2	Obs.
1981	8	6	tmn 7pm	62.1	63.0	Obs.
1981	8	9	tmx 7am	73.3	73.8	Keying
			end 7am	9999	0600	Missing time
			end 7pm	1700	1715	Period
			prc 7pm	25	26	Period
1981	8	10	tmn 7pm	55.0	55.2	Obs.
			beg 7am	1700	0	Period
			end 7am	1815	0	Period
			prc 7am	1	0	Period
			beg 7pm	0650	0700	Period
1981	8	11	tmx 7am	61.8	62.6	Obs.
			tmn 7pm	56.0	56.2	Obs.

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	8	12	beg 7pm	9999	1545	Missing time
			end 7pm	1700	1900	Period
			prc 7pm	9998	8	Period
1981	8	13	tmx 7am	65.0	65.1	Obs.
			beg 7am	1700	1900	Period
			end 7am	9999	2000	Missing time
			prc 7am	10	2	Period
1981	8	14	tmx 7am	67.3	68.0	Obs.
			tmn 7pm	61.9	61.5	Keying
			beg 7pm	9999	1315	Missing time
			end 7pm	9999	1400	Missing time
1981	8	16	tmx 7am	69.1	69.7	Keying
			end 7pm	9999	1530	Missing time
1981	8	17	tmx 7am	62.4	62.6	Obs.
			tmn 7pm	54.8	54.5	Obs.
			wetb 7pm	58.7	58.9	Keying
1981	8	18	tmx 7am	75.8	69.9	Obs.
1981	8	20	tmx 7am	75.3	75.5	Obs.
			beg 7pm	9999	1500	Missing time
			end 7pm	9999	1530	Missing time
1981	8	21	end 7pm	1700	1900	Period
			prc 7pm	9998	1	Period
1981	8	22	beg 7am	1700	1900	Period
			end 7am	9999	2130	Missing time
			prc 7am	2	1	Period
			end 7pm	9999	1415	Missing time
1981	8	23	tmx 7am	73.1	66.5	Obs.
			beg 7am	9999	1910	Missing time
			end 7am	9999	1945	Missing time
1981	8	24	tmn 7pm	56.0	56.5	Obs.
			beg 7pm	9999	1500	Missing time
			end 7pm	1700	1855	Missing time
1981	8	25	tmn 7pm	57.9	57.5	Keying
			beg 7am	1700	0	Period
			end 7am	1855	0	Period
			prc 7am	9998	0	Period
			beg 7pm	0	1800	Period
			end 7pm	0	1900	Period
			prc 7pm	0	1	Period
1981	8	26	tmx 7am	68.5	68.7	Obs.
			beg 7am	9999	1900	Period
			end 7am	1856	1956	Period
			prc 7am	4	3	Period
1981	8	28	tmx 7am	71.4	67.8	Obs.
			end 7am	9999	0030	Missing time
			tmn 7pm	56.1	56.0	Obs.
1981	8	29	beg 7pm	9999	1215	Missing time
			end 7pm	9999	1230	Missing time
1981	8	30	tmx 7am	73.3	71.7	Obs.
			end 7pm	1253	1255	Keying
			end 7pm	9999	1445	Missing time

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	8	31	tmx 7pm	71.0	70.8	Obs.
			tmn 7pm	56.0	56.5	Obs.
			end 7pm	1700	1900	Period
			prc 7pm	1	3	Period
1981	9	1	tmx 7am	60.2	60.7	Keying
			beg 7am	1700	1900	Period
			end 7am	0225	1925	Conversion
			prc 7am	2	9998	Period
1981	9	2	end 7pm	9999	1500	Missing time
1981	9	3	tmx 7am	74.0	71.6	Obs.
			beg 7am	9999	1930	Period
			end 7am	0500	2330	Unknown
1981	9	5	end 7pm	1700	1900	Period
			prc 7pm	9998	7	Period
1981	9	6	beg 7am	1700	1900	Period
			end 7am	9999	2200	Missing time
			prc 7am	52	45	Period
			beg 7pm	9999	1530	Missing time
			end 7pm	9999	1630	Missing time
1981	9	9	tmx 7am	67.4	67.8	Obs.
1981	9	10	tmx 7am	69.8	70.1	Obs.
1981	9	12	tmx 7am	68.9	69.5	Obs.
1981	9	16	dryb 7am	53.2	53.5	Obs.
			wetb 7am	48.0	49.0	Obs.
			beg 7am	9999	2300	Missing time
			end 7am	9999	0200	Missing time
			tmn 7pm	53.2	52.0	Obs.
1981	9	18	tmx 7am	63.8	64.1	Obs.
1981	9	21	tmx 7am	66.6	67.3	Obs.
			end 7am	9999	0415	Missing time
			tmn 7pm	53.3	55.2	Obs.
			end 7pm	9999	1600	Missing time
1981	9	22	dryb 7pm	70.8	70.6	Obs.
1981	9	23	beg 7pm	0	1717	Period
			end 7pm	0	1838	Period
			prc 7pm	0	9998	Period
1981	9	24	tmx 7am	64.7	64.9	Obs.
			beg 7am	1717	0640	Period
			end 7am	1738	0700	Period
			beg 7pm	0640	1555	Period
1981	9	27	tmx 7am	61.0	61.4	Obs.
1981	9	29	tmx 7am	64.9	65.0	Obs.
1981	10	1	tmx 7am	56.8	56.9	Obs.
1981	10	3	beg 7am	0	0600	Period
			end 7am	0	0700	Period
			prc 7am	0	9998	Period
			beg 7pm	9999	0700	Missing time
			end 7pm	9999	0900	Missing time
1981	10	4	beg 7pm	9999	1400	Missing time

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	10	5	tmx 7am	58.9	59.5	Obs.
			beg 7am	9999	2100	Period
			end 7am	2230	2130	Conversion
1981	10	8	end 7pm	1303	1900	Period
1981	10	9	beg 7am	1846	1900	Period
			end 7am	1910	0630	Period
			beg 7pm	9999	0	Period
			end 7pm	9999	0	Period
			prc 7pm	9998	0	Period
1981	10	12	tmx 7am	63.7	64.4	Obs.
1981	10	13	end 7am	0500	0700	Period
			beg 7pm	9999	0700	Period
			end 7pm	0815	1815	Period
1981	10	14	end 7am	1910	0630	Period
			dryb 7pm	53.8	50.0	Obs.
			wetb 7pm	49.4	46.0	Obs.
			beg 7pm	0500	0700	Period
			end 7pm	0740	1900	Period
			prc 7pm	9998	5	Period
1981	10	15	tmx 7am	53.7	50.0	Obs.
			beg 7am	9999	1900	Period
			end 7am	0500	0700	Period
			prc 7am	9998	5	Period
			beg 7pm	0500	0700	Period
			end 7pm	1340	1900	Period
1981	10	16	beg 7am	1831	1900	Period
			end 7am	0500	0700	Period
			prc 7am	5	9	Obs.
			beg 7pm	0500	0700	Period
			end 7pm	1120	1320	Conversion
1981	10	17	beg 7pm	9999	1330	Missing time
			end 7pm	9999	1400	Missing time
1981	10	21	tmx 7am	56.2	57.2	Obs.
			end 7pm	1700	1900	Period
			sfl 7pm	0	9998	Trace
1981	10	22	beg 7am	1700	0	Period
			end 7am	9999	0	Period
			prc 7am	9998	0	Period
1981	10	24	tmx 7am	42.2	43.0	Obs.
			sdp 7am	9999	0	Missing sdp
			end 7pm	1700	1900	Period
			prc 7pm	13	21	Period
			sfl 7pm	15	21	Period
1981	10	25	tmx 7am	32.4	32.7	Obs.
			beg 7am	1700	1900	Period
			prc 7am	10	2	Period
			sfl 7am	11	2	Period
			sdp 7am	9999	2	Missing sdp
1981	10	26	sdp 7am	9999	0	Missing sdp

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	10	27	sdp 7am	9999	0	Missing sdp
1981	10	28	sdp 7am	9999	0	Missing sdp
1981	10	29	sdp 7am	9999	0	Missing sdp
1981	10	30	end 7pm	1700	1810	Period
			sdp 7am	9999	0	Missing sdp
1981	10	31	beg 7am	1700	1945	Period
			end 7am	1810	2110	Period
			sdp 7am	9999	0	Missing sdp
			tmn 7pm	25.1	29.0	Obs.
1981	11	1	sdp 7am	9999	0	Missing sdp
			dryb 7pm	55.5	55.0	Obs.
			wetb 7pm	42.7	42.5	Obs.
1981	11	2	sdp 7am	9999	0	Missing sdp
1981	11	3	sdp 7am	9999	0	Missing sdp
1981	11	4	sdp 7am	9999	0	Missing sdp
1981	11	5	sdp 7am	9999	0	Missing sdp
1981	11	6	sdp 7am	9999	0	Missing sdp
1981	11	7	sdp 7am	9999	0	Missing sdp
1981	11	8	sdp 7am	9999	0	Missing sdp
1981	11	9	sdp 7am	9999	0	Missing sdp
1981	11	10	sdp 7am	9999	0	Missing sdp
1981	11	11	tmx 7am	44.3	44.6	Obs.
			sdp 7am	9999	0	Missing sdp
1981	11	12	sdp 7am	9999	0	Missing sdp
1981	11	13	tmx 7am	55.0	44.0	Keying
			sdp 7am	9999	0	Missing sdp
			tmn 7pm	36.3	35.5	Obs.
1981	11	14	sdp 7am	9999	0	Missing sdp
1981	11	15	sdp 7am	9999	0	Missing sdp
1981	11	16	tmx 7am	53.4	53.7	Obs.
			sdp 7am	9999	0	Missing sdp
1981	11	17	sdp 7am	9999	0	Missing sdp
1981	11	18	dryb 7am	48.0	50.0	Obs.
			wetb 7am	38.0	39.0	Obs.
			sdp 7am	9999	0	Missing sdp
1981	11	19	sdp 7am	9999	0	Missing sdp
1981	11	20	tmx 7am	33.4	34.2	Obs.
			sdp 7am	9999	0	Missing sdp
1981	11	21	sdp 7am	9999	0	Missing sdp
1981	11	22	end 7pm	1700	1900	Period
			sdp 7am	9999	0	Missing sdp
1981	11	23	beg 7am	1900	1700	Period
			end 7am	9999	1930	Period
			sdp 7am	9999	0	Missing sdp
1981	11	24	sdp 7am	9999	0	Missing sdp
1981	11	25	sdp 7am	9999	0	Missing sdp
			end 7pm	1700	1900	Period
1981	11	26	beg 7am	1700	1900	Period
			sfl 7am	0	9998	Trace
			sdp 7am	9999	9998	Missing sdp
			sdp 7pm	1	9998	Unknown

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	11	27	sdp 7am	9999	9998	Missing sdp
			sdp 7pm	9998	0	Morning
1981	11	28	tmx 7am	33.8	34.0	Obs.
			beg 7am	9999	2000	Missing time
			end 7am	9999	2130	Missing time
			sdp 7am	9999	0	Missing sdp
			sdp 7pm	9998	0	Period
1981	11	29	sdp 7am	9999	0	Missing sdp
1981	11	30	sdp 7am	9999	0	Missing sdp
1981	12	1	tmx 7am	31.7	31.9	Obs.
			sdp 7am	9999	0	Missing sdp
1981	12	2	sdp 7am	9999	0	Missing sdp
1981	12	3	sdp 7am	9999	0	Missing sdp
1981	12	4	sdp 7am	9999	0	Missing sdp
1981	12	5	sdp 7am	9999	0	Missing sdp
1981	12	6	dryb 7am	41.5	36.0	Obs.
			wetb 7am	32.0	30.0	Obs.
			sdp 7am	9999	0	Missing sdp
			tmn 7pm	39.9	36.0	Obs.
1981	12	7	tmx 7am	50.9	41.9	Obs.
			sdp 7am	9999	0	Missing sdp
1981	12	8	tmx 7am	47.2	48.5	Obs.
			sdp 7am	9999	0	Missing sdp
1981	12	9	tmx 7am	38.2	38.7	Obs.
			sdp 7am	9999	0	Missing sdp
1981	12	10	sdp 7am	9999	0	Missing sdp
1981	12	11	sdp 7am	9999	0	Missing sdp
1981	12	12	sdp 7am	9999	0	Missing sdp
1981	12	13	beg 7am	1700	0	Obs.
			end 7am	2030	0	Obs.
			prc 7am	1	0	Obs.
			sfl 7am	2	0	Obs.
			sdp 7am	9999	0	Missing sdp
			beg 7pm	0920	1120	Conversion
			end 7pm	1700	1900	Period
			prc 7pm	2	3	Period
			sfl 7pm	2	4	Period
1981	12	14	beg 7am	0	1900	Obs.
			end 7am	0	2030	Obs.
			prc 7am	0	9998	Obs.
			sfl 7am	0	9998	Obs.
			sdp 7am	9999	9998	Missing sdp
1981	12	15	beg. time	2057	0	Obs.
			end time	2120	0	Obs.
			prc 7am	9998	0	Obs.
			sfl 7am	9998	0	Obs.
			sdp 7am	9999	0	Missing sdp
			sdp 7pm	9998	0	Obs.

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	12	16	beg 7am	1700	2120	Obs.
			end 7am	9999	2220	Missing time
			prc 7am	21	9998	Obs.
			sfl 7am	40	9998	Obs.
			sdp 7am	9999	0	Missing sdp
			beg 7pm	9999	1600	Missing time
			end 7pm	1700	1900	Period
			prc 7pm	9998	1	Period
			sfl 7pm	9998	2	Period
1981	12	17	beg 7am	0	1900	Obs.
			end 7am	0	0030	Obs.
			prc 7am	0	23	Obs.
			sfl 7am	0	42	Obs.
			sdp 7am	9999	4	Missing sdp
1981	12	18	tmx 7am	17.1	17.4	Keying
			sdp 7am	9999	3	Missing sdp
1981	12	19	sdp 7am	9999	2	Missing sdp
1981	12	20	tmn 7pm	33.7	33.2	Obs.
			sdp 7am	9999	2	Missing sdp
			sdp 7pm	0	9998	Trace
1981	12	21	beg 7am	1705	0	Obs.
			end 7am	9999	0	Obs.
			prc 7am	29	0	Obs.
			sfl 7am	45	0	Obs.
			sdp 7am	9999	9998	Missing sdp
			beg 7pm	0	1705	Period
			end 7pm	0	1900	Period
			prc 7pm	0	1	Period
			sfl 7pm	0	1	Period
			sdp 7pm	0	9998	Period
1981	12	22	beg 7am	1700	1900	Period
			end 7am	1930	0400	Obs.
			prc 7am	9998	28	Obs.
			sfl 7am	9998	44	Obs.
			sdp 7am	9999	4	Missing sdp
			beg 7pm	0	1805	Period
			end 7pm	0	1900	Period
			prc 7pm	0	9998	Period
			sfl 7pm	0	9998	Period
1981	12	23	beg 7am	0	1900	Obs.
			end 7am	0	1930	Obs.
			prc 7am	0	9998	Obs.
			sfl 7am	0	9998	Obs.
			sdp 7am	9999	3	Missing sdp
1981	12	24	sdp 7am	9999	3	Missing sdp
1981	12	25	beg 7am	2155	0	Obs.
			end 7am	9999	0	Obs.
			prc 7am	9998	0	Obs.
			sfl 7am	9998	0	Obs.
			sdp 7am	9999	3	Missing sdp

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1981	12	26	beg 7am	9999	2155	Missing time
			end 7am	0500	0200	Obs.
			prc 7am	2	9998	Obs.
			sfl 7am	5	9998	Obs.
			sdp 7am	9999	2	Missing sdp
1981	12	27	beg 7am e	1925	0200	Obs.
			end 7am	9999	0700	Missing time
			prc 7am	9998	2	Period
			sfl 7am	9998	5	Period
			sdp 7am	9999	3	Missing sdp
			beg 7pm	0500	0700	Period
			prc 7pm	10	5	Obs.
1981	12	28	beg 7am	0	1925	Obs.
			end 7am	0	0030	Obs.
			prc 7am	0	9998	Obs.
			sfl 7am	0	9998	Obs.
			sdp 7am	9999	3	Missing sdp
1981	12	29	sdp 7am	9999	3	Missing sdp
1981	12	30	beg 7am	1700	0	Obs.
			end 7am	9999	0	Obs.
			prc 7am	9998	0	Obs.
			sfl 7am	9998	0	Obs.
			sdp 7am	9999	2	Missing sdp
			beg 7pm	9999	1645	Missing time
			end 7pm	1700	1730	Period
1981	12	31	beg 7am	9999	0	Period
			end 7am	9999	0	Period
			prc 7pm	9998	0	Period
			prc 7pm	9998	0	Period
			sdp 7am	9999	2	Missing sdp
			beg 7am	9999	0	Obs.
			end 7pm	1700	0	Obs.
			prc 7pm	9998	0	Obs.
			sfl 7pm	9998	0	Obs.
1980	3	6	prc 7pm	2	9998	Keying
1980	5	1	beg 7am	0	1700	Missing time
			end 7am	0	0500	Missing time
			prc 7am	0	30	Missing prc
			prc 7pm	52	53	Prc 52
1979	2	3	tmx	36.2	30.2	Keying
1979	2	22	prc	9998	0	Trace
			sfl	9998	0	Trace
1979	2	27	prc	4+10	14	12-hr data
			sfl	2+3	3	12-hr data
1979	4	11	prc	105	106	Prc 52
1979	5	8	prc	104	105	Prc 52
1979	5	19	beg time	0	1700	Trace
			end time	0	1800	Trace
			prc	0	9998	Trace

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1979	6	20	tmx	65.0	78.9	Unknown
1979	7	30	sfl	9998	8887	Hail
1979	10	20	prc	9998	0	Trace
1979	11	13	tmx	27.0	46.9	12-hr data
1979	11	17	tmx	36.5	65.9	Unknown
1978	6	29	end time	1320	1430	Keying
1978	7	19	beg time	0	9999	Keying
			end time	0	9999	Keying
1978	8	16	prc	1	0	Period
1978	8	17	prc	0	1	Period
1977	2	14	sdp	9999	0	Missing sdp
1977	7	20	prc	52	53	Prc 52
1977	7	25	prc	442	443	Unknown
1976	6	18	prc	52	53	Prc 52
!1975	3	26	sdp	7	1	Keying
1975	6	18	prc	58	59	Prc 58
1975	8	14	prc	58	59	Prc 58
1974	1	8	prc	1	15	Obs.
			sfl	9	20	Obs.
1973	4	6	prc	26	0	Period
			sfl	48	0	Period
1973	4	7	prc	25	48	Period
			sfl	22	66	Period
			sdp	0	6	Missing sdp
1973	4	8	prc	0	3	Period
			sfl	0	4	Period
			sdp	0	3	Missing sdp
!1973	4	9	sdp	0	2	Missing sdp
!1973	4	10	sdp	0	9998	Missing sdp
!1973	4	15	sdp	0	9998	Missing sdp
!1973	4	16	sdp	0	9998	Missing sdp
!1973	4	19	sdp	0	9998	Missing sdp
1973	11	4	prc	52	53	Prc 52
1972	4	14	prc	0	8	Unknown
			sfl	0	2	Unknown
1972	4	26	prc	52	53	Prc 52
1972	6	6	prc	52	53	Prc 52
1972	12	3	tmx	36.0	34.0	Unknown
!1972	12	4	sdp	0	1	Missing sdp
!1972	12	5	sdp	0	6	Missing sdp
!1972	12	6	sdp	0	5	Missing sdp
!1972	12	7	sdp	0	5	Missing sdp

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
!1972	12	8	sdp	0	7	Missing sdp
!1972	12	9	sdp	0	8	Missing sdp
!1972	12	10	sdp	0	7	Missing sdp
!1972	12	11	sdp	0	7	Missing sdp
!1972	12	12	sdp	0	6	Missing sdp
!1972	12	13	sdp	0	6	Missing sdp
!1972	12	14	sdp	0	6	Missing sdp
!1972	12	15	sdp	0	6	Missing sdp
!1972	12	16	sdp	0	6	Missing sdp
!1972	12	17	sdp	0	5	Missing sdp
!1972	12	18	sdp	0	4	Missing sdp
!1972	12	19	sdp	0	4	Missing sdp
!1972	12	20	sdp	0	3	Missing sdp
!1972	12	21	sdp	0	2	Missing sdp
!1972	12	22	sdp	0	2	Missing sdp
!1972	12	23	sdp	0	1	Missing sdp
!1972	12	24	sdp	0	1	Missing sdp
!1972	12	25	sdp	0	9998	Missing sdp
!1972	12	26	sdp	0	9998	Missing sdp
!1972	12	27	sdp	0	9998	Missing sdp
!1972	12	28	sdp	0	9998	Missing sdp
!1972	12	29	sdp	0	2	Missing sdp
!1972	12	30	sdp	0	1	Missing sdp
!1972	12	31	sdp	0	1	Missing sdp
1971	9	8	prc	52	53	Prc 52
!1970	4	4	sdp	9998	1	Keying
!1970	4	5	sdp	0	9998	Trace
!1970	4	6	sdp	0	9998	Trace
!1970	4	7	sdp	0	9998	Trace
1970	10	7	prc	52	53	Prc 52
!1969	1	3	sdp	0	9998	Missing sdp
!1969	1	23	sdp	0	1	Missing sdp
!1969	1	24	sdp	0	1	Missing sdp
!1969	1	25	sdp	0	1	Missing sdp
!1969	1	26	sdp	0	9998	Missing sdp
!1969	1	27	sdp	0	9998	Missing sdp
!1969	1	28	sdp	0	6	Missing sdp
!1969	1	29	sdp	0	5	Missing sdp
!1969	1	30	sdp	0	5	Missing sdp
!1969	1	31	sdp	0	4	Missing sdp
!1968	3	20	sdp	0	1	Missing sdp
!1968	4	3	sdp	0	1	Missing sdp
1968	4	17	prc	116	117	Prc 58
!			sdp	0	3	Missing sdp
!1968	4	18	sdp	0	3	Missing sdp
!1968	4	19	sdp	0	1	Missing sdp
1968	10	8	prc	52	53	Prc 52

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1967	5	30	prc	211	212	Prc 52
1967	11	2	prc	52	53	Prc 52
!1967	12	12	sdp	0	1	Missing sdp
!1967	12	13	sdp	0	6	Missing sdp
!1967	12	14	sdp	0	7	Missing sdp
!1967	12	15	sdp	0	6	Missing sdp
!1967	12	16	sdp	0	6	Missing sdp
!1967	12	17	sdp	0	6	Missing sdp
!1967	12	18	sdp	0	5	Missing sdp
!1967	12	19	sdp	0	4	Missing sdp
!1967	12	20	sdp	0	6	Missing sdp
!1967	12	21	sdp	0	6	Missing sdp
!1967	12	22	sdp	0	5	Missing sdp
!1967	12	23	sdp	0	4	Missing sdp
!1967	12	24	sdp	0	3	Missing sdp
!1967	12	25	sdp	0	3	Missing sdp
!1967	12	26	sdp	0	5	Missing sdp
!1967	12	27	sdp	0	5	Missing sdp
!1967	12	28	sdp	0	4	Missing sdp
!1967	12	29	sdp	0	5	Missing sdp
!1967	12	30	sdp	0	6	Missing sdp
!1967	12	31	sdp	0	6	Missing sdp
1965	12	13	sdp	5	9998	Unknown
1965	12	14	prc	24	29	Unknown
1965	12	15	sfl	9998	2	Unknown
!1964	11	14	sdp	60	6	Keying
1961	2	4	prc	0	9998	Trace
1961	3	18	prc	105	106	Prc 52
1961	7	7	prc	156	144	Unknown
1961	8	8	prc	58	59	Prc 58
1961	9	3	prc	58	59	Prc 58
1961	12	13	sdp	9999	0	Missing sdp
1959	4	18	prc	52	53	Prc 52
1958	3	9	prc	58	59	Prc 58
1958	5	9	prc	58	59	Prc 58
1958	6	25	prc	52	53	Prc 52
1955	4	7	prc	9998	0	Trace
1955	4	8	prc	0	9998	Trace
1955	9	20	prc	58	59	Prc 58
!1954	1	25	sdp	5	1	Keying
!1954	1	26	sdp	5	1	Keying

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1952	3	21	prc	58	59	Prc 58
1947	5	15	prc	52	53	Prc 52
1945	5	27	prc	58	59	Prc 58
1944	5	24	prc	116	117	Prc 58
1942	10	15	prc	58	59	Prc 58
1937	1	9	tmx	8.6	18.6	Keying
1937	1	31	sfl	9998	0	Trace
1937	4	17	prc	58	59	Prc 58
1937	4	23	beg 7am	9999	1900	Unknown
			end 7am	0	0700	Unknown
			beg 7pm	1505	0700	Unknown
			end 7pm	1510	1900	Unknown
1937	9	24	sfl	9998	0	Trace
1936	1	26	prc	0	9998	Trace
1936	8	3	prc	104	105	Prc 52
1935	4	24	prc	52	53	Prc 52
1935	5	23	prc	58	59	Prc 58
1934	12	2	prc	0	9998	Trace
1934	12	31	prc	0	9998	Trace
1933	3	24	sfl	9998	0	Trace
1933	12	1	sfl	0	10	Obs.
1933	12	5	prc	0	9998	Trace
1932	1	31	prc	0	9998	Trace
1932	2	10	prc	0	9998	Trace
1932	3	7	prc	58	59	Prc 58
1932	3	22	prc	0	9998	Trace
1932	3	26	prc	0	9998	Trace
1931	1	12	beg	0	9999	Trace
			end	0	9999	Trace
			prc	0	9998	Trace
1931	2	21	prc	0	9998	Trace
1931	3	3	sfl	3	2	Keying
1931	3	5	sfl	13	12	Unknown
1931	3	23	sfl	9998	0	Trace
1931	3	24	sfl	0	9998	Trace
1931	4	24	sfl	23	38	Unknown

Year	Mo	Day	Element	Orig.	Changed to	Type of Error
1931	5	21	sfl	0	9998	Trace
1931	6	5	prc	123	124	Unknown
1931	7	30	prc	9998	0	Trace
			beg 7pm	1500	0	Trace
1931	8	1	prc	3	9998	Unknown
1931	9	1	prc	4	6	Unknown
1931	11	17	prc	0	9998	Trace
1931	11	22	sfl	3	2	Unknown
1931	11	23	sfl	23	22	Unknown
1930	1	13	sfl	9998	0	Trace
1930	2	13	sfl	9998	0	Trace
1930	8	13	prc	58	59	Prc 58
1930	10	15	sfl	5	0	Keying
1929	1	16	sfl	9998	0	Trace
1929	5	1	sfl	9998	0	Trace
1929	10	22	sfl	9998	0	Trace
1928	1	2	prc	0	9998	Trace
1928	2	15	sfl	70	80	Unknown
1928	2	23	prc	2	1	Unknown
1928	4	13	prc	0	9998	Trace
1928	5	2	prc	58	59	Prc 58
1927	4	14	prc	58	59	Prc 58
1927	8	28	prc	0	1	Period
1927	8	29	prc	1	9998	Period
1926	3	25	sfl	0	9998	Trace
1926	3	26	sfl	0	9998	Trace
1926	4	9	prc	52	53	Prc 52
1926	4	21	prc	116	117	Prc 58
1926	6	13	prc	105	106	Prc 52
1924	2	20	tmn	-2.5	2.5	Keying
1923	6	4	prc	52	53	Prc 52
1922	6	14	prc	52	53	Prc 52
1920	2	12	sfl	0	9998	Trace
1920	2	22	sfl	0	9998	Trace
1919	1	27	sfl	9998	0	Trace
1919	2	20	prc	0	9998	Trace
1919	4	8	prc	0	9998	Trace
1918	9	15	prc	116	117	Prc 58