



Documentation of a Natural Event Due to High Winds, September 25, 2001 Columbia Plateau, Washington

03-02-005
April 2003



Printed on Recycled Paper

If you have special accommodation needs or require this document in alternative format, please contact Judy Beitel at (360) 407-6878 (voice) or 711 or 1-800-833-6388 (TTY).

Documentation of a Natural Event Due to High Winds, September 25, 2001 Columbia Plateau, Washington

Prepared by:

Washington State Department of Ecology
Air Quality Program

April 2003

Contents

Summary.....	1
Overview of the Natural Events Policy.....	1
Ecology’s Response to High Wind Events on the Columbia Plateau.....	2
Evaluation of the September 25, 2001 Exceedances on the Columbia Plateau, Washington....	3
BACM Implementation.....	23
Findings on the September 25, 2001 Exceedances on the Columbia Plateau, Washington.....	25

List of Tables

- Table 1 - Pasco, Washington Wind Observations, September 25, 2001
- Table 2 - Spokane, Washington Wind Observations, September 25, 2001
- Table 3 - Walla Walla, Washington Wind Observations, September 25, 2001
- Table 4 - Precipitation prior to a Natural Event due to high winds, September 25, 2001
- Table 5 - Pendleton, Oregon Wind Observations, September 25, 2001

List of Figures:

- Figure 1 - PM₁₀ Concentrations, September 2001, Kennewick, Spokane and Walla Walla, Washington
- Figure 2 - Wind Speeds, Gusts and Direction, Pasco, Washington, 2000(PST), September 24, 2001 - 0000(PST) September 26, 2001
- Figure 3 - Wind Speeds, Gusts and Direction, Spokane, Washington. 2000(PST), September 24, 2001 - 0000(PST) September 26, 2001
- Figure 4 - Wind Speeds, Gusts and Direction, Walla Walla, Washington. 2000(PST), September 24, 2001 - 0000(PST) September 26, 2001
- Figure 5 - ©UNISYS Surface Data Plot
00Z 25 Sep, 2001, [4:00 pm, September 24, 2001 (PST)]
- Figure 6 - ETA Analysis, 0000Z 25 Sep 01, [4:00 pm, September 24, 2001(PST)]
- Figure 7 - ©UNISYS Surface Data Plot 012Z 25 Sep, 2001, [4:00 am, September 25, 2001 (PST)]
- Figure 8 - ETA Analysis, 0000Z 25 Sep 01, [4:00 pm, September 24, 2001 (PST)]
- Figure 9 - ©UNISYS Surface Data Plot
00Z 26 Sep, 2001, [4:00 pm, September 25, 2001 (PST)]
- Figure 10 - Geostationary Operational Environmental Satellite (GOES) infrared image at 2315Z, or 3:15 pm, September 25, 2001

- Appendix A Kennewick, Spokane and Walla Walla, Washington, PM₁₀ Data
- Appendix B Meteorological Data - Kennewick, Spokane and Walla Walla, Washington
- Appendix C BACM Assessment: Benton, Spokane and Walla Walla counties

This page intentionally left blank.

Summary

On September 25, 2001, the Federal Reference Method monitors in Kennewick, Spokane (Crown Zellerbach and Rockwood) and Walla Walla, Washington measured particulate matter, 10 microns and smaller (PM₁₀) concentrations of 284 µg/m³, 260 µg/m³, 211 µg/m³, and 182 µg/m³, respectively. These concentrations exceeded the primary 24-hour PM₁₀ National Ambient Air Quality Standard (NAAQS) of 150 µg/m³.

The Washington State Department of Ecology (Ecology) has determined that these exceedances were due to a natural event caused by high winds and thus should be excluded from attainment status assessments of the Kennewick, Spokane and Walla Walla areas. Ecology flagged the data points for September 25, 2001, in the AIRS database maintained by the U.S. Environmental Protection Agency (EPA) to indicate a natural event was involved.

Ecology, the Benton Clean Air Authority and the Spokane County Air Pollution Control Authority determined to provide natural event documentation in one account, due to the regional nature of this high wind event. Thus, this documentation is being submitted to EPA in support of the data flags for EPA's acknowledgement and flagging of the data points.

Natural Events Policy

EPA issued the policy on "Areas Affected by PM-10 Natural Events" (hereafter referred to as Natural Events Policy or NEP) on May 30, 1996. EPA's reasons for issuing the NEP are described in the following terms:

In issuing the natural events policy, EPA now believes that, under certain circumstances, it is appropriate to again exclude PM-10 air quality data that are attributable to uncontrollable natural events from the decisions regarding an area's nonattainment status.

Under the policy, ambient PM₁₀ concentrations raised by unusually high winds are treated as uncontrollable natural events when the dust originates from nonanthropogenic sources, or when the dust originates from contributing anthropogenic sources controlled with best available control measures (BACM).

After natural events cause the PM₁₀ concentration to violate the PM₁₀ NAAQS, the NEP requires a state to develop a natural events action plan (NEAP) to deal with future exceedances. The NEP specifies that the NEAP is available for public review and comment. A state submits the NEAP to EPA for review and comment.

Under the NEP, when a state has reason to believe that natural events have caused monitored exceedances of the PM₁₀ standard, the state is responsible for establishing a clear causal relationship between the natural event and the exceedance. Documentation of the natural event should be sufficient to demonstrate that the natural event occurred and that it impacted a particular monitoring site. The documentation should provide evidence that concentrations at the monitoring site would not have exceeded the PM₁₀ standard in the absence of a natural event.

Ecology's Response to High Wind Events on the Columbia Plateau

During the late 1980s and early 1990s, a large number of exceedances of the 24-hour standard for PM₁₀ were recorded in Kennewick, Spokane, and Wallula, Washington. Accordingly, Ecology developed the *Natural Events Action Plan for High Wind Events in the Columbia Plateau* in March 1998, to deal with high wind natural events in eastern Washington. The Columbia Plateau NEAP addresses the NEP by providing for the following:

1. Notification of citizens when air quality is likely to be impaired due to high wind events.
2. Advice to citizens on steps to minimize exposure.
3. Development of a program to identify and implement controls for anthropogenic sources of windblown dust on the Columbia Plateau.

Ecology and the identified agricultural agencies continue to carry out the Columbia Plateau NEAP. Therefore, exceedances of the standard due to high wind natural events can be excluded from decisions on the area's nonattainment status after Ecology has identified and documented these events and forwarded the documentation to EPA.

The 1998 NEAP included Ecology's commitment to re-evaluate the NEAP at the end of 2001. The re-evaluation is currently in progress and a 2002 NEAP is presently in development.

In the spirit of the 2002 NEAP, this documentation includes a section on BACM implementation for agricultural fields, as it relates to the September 25, 2001, Columbia Plateau high wind event. As well, it incorporates the application of Ecology's refined high wind event definition as criteria for elevating high wind events. Ecology's definition of a high wind event is:

A high wind event occurs when the wind entrains and suspends dust to the extent that concentrations of PM₁₀ are elevated. This typically occurs when the average hourly wind speed at 33 ft is 18 miles per hour or greater for two or more hours; or in excess of 13 miles per hour for two or more hours when conditions of higher susceptibility to wind erosion exist. A high wind event that exceeds the PM₁₀ standard is a natural event.

These are intended to serve as transitional elements as NEAP implementation shifts from the 1998 NEAP to the 2002 NEAP. The 2002 NEAP will include the high wind event definition and Ecology's finding that BACM for agricultural fields is being implemented in the Columbia Plateau.

In the interest of being scientifically precise, the documentation uses "terms of art" to describe the associated meteorology.

Evaluation of the September 25, 2001 Exceedances on the Columbia Plateau, Washington

1. Kennewick, Spokane (Crown Zellerbach and Rockwood) and Walla Walla PM₁₀ Data

The Kennewick monitor operated on a daily monitoring schedule throughout 2001. The average PM₁₀ concentration was 25 µg/m³. Monthly maxima ranged from a low of 12 µg/m³ in December, to a high of 42 µg/m³ in September. The September 25, 2001, concentration of 284 µg/m³ was one of three monitored exceedances of the PM₁₀ NAAQS for the year, the other two being monitored concentrations of 347 µg/m³ and 267 µg/m³ on March 13, 2001 and October 23, 2001, respectively. The exceedances of March 13, 2001 and October 23, 2001 have been flagged as natural events due to high winds.

Throughout 2001, the Spokane monitors at Crown Zellerbach and Rockwood operated on a daily monitoring and a 1-in-3-day schedule, respectively. The average PM₁₀ concentrations at Crown Zellerbach and Rockwood were 29 µg/m³ and 25 µg/m³, respectively. Monthly maxima at Crown Zellerbach ranged from a low of 17 µg/m³ in December, to a high of 50 µg/m³ in September. At Rockwood, the monthly maxima ranged from a low of 13 µg/m³ in June, to a high of 48 µg/m³ in September. The September 25, 2001, concentrations of 260 µg/m³ and 211 µg/m³ were the only monitored exceedances of the PM₁₀ NAAQS for either site.

The Walla Walla monitor operated on a 1-in-3-day schedule throughout 2001. The average PM₁₀ concentration was 26 µg/m³. Monthly maxima ranged from a low of 14 µg/m³ in June, to a high of 72 µg/m³ in September. The September 25, 2001, concentration of 182 µg/m³ was the only monitored exceedance of the PM₁₀ NAAQS for the year.

September, 2001, PM₁₀ data for each of the four monitors are displayed in Figure 1.

2. Kennewick, Spokane, and Walla Walla Meteorological Data

National Weather Service (NWS) data for Kennewick (Tri-Cities Airport), Spokane (Spokane International Airport) and Walla Walla (Walla Walla Regional Airport) shows winds for September 25, 2001, were variable both in direction and speed throughout the day. Data from all three stations shows that at about 1200 hours, wind directions shifted and remained predominantly out of the south to southwest for several hours. Wind speeds during this time increased, ranging from the high teens to the 30s; gusts ranged from 21 to 41 mph. The meteorological data is found in Appendix B.

A. Kennewick Meteorological Data

Data from the Tri-Cities Airport at Pasco shows windy and gusty conditions from about noon to 2200 hours, September 25, 2001, Pacific Standard Time (Table 1). Wind speeds ranged from 18 to 35 mph; gusts ranged from 28 to 41 mph. Winds were primarily from the southwest. The data shows the winds at Kennewick met Ecology's definition for a high wind event.

This page intentionally left blank.

PM10 concentrations - September, 2001
Spokane WA, Walla Walla WA, and Kennewick WA

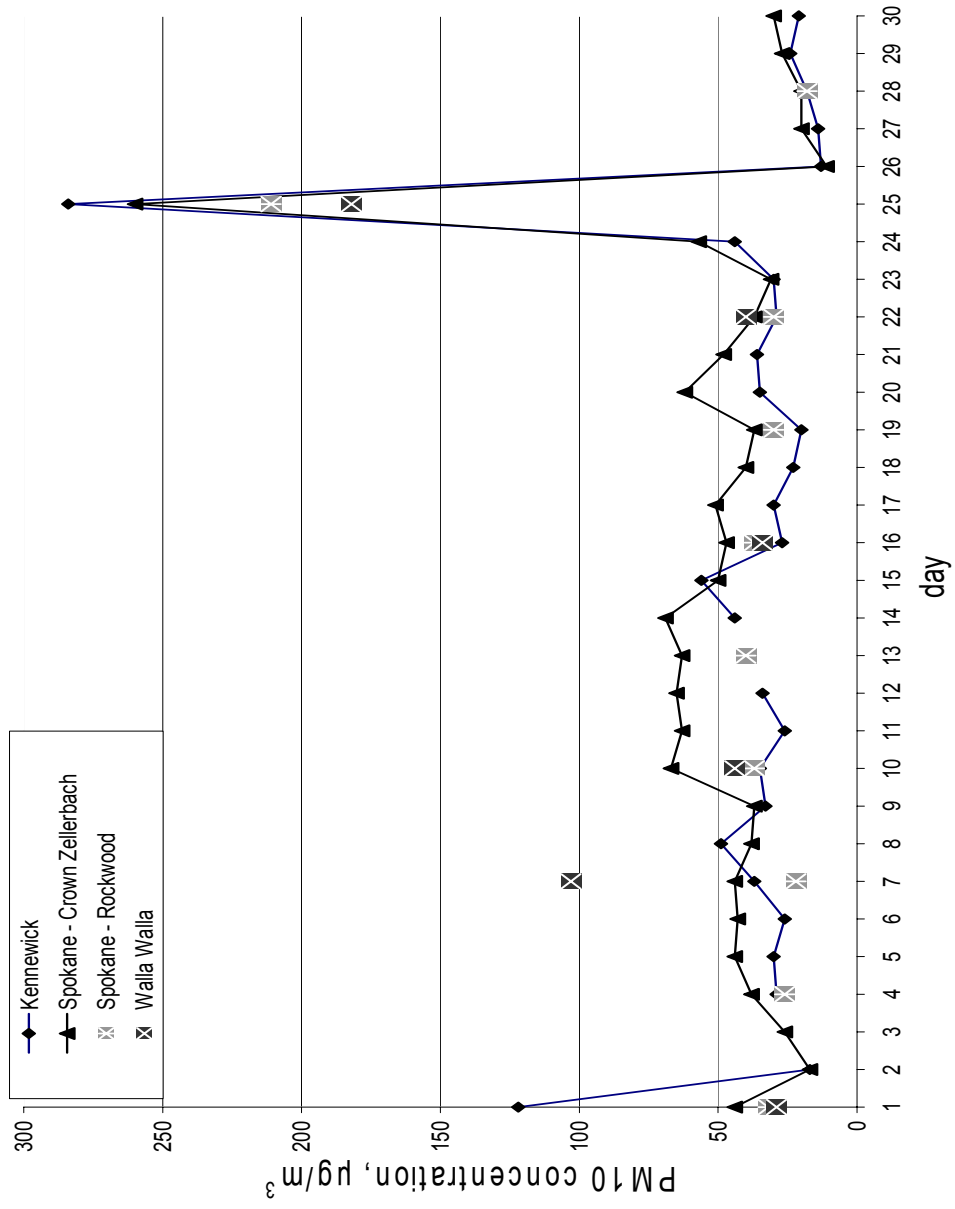


Figure 1

This page intentionally left blank.

Table 1. Select Pasco Wind Observations, September 25, 2001

Time (PST)	Wind Direction	Wind Speed (mph)	Peak Wind Speed (mph)
1138	SW (230°)	23	29
1153	SW (230°)	35	41
1246	SW (230°)	18	24
1253	SW (220°)	28	35
1301	SW (220°)	28	35
1353	SSW (210°)	23	30
1453	SW (220°)	21	28
1553	SSW (210°)	18	0
1653	SSW (210°)	20	0
1753	SSW (210°)	21	29
1853	SW (220°)	24	31
2053	SW (230°)	19	25
2153	SW (220°)	18	23

B. Spokane Meteorological Data

Spokane meteorological data also shows windy and gusty conditions on September 25, 2001. From about noon to 1529 hours, Pacific Standard Time (Table 2) winds, primarily from the south and south-southwest, ranged from 17 to 29 mph; gusts ranged from 31 to 36 mph. Wind speeds dropped for several hours before rising again to 20 mph, at 2125. For the remainder of the day, wind speeds were in the low 20s with gusts in the mid 20s. The data shows the winds at Spokane met Ecology's definition for a high wind event.

Table 2. Select Spokane Wind Observations, September 25, 2001

Time (PST)	Wind Direction	Wind Speed (mph)	Peak Wind Speed (mph)
1156	S (190°)	26	32
1256	S (190°)	17	0
1356	S (190°)	26	32
1421	S (190°)	29	36
1427	SSW (210°)	25	36
1440	SSW (210°)	29	36
1456	SW (220°)	28	33
1529	SSW (210°)	25	31
1549 - 2056	variable	9 – 13	0
2125	S (170°)	20	26
2156	S (180°)	20	0
2256	S (170°)	20	24
2356	S (180°)	22	0

C. Walla Walla Meteorological Data

At Walla Walla, high winds and gusty conditions were observed from 1153 to 1353 on September 25, 2001. Wind speeds ranged from 17 to 26 mph; gusts ranged from 21 to 35 mph.

For the remainder of the day, wind speeds were in the mid teens with occasional gusts of 22 mph. The data shows the winds at Walla Walla met Ecology’s definition for a high wind event.

Table 3. Select Walla Walla Wind Observations, September 25, 2001

Time (PST)	Wind Direction	Wind Speed (mph)	Peak Wind Speed (mph)
1153	SW (230°)	21	32
1200	SW (230°)	22	29
1207	SW (230°)	26	32
1233	SW (230°)	25	33
1253	SW (230°)	26	35
1258	SW (230°)	24	35
1353	SSW (200°)	17	23
1453	SSW (210°)	14	21

Wind speeds, gusts and wind direction at Pasco, Spokane and Walla Walla from 2000, September 24, 2001, to 0000, September 25, 2001 are displayed in Figures 2, 3, and 4.

D. Additional Meteorological Data

1. Table 4 summarizes precipitation data for Pasco, Spokane and Walla Walla, Washington prior to September 25, 2001. The data show August 24 as the most recently recorded precipitation prior to the high wind event. Thus, conditions were dry throughout the region.

Table 4. Precipitation prior to a Natural Event due to high winds, September 25, 2001

STATION:	Prec. 72 hrs. prior to event	Date of most recent prec. prior to event	Amount	# Days w/no prec. prior to event
Pasco NWS	0	8/24/01	.14 in.	31
Spokane NWS	0	8/24/01	.10 in.	31
Walla Walla NWS	0	8/24/01	.01 in.	31

Data for Spokane show high winds preceded .16 inches of precipitation recorded on September 25, 2002. From noon to 1529 wind speeds ranged from 17 to 29 mph; gusts ranged from 31 to 36 mph. Hourly measurable precipitation for Spokane International Airport, courtesy of Spokane County Air Pollution Control Authority (SCAPCA), shows .07 and .02 inches of precipitation at 1800 and 1900 hours; the other .07 inches occurred later in the day. That the high winds precede the rainfall is further corroborated by Ecology and SCAPCA staff, in Spokane at the time. Their statement regarding the event and the timing of rainfall is found in Appendix B, along with hourly precipitation data for Spokane International Airport.

Data for the Walla Walla Regional Airport show .20 inches of precipitation on September 25, 2002. Washington State University’s Public Agricultural Weather System (PAWS) station at Touchet was examined in order to further assess the timing of the precipitation, in relation to the high winds. The data show the first measurable precipitation at 1800 hours; winds of 21 and 19 mph are recorded at 1300 and 1400 hours, respectively. Thus, the data show high winds preceded the precipitation. This is consistent with data for Spokane and the regional nature of the high wind event.

Wind speeds, gusts and wind direction, Pasco, WA

2000(PST), Spetember 24, 2001 - 0000(PST), September 26, 2001

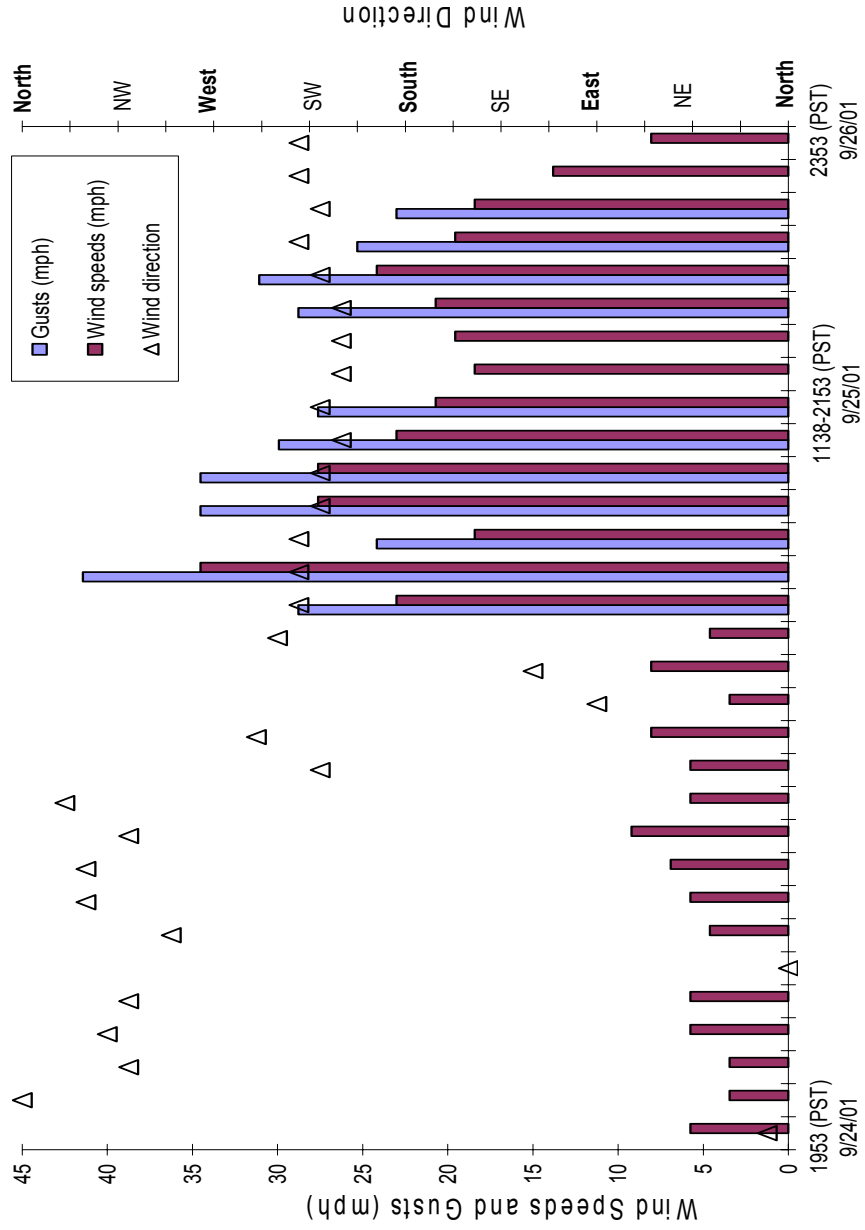


Figure 2

This page intentionally left blank.

Wind speeds, gusts and wind direction, Spokane WA
 2000(PST), September 24, 2001 - 0000(PST), September 26, 2001

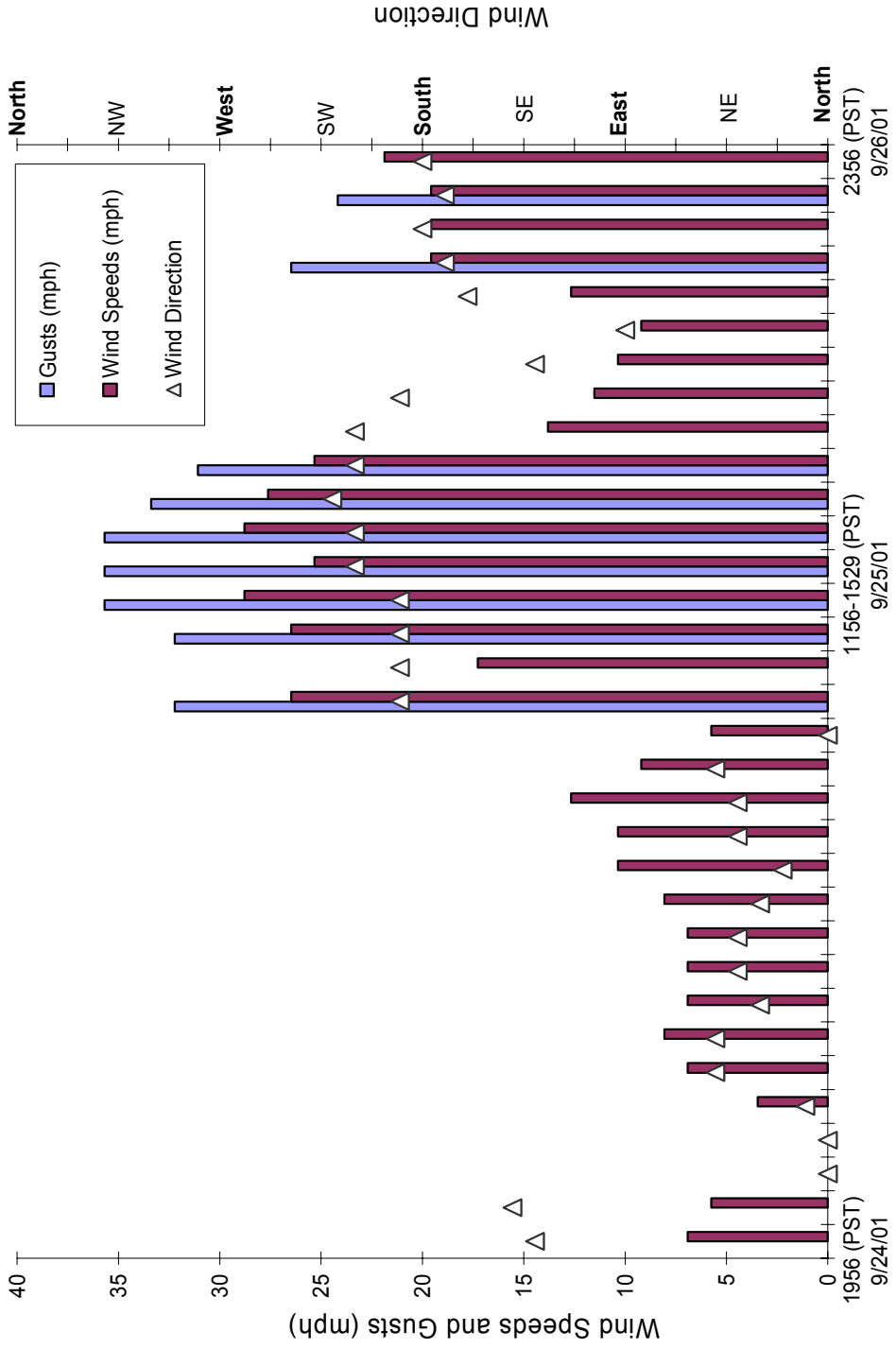


Figure 3

This page intentionally left blank.

Wind speeds, gusts and wind direction, Walla Walla, WA
 2000(PST), September 24, 2001 - 0000(PST) September 26, 2001

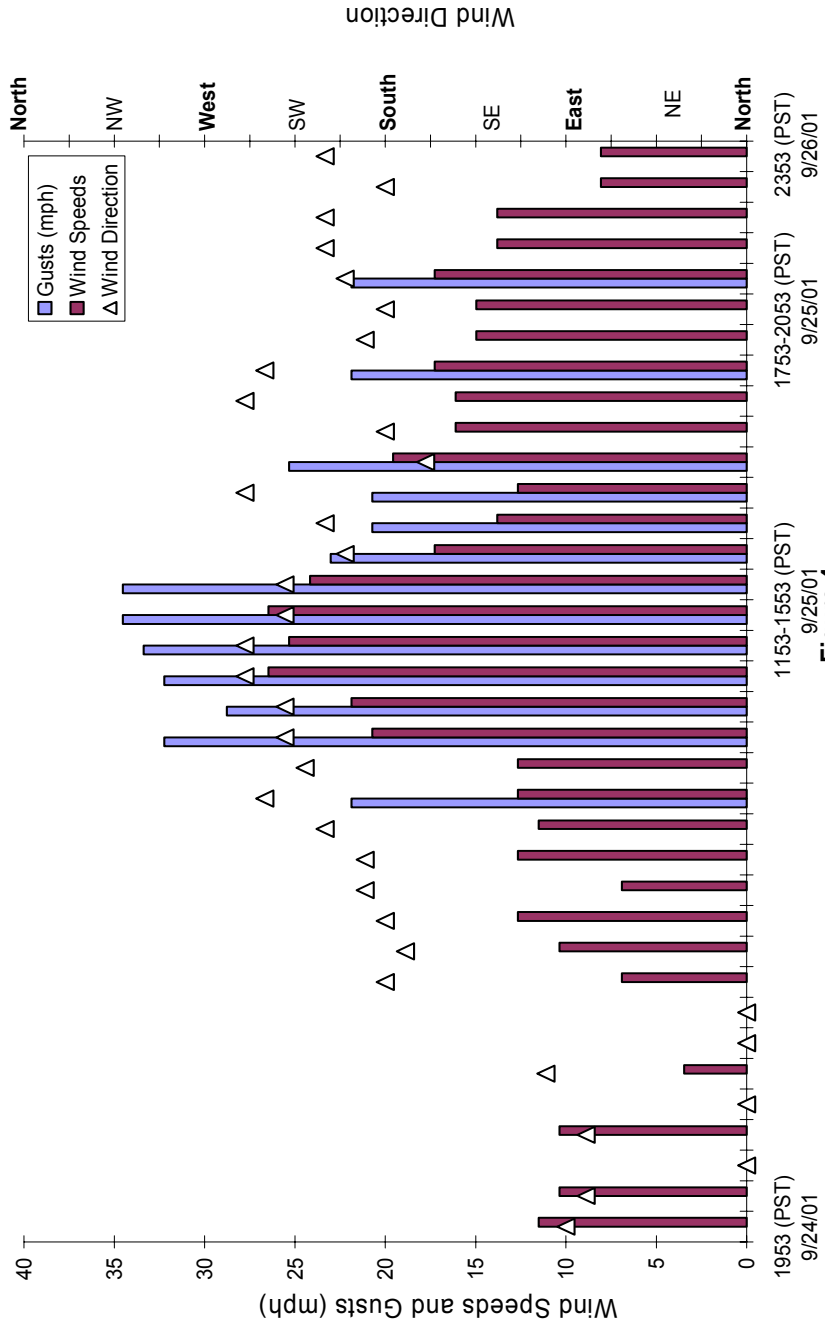


Figure 4

This page intentionally left blank.

2. Weather maps were analyzed to assess the general meteorological conditions and their geographic distribution, with respect to the September 25, 2001 event. The weather maps are presented on the following pages as Figures 5 through 10. They show that a low pressure system and a thermal trough moved from the southwest to the northeast, traversing northward from California into eastern Washington. The weather maps tie the various observations together and explain the regional extent of afternoon and evening high winds.

Figures 5, 7, and 9 are surface weather maps showing observations from various reporting stations at 4:00 PM, September 24, 2001, 4:00 AM, September 25, 2001, and 4:00 PM, September 25, 2001. Figures 6 and 8 are weather maps developed using the ETA weather forecast model. Observations are reported as 1200 and 0000 Zulu (Z) which corresponds to 4:00 AM and 4:00 PM, Pacific Standard Time (PST). Figure 10 is a Geostationary Operational Environmental Satellite (GOES) infrared 11um image at 2315Z, or 3:15 pm, September 25, 2001.

a.) The surface data plot for 00Z 25 Sep, 2001, [(Figure 5, 4:00 pm, September 24, 2001 (PST))] shows an approaching low pressure system off the central California coast spreading precipitation northward. A thermal trough extends the entire length of California. ETA analysis for 0000Z 25 Sep, 2001, [(Figure 6, 4:00 pm, September 24, 2001 (PST))] clearly shows the stacked low pressure system off the California coast. The pattern around the low shows good flow northward across Oregon and over eastern Washington.

At this point, the meteorological conditions are not likely to be associated with much more than local, thermally-driven winds. However, coupling of these conditions with additional moisture in the mid to lower layers and either, cooling of the upper atmosphere, or, an area of upward motion, presents favorable conditions for higher winds likely to generate blowing dust.

b.) Both the surface data plot and the ETA analysis for 12Z 25 Sep, 2001, [(Figure 7 and 8, 4:00 am, September 25, 2001 (PST))] show the low off the California coast has moved onshore, spreading precipitation ahead of it, east into Nevada and north into Oregon. The surface data plot shows the thermal trough has moved northward and now extends through eastern Oregon and eastern Washington.

Both the moisture and approaching trough are getting closer to eastern Washington. As air parcels rise, moisture increases the ability of the atmosphere to produce deep convection by supplying heat released during condensation. The approaching trough provides both cooling aloft to destabilize the atmosphere and upward motion. The likelihood for higher winds and turbulence in eastern Washington is increasing.

c.) The surface data plot for 00Z 26 Sep, 2001 [Figure 9, 4:00 PM, September 25, 2001 (PST)] shows the trough has picked up the low and is swinging it through Washington and Oregon, spreading rain into eastern Washington and the Idaho panhandle. A cold front associated with the low pressure center extends from the Rocky Mountains at the Idaho-Montana border southward through central Idaho to northeastern Nevada and southwestward into California. The

GOES NH Infrared 11um 2345Z 25 September 2001 satellite image shows a vigorous system centered over the Washington-Oregon border (Figure 10).

d.) Wind observations at Pendleton, Oregon, approximately 25 miles south of Walla Walla, WA further support tracking of this weather system. Pendleton reported wind speeds ranging from 24 to 30 mph with peak gusts of 37 mph from 0956 to 1156 on September 25, 2001 (Table 5). Winds were primarily from the south-southwest.

Table 5. Pendleton, Oregon Wind Observations, September 25, 2001

Time (PST)	Wind Direction	Wind Speed (mph)	Peak Wind Speed (mph)
0956	SSW (230°)	24	0
1047	SSW (230°)	30	37
1056	SSW (230°)	25	37
1156	S (180°)	26	33
1256-1656	variable	6 – 13 mph	0
1743	WSW (240°)	24	0
1756	WSW (240°)	26	32
1822	WSW (240°)	28	32

Data from the NWS station at Pendleton, Oregon shows no measured precipitation for the 50 days prior to September 25, 2001. On August 5, 2001, .01 in. precipitation is reported.

SUMMARY: The conditions that were being set up during the previous 24 hours produced a relatively vigorous cold front that passed through eastern Washington, September 25, 2001. The 35 mph winds reported at Twin Falls, Idaho (Figure 9) provide an indication of the frontal strength, just ahead of the front.

As seen in the weather maps, the disturbance moved from the southwest to the northeast, traversing from northern California into eastern Washington. The conditions associated with the front could be expected to produce the observed strong and gusty winds and blowing dust. The disturbance accounts for the high winds identified and associated with the natural event.

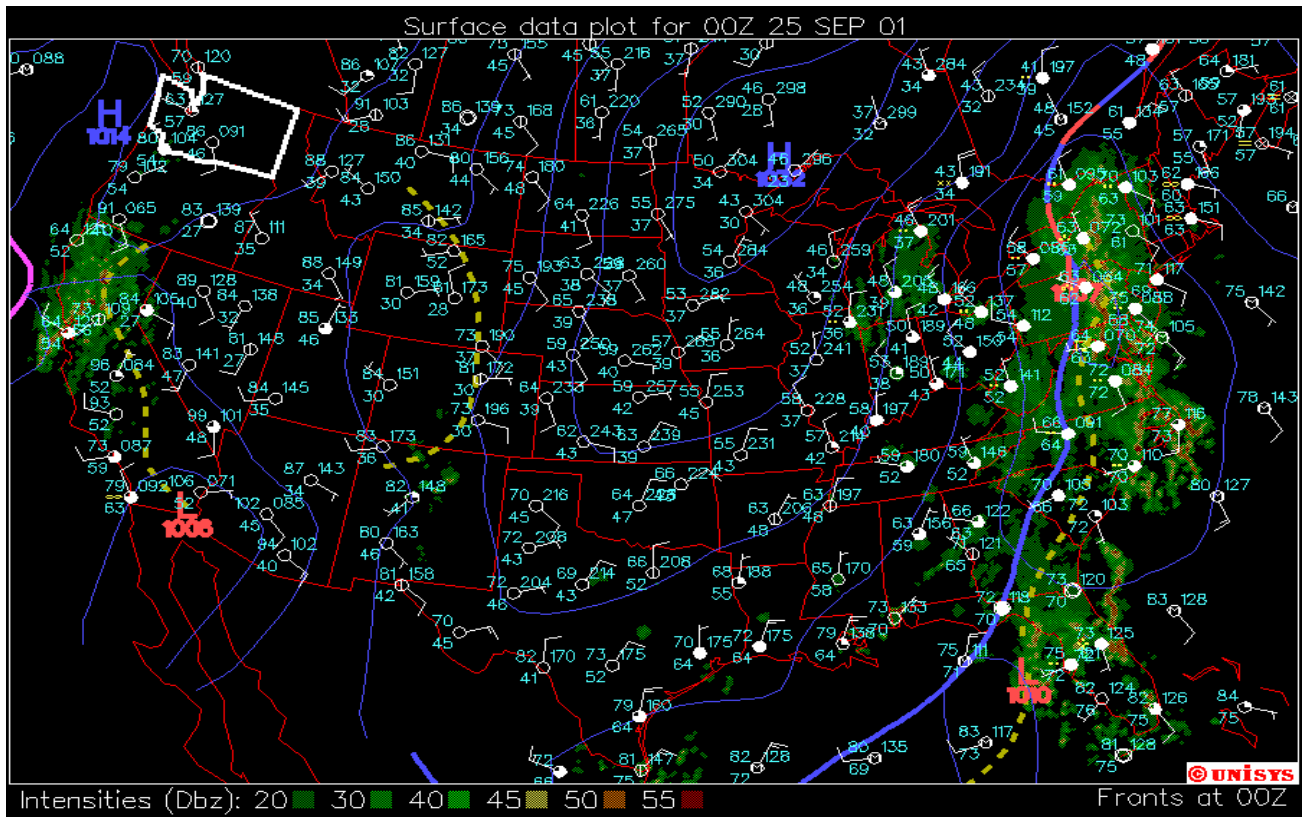


Figure 5

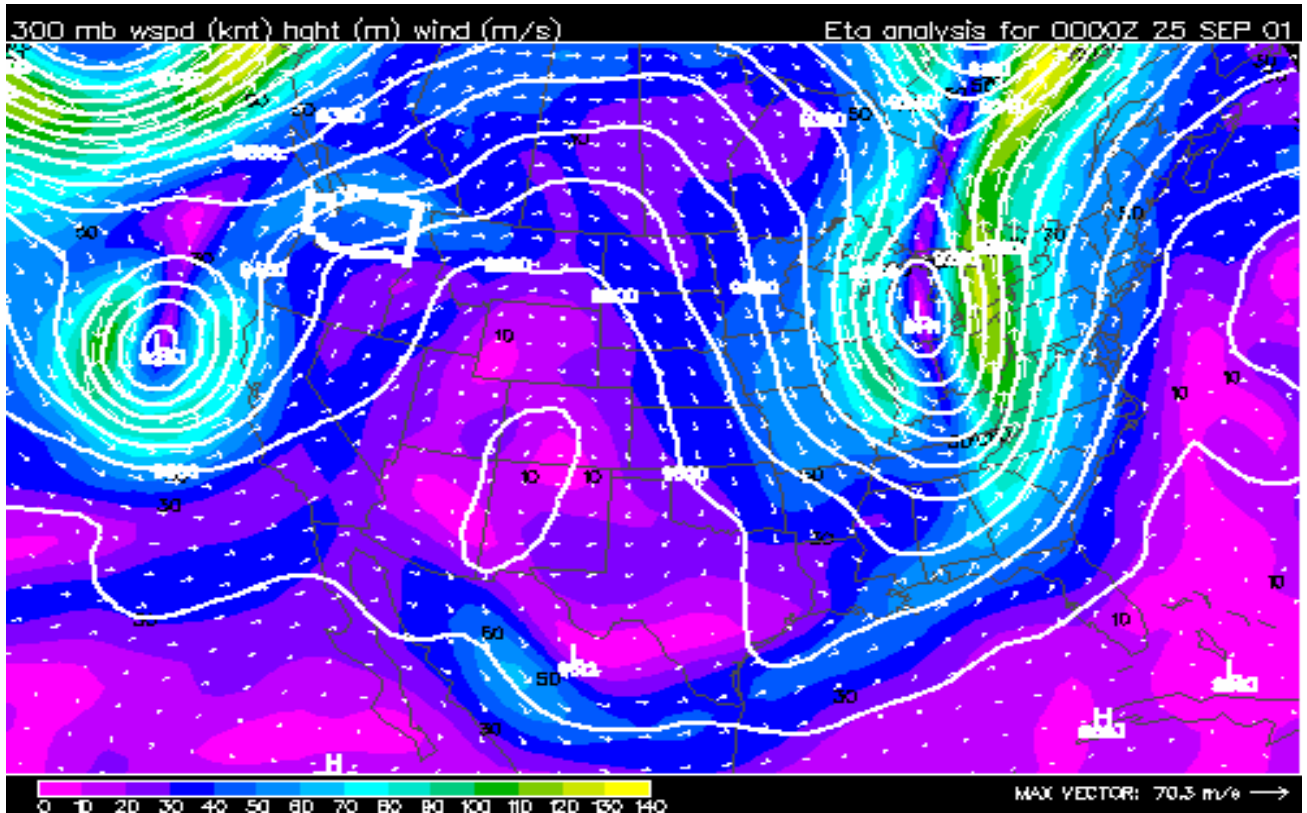


Figure 6

This page intentionally left blank.

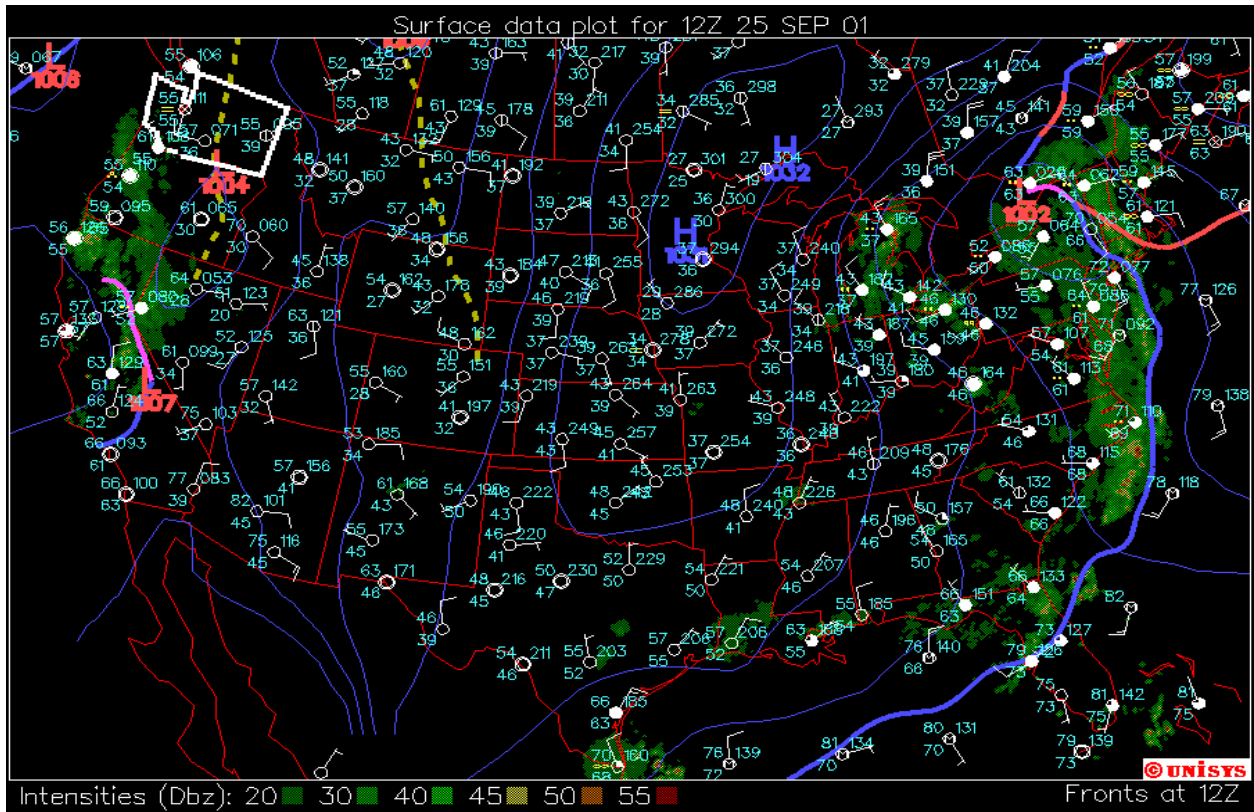


Figure 7

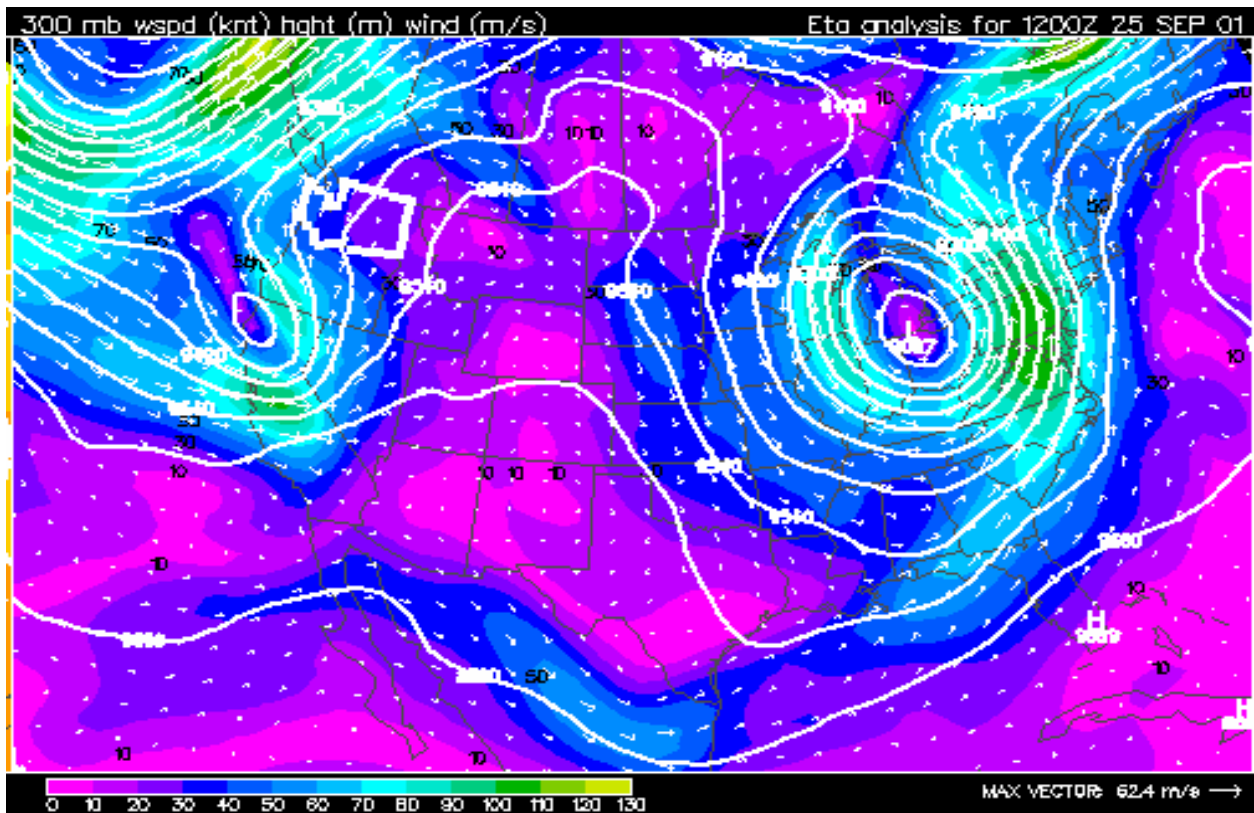


Figure 8

This page intentionally left blank.

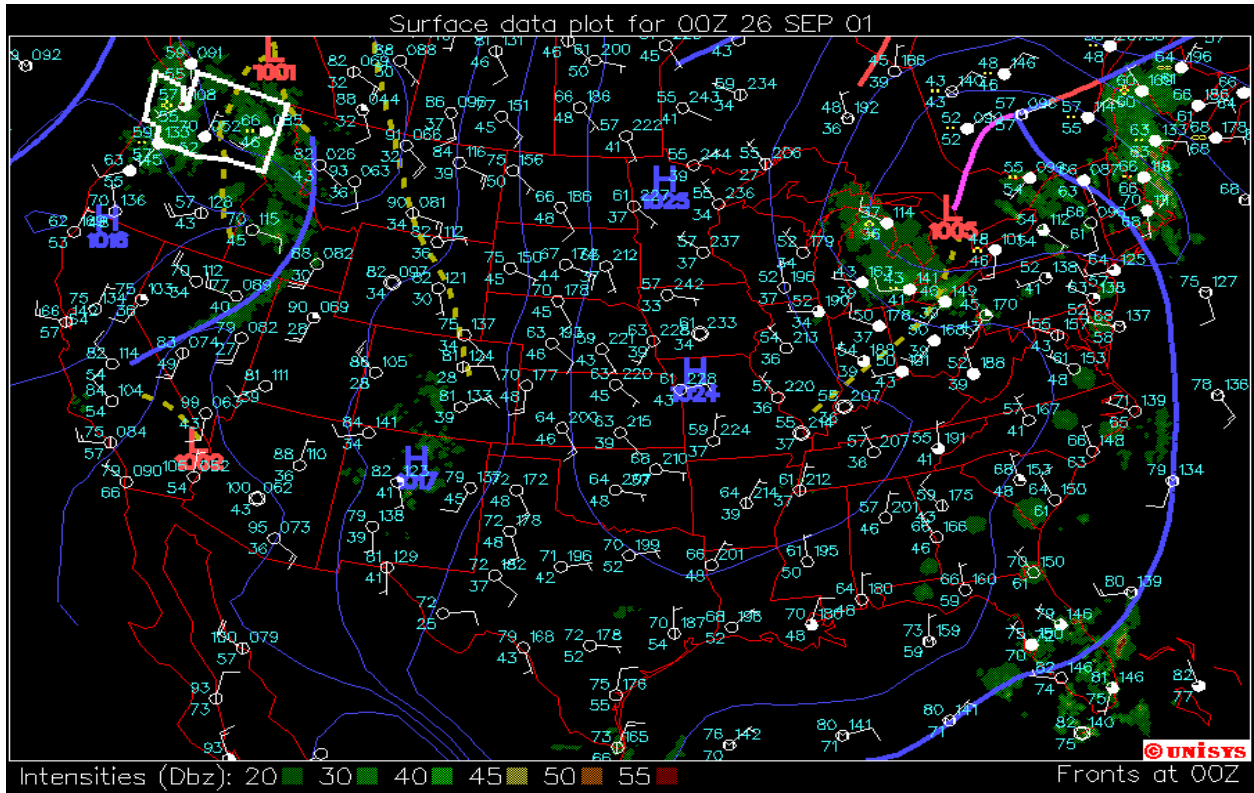


Figure 9

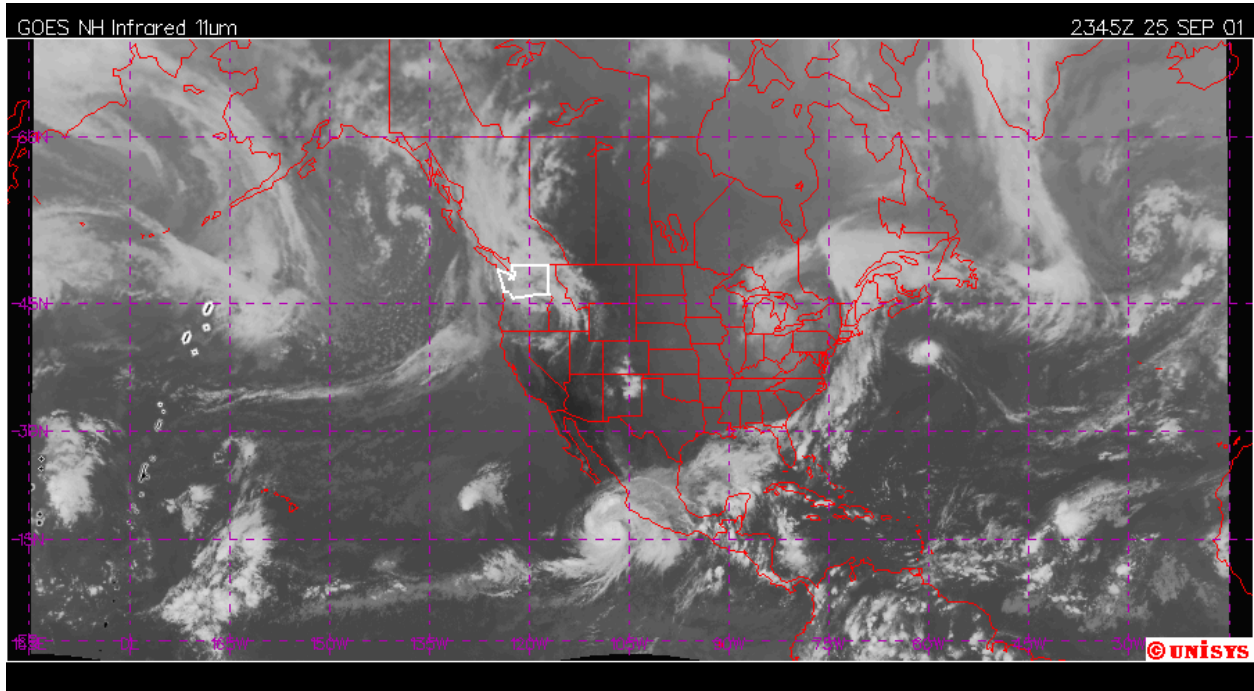


Figure 10

This page intentionally left blank.

BACM Implementation

Ecology has determined that BACM for agricultural fields is being implemented on the Columbia Plateau. This section summarizes recent BACM information for Benton, Spokane, and Walla Walla counties.

Background

Ecology relies on the federal, state and local agricultural agencies that are responsible for working with farmers regarding implementation of wind erosion conservation practices (BMPs). The USDA Natural Resource Conservation Service (NRCS), Agricultural Research Service (ARS) and local conservation districts lead this effort. Ecology coordinates with these agencies regarding conservation issues on the Columbia Plateau and commits to continuing efforts.

A menu of wind erosion conservation practices (BMPs) have been identified through the NRCS and the Columbia Plateau Wind Erosion/Air Quality Research Project (CP3). The CP3 reports that methods of wind erosion control are based on two principles: 1) reducing the direct force of wind on erodible soil particles, and 2) modifying the soil surface to resist wind action or particle movement.

Certain tillage practices are consistent with these principles in that they increase crop residue and/or surface roughness. The same can be said for enrolling highly erodible land (HEL) in the USDA's Conservation Reserve Program (CRP). The CRP is a USDA Conservation Title Program that allows growers to retire qualified highly erodible fields from crop production and establish either grass or tree cover on the land to control wind and/or water erosion.

Accordingly, Ecology finds the following two approaches constitute BACM:

- 1) Participation in USDA Conservation Title Programs
- 2) Voluntary implementation of conservation practices (BMPs) recognized by the USDA NRCS and/or the Columbia Plateau Wind Erosion/Air Quality Project

BACM Definition

The 2002 NEAP (under development) defines BACM for agricultural fields as conservation programs and practices that abate or minimize wind erosion. A more practical working definition is the USDA Conservation Programs, especially the Conservation Reserve Program (CRP) supplemented by incentive based implementation of wind-erosion BMPs.

BACM Tracking

The Conservation Technology Information Center (CTIC), established in 1982, is a national nonprofit public-private partnership working to promote soil and water quality and equip agriculture with affordable, integrated management systems. The CTIC was founded by a group of agribusiness, governmental agency and association partners, as a special project of the National Association of Conservation Districts (NACD). Funded by both private and public

sources, the Center serves numerous corporate, academic, nonprofit, federal, state and multi-state partners.

The CTIC annually conducts a National Crop Residue Management Survey. County level data from the survey is available through the CTIC's Core 4 program. Core 4 tracks conservation (No-Till, Ridge-Till, Mulch-Till) and conventional (0-15 percent and 15-30 percent residue) tillage practices and enrollment in the CRP on a county by county basis.

The CTIC's Core 4 program shows that farmers on the Columbia Plateau participate in wind erosion conservation programs and implement conservation practices promoted by USDA's Natural Resource Conservation Service (NRCS) and Washington State University's (WSU) CP3. Ecology uses the Core 4 as a resource for tracking BACM implementation on the Columbia Plateau, given the following understanding. The data on residue management, no-till, ridge-till and mulch-till reflect voluntary conservation practices (BMP) use. These statistics are likely to be dynamic and may change year to year based on crop selection, drought and economic viability.

2001 BACM Determination for Benton, Spokane and Walla Walla counties

Saxton et al (2000) developed a regional windblown dust modeling system for the Columbia Plateau in order to simulate a dust storm that occurred during September 23-25, 1999. This work shows that during high wind speeds accompanying a storm, emissions affecting urban receptors are within approximately 25 miles of the receptor.

High winds and gusts were predominantly out of the southwest on September, 25, 2001. In light of this and results from Saxton's source-receptor modeling, Ecology finds agricultural fields lying to the southwest and within about 25 miles of the PM₁₀ monitors at Kennewick, Spokane and Walla Walla are candidates for contributing to the measured emissions. Accordingly, Ecology prepared a BACM assessment for Benton, Spokane and Walla Walla counties, using the Core 4 data. The assessment is based on Core 4's 2000 data, the most recent year for which data is currently available. The summary shows that 75 percent of the three counties' total farmable acres are either in a USDA conservation program, use one of the minimum till practices, or contain 15-30 percent residue. The summary and corresponding Core 4 data can be found in Appendix C.

Washington State determines that BACM for agricultural fields was implemented in Benton, Spokane and Walla Walla counties on September, 25, 2001.

Findings

The meteorological data from the Pasco, Spokane and Walla Walla, Washington NWS stations show that the afternoon of September 25, 2001, was characterized by windy and gusty conditions. Wind speeds and gusts were in the 20s to 30s at Pasco, Spokane and Walla Walla, WA. The winds meet Ecology's high wind event definition of the 2002 NEAP, now under development.

Ecology finds BACM was implemented on candidate agricultural fields southwest and within about 25 miles of the PM₁₀ monitors. Under the dry conditions prevalent in this area the windy and gusty conditions are likely to have raised the dust that led to the monitored high PM₁₀ levels. Therefore, the monitored PM₁₀ concentration at Kennewick (284 µg/m³), Spokane [Crown Zellerbach (260 µg/m³) and Rockwood (211 µg/m³)] and Walla Walla, Washington (182 µg/m³) on September 25, 2001, are reasonably attributed to a natural event due to high winds.

Appendix A

Kennewick, Spokane and Walla Walla, Washington PM₁₀ Data

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA DAILY AMP350D

Dec. 19, 2002

CAS NUMBER:
 LATITUDE: 46.218611
 LONGITUDE: -119.205556
 UTM ZONE: 11
 UTM NORTHING: 5120514
 UTM EASTING: 329896
 ELEVATION-MSL:155
 PROBE HEIGHT: 9

(81102) PM10 Total 0-10um
 SITE ID: 53-005-0002 POC: 1
 COUNTY: (005) BENTON
 CITY: (35275) KENNEWICK
 SITE ADDRESS: KENNEWICK VSC/5929 W METALINE
 SITE COMMENTS:
 MONITOR COMMENTS:
 SUPPORT AGENCY: (1136) WASHINGTON STATE DEPARTMENT OF ECOLOGY
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 REPORTING ORG: (1136) WASHINGTON STATE DEPARTMENT OF ECOLOGY

STATE: (53) WASHINGTON
 AQCR: (230) SOUTH CENTRAL WASHINGTON
 URBANIZED AREA: (6740) RICHLAND-KENNEWICK
 LAND USE: RESIDENTIAL
 LOCATION SETTING: URBAN AND CENTER CITY

REPORT FOR: 2001

DURATION: 7
 UNITS: (001) UG/CU METER (25 C)
 MIN DETECTABLE: 4

DAY	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1	15	26	32	9	11	49	18	18	122	36	11	18
2	14		11	9	10	10		25	17	30	14	5
3	21		10		16	17	35	46		35	22	5
4	27	12	10	13	41	38		13	29	56	31	
5	20			12	17	9	33	13	30	32	19	2
6	15			6	19	10	26	19	26	34		4
7	14	16	25	6	31	18	20	26	37	18	21	15
8	22	18	17		36	20	22	34	49			16
9	23	11	10	2		17	27	32	33	16	30	5
10			48	7	28	7	35	41	35	20	29	8
11	8	10	7	8	40	15	30	33	26	13	30	20
12	16	22	22	9	60		30	38	34		30	11
13	12	25	P 347a	6	20		25	52			21	7
14	11	21		7	9	37	30	61	44		12	10
15	12	16	15	30		12	19	71	56		11	4
16	19	8		39	29	57	17	69	27	35	6	5
17	20	10	5	33	15	22	12	37	30	17	10	18
18	17		4	17	15			39	23	26	13	15
19	17	24	14	19		29	19		20	17	12	13
20	13	25	19	23		27	22	30	35	20	21	9
21		25		16	23	39	16	22	36	17		15
22	17	19	33		26	30		13	29		6	18
23	12	17	39		111	14	22	9	30	P 267a		
24	20	15		29	36		24	5	44	32	6	
25	16	18		45	29	13	22	18	P 284a		2	11
26	17	18	29	33	35	15	22	20	13	39	7	16
27	13		10	22	37	11	127	26	14		13	13
28	8		9	24	69	9	82	20	18	9	13	16
29			15	18	13	17	10	29	24	19	7	19
30			13	19	18	21		29	21	15	5	18
31	24		14		21		15	46		22		22
NO.:	27	20	24	26	27	25	27	30	28	23	26	28
MAX:	27	26	347	45	111	57	127	71	284	267	31	22
MEAN:	16	18	32	18	30	21	30	31	42	36	15	12

ANNUAL OBSERVATIONS: 311 ANNUAL MEAN: 25 ANNUAL MAX: 347
 3 Values marked with 'P' exceed the PRIMARY STANDARD of: 155
 3 Values marked with 'S' exceed the SECONDARY STANDARD of: 155

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA DAILY AMP350D

Dec. 19, 2002

(81102) PM10 Total 0-10um

SITE ID: 53-063-0016 POC: 3
 COUNTY: (063) SPOKANE
 CITY: (67000) SPOKANE
 SITE ADDRESS: CROWN ZELLERBACH/E 3530 FERRY
 SITE COMMENTS: NAMS TSP SITE. ESTABLISHED 4-72.
 MONITOR COMMENTS:

STATE: (53) WASHINGTON
 AQCR: (062) EASTERN WASHINGTON-NORTH
 URBANIZED AREA: (7840) SPOKANE, WA
 LAND USE: COMMERCIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 47.660833
 LONGITUDE: -117.357222
 UTM ZONE: 11
 UTM NORTHING: 5278447
 UTM EASTING: 473178
 ELEVATION-MSL: 590
 PROBE HEIGHT: 8

SUPPORT AGENCY: (1136) WASHINGTON STATE DEPARTMENT OF ECOLOGY
 MONITOR TYPE: Multiple Monitor Types
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 REPORTING ORG: (1136) WASHINGTON STATE DEPARTMENT OF ECOLOGY

REPORT FOR: 2001

DURATION: 7
 UNITS: (001) UG/CU METER (25 C)
 MIN DETECTABLE: 4

DAY	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1	20	46	86	15	15	34	23	27	44	46	15	5
2	32	16	27	18	10	9	31	28	17	54	21	7
3	40	24	41	13	23	8	38	37	26	44	32	8
4	30	16	22	36	40	13	28	13	38	49	38	8
5	18	17	65	24	23	12	36	17	44	52	21	9
6	15	33	85	13	14	11	25	32	43	47	29	9
7	15	47	103	10	35	20	18	34	44	27	31	21
8	44	61	35	10	43	25	22	34	38	20	40	19
9	40	25	30	14	33	31	39	37	14	69	15	15
10	43	17	37	14	31	8	32	43	67	23	47	16
11	26	25	22	17	46	11	34	38	63	17	33	26
12	22	22	23	27	40	9	40	32	65	52	35	18
13	24	47	33	14	24	12	70	54	63	20	28	4
14	14	44	23	14	13	17	24	47	69	23	7	9
15	28	39	40	25	8	17	23	50	50	29	16	11
16	22	17	17	49	13	19	14	63	47	23	15	2
17	28	13	23	60	15	13	15	54	51	18	15	20
18	26	18	11	29	18	20	17	38	40	17	17	22
19	21	30	20	27	38	30	20	46	37	24	22	21
20	17	36	42	33	9	34	30	45	62	25	17	17
21	16	38	52	21	29	37	15	29	48	15	13	16
22	29	28	67	18	34	30	17	20	37	10	4	23
23	19	19	74	17	37	19	22	13	31	33	7	17
24	18	37	35	39	60	13	24	16	57	16	13	30
25	20	55	17	58	45	11	23	23	P 260a	31	6	14
26	35	99	19	38	33	16	36	31	11	45	17	40
27	23	98	17	33	43	13	35	43	20	38	31	31
28	17	91	16	12	24	12	21	35	20	19	12	16
29	18		15	7	19	25	15	44	27	32	6	22
30	11		20	16	27	22	26	56	30	23	9	23
31	21		18		36		20	41		9		14
NO.:	31	28	31	30	31	29	31	31	30	31	30	31
MAX:	44	99	103	60	60	37	70	63	260	54	69	40
MEAN:	24	38	37	24	28	18	27	36	50	29	22	17

ANNUAL OBSERVATIONS: 364 ANNUAL MEAN: 29 ANNUAL MAX: 260
 1 Values marked with 'P' exceed the PRIMARY STANDARD of: 155
 1 Values marked with 'S' exceed the SECONDARY STANDARD of: 155

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA DAILY AMP350D

Dec. 19, 2002

(81102) PM10 Total 0-10um
 SITE ID: 53-063-1017 POC: 1
 COUNTY: (063) SPOKANE
 CITY: (67000) SPOKANE
 SITE ADDRESS: ROCKWOOD/N 9005 COUNTRY HOMES BLVD
 SITE COMMENTS:

STATE: (53) WASHINGTON
 AQCR: (062) EASTERN WASHINGTON-NORTH
 URBANIZED AREA: (7840) SPOKANE, WA
 LAND USE: RESIDENTIAL
 LOCATION SETTING: URBAN AND CENTER CITY

CAS NUMBER:
 LATITUDE: 47.739722
 LONGITUDE: -117.413333
 UTM ZONE: 11
 UTM NORTHING: 5287250
 UTM EASTING: 469020
 ELEVATION-MSL: 1940
 PROBE HEIGHT: 9

MONITOR COMMENTS:
 SUPPORT AGENCY: (1136) WASHINGTON STATE DEPARTMENT OF ECOLOGY
 MONITOR TYPE: SLAMS
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 REPORTING ORG: (1136) WASHINGTON STATE DEPARTMENT OF ECOLOGY

REPORT FOR: 2001

DURATION: 7
 UNITS: (001) UG/CU METER (25 C)
 MIN DETECTABLE: 4

DAY	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1	17			15	14				32	31		
2								23				
3		24	26			7	27				30	8
4	22			25	25				26	26		
5			43					13				
6		14				9	23				20	13
7	26			12	26				22	22		
8			37					21				
9		19				14	26				51	13
10	27			9	27				37	15		
11			19					31				
12		23				7	27				59	18
13	25			13	23				40	19		
14			26					27				
15		28				14	21				20	13
16	21			57	10				37	19		
17			35					50				
18						15	15				24	19
19	19			19	28				30	20		
20			39					39				
21						28	14				17	19
22	16	21		19	26				30	10		
23			59					9				
24		32				12	17				14	22
25	18	44		43	33				P 211a	22		
26			13					19				
27		68				10	29				24	29
28	14			14	20				18	17		
29			14					27				
30						16	17				9	33
31	16				24					9		
NO.:	11	9	10	10	11	10	10	10	10	11	10	10
MAX:	27	68	59	57	33	28	29	50	211	31	59	33
MEAN:	20	30	31	23	23	13	22	26	48	19	27	19

ANNUAL OBSERVATIONS: 122 ANNUAL MEAN: 25 ANNUAL MAX: 211
 1 Values marked with 'P' exceed the PRIMARY STANDARD of: 155
 1 Values marked with 'S' exceed the SECONDARY STANDARD of: 155

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 AIR QUALITY SYSTEM
 RAW DATA DAILY AMP350D

Dec. 19, 2002

(81102) PM10 Total 0-10um

SITE ID: 53-071-0005 POC: 1
 COUNTY: (071) WALLA WALLA
 CITY: (75775) WALLA WALLA
 SITE ADDRESS: FIRE STATION/200 S 12TH
 SITE COMMENTS:DOE SITE #3692007A01

STATE: (53) WASHINGTON
 AQCR: (230) SOUTH CENTRAL WASHINGTON
 URBANIZED AREA: (7840) SPOKANE, WA
 LAND USE: COMMERCIAL
 LOCATION SETTING: SUBURBAN

CAS NUMBER:
 LATITUDE: 46.060833
 LONGITUDE: -118.348333
 UTM ZONE: 11
 UTM NORTHING: 5101472
 UTM EASTING: 395707
 ELEVATION-MSL:30
 PROBE HEIGHT: 5

MONITOR COMMENTS:
 SUPPORT AGENCY: (1136) WASHINGTON STATE DEPARTMENT OF ECOLOGY
 MONITOR TYPE: OTHER
 COLLECTION AND ANALYSIS METHOD: (063) HI-VOL SA/GMW-1200 GRAVIMETRIC
 REPORTING ORG: (1136) WASHINGTON STATE DEPARTMENT OF ECOLOGY

REPORT FOR: 2001

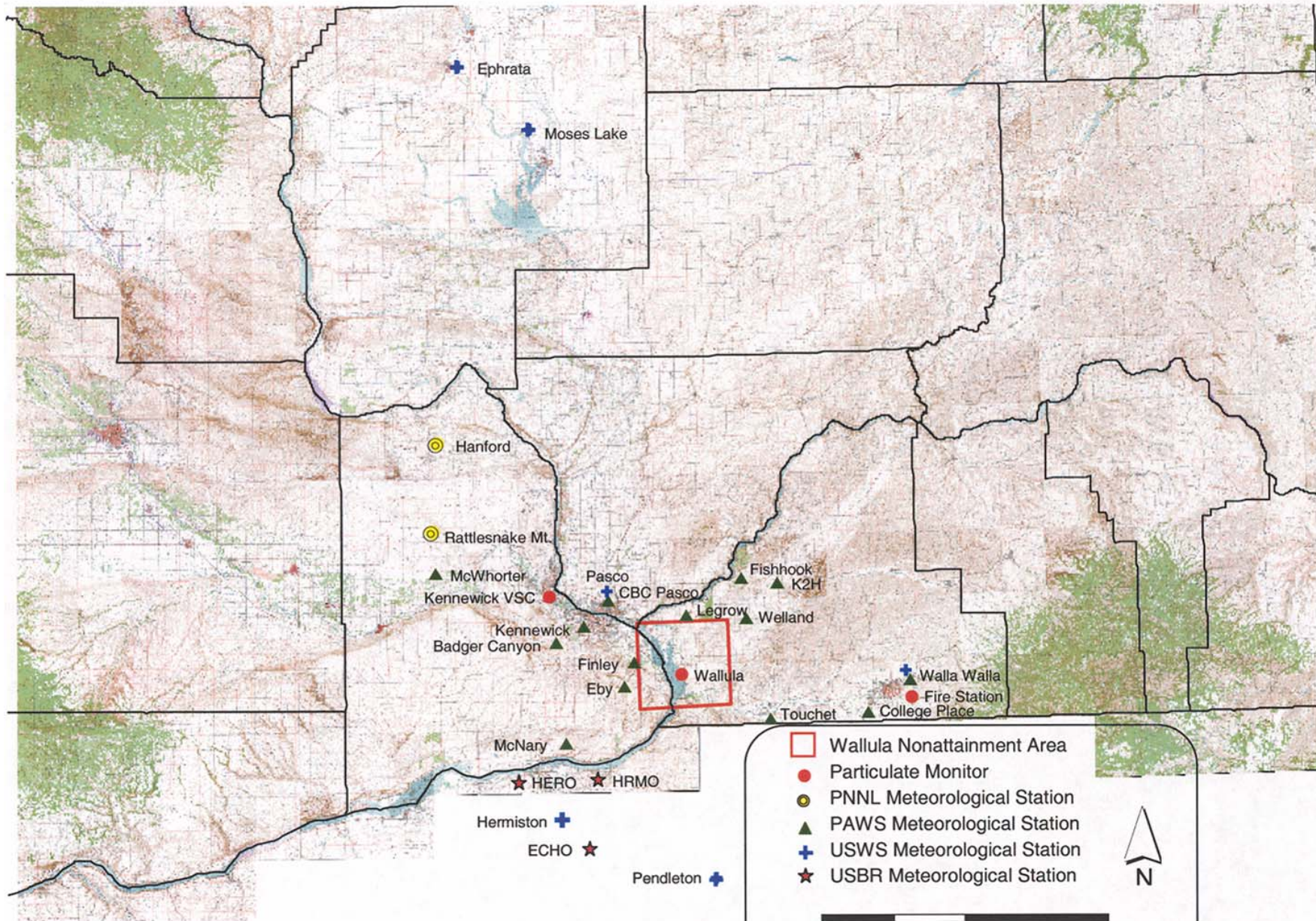
DURATION: 7
 UNITS: (001) UG/CU METER (25 C)
 MIN DETECTABLE: 4

DAY	MONTH											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1	12				11				29	32		
2			11					37				
3						10	38				42	10
4	27				24					47		
5			28					17				
6		17				10	20					6
7	25				30				103	19		
8			11					39				
9						14	23				23	12
10					29				44	25		
11			9					40				
12						5					28	12
13	8			7	22					17		
14			14					53				
15						13	32				18	8
16	24			47	10				34	41		
17			7					40				
18						18	17				15	8
19	16			16	60					25		
20			24					29				
21		29				29	20				11	28
22	13			17	25				40			
23			45					13				
24		25				18	28				11	22
25				39	26			P 182a	20			
26												
27		38				13	41				29	23
28					36							
29								38				
30							13				8	40
31	42				22					8		
NO.:	8	4	8	5	11	9	9	9	6	9	9	10
MAX:	42	38	45	47	60	29	41	53	182	47	42	40
MEAN:	21	27	19	25	27	14	26	34	72	26	21	17

ANNUAL OBSERVATIONS: 97 ANNUAL MEAN: 26 ANNUAL MAX: 182
 1 Values marked with 'P' exceed the PRIMARY STANDARD of: 155
 1 Values marked with 'S' exceed the SECONDARY STANDARD of: 155

Appendix B

Meteorological Data Kennewick, Spokane and Walla Walla, Washington



- Wallula Nonattainment Area
- Particulate Monitor
- PNNL Meteorological Station
- ▲ PAWS Meteorological Station
- + USWS Meteorological Station
- ★ USBR Meteorological Station

N

0 5 10 20
Miles

Data file for alw.txt

Data file for alw#
 # This data is from: Walla Walla (stn. code alw)
 #
 #
 Walla Walla Site and Instrument specifications
 Walla Walla, WA
 NWS: This site is a National Weather Service site.

Archived data available via this UW link since: 01 Jul 1996

STATION NAME	ID	LAT	Lon	ELEV M	ELEV FT	WMO																
WALLA WALLA RGN WA US	KALW	46.10	-118.28	367 m	1204 ft	72788																
# Station precip: maximum and daily avg (inches) over entire period of record							-----*															
# Station extrema: daily hi/lo temperatures over entire period of record							-----*															
# Station average: daily hi/lo temperatures over entire period of record							-----*															
# Station 6-hour hi/lo temperatures							-----*															
# Rain Gauge (inches)							-----*															
# Relative humidity (%)							-----*															
# Solar irradiance (W/m^2)							-----*															
# Visibility (miles)							-----*															
# Cloud height (100's of feet)							-----*															
# Cloud cover (1/8ths of sky)							-----*															
# Wind peak (nautical miles per hour)							-----*															
# Wind speed (nautical miles per hour)							-----*															
# Wind direction (clockwise degrees from North)							-----*															
# Dewpoint temperature (F)							-----*															
# Air temperature (F)							-----*															
# Pressure (millibars)							-----*															
Date (GMT)	Julian date	Pres	Tair	Tdew	Dir	Spd	Peak	Cc	Cht	Vis	Radn	RelH	Rain	hi	lo	hi	lo	hi	lo	max	avg	
2001-08-24 08:53	2452146.3701389	1019.6	59.0	46.0	220	8.0	NA	0	120	10	NA	62.0	NA	M	M	M	M	M	M	M	M	M
2001-08-24 09:53	2452146.4118056	1019.9	58.0	45.0	180	5.0	NA	0	120	10	NA	61.8	NA	M	M	M	M	M	M	M	M	M
2001-08-24 10:53	2452146.4534722	1020.3	56.0	45.0	200	6.0	NA	3	120	10	NA	66.5	NA	M	M	M	M	M	M	M	M	M
2001-08-24 11:53	2452146.4951389	1020.5	56.0	45.0	170	5.0	NA	3	120	10	NA	66.5	0.01	65	56	M	58.8	M	45	M	M	M
2001-08-24 12:53	2452146.5368056	1021.0	54.0	44.0	150	5.0	NA	0	120	10	NA	68.8	NA	M	M	M	M	M	M	M	M	M
2001-08-24 13:53	2452146.5784722	1021.4	56.0	45.0	150	5.0	NA	0	120	10	NA	66.5	NA	M	M	M	M	M	M	M	M	M
2001-08-24 14:53	2452146.6201389	1021.6	59.0	45.0	0	0.0	NA	0	120	10	NA	59.6	NA	M	M	M	M	M	M	M	M	M
2001-08-24 15:53	2452146.6618056	1021.7	62.0	45.0	240	4.0	NA	0	120	10	NA	53.6	NA	M	M	M	M	M	M	M	M	M
2001-08-24 16:53	2452146.7034722	1021.4	65.0	45.0	250	8.0	NA	0	120	10	NA	48.3	NA	M	M	M	M	M	M	M	M	M
2001-08-24 17:53	2452146.7451389	1021.5	67.0	43.0	NA	6.0	NA	0	120	10	NA	41.7	NA	68	50	M	M	M	M	M	M	M
2001-08-24 18:53	2452146.7868056	1021.1	70.0	43.0	NA	6.0	NA	0	120	10	NA	37.6	NA	M	M	M	M	M	M	M	M	M
2001-08-24 19:53	2452146.8284722	1020.9	72.0	43.0	260	9.0	NA	0	120	10	NA	35.2	NA	M	M	M	M	M	M	M	M	M
2001-08-24 20:53	2452146.8701389	1020.2	73.0	42.0	260	11.0	14.0	0	120	10	NA	32.7	NA	M	M	M	M	M	M	M	0.42	0.034
2001-08-24 21:53	2452146.9118056	1019.3	75.0	41.0	300	5.0	NA	0	120	10	NA	29.4	NA	M	M	M	M	M	M	M	M	M
2001-08-24 22:53	2452146.9534722	1018.8	75.0	42.0	NA	4.0	NA	0	120	10	NA	30.6	NA	M	M	M	M	M	M	M	M	M
2001-08-24 23:53	2452146.9951389	1018.5	76.0	40.0	NA	6.0	NA	0	120	10	NA	27.4	NA	76	67	85.4	M	102	M	M	M	M
2001-08-25 00:53	2452147.0368056	1018.3	75.0	39.0	0	0.0	NA	0	120	10	NA	27.2	NA	M	M	M	M	M	M	M	M	M
2001-08-25 01:53	2452147.0784722	1018.1	74.0	39.0	320	4.0	NA	0	120	10	NA	28.1	NA	M	M	M	M	M	M	M	M	M

Data file for alw.txt

2001-08-27	11:53	2452149.4951389	1015.9	70.0	50.0	200	9.0	NA	0	120	10	NA	49.0	0.00	73	67	M	58.0	M	45	M	M
2001-08-27	12:53	2452149.5368056	1016.6	65.0	49.0	190	6.0	NA	0	120	10	NA	56.1	NA	M	M	M	M	M	M	M	M
2001-08-27	13:53	2452149.5784722	1017.4	67.0	50.0	180	5.0	NA	0	120	10	NA	54.3	NA	M	M	M	M	M	M	M	M
2001-08-27	14:53	2452149.6201389	1017.7	72.0	52.0	210	10.0	NA	0	120	10	NA	49.3	NA	M	M	M	M	M	M	M	M
2001-08-27	15:53	2452149.6618056	1017.6	75.0	53.0	220	13.0	NA	0	120	10	NA	46.3	NA	M	M	M	M	M	M	M	M
2001-08-27	16:53	2452149.7034722	1017.7	78.0	53.0	200	12.0	NA	0	120	10	NA	41.9	NA	M	M	M	M	M	M	M	M
2001-08-27	17:53	2452149.7451389	1017.5	80.0	53.0	220	10.0	NA	0	120	10	NA	39.2	NA	80	64	M	M	M	M	M	M
2001-08-27	18:53	2452149.7868056	1016.9	82.0	54.0	240	10.0	15.0	0	120	10	NA	38.1	NA	M	M	M	M	M	M	M	M
2001-08-27	19:53	2452149.8284722	1016.3	85.0	54.0	230	10.0	15.0	0	120	10	NA	34.6	NA	M	M	M	M	M	M	M	M
2001-08-27	20:53	2452149.8701389	1015.4	88.0	53.0	250	12.0	NA	0	120	10	NA	30.3	NA	M	M	M	M	M	M	0.72	0.029
2001-08-27	21:53	2452149.9118056	1014.7	88.0	48.0	220	10.0	15.0	0	120	10	NA	25.2	NA	M	M	M	M	M	M	M	M
2001-08-27	22:53	2452149.9534722	1014.1	89.0	49.0	NA	6.0	NA	0	120	10	NA	25.3	NA	M	M	M	M	M	M	M	M
2001-08-27	23:53	2452149.9951389	1013.5	89.0	47.0	280	5.0	NA	0	120	10	NA	23.5	NA	91	80	84.5	M	99	M	M	M
2001-08-28	00:53	2452150.0368056	1013.3	89.0	42.0	240	7.0	NA	0	120	10	NA	19.4	NA	M	M	M	M	M	M	M	M
2001-08-28	01:53	2452150.0784722	1013.2	86.0	39.0	240	5.0	NA	0	120	10	NA	19.0	NA	M	M	M	M	M	M	M	M
2001-08-28	02:53	2452150.1201389	1013.5	78.0	41.0	210	7.0	NA	0	120	10	NA	26.6	NA	M	M	M	M	M	M	M	M
2001-08-28	03:53	2452150.1618056	1013.8	77.0	43.0	170	6.0	NA	0	120	10	NA	29.7	NA	M	M	M	M	M	M	M	M
2001-08-28	04:53	2452150.2034722	1014.2	76.0	40.0	180	5.0	NA	0	120	10	NA	27.4	NA	M	M	M	M	M	M	M	M
2001-08-28	05:53	2452150.2451389	1014.5	73.0	41.0	180	10.0	NA	0	120	10	NA	31.5	NA	90	70	M	M	M	M	M	M
2001-08-28	06:53	2452150.2868056	1014.5	71.0	41.0	190	9.0	NA	0	120	10	NA	33.7	NA	M	M	M	M	M	M	M	M
2001-08-28	07:53	2452150.3284722	1014.8	71.0	40.0	170	9.0	NA	0	120	10	NA	32.4	NA	M	M	M	M	M	M	M	M
2001-08-28	08:53	2452150.3701389	1014.9	69.0	42.0	180	10.0	NA	0	120	10	NA	37.5	NA	M	M	M	M	M	M	M	M
2001-08-28	09:53	2452150.4118056	1014.9	67.0	44.0	190	9.0	NA	0	120	10	NA	43.3	NA	M	M	M	M	M	M	M	M
2001-08-28	10:53	2452150.4534722	1015.0	66.0	44.0	180	8.0	NA	0	120	10	NA	44.9	NA	M	M	M	M	M	M	M	M
2001-08-28	11:53	2452150.4951389	1015.0	65.0	44.0	160	4.0	NA	0	120	10	NA	46.5	0.00	73	64	M	57.7	M	48	M	M
2001-08-28	12:53	2452150.5368056	1014.7	66.0	44.0	180	8.0	NA	0	120	10	NA	44.9	NA	M	M	M	M	M	M	M	M
2001-08-28	13:53	2452150.5784722	1015.1	66.0	46.0	210	7.0	NA	0	120	10	NA	48.4	NA	M	M	M	M	M	M	M	M
2001-08-28	14:53	2452150.6201389	1015.4	73.0	48.0	210	8.0	NA	0	120	10	NA	41.1	NA	M	M	M	M	M	M	M	M
2001-08-28	15:53	2452150.6618056	1015.4	74.0	50.0	210	10.0	NA	0	120	10	NA	42.8	NA	M	M	M	M	M	M	M	M
2001-08-28	16:53	2452150.7034722	1015.4	75.0	51.0	230	10.0	NA	0	120	10	NA	43.0	NA	M	M	M	M	M	M	M	M
2001-08-28	17:53	2452150.7451389	1015.2	71.0	59.0	270	5.0	NA	1	120	10	NA	65.8	NA	76	63	M	M	M	M	M	M
2001-08-28	18:53	2452150.7868056	1014.8	77.0	51.0	250	6.0	NA	0	120	10	NA	40.2	NA	M	M	M	M	M	M	M	M
2001-08-28	19:53	2452150.8284722	1014.1	80.0	50.0	240	7.0	NA	0	120	10	NA	35.1	NA	M	M	M	M	M	M	M	M
2001-08-28	20:53	2452150.8701389	1013.4	83.0	50.0	NA	6.0	NA	0	120	10	NA	31.8	NA	M	M	M	M	M	M	0.38	0.023
2001-08-28	21:53	2452150.9118056	1012.6	85.0	49.0	NA	3.0	NA	0	120	10	NA	28.8	NA	M	M	M	M	M	M	M	M
2001-08-28	22:53	2452150.9534722	1011.8	86.0	49.0	NA	4.0	NA	0	120	10	NA	27.9	NA	M	M	M	M	M	M	M	M
2001-08-28	23:53	2452150.9951389	1011.2	87.0	48.0	NA	4.0	NA	0	120	10	NA	26.0	NA	88	71	84.2	M	107	M	M	M
2001-08-29	00:53	2452151.0368056	1010.7	87.0	47.0	NA	3.0	NA	0	120	10	NA	25.0	NA	M	M	M	M	M	M	M	M
2001-08-29	01:53	2452151.0784722	1010.8	84.0	46.0	330	5.0	NA	0	120	10	NA	26.5	NA	M	M	M	M	M	M	M	M
2001-08-29	02:53	2452151.1201389	1010.8	78.0	45.0	350	3.0	NA	0	120	10	NA	31.1	NA	M	M	M	M	M	M	M	M
2001-08-29	03:53	2452151.1618056	1011.1	73.0	47.0	90	5.0	NA	0	120	10	NA	39.6	NA	M	M	M	M	M	M	M	M
2001-08-29	04:53	2452151.2034722	1011.2	70.0	47.0	90	6.0	NA	0	120	10	NA	43.8	NA	M	M	M	M	M	M	M	M
2001-08-29	05:53	2452151.2451389	1011.2	68.0	47.0	100	6.0	NA	0	120	10	NA	46.9	NA	88	67	M	M	M	M	M	M
2001-08-29	06:53	2452151.2868056	1010.9	67.0	47.0	100	7.0	NA	0	120	10	NA	48.6	NA	M	M	M	M	M	M	M	M
2001-08-29	07:53	2452151.3284722	1011.0	64.0	47.0	90	5.0	NA	0	120	10	NA	53.9	NA	M	M	M	M	M	M	M	M
2001-08-29	08:53	2452151.3701389	1011.0	64.0	47.0	130	4.0	NA	0	120	10	NA	53.9	NA	M	M	M	M	M	M	M	M
2001-08-29	09:53	2452151.4118056	1011.3	65.0	47.0	130	5.0	NA	0	120	10	NA	52.1	NA	M	M	M	M	M	M	M	M
2001-08-29	10:53	2452151.4534722	1011.5	65.0	47.0	160	5.0	NA	0	120	10	NA	52.1	NA	M	M	M	M	M	M	M	M
2001-08-29	11:53	2452151.4951389	1011.8	63.0	47.0	160	5.0	NA	0	120	10	NA	55.8	0.00	69	60	M	57.4	M	45	M	M
2001-08-29	12:53	2452151.5368056	1012.0	64.0	48.0	170	6.0	NA	0	120	10	NA	56.0	NA	M	M	M	M	M	M	M	M
2001-08-29	13:53	2452151.5784722	1012.4	65.0	49.0	160	5.0	NA	0	120	10	NA	56.1	NA	M	M	M	M	M	M	M	M
2001-08-29	14:53	2452151.6201389	1012.6	69.0	50.0	160	3.0	NA	0	120	10	NA	50.7	NA	M	M	M	M	M	M	M	M
2001-08-29	15:53	2452151.6618056	1012.4	71.0	52.0	NA	3.0	NA	0	120	10	NA	51.0	NA	M	M	M	M	M	M	M	M
2001-08-29	16:53	2452151.7034722	1012.3	73.0	53.0	NA	4.0	NA	0	120	10	NA	49.5	NA	M	M	M	M	M	M	M	M
2001-08-29	17:53	2452151.7451389	1011.9	77.0	53.0	220	6.0	NA	0	120	10	NA	43.3	NA	77	63	M	M	M	M	M	M
2001-08-29	18:53	2452151.7868056	1011.3	81.0	52.0	NA	3.0	NA	0	120	10	NA	36.6	NA	M	M	M	M	M	M	M	M
2001-08-29	19:53	2452151.8284722	1010.6	83.0	51.0	NA	5.0	NA	0	120	10	NA	33.0	NA	M	M	M	M	M	M	M	M

Data file for alw.txt

2001-08-29	20:53	2452151.8701389	1009.6	87.0	50.0	30	6.0	NA	0	120	10	NA	28.0	NA	M	M	M	M	M	M	0.51	0.016	
2001-08-29	21:53	2452151.9118056	1008.4	89.0	50.0	NA	6.0	NA	0	120	10	NA	26.3	NA	M	M	M	M	M	M	M	M	
2001-08-29	22:53	2452151.9534722	1007.6	90.0	48.0	280	6.0	NA	0	120	10	NA	23.6	NA	M	M	M	M	M	M	M	M	
2001-08-29	23:53	2452151.9951389	1007.0	92.0	47.0	300	5.0	NA	0	120	10	NA	21.4	NA	93	77	83.9	M	M	104	M	M	
2001-08-30	00:53	2452152.0368056	1006.4	92.0	45.0	360	5.0	NA	0	120	10	NA	19.8	NA	M	M	M	M	M	M	M	M	
2001-08-30	01:53	2452152.0784722	1006.3	87.0	54.0	160	6.0	NA	0	120	10	NA	32.5	NA	M	M	M	M	M	M	M	M	
2001-08-30	02:53	2452152.1201389	1006.5	80.0	52.0	200	6.0	NA	0	120	10	NA	37.8	NA	M	M	M	M	M	M	M	M	
2001-08-30	03:53	2452152.1618056	1006.8	78.0	53.0	160	7.0	NA	0	120	10	NA	41.9	NA	M	M	M	M	M	M	M	M	
2001-08-30	04:53	2452152.2034722	1007.0	76.0	52.0	140	5.0	NA	0	120	10	NA	43.1	NA	M	M	M	M	M	M	M	M	
2001-08-30	05:53	2452152.2451389	1007.2	70.0	49.0	100	6.0	NA	0	120	10	NA	47.2	NA	92	70	M	M	M	M	M	M	
2001-08-30	06:53	2452152.2868056	1007.2	71.0	48.0	110	7.0	NA	0	120	10	NA	44.0	NA	M	M	M	M	M	M	M	M	
2001-08-30	07:53	2452152.3284722	1007.2	69.0	47.0	100	7.0	NA	0	120	10	NA	45.3	NA	M	M	M	M	M	M	M	M	
2001-08-30	08:53	2452152.3701389	1007.0	68.0	47.0	100	6.0	NA	0	120	10	NA	46.9	NA	M	M	M	M	M	M	M	M	
2001-08-30	09:53	2452152.4118056	1006.9	66.0	47.0	100	7.0	NA	0	120	10	NA	50.3	NA	M	M	M	M	M	M	M	M	
2001-08-30	10:53	2452152.4534722	1006.9	66.0	47.0	100	7.0	NA	0	120	10	NA	50.3	NA	M	M	M	M	M	M	M	M	
2001-08-30	11:53	2452152.4951389	1006.9	65.0	47.0	100	8.0	NA	0	120	10	NA	52.1	0.00	71	65	M	57.2	M	45	M	M	
2001-08-30	12:53	2452152.5368056	1007.6	65.0	47.0	270	4.0	NA	0	120	10	NA	52.1	NA	M	M	M	M	M	M	M	M	
2001-08-30	13:53	2452152.5784722	1008.3	67.0	48.0	170	7.0	NA	0	120	10	NA	50.4	NA	M	M	M	M	M	M	M	M	
2001-08-30	14:53	2452152.6201389	1008.7	71.0	49.0	190	6.0	NA	0	120	10	NA	45.6	NA	M	M	M	M	M	M	M	M	
2001-08-30	15:53	2452152.6618056	1008.7	75.0	53.0	210	9.0	NA	0	120	10	NA	46.3	NA	M	M	M	M	M	M	M	M	
2001-08-30	16:53	2452152.7034722	1008.9	78.0	53.0	220	7.0	NA	0	120	10	NA	41.9	NA	M	M	M	M	M	M	M	M	
2001-08-30	17:53	2452152.7451389	1009.1	81.0	53.0	NA	5.0	NA	0	120	10	NA	38.0	NA	81	61	M	M	M	M	M	M	
2001-08-30	18:53	2452152.7868056	1008.7	84.0	53.0	250	7.0	NA	0	120	10	NA	34.5	NA	M	M	M	M	M	M	M	M	
2001-08-30	19:53	2452152.8284722	1008.5	87.0	50.0	240	6.0	NA	0	120	10	NA	28.0	NA	M	M	M	M	M	M	M	M	
2001-08-30	20:53	2452152.8701389	1008.2	89.0	48.0	250	7.0	NA	0	120	10	NA	24.4	NA	M	M	M	M	M	M	M	0.66	0.021
2001-08-30	21:53	2452152.9118056	1007.6	90.0	44.0	NA	3.0	NA	0	120	10	NA	20.3	NA	M	M	M	M	M	M	M	M	
2001-08-30	22:53	2452152.9534722	1006.9	92.0	43.0	270	7.0	NA	0	120	10	NA	18.4	NA	M	M	M	M	M	M	M	M	
2001-08-30	23:53	2452152.9951389	1006.6	91.0	44.0	NA	3.0	NA	0	120	10	NA	19.7	NA	93	81	83.6	M	M	102	M	M	
2001-08-31	00:53	2452153.0368056	1006.3	91.0	43.0	240	5.0	NA	0	120	10	NA	19.0	NA	M	M	M	M	M	M	M	M	
2001-08-31	01:53	2452153.0784722	1006.2	88.0	45.0	290	6.0	NA	0	120	10	NA	22.5	NA	M	M	M	M	M	M	M	M	
2001-08-31	02:53	2452153.1201389	1006.5	82.0	44.0	0	0.0	NA	0	120	10	NA	26.2	NA	M	M	M	M	M	M	M	M	
2001-08-31	03:53	2452153.1618056	1007.1	75.0	47.0	130	5.0	NA	0	120	10	NA	37.0	NA	M	M	M	M	M	M	M	M	
2001-08-31	04:53	2452153.2034722	1007.3	73.0	46.0	130	5.0	NA	0	120	10	NA	38.1	NA	M	M	M	M	M	M	M	M	
2001-08-31	05:53	2452153.2451389	1008.2	73.0	44.0	180	7.0	NA	0	120	10	NA	35.3	NA	92	72	M	M	M	M	M	M	
2001-08-31	06:53	2452153.2868056	1008.7	73.0	47.0	190	9.0	NA	0	120	10	NA	39.6	NA	M	M	M	M	M	M	M	M	
2001-08-31	07:53	2452153.3284722	1009.0	72.0	49.0	190	10.0	NA	0	120	10	NA	44.1	NA	M	M	M	M	M	M	M	M	
2001-08-31	08:53	2452153.3701389	1009.2	72.0	49.0	190	11.0	NA	0	120	10	NA	44.1	NA	M	M	M	M	M	M	M	M	
2001-08-31	09:53	2452153.4118056	1009.9	70.0	49.0	190	10.0	NA	0	120	10	NA	47.2	NA	M	M	M	M	M	M	M	M	
2001-08-31	10:53	2452153.4534722	1010.5	68.0	50.0	180	8.0	NA	0	120	10	NA	52.5	NA	M	M	M	M	M	M	M	M	
2001-08-31	11:53	2452153.4951389	1011.1	69.0	50.0	190	9.0	NA	0	120	10	NA	50.7	0.00	73	68	M	56.9	M	47	M	M	
2001-08-31	12:53	2452153.5368056	1011.4	69.0	51.0	190	9.0	NA	0	120	10	NA	52.7	NA	M	M	M	M	M	M	M	M	
2001-08-31	13:53	2452153.5784722	1012.1	69.0	52.0	210	8.0	NA	0	120	10	NA	54.6	NA	M	M	M	M	M	M	M	M	
2001-08-31	14:53	2452153.6201389	1012.3	72.0	52.0	210	10.0	NA	0	120	10	NA	49.3	NA	M	M	M	M	M	M	M	M	
2001-08-31	15:53	2452153.6618056	1012.4	74.0	52.0	220	11.0	NA	0	120	10	NA	46.1	NA	M	M	M	M	M	M	M	M	
2001-08-31	16:53	2452153.7034722	1012.7	76.0	50.0	210	11.0	NA	0	120	10	NA	40.1	NA	M	M	M	M	M	M	M	M	
2001-08-31	17:53	2452153.7451389	1012.6	78.0	51.0	210	11.0	NA	0	120	10	NA	38.9	NA	78	69	M	M	M	M	M	M	
2001-08-31	18:53	2452153.7868056	1012.0	80.0	51.0	220	9.0	NA	0	120	10	NA	36.4	NA	M	M	M	M	M	M	M	M	
2001-08-31	19:53	2452153.8284722	1011.6	82.0	50.0	230	10.0	17.0	0	120	10	NA	32.9	NA	M	M	M	M	M	M	M	M	
2001-08-31	20:53	2452153.8701389	1010.6	83.0	48.0	210	13.0	18.0	0	120	10	NA	29.5	NA	M	M	M	M	M	M	M	0.97	0.058
2001-08-31	21:53	2452153.9118056	1010.0	84.0	46.0	220	7.0	NA	0	120	10	NA	26.5	NA	M	M	M	M	M	M	M	M	
2001-08-31	22:53	2452153.9534722	1009.2	87.0	41.0	260	9.0	NA	0	120	10	NA	19.9	NA	M	M	M	M	M	M	M	M	
2001-08-31	23:53	2452153.9951389	1008.7	86.0	41.0	240	7.0	15.0	0	120	10	NA	20.5	NA	87	78	83.4	M	M	104	M	M	
2001-09-01	00:53	2452154.0368056	1008.5	85.0	36.0	240	10.0	NA	0	120	10	NA	17.4	NA	M	M	M	M	M	M	M	M	
2001-09-01	01:53	2452154.0784722	1008.6	79.0	34.0	200	7.0	NA	0	120	10	NA	19.6	NA	M	M	M	M	M	M	M	M	
2001-09-01	02:53	2452154.1201389	1008.7	76.0	35.0	180	6.0	NA	0	120	10	NA	22.5	NA	M	M	M	M	M	M	M	M	
2001-09-01	03:53	2452154.1618056	1009.3	73.0	34.0	170	9.0	NA	0	120	10	NA	23.9	NA	M	M	M	M	M	M	M	M	
2001-09-01	04:53	2452154.2034722	1010.0	74.0	35.0	190	12.0	NA	0	120	10	NA	24.0	NA	M	M	M	M	M	M	M	M	

Data file for alw.txt

2001-09-01	05:53	2452154.2451389	1010.7	71.0	39.0	200	10.0	NA	0	120	10	NA	31.1	NA	86	71	M	M	M	M	M	M
2001-09-01	06:53	2452154.2868056	1011.0	70.0	38.0	200	9.0	NA	0	120	10	NA	31.0	NA	M	M	M	M	M	M	M	M
2001-09-01	07:53	2452154.3284722	1011.2	68.0	40.0	200	7.0	NA	0	120	10	NA	35.9	NA	M	M	M	M	M	M	M	M
2001-09-01	08:53	2452154.3701389	1011.4	68.0	45.0	190	8.0	NA	0	120	10	NA	43.5	NA	M	M	M	M	M	M	M	M
2001-09-01	09:53	2452154.4118056	1011.1	67.0	44.0	200	9.0	NA	0	120	10	NA	43.3	NA	M	M	M	M	M	M	M	M
2001-09-01	10:53	2452154.4534722	1010.6	67.0	45.0	180	7.0	NA	0	120	10	NA	45.0	NA	M	M	M	M	M	M	M	M
2001-09-01	11:53	2452154.4951389	1010.8	67.0	47.0	200	5.0	NA	0	120	10	NA	48.6	0.00	71	66	M	56.6	M	46	M	M
2001-09-01	12:53	2452154.5368056	1010.9	66.0	48.0	180	8.0	NA	0	120	10	NA	52.2	NA	M	M	M	M	M	M	M	M
2001-09-01	13:53	2452154.5784722	1011.1	65.0	48.0	250	4.0	NA	0	120	10	NA	54.1	NA	M	M	M	M	M	M	M	M
2001-09-01	14:53	2452154.6201389	1011.8	68.0	44.0	230	7.0	NA	0	120	10	NA	41.9	NA	M	M	M	M	M	M	M	M
2001-09-01	15:53	2452154.6618056	1012.2	69.0	48.0	210	11.0	NA	0	120	10	NA	47.1	NA	M	M	M	M	M	M	M	M
2001-09-01	16:53	2452154.7034722	1012.3	73.0	50.0	220	10.0	NA	0	120	10	NA	44.3	NA	M	M	M	M	M	M	M	M
2001-09-01	17:53	2452154.7451389	1012.4	76.0	51.0	260	11.0	NA	1	120	10	NA	41.6	NA	76	64	M	1	M	M	M	M
2001-09-01	18:53	2452154.7868056	1012.3	77.0	50.0	200	8.0	NA	1	120	10	NA	38.7	NA	M	M	M	M	M	M	M	M
2001-09-01	19:53	2452154.8284722	1011.8	77.0	49.0	210	8.0	NA	0	120	10	NA	37.3	NA	M	M	M	M	M	M	M	M
2001-09-01	20:53	2452154.8701389	1011.5	83.0	48.0	240	14.0	NA	1	120	10	NA	29.5	NA	M	M	M	M	M	M	0.43	0.015
2001-09-01	21:53	2452154.9118056	1011.5	82.0	49.0	230	13.0	NA	0	120	10	NA	31.7	NA	M	M	M	M	M	M	M	M
2001-09-01	22:53	2452154.9534722	1011.2	82.0	47.0	250	16.0	NA	3	120	10	NA	29.4	NA	M	M	M	M	M	M	M	M
2001-09-01	23:53	2452154.9951389	1011.1	83.0	49.0	230	13.0	NA	0	120	10	NA	30.7	NA	84	74	83.1	M	103	M	M	M
2001-09-02	01:53	2452155.0784722	1011.4	79.0	47.0	270	11.0	NA	1	120	10	NA	32.4	NA	M	M	M	M	M	M	M	M
2001-09-02	02:53	2452155.1201389	1011.8	75.0	47.0	220	8.0	NA	6	85	10	NA	37.0	NA	M	M	M	M	M	M	M	M
2001-09-02	03:53	2452155.1618056	1013.2	69.0	47.0	0	0.0	NA	1	120	10	NA	45.3	NA	M	M	M	M	M	M	M	M
2001-09-02	04:53	2452155.2034722	1013.8	68.0	48.0	170	4.0	NA	0	120	10	NA	48.7	NA	M	M	M	M	M	M	M	M
2001-09-02	05:53	2452155.2451389	1014.0	66.0	48.0	170	9.0	NA	0	120	10	NA	52.2	NA	83	65	M	M	M	M	M	M
2001-09-02	06:53	2452155.2868056	1014.1	63.0	49.0	190	8.0	NA	0	120	10	NA	60.2	NA	M	M	M	M	M	M	M	M
2001-09-02	07:53	2452155.3284722	1014.1	61.0	49.0	180	7.0	NA	0	120	10	NA	64.6	NA	M	M	M	M	M	M	M	M
2001-09-02	08:53	2452155.3701389	1013.6	58.0	48.0	190	6.0	NA	0	120	10	NA	69.3	NA	M	M	M	M	M	M	M	M
2001-09-02	09:53	2452155.4118056	1013.9	59.0	48.0	150	5.0	NA	0	120	10	NA	66.8	NA	M	M	M	M	M	M	M	M
2001-09-02	10:53	2452155.4534722	1013.9	58.0	48.0	160	5.0	NA	0	120	10	NA	69.3	NA	M	M	M	M	M	M	M	M
2001-09-02	11:53	2452155.4951389	1013.9	56.0	48.0	140	4.0	NA	0	120	10	NA	74.4	0.00	66	54	M	56.3	M	47	M	M
2001-09-02	12:53	2452155.5368056	1013.7	55.0	47.0	130	3.0	NA	0	120	10	NA	74.3	NA	M	M	M	M	M	M	M	M
2001-09-02	13:53	2452155.5784722	1014.1	53.0	47.0	90	4.0	NA	0	120	10	NA	80.0	NA	M	M	M	M	M	M	M	M
2001-09-02	14:53	2452155.6201389	1014.3	63.0	49.0	100	3.0	NA	0	120	10	NA	60.2	NA	M	M	M	M	M	M	M	M
2001-09-02	15:53	2452155.6618056	1013.9	66.0	49.0	0	0.0	NA	0	120	10	NA	54.2	NA	M	M	M	M	M	M	M	M
2001-09-02	16:53	2452155.7034722	1013.8	69.0	49.0	0	0.0	NA	0	120	10	NA	48.9	NA	M	M	M	M	M	M	M	M
2001-09-02	17:53	2452155.7451389	1013.5	73.0	48.0	NA	3.0	NA	0	120	10	NA	41.1	NA	73	51	M	M	M	M	M	M
2001-09-02	18:53	2452155.7868056	1012.9	75.0	48.0	NA	3.0	NA	0	120	10	NA	38.4	NA	M	M	M	M	M	M	M	M
2001-09-02	19:53	2452155.8284722	1012.0	80.0	48.0	340	5.0	NA	0	120	10	NA	32.6	NA	M	M	M	M	M	M	M	M
2001-09-02	20:53	2452155.8701389	1011.5	80.0	47.0	300	8.0	NA	0	120	10	NA	31.4	NA	M	M	M	M	M	M	0.94	0.038
2001-09-02	21:53	2452155.9118056	1010.9	81.0	47.0	330	6.0	NA	0	120	10	NA	30.4	NA	M	M	M	M	M	M	M	M
2001-09-02	22:53	2452155.9534722	1010.1	83.0	48.0	NA	3.0	NA	0	120	10	NA	29.5	NA	M	M	M	M	M	M	M	M
2001-09-02	23:53	2452155.9951389	1009.7	83.0	48.0	NA	3.0	NA	0	120	10	NA	29.5	NA	84	71	82.8	M	99	M	M	M
2001-09-03	00:53	2452156.0368056	1009.5	82.0	49.0	NA	4.0	NA	0	120	10	NA	31.7	NA	M	M	M	M	M	M	M	M
2001-09-03	01:53	2452156.0784722	1009.4	79.0	47.0	320	4.0	NA	0	120	10	NA	32.4	NA	M	M	M	M	M	M	M	M
2001-09-03	02:53	2452156.1201389	1009.3	75.0	46.0	60	3.0	NA	0	120	10	NA	35.6	NA	M	M	M	M	M	M	M	M
2001-09-03	03:53	2452156.1618056	1010.2	67.0	48.0	80	7.0	NA	0	120	10	NA	50.4	NA	M	M	M	M	M	M	M	M
2001-09-03	04:53	2452156.2034722	1010.8	66.0	48.0	100	4.0	NA	0	120	10	NA	52.2	NA	M	M	M	M	M	M	M	M
2001-09-03	05:53	2452156.2451389	1011.0	68.0	49.0	150	5.0	NA	0	120	10	NA	50.6	NA	84	65	M	M	M	M	M	M
2001-09-03	06:53	2452156.2868056	1011.0	66.0	48.0	110	7.0	NA	0	120	10	NA	52.2	NA	M	M	M	M	M	M	M	M
2001-09-03	07:53	2452156.3284722	1011.5	66.0	47.0	180	9.0	NA	0	120	10	NA	50.3	NA	M	M	M	M	M	M	M	M
2001-09-03	08:53	2452156.3701389	1011.9	66.0	43.0	190	7.0	NA	0	120	10	NA	43.2	NA	M	M	M	M	M	M	M	M
2001-09-03	09:53	2452156.4118056	1012.4	66.0	43.0	180	7.0	NA	0	120	10	NA	43.2	NA	M	M	M	M	M	M	M	M
2001-09-03	10:53	2452156.4534722	1012.4	64.0	44.0	190	10.0	NA	0	120	10	NA	48.1	NA	M	M	M	M	M	M	M	M
2001-09-03	11:53	2452156.4951389	1013.0	62.0	44.0	180	6.0	NA	0	120	10	NA	51.6	0.00	69	62	M	56.1	M	47	M	M
2001-09-03	12:53	2452156.5368056	1013.3	62.0	46.0	200	7.0	NA	0	120	10	NA	55.7	NA	M	M	M	M	M	M	M	M
2001-09-03	13:53	2452156.5784722	1014.5	62.0	45.0	170	6.0	NA	0	120	10	NA	53.6	NA	M	M	M	M	M	M	M	M
2001-09-03	14:53	2452156.6201389	1015.1	67.0	46.0	180	8.0	NA	0	120	10	NA	46.8	NA	M	M	M	M	M	M	M	M

Data file for alw.txt

2001-09-17	23:53	2452170.9951389	1011.5	85.0	39.0	240	10.0	NA	0	120	10	NA	19.6	NA	86	77	77.8	M	97	M	M	M	M
2001-09-18	00:53	2452171.0368056	1011.2	83.0	39.0	210	8.0	NA	0	120	10	NA	20.9	NA	M	M	M	M	M	M	M	M	M
2001-09-18	01:53	2452171.0784722	1011.4	77.0	42.0	190	7.0	NA	0	120	10	NA	28.6	NA	M	M	M	M	M	M	M	M	M
2001-09-18	02:53	2452171.1201389	1011.7	76.0	37.0	160	6.0	NA	0	120	10	NA	24.3	NA	M	M	M	M	M	M	M	M	M
2001-09-18	03:53	2452171.1618056	1012.3	74.0	37.0	190	11.0	NA	0	120	10	NA	26.0	NA	M	M	M	M	M	M	M	M	M
2001-09-18	04:53	2452171.2034722	1013.5	72.0	37.0	190	11.0	NA	0	120	10	NA	27.8	NA	M	M	M	M	M	M	M	M	M
2001-09-18	06:53	2452171.2868056	1013.7	69.0	35.0	210	10.0	NA	0	120	10	NA	28.5	NA	M	M	M	M	M	M	M	M	M
2001-09-18	07:53	2452171.3284722	1014.0	68.0	33.0	220	10.0	NA	0	120	10	NA	27.2	NA	M	M	M	M	M	M	M	M	M
2001-09-18	08:53	2452171.3701389	1014.2	66.0	32.0	200	7.0	NA	0	120	10	NA	28.0	NA	M	M	M	M	M	M	M	M	M
2001-09-18	09:53	2452171.4118056	1014.2	63.0	33.0	170	9.0	NA	0	120	10	NA	32.4	NA	M	M	M	M	M	M	M	M	M
2001-09-18	10:53	2452171.4534722	1014.2	60.0	33.0	170	7.0	NA	0	120	10	NA	36.0	NA	M	M	M	M	M	M	M	M	M
2001-09-18	11:53	2452171.4951389	1014.1	60.0	32.0	170	9.0	NA	0	120	10	NA	34.6	0.00	71	58	M	51.8	M	32	M	M	M
2001-09-18	12:53	2452171.5368056	1014.6	59.0	31.0	170	8.0	NA	0	120	10	NA	34.4	NA	M	M	M	M	M	M	M	M	M
2001-09-18	13:53	2452171.5784722	1014.9	57.0	32.0	190	5.0	NA	0	120	10	NA	38.5	NA	M	M	M	M	M	M	M	M	M
2001-09-18	14:53	2452171.6201389	1015.0	61.0	34.0	230	3.0	NA	0	120	10	NA	36.2	NA	M	M	M	M	M	M	M	M	M
2001-09-18	15:53	2452171.6618056	1015.0	68.0	35.0	210	9.0	NA	0	120	10	NA	29.5	NA	M	M	M	M	M	M	M	M	M
2001-09-18	16:53	2452171.7034722	1014.7	72.0	35.0	220	11.0	NA	0	120	10	NA	25.7	NA	M	M	M	M	M	M	M	M	M
2001-09-18	17:53	2452171.7451389	1014.7	73.0	36.0	230	9.0	NA	0	120	10	NA	25.9	NA	74	56	M	M	M	M	M	M	M
2001-09-18	18:53	2452171.7868056	1014.2	76.0	35.0	220	11.0	NA	0	120	10	NA	22.5	NA	M	M	M	M	M	M	M	M	M
2001-09-18	19:53	2452171.8284722	1013.8	78.0	35.0	230	8.0	NA	0	120	10	NA	21.0	NA	M	M	M	M	M	M	M	M	M
2001-09-18	20:53	2452171.8701389	1012.8	79.0	36.0	250	9.0	NA	0	120	10	NA	21.2	NA	M	M	M	M	M	M	M	0.44	0.029
2001-09-18	21:53	2452171.9118056	1012.3	80.0	36.0	200	9.0	NA	0	120	10	NA	20.5	NA	M	M	M	M	M	M	M	M	M
2001-09-18	22:53	2452171.9534722	1012.2	81.0	36.0	240	5.0	NA	0	120	10	NA	19.8	NA	M	M	M	M	M	M	M	M	M
2001-09-18	23:53	2452171.9951389	1011.9	81.0	36.0	280	6.0	NA	0	120	10	NA	19.8	NA	82	73	77.4	M	97	M	M	M	M
2001-09-19	00:53	2452172.0368056	1011.6	78.0	36.0	220	4.0	NA	0	120	10	NA	21.9	NA	M	M	M	M	M	M	M	M	M
2001-09-19	01:53	2452172.0784722	1011.3	76.0	39.0	160	3.0	NA	0	120	10	NA	26.3	NA	M	M	M	M	M	M	M	M	M
2001-09-19	02:53	2452172.1201389	1011.2	70.0	37.0	130	5.0	NA	0	120	10	NA	29.8	NA	M	M	M	M	M	M	M	M	M
2001-09-19	03:53	2452172.1618056	1011.1	67.0	36.0	140	5.0	NA	0	120	10	NA	31.7	NA	M	M	M	M	M	M	M	M	M
2001-09-19	04:53	2452172.2034722	1012.2	68.0	41.0	220	13.0	NA	0	120	10	NA	37.3	NA	M	M	M	M	M	M	M	M	M
2001-09-19	05:53	2452172.2451389	1013.2	65.0	45.0	210	11.0	NA	0	120	10	NA	48.3	NA	81	64	M	M	M	M	M	M	M
2001-09-19	06:53	2452172.2868056	1013.9	62.0	45.0	210	9.0	NA	0	120	10	NA	53.6	NA	M	M	M	M	M	M	M	M	M
2001-09-19	07:53	2452172.3284722	1014.2	58.0	46.0	180	7.0	NA	0	120	10	NA	64.2	NA	M	M	M	M	M	M	M	M	M
2001-09-19	08:53	2452172.3701389	1014.5	57.0	46.0	180	10.0	NA	0	120	10	NA	66.6	NA	M	M	M	M	M	M	M	M	M
2001-09-19	09:53	2452172.4118056	1014.9	56.0	46.0	190	10.0	NA	0	120	10	NA	69.0	NA	M	M	M	M	M	M	M	M	M
2001-09-19	10:53	2452172.4534722	1015.4	55.0	46.0	190	8.0	NA	0	120	10	NA	71.6	NA	M	M	M	M	M	M	M	M	M
2001-09-19	11:53	2452172.4951389	1016.2	54.0	45.0	180	9.0	NA	0	120	10	NA	71.5	0.00	65	54	M	51.6	M	36	M	M	M
2001-09-19	12:53	2452172.5368056	1016.6	54.0	44.0	180	12.0	NA	0	120	10	NA	68.8	NA	M	M	M	M	M	M	M	M	M
2001-09-19	13:53	2452172.5784722	1017.3	54.0	44.0	180	12.0	NA	0	120	10	NA	68.8	NA	M	M	M	M	M	M	M	M	M
2001-09-19	14:53	2452172.6201389	1017.9	57.0	44.0	190	9.0	NA	0	120	10	NA	61.7	NA	M	M	M	M	M	M	M	M	M
2001-09-19	15:53	2452172.6618056	1018.0	59.0	44.0	190	14.0	NA	0	120	10	NA	57.4	NA	M	M	M	M	M	M	M	M	M
2001-09-19	16:53	2452172.7034722	1018.6	62.0	44.0	190	11.0	NA	0	120	10	NA	51.6	NA	M	M	M	M	M	M	M	M	M
2001-09-19	17:53	2452172.7451389	1018.7	64.0	44.0	220	10.0	NA	0	120	10	NA	48.1	NA	64	54	M	M	M	M	M	M	M
2001-09-19	18:53	2452172.7868056	1018.7	66.0	43.0	180	10.0	NA	0	120	10	NA	43.2	NA	M	M	M	M	M	M	M	M	M
2001-09-19	19:53	2452172.8284722	1018.4	68.0	43.0	NA	6.0	NA	0	120	10	NA	40.3	NA	M	M	M	M	M	M	M	M	M
2001-09-19	20:53	2452172.8701389	1018.0	69.0	42.0	210	10.0	NA	0	120	10	NA	37.5	NA	M	M	M	M	M	M	M	0.58	0.032
2001-09-19	21:53	2452172.9118056	1017.7	72.0	40.0	NA	5.0	NA	0	120	10	NA	31.3	NA	M	M	M	M	M	M	M	M	M
2001-09-19	22:53	2452172.9534722	1017.3	71.0	37.0	NA	4.0	NA	0	120	10	NA	28.8	NA	M	M	M	M	M	M	M	M	M
2001-09-19	23:53	2452172.9951389	1017.1	71.0	41.0	0	0.0	NA	0	120	10	NA	33.7	NA	72	64	77.1	M	97	M	M	M	M
2001-09-20	00:53	2452173.0368056	1017.0	68.0	39.0	0	0.0	NA	0	120	10	NA	34.5	NA	M	M	M	M	M	M	M	M	M
2001-09-20	01:53	2452173.0784722	1016.9	65.0	38.0	80	4.0	NA	0	120	8	NA	36.8	NA	M	M	M	M	M	M	M	M	M
2001-09-20	02:53	2452173.1201389	1017.1	59.0	38.0	20	6.0	NA	0	120	10	NA	45.5	NA	M	M	M	M	M	M	M	M	M
2001-09-20	03:53	2452173.1618056	1017.2	60.0	38.0	70	8.0	NA	0	120	10	NA	43.9	NA	M	M	M	M	M	M	M	M	M
2001-09-20	04:53	2452173.2034722	1017.0	56.0	38.0	0	0.0	NA	0	120	10	NA	50.7	NA	M	M	M	M	M	M	M	M	M
2001-09-20	05:53	2452173.2451389	1017.0	54.0	37.0	90	5.0	NA	0	120	10	NA	52.4	NA	71	54	M	M	M	M	M	M	M
2001-09-20	06:53	2452173.2868056	1016.8	55.0	35.0	100	7.0	NA	0	120	10	NA	46.7	NA	M	M	M	M	M	M	M	M	M
2001-09-20	07:53	2452173.3284722	1016.8	55.0	32.0	100	7.0	NA	0	120	10	NA	41.4	NA	M	M	M	M	M	M	M	M	M
2001-09-20	08:53	2452173.3701389	1016.7	53.0	31.0	100	7.0	NA	0	120	10	NA	42.8	NA	M	M	M	M	M	M	M	M	M

Data file for psc.txt

Data file for psc#
 # This data is from: Pasco (stn. code psc)
 #
 #
 Pasco Site and Instrument specifications
 Pasco, WA
 NWS: This site is a National Weather Service site.

Archived data available via this UW link since: 01 Jul 1996

STATION NAME	ID	LAT	Lon	ELEV M	ELEV FT	WMO																
PASCO/TRI-CITIE WA US	KPSC	46.27	-119.12	124 m	407 ft	99999																
# Station precip: maximum and daily avg (inches) over entire period of record							-----*															
# Station extrema: daily hi/lo temperatures over entire period of record							-----*															
# Station average: daily hi/lo temperatures over entire period of record							-----*															
# Station 6-hour hi/lo temperatures							-----*															
# Rain Gauge (inches)							-----*															
# Relative humidity (%)							-----*															
# Solar irradiance (W/m^2)							-----*															
# Visibility (miles)							-----*															
# Cloud height (100's of feet)							-----*															
# Cloud cover (1/8ths of sky)							-----*															
# Wind peak (nautical miles per hour)							-----*															
# Wind speed (nautical miles per hour)							-----*															
# Wind direction (clockwise degrees from North)							-----*															
# Dewpoint temperature (F)							-----*															
# Air temperature (F)							-----*															
# Pressure (millibars)							-----*															

Date (GMT)	Julian date	Pres	Tair	Tdew	Dir	Spd	Peak	Cc	Cht	Vis	Radn	RelH	Rain	hi	lo	hi	lo	hi	lo	max	avg	
2001-08-24 08:53	2452146.3701389	1018.8	58.0	51.0	230	10.0	NA	0	120	10	NA	77.5	NA	M	M	M	M	M	M	M	M	M
2001-08-24 09:53	2452146.4118056	1019.2	53.0	51.0	360	5.0	NA	0	120	10	NA	92.9	NA	M	M	M	M	M	M	M	M	M
2001-08-24 10:53	2452146.4534722	1019.7	53.0	51.0	50	4.0	NA	0	120	10	NA	92.9	NA	M	M	M	M	M	M	M	M	M
2001-08-24 11:53	2452146.4951389	1019.9	52.0	51.0	130	4.0	NA	0	120	10	NA	96.4	0.14	62	50	M	56.8	M	47	M	M	M
2001-08-24 12:53	2452146.5368056	1020.3	48.0	48.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	M
2001-08-24 13:53	2452146.5784722	1020.8	53.0	52.0	110	5.0	NA	0	120	10	NA	96.4	NA	M	M	M	M	M	M	M	M	M
2001-08-24 14:53	2452146.6201389	1021.1	58.0	53.0	130	3.0	NA	0	120	10	NA	83.4	NA	M	M	M	M	M	M	M	M	M
2001-08-24 15:53	2452146.6618056	1021.1	63.0	52.0	NA	3.0	NA	0	120	10	NA	67.3	NA	M	M	M	M	M	M	M	M	M
2001-08-24 16:53	2452146.7034722	1021.1	66.0	52.0	0	0.0	NA	0	120	10	NA	60.6	NA	M	M	M	M	M	M	M	M	M
2001-08-24 17:53	2452146.7451389	1021.0	68.0	50.0	270	5.0	NA	0	120	10	NA	52.5	NA	69	48	M	M	M	M	M	M	M
2001-08-24 18:53	2452146.7868056	1020.6	71.0	49.0	320	4.0	NA	0	120	10	NA	45.6	NA	M	M	M	M	M	M	M	M	M
2001-08-24 19:53	2452146.8284722	1020.1	73.0	49.0	200	6.0	NA	0	120	10	NA	42.7	NA	M	M	M	M	M	M	M	M	M
2001-08-24 20:53	2452146.8701389	1019.5	75.0	45.0	190	7.0	NA	0	120	10	NA	34.3	NA	M	M	M	M	M	M	M	0.54	0.025
2001-08-24 21:53	2452146.9118056	1018.7	76.0	46.0	190	6.0	NA	0	120	10	NA	34.5	NA	M	M	M	M	M	M	M	M	M
2001-08-24 22:53	2452146.9534722	1018.1	77.0	47.0	250	6.0	NA	0	120	10	NA	34.6	NA	M	M	M	M	M	M	M	M	M
2001-08-24 23:53	2452146.9951389	1017.7	77.0	46.0	0	0.0	NA	0	120	10	NA	33.3	NA	78	68	86.8	M	99	M	M	M	M
2001-08-25 00:53	2452147.0368056	1017.3	78.0	47.0	0	0.0	NA	0	120	10	NA	33.5	NA	M	M	M	M	M	M	M	M	M
2001-08-25 01:53	2452147.0784722	1017.2	76.0	48.0	90	6.0	NA	0	120	10	NA	37.2	NA	M	M	M	M	M	M	M	M	M

Data file for psc.txt

2001-08-27	11:53	2452149.4951389	1015.0	56.0	56.0	340	3.0	NA	0	120	10	NA	100.0	0.00	65	55	M	56.1	M	47	M	M
2001-08-27	12:53	2452149.5368056	1015.4	55.0	55.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M
2001-08-27	13:53	2452149.5784722	1016.0	56.0	56.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M
2001-08-27	14:53	2452149.6201389	1016.5	65.0	61.0	0	0.0	NA	0	120	10	NA	86.9	NA	M	M	M	M	M	M	M	M
2001-08-27	15:53	2452149.6618056	1016.4	75.0	60.0	NA	5.0	NA	0	120	10	NA	59.6	NA	M	M	M	M	M	M	M	M
2001-08-27	16:53	2452149.7034722	1016.6	79.0	60.0	NA	4.0	NA	0	120	10	NA	52.2	NA	M	M	M	M	M	M	M	M
2001-08-27	17:53	2452149.7451389	1016.4	82.0	59.0	190	6.0	NA	0	120	10	NA	45.7	NA	82	54	M	M	M	M	M	M
2001-08-27	18:53	2452149.7868056	1015.9	85.0	58.0	NA	4.0	NA	0	120	10	NA	40.0	NA	M	M	M	M	M	M	M	M
2001-08-27	19:53	2452149.8284722	1015.2	87.0	57.0	NA	5.0	NA	0	120	10	NA	36.2	NA	M	M	M	M	M	M	M	M
2001-08-27	20:53	2452149.8701389	1014.3	90.0	57.0	NA	5.0	NA	0	120	10	NA	32.9	NA	M	M	M	M	M	M	0.14	0.004
2001-08-27	21:53	2452149.9118056	1013.6	91.0	52.0	NA	5.0	NA	0	120	10	NA	26.6	NA	M	M	M	M	M	M	M	M
2001-08-27	22:53	2452149.9534722	1012.7	93.0	52.0	260	5.0	NA	0	120	10	NA	25.0	NA	M	M	M	M	M	M	M	M
2001-08-27	23:53	2452149.9951389	1012.0	94.0	51.0	200	6.0	NA	0	120	10	NA	23.4	NA	94	81	85.9	M	99	M	M	M
2001-08-28	00:53	2452150.0368056	1011.7	93.0	53.0	160	6.0	NA	0	120	10	NA	25.9	NA	M	M	M	M	M	M	M	M
2001-08-28	01:53	2452150.0784722	1011.4	91.0	52.0	200	4.0	NA	0	120	10	NA	26.6	NA	M	M	M	M	M	M	M	M
2001-08-28	02:53	2452150.1201389	1011.6	83.0	49.0	240	8.0	NA	0	120	10	NA	30.7	NA	M	M	M	M	M	M	M	M
2001-08-28	03:53	2452150.1618056	1012.4	79.0	49.0	280	4.0	NA	0	120	10	NA	34.9	NA	M	M	M	M	M	M	M	M
2001-08-28	04:53	2452150.2034722	1012.3	78.0	49.0	210	3.0	NA	0	120	10	NA	36.1	NA	M	M	M	M	M	M	M	M
2001-08-28	05:53	2452150.2451389	1012.5	77.0	51.0	NA	5.0	NA	0	120	10	NA	40.2	NA	94	75	M	M	M	M	M	M
2001-08-28	06:53	2452150.2868056	1012.9	75.0	51.0	0	0.0	NA	0	120	10	NA	43.0	NA	M	M	M	M	M	M	M	M
2001-08-28	07:53	2452150.3284722	1013.4	67.0	54.0	130	3.0	NA	0	120	10	NA	63.0	NA	M	M	M	M	M	M	M	M
2001-08-28	08:53	2452150.3701389	1013.7	62.0	56.0	0	0.0	NA	0	120	10	NA	80.7	NA	M	M	M	M	M	M	M	M
2001-08-28	09:53	2452150.4118056	1013.6	60.0	56.0	0	0.0	NA	0	120	10	NA	86.6	NA	M	M	M	M	M	M	M	M
2001-08-28	10:53	2452150.4534722	1013.7	60.0	57.0	120	5.0	NA	0	120	10	NA	89.8	NA	M	M	M	M	M	M	M	M
2001-08-28	11:53	2452150.4951389	1013.7	62.0	57.0	180	3.0	NA	0	120	10	NA	83.7	0.00	79	57	M	55.8	M	44	M	M
2001-08-28	12:53	2452150.5368056	1013.6	65.0	56.0	140	4.0	NA	0	120	10	NA	72.6	NA	M	M	M	M	M	M	M	M
2001-08-28	13:53	2452150.5784722	1014.0	61.0	58.0	0	0.0	NA	0	120	10	NA	89.8	NA	M	M	M	M	M	M	M	M
2001-08-28	14:53	2452150.6201389	1014.1	66.0	58.0	100	5.0	NA	0	120	10	NA	75.4	NA	M	M	M	M	M	M	M	M
2001-08-28	15:53	2452150.6618056	1014.5	69.0	60.0	150	5.0	NA	0	120	10	NA	73.0	NA	M	M	M	M	M	M	M	M
2001-08-28	16:53	2452150.7034722	1014.3	75.0	56.0	NA	3.0	NA	0	120	10	NA	51.6	NA	M	M	M	M	M	M	M	M
2001-08-28	17:53	2452150.7451389	1014.0	79.0	55.0	310	4.0	NA	0	120	10	NA	43.6	NA	79	58	M	M	M	M	M	M
2001-08-28	18:53	2452150.7868056	1013.5	82.0	54.0	290	4.0	NA	0	120	10	NA	38.1	NA	M	M	M	M	M	M	M	M
2001-08-28	19:53	2452150.8284722	1012.8	85.0	54.0	NA	4.0	NA	0	120	10	NA	34.6	NA	M	M	M	M	M	M	M	M
2001-08-28	20:53	2452150.8701389	1012.2	87.0	54.0	310	6.0	NA	0	120	10	NA	32.5	NA	M	M	M	M	M	M	0.26	0.009
2001-08-28	21:53	2452150.9118056	1011.5	88.0	55.0	NA	3.0	NA	0	120	10	NA	32.6	NA	M	M	M	M	M	M	M	M
2001-08-28	22:53	2452150.9534722	1010.8	90.0	54.0	320	5.0	NA	0	120	10	NA	29.5	NA	M	M	M	M	M	M	M	M
2001-08-28	23:53	2452150.9951389	1010.4	90.0	53.0	320	6.0	NA	0	120	10	NA	28.5	NA	90	79	85.6	M	100	M	M	M
2001-08-29	00:53	2452151.0368056	1010.1	90.0	53.0	350	6.0	NA	0	120	10	NA	28.5	NA	M	M	M	M	M	M	M	M
2001-08-29	01:53	2452151.0784722	1009.8	85.0	56.0	350	5.0	NA	0	120	10	NA	37.2	NA	M	M	M	M	M	M	M	M
2001-08-29	02:53	2452151.1201389	1009.7	79.0	59.0	0	0.0	NA	0	120	10	NA	50.4	NA	M	M	M	M	M	M	M	M
2001-08-29	03:53	2452151.1618056	1009.9	74.0	58.0	0	0.0	NA	0	120	10	NA	57.4	NA	M	M	M	M	M	M	M	M
2001-08-29	04:53	2452151.2034722	1010.0	66.0	61.0	10	3.0	NA	0	120	10	NA	83.9	NA	M	M	M	M	M	M	M	M
2001-08-29	05:53	2452151.2451389	1010.1	62.0	62.0	360	6.0	NA	0	120	10	NA	100.0	NA	90	62	M	M	M	M	M	M
2001-08-29	06:53	2452151.2868056	1010.2	61.0	61.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M
2001-08-29	07:53	2452151.3284722	1010.7	58.0	58.0	20	3.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M
2001-08-29	08:53	2452151.3701389	1010.6	58.0	57.0	0	0.0	NA	0	120	10	NA	96.5	NA	M	M	M	M	M	M	M	M
2001-08-29	09:53	2452151.4118056	1010.8	56.0	56.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M
2001-08-29	10:53	2452151.4534722	1011.1	54.0	54.0	360	4.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M
2001-08-29	11:53	2452151.4951389	1011.5	55.0	55.0	310	3.0	NA	0	120	10	NA	100.0	0.00	64	53	M	55.5	M	45	M	M
2001-08-29	12:53	2452151.5368056	1011.6	54.0	54.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M
2001-08-29	13:53	2452151.5784722	1012.3	54.0	54.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M
2001-08-29	14:53	2452151.6201389	1012.3	62.0	56.0	NA	3.0	NA	0	120	10	NA	80.7	NA	M	M	M	M	M	M	M	M
2001-08-29	15:53	2452151.6618056	1012.0	67.0	57.0	0	0.0	NA	0	120	10	NA	70.2	NA	M	M	M	M	M	M	M	M
2001-08-29	16:53	2452151.7034722	1011.9	74.0	58.0	NA	3.0	NA	0	120	10	NA	57.4	NA	M	M	M	M	M	M	M	M
2001-08-29	17:53	2452151.7451389	1011.5	77.0	57.0	NA	4.0	NA	0	120	10	NA	50.1	NA	78	52	M	M	M	M	M	M
2001-08-29	18:53	2452151.7868056	1010.7	81.0	58.0	NA	3.0	NA	0	120	10	NA	45.5	NA	M	M	M	M	M	M	M	M
2001-08-29	19:53	2452151.8284722	1010.0	84.0	59.0	310	4.0	NA	0	120	10	NA	42.8	NA	M	M	M	M	M	M	M	M

Data file for psc.txt

2001-08-29	20:53	2452151.8701389	1009.1	88.0	59.0	340	7.0	NA	0	120	10	NA	37.7	NA	M	M	M	M	M	M	0.07	0.005	
2001-08-29	21:53	2452151.9118056	1008.0	90.0	56.0	320	4.0	NA	0	120	10	NA	31.8	NA	M	M	M	M	M	M	M	M	
2001-08-29	22:53	2452151.9534722	1007.2	92.0	55.0	320	5.0	NA	0	120	10	NA	28.8	NA	M	M	M	M	M	M	M	M	
2001-08-29	23:53	2452151.9951389	1006.4	92.0	55.0	320	7.0	NA	0	120	10	NA	28.8	NA	M	93	77	85.3	M	103	M	M	
2001-08-30	00:53	2452152.0368056	1005.8	92.0	55.0	320	6.0	NA	0	120	10	NA	28.8	NA	M	M	M	M	M	M	M	M	
2001-08-30	01:53	2452152.0784722	1005.4	89.0	59.0	300	3.0	NA	0	120	10	NA	36.5	NA	M	M	M	M	M	M	M	M	
2001-08-30	02:53	2452152.1201389	1005.5	80.0	60.0	260	3.0	NA	0	120	10	NA	50.5	NA	M	M	M	M	M	M	M	M	
2001-08-30	03:53	2452152.1618056	1005.6	73.0	59.0	0	0.0	NA	0	120	10	NA	61.5	NA	M	M	M	M	M	M	M	M	
2001-08-30	04:53	2452152.2034722	1005.7	65.0	62.0	20	5.0	NA	0	120	10	NA	90.0	NA	M	M	M	M	M	M	M	M	
2001-08-30	05:53	2452152.2451389	1005.8	63.0	62.0	360	4.0	NA	0	120	10	NA	96.5	NA	M	93	63	M	M	M	M	M	
2001-08-30	06:53	2452152.2868056	1006.1	63.0	62.0	0	0.0	NA	0	120	10	NA	96.5	NA	M	M	M	M	M	M	M	M	
2001-08-30	07:53	2452152.3284722	1006.3	59.0	59.0	20	4.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	
2001-08-30	08:53	2452152.3701389	1006.3	58.0	58.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	
2001-08-30	09:53	2452152.4118056	1006.2	57.0	57.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	
2001-08-30	10:53	2452152.4534722	1006.6	55.0	55.0	340	4.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	
2001-08-30	11:53	2452152.4951389	1006.7	54.0	54.0	0	0.0	NA	0	120	10	NA	100.0	0.00	64	54	M	55.2	M	44	M	M	
2001-08-30	12:53	2452152.5368056	1006.9	54.0	54.0	60	3.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	
2001-08-30	13:53	2452152.5784722	1007.5	55.0	55.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	
2001-08-30	14:53	2452152.6201389	1007.7	63.0	59.0	350	3.0	NA	0	120	10	NA	86.8	NA	M	M	M	M	M	M	M	M	
2001-08-30	15:53	2452152.6618056	1007.8	72.0	59.0	NA	3.0	NA	0	120	10	NA	63.6	NA	M	M	M	M	M	M	M	M	
2001-08-30	16:53	2452152.7034722	1007.9	80.0	60.0	260	6.0	NA	0	120	10	NA	50.5	NA	M	M	M	M	M	M	M	M	
2001-08-30	17:53	2452152.7451389	1008.0	82.0	60.0	NA	5.0	NA	0	120	10	NA	47.3	NA	82	53	M	M	M	M	M	M	
2001-08-30	18:53	2452152.7868056	1007.8	86.0	60.0	120	5.0	NA	0	120	10	NA	41.6	NA	M	M	M	M	M	M	M	M	
2001-08-30	19:53	2452152.8284722	1007.2	88.0	59.0	NA	4.0	NA	0	120	10	NA	37.7	NA	M	M	M	M	M	M	M	M	
2001-08-30	20:53	2452152.8701389	1006.9	92.0	57.0	230	7.0	NA	0	120	10	NA	30.9	NA	M	M	M	M	M	M	M	0.05	0.002
2001-08-30	21:53	2452152.9118056	1006.2	94.0	56.0	230	6.0	NA	0	120	10	NA	28.1	NA	M	M	M	M	M	M	M	M	
2001-08-30	22:53	2452152.9534722	1005.5	94.0	53.0	190	5.0	NA	0	120	10	NA	25.1	NA	M	M	M	M	M	M	M	M	
2001-08-30	23:53	2452152.9951389	1005.2	95.0	52.0	220	7.0	NA	0	120	10	NA	23.5	NA	96	82	85.1	M	103	M	M	M	
2001-08-31	00:53	2452153.0368056	1004.8	94.0	51.0	220	7.0	NA	0	120	10	NA	23.4	NA	M	M	M	M	M	M	M	M	
2001-08-31	01:53	2452153.0784722	1004.7	91.0	47.0	200	7.0	NA	0	120	10	NA	22.1	NA	M	M	M	M	M	M	M	M	
2001-08-31	02:53	2452153.1201389	1004.7	86.0	45.0	190	5.0	NA	0	120	10	NA	24.0	NA	M	M	M	M	M	M	M	M	
2001-08-31	03:53	2452153.1618056	1005.3	83.0	51.0	190	5.0	NA	0	120	10	NA	33.0	NA	M	M	M	M	M	M	M	M	
2001-08-31	04:53	2452153.2034722	1005.6	77.0	57.0	240	8.0	NA	0	120	10	NA	50.1	NA	M	M	M	M	M	M	M	M	
2001-08-31	05:53	2452153.2451389	1006.2	74.0	56.0	0	0.0	NA	0	120	10	NA	53.4	NA	95	74	M	M	M	M	M	M	
2001-08-31	06:53	2452153.2868056	1006.9	76.0	52.0	300	3.0	NA	0	120	10	NA	43.1	NA	M	M	M	M	M	M	M	M	
2001-08-31	07:53	2452153.3284722	1007.3	70.0	58.0	150	5.0	NA	0	120	10	NA	65.7	NA	M	M	M	M	M	M	M	M	
2001-08-31	08:53	2452153.3701389	1008.0	64.0	58.0	60	5.0	NA	0	120	10	NA	80.8	NA	M	M	M	M	M	M	M	M	
2001-08-31	09:53	2452153.4118056	1008.6	61.0	58.0	0	0.0	NA	0	120	10	NA	89.8	NA	M	M	M	M	M	M	M	M	
2001-08-31	10:53	2452153.4534722	1009.3	60.0	59.0	0	0.0	NA	0	120	10	NA	96.5	NA	M	M	M	M	M	M	M	M	
2001-08-31	11:53	2452153.4951389	1009.5	59.0	59.0	10	6.0	NA	0	120	10	NA	100.0	0.00	77	58	M	55.0	M	41	M	M	
2001-08-31	12:53	2452153.5368056	1009.7	64.0	60.0	120	6.0	NA	0	120	10	NA	86.8	NA	M	M	M	M	M	M	M	M	
2001-08-31	13:53	2452153.5784722	1010.9	60.0	60.0	90	4.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	
2001-08-31	14:53	2452153.6201389	1011.1	72.0	54.0	210	9.0	NA	0	120	10	NA	53.1	NA	M	M	M	M	M	M	M	M	
2001-08-31	15:53	2452153.6618056	1011.2	75.0	54.0	210	8.0	NA	0	120	10	NA	48.0	NA	M	M	M	M	M	M	M	M	
2001-08-31	16:53	2452153.7034722	1011.3	79.0	56.0	220	7.0	NA	0	120	10	NA	45.2	NA	M	M	M	M	M	M	M	M	
2001-08-31	17:53	2452153.7451389	1011.2	79.0	56.0	200	12.0	NA	0	120	10	NA	45.2	NA	80	59	M	M	M	M	M	M	
2001-08-31	18:53	2452153.7868056	1010.7	82.0	56.0	210	7.0	NA	0	120	10	NA	41.0	NA	M	M	M	M	M	M	M	M	
2001-08-31	19:53	2452153.8284722	1010.0	84.0	57.0	240	11.0	NA	0	120	10	NA	39.9	NA	M	M	M	M	M	M	M	M	
2001-08-31	20:53	2452153.8701389	1009.6	85.0	52.0	230	8.0	NA	0	120	10	NA	32.2	NA	M	M	M	M	M	M	M	1.11	0.032
2001-08-31	21:53	2452153.9118056	1008.8	88.0	51.0	230	8.0	NA	0	120	10	NA	28.2	NA	M	M	M	M	M	M	M	M	
2001-08-31	22:53	2452153.9534722	1008.0	87.0	50.0	200	7.0	NA	0	120	10	NA	28.0	NA	M	M	M	M	M	M	M	M	
2001-08-31	23:53	2452153.9951389	1007.1	89.0	48.0	210	11.0	NA	0	120	10	NA	24.4	NA	90	79	84.8	M	102	M	M	M	
2001-09-01	00:53	2452154.0368056	1006.7	88.0	43.0	210	10.0	NA	0	120	10	NA	20.8	NA	M	M	M	M	M	M	M	M	
2001-09-01	01:53	2452154.0784722	1006.5	85.0	44.0	220	12.0	NA	0	120	10	NA	23.8	NA	M	M	M	M	M	M	M	M	
2001-09-01	02:53	2452154.1201389	1007.0	78.0	48.0	290	9.0	NA	0	120	10	NA	34.8	NA	M	M	M	M	M	M	M	M	
2001-09-01	03:53	2452154.1618056	1007.9	74.0	54.0	320	12.0	NA	0	120	10	NA	49.6	NA	M	M	M	M	M	M	M	M	
2001-09-01	04:53	2452154.2034722	1008.8	70.0	54.0	300	6.0	NA	0	120	10	NA	56.8	NA	M	M	M	M	M	M	M	M	

Data file for psc.txt

2001-09-01	05:53	2452154.2451389	1009.4	72.0	52.0	240	5.0	NA	0	120	10	NA	49.3	NA	90	68	M	M	M	M	M	M	M	M
2001-09-01	06:53	2452154.2868056	1009.6	71.0	52.0	0	0.0	NA	0	120	10	NA	51.0	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	07:53	2452154.3284722	1010.2	64.0	52.0	0	0.0	NA	0	120	10	NA	65.0	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	08:53	2452154.3701389	1010.0	66.0	53.0	150	6.0	NA	0	120	10	NA	62.9	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	09:53	2452154.4118056	1009.7	66.0	54.0	170	4.0	NA	0	120	10	NA	65.2	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	10:53	2452154.4534722	1009.8	66.0	54.0	NA	3.0	NA	0	120	10	NA	65.2	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	11:53	2452154.4951389	1009.3	68.0	55.0	200	6.0	NA	0	120	10	NA	63.1	0.00	72	60	M	54.7	M	43	M	M	M	M
2001-09-01	12:53	2452154.5368056	1009.4	66.0	56.0	250	5.0	NA	0	120	10	NA	70.1	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	13:53	2452154.5784722	1010.0	67.0	55.0	210	9.0	NA	0	120	10	NA	65.3	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	14:53	2452154.6201389	1009.9	69.0	55.0	230	5.0	NA	0	120	10	NA	61.0	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	15:53	2452154.6618056	1010.4	74.0	55.0	230	13.0	NA	0	120	10	NA	51.5	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	16:53	2452154.7034722	1010.4	77.0	53.0	210	13.0	24.0	0	120	10	NA	43.3	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	17:53	2452154.7451389	1010.4	80.0	52.0	230	13.0	21.0	0	120	10	NA	37.8	NA	81	66	M	M	M	M	M	M	M	M
2001-09-01	18:53	2452154.7868056	1010.2	80.0	53.0	210	14.0	20.0	0	120	10	NA	39.2	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	19:53	2452154.8284722	1009.7	84.0	53.0	220	21.0	NA	0	120	10	NA	34.5	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	20:53	2452154.8701389	1009.6	86.0	47.0	230	14.0	23.0	0	120	10	NA	25.8	NA	M	M	M	M	M	M	M	0.12	0.008	M
2001-09-01	21:53	2452154.9118056	1009.8	86.0	54.0	280	17.0	NA	0	120	10	NA	33.5	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	22:53	2452154.9534722	1009.8	86.0	55.0	280	14.0	19.0	0	120	10	NA	34.8	NA	M	M	M	M	M	M	M	M	M	M
2001-09-01	23:53	2452154.9951389	1009.8	84.0	52.0	280	19.0	25.0	0	120	10	NA	33.2	NA	87	77	84.5	M	103	M	M	M	M	M
2001-09-02	01:53	2452155.0784722	1010.7	77.0	53.0	320	12.0	NA	0	120	10	NA	43.3	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	02:53	2452155.1201389	1011.4	69.0	53.0	330	9.0	NA	0	120	10	NA	56.7	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	03:53	2452155.1618056	1012.5	66.0	53.0	280	7.0	NA	0	120	10	NA	62.9	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	04:53	2452155.2034722	1013.1	63.0	52.0	270	5.0	NA	0	120	10	NA	67.3	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	05:53	2452155.2451389	1013.5	62.0	51.0	280	4.0	NA	0	120	10	NA	67.2	NA	84	61	M	M	M	M	M	M	M	M
2001-09-02	06:53	2452155.2868056	1013.9	60.0	51.0	240	3.0	NA	0	120	10	NA	72.1	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	07:53	2452155.3284722	1013.8	56.0	50.0	10	3.0	NA	0	120	10	NA	80.2	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	08:53	2452155.3701389	1013.7	52.0	49.0	100	4.0	NA	0	120	10	NA	89.5	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	09:53	2452155.4118056	1013.5	51.0	50.0	10	3.0	NA	0	120	10	NA	96.4	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	10:53	2452155.4534722	1013.8	48.0	48.0	40	4.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	11:53	2452155.4951389	1013.6	47.0	47.0	0	0.0	NA	0	120	10	NA	100.0	0.00	62	46	M	54.4	M	44	M	M	M	M
2001-09-02	12:53	2452155.5368056	1013.4	47.0	47.0	0	0.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	13:53	2452155.5784722	1013.9	46.0	46.0	340	5.0	NA	0	120	10	NA	100.0	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	14:53	2452155.6201389	1014.2	54.0	49.0	10	5.0	NA	0	120	10	NA	83.1	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	15:53	2452155.6618056	1014.1	60.0	51.0	0	0.0	NA	0	120	10	NA	72.1	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	16:53	2452155.7034722	1013.8	65.0	54.0	0	0.0	NA	0	120	10	NA	67.5	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	17:53	2452155.7451389	1013.2	69.0	53.0	100	3.0	NA	0	120	10	NA	56.7	NA	69	44	M	M	M	M	M	M	M	M
2001-09-02	18:53	2452155.7868056	1012.6	74.0	54.0	NA	3.0	NA	0	120	10	NA	49.6	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	19:53	2452155.8284722	1011.8	77.0	54.0	NA	5.0	NA	0	120	10	NA	44.9	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	20:53	2452155.8701389	1011.1	79.0	56.0	70	5.0	NA	0	120	10	NA	45.2	NA	M	M	M	M	M	M	M	0.63	0.024	M
2001-09-02	21:53	2452155.9118056	1010.2	81.0	54.0	NA	4.0	NA	0	120	10	NA	39.4	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	22:53	2452155.9534722	1009.5	82.0	56.0	20	6.0	NA	0	120	10	NA	41.0	NA	M	M	M	M	M	M	M	M	M	M
2001-09-02	23:53	2452155.9951389	1009.0	83.0	56.0	30	7.0	NA	0	120	10	NA	39.7	NA	84	69	84.2	M	100	M	M	M	M	M
2001-09-03	00:53	2452156.0368056	1008.4	80.0	54.0	50	7.0	NA	0	120	10	NA	40.7	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	01:53	2452156.0784722	1008.1	80.0	54.0	70	4.0	NA	0	120	10	NA	40.7	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	02:53	2452156.1201389	1008.4	67.0	56.0	40	4.0	NA	0	120	10	NA	67.7	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	03:53	2452156.1618056	1009.3	66.0	60.0	0	0.0	NA	0	120	10	NA	81.0	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	04:53	2452156.2034722	1009.7	64.0	59.0	330	3.0	NA	0	120	10	NA	83.8	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	05:53	2452156.2451389	1010.1	59.0	57.0	0	0.0	NA	0	120	10	NA	93.1	NA	83	58	M	M	M	M	M	M	M	M
2001-09-03	06:53	2452156.2868056	1010.2	58.0	57.0	0	0.0	NA	0	120	10	NA	96.5	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	07:53	2452156.3284722	1010.5	61.0	55.0	120	3.0	NA	0	120	10	NA	80.6	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	08:53	2452156.3701389	1010.7	64.0	51.0	210	5.0	NA	0	120	10	NA	62.6	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	09:53	2452156.4118056	1011.1	65.0	51.0	150	3.0	NA	0	120	10	NA	60.5	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	10:53	2452156.4534722	1011.4	63.0	51.0	NA	4.0	NA	0	120	10	NA	64.8	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	11:53	2452156.4951389	1011.9	64.0	52.0	140	7.0	NA	0	120	10	NA	65.0	0.00	66	56	M	54.1	M	44	M	M	M	M
2001-09-03	12:53	2452156.5368056	1011.9	65.0	49.0	190	12.0	NA	0	120	10	NA	56.1	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	13:53	2452156.5784722	1012.7	63.0	52.0	160	9.0	NA	0	120	10	NA	67.3	NA	M	M	M	M	M	M	M	M	M	M
2001-09-03	14:53	2452156.6201389	1013.7	66.0	50.0	170	14.0	NA	0	120	10	NA	56.3	NA	M	M	M	M	M	M	M	M	M	M

Data file for psc.txt

2001-09-17	17:53	2452170.7451389	1014.0	77.0	48.0	NA	5.0	NA	0	120	10	NA	36.0	NA	77	61	M	M	M	M	M	M		
2001-09-17	18:53	2452170.7868056	1013.5	78.0	45.0	NA	5.0	NA	0	120	10	NA	31.1	NA	M	M	M	M	M	M	M	M		
2001-09-17	19:53	2452170.8284722	1012.5	82.0	43.0	190	8.0	NA	0	120	10	NA	25.2	NA	M	M	M	M	M	M	M	M		
2001-09-17	20:53	2452170.8701389	1011.9	85.0	42.0	210	7.0	NA	0	120	10	NA	22.1	NA	M	M	M	M	M	M	M	M	0.30	0.016
2001-09-17	21:53	2452170.9118056	1011.3	86.0	41.0	NA	4.0	NA	0	120	10	NA	20.5	NA	M	M	M	M	M	M	M	M		
2001-09-17	22:53	2452170.9534722	1010.6	88.0	41.0	170	4.0	NA	0	120	10	NA	19.3	NA	M	M	M	M	M	M	M	M		
2001-09-17	23:53	2452170.9951389	1010.1	88.0	41.0	280	4.0	NA	0	120	10	NA	19.3	NA	88	76	79.1	M	92	M	M	M		
2001-09-18	00:53	2452171.0368056	1009.5	88.0	42.0	150	4.0	NA	0	120	10	NA	20.0	NA	M	M	M	M	M	M	M	M		
2001-09-18	01:53	2452171.0784722	1009.1	84.0	44.0	NA	5.0	NA	0	120	10	NA	24.6	NA	M	M	M	M	M	M	M	M		
2001-09-18	02:53	2452171.1201389	1009.4	76.0	44.0	240	9.0	NA	0	120	10	NA	31.9	NA	M	M	M	M	M	M	M	M		
2001-09-18	03:53	2452171.1618056	1010.7	74.0	40.0	300	13.0	NA	0	120	10	NA	29.3	NA	M	M	M	M	M	M	M	M		
2001-09-18	04:53	2452171.2034722	1011.6	73.0	35.0	280	8.0	NA	0	120	10	NA	24.9	NA	M	M	M	M	M	M	M	M		
2001-09-18	06:53	2452171.2868056	1012.6	68.0	43.0	0	0.0	NA	0	120	10	NA	40.3	NA	M	M	M	M	M	M	M	M		
2001-09-18	07:53	2452171.3284722	1012.8	68.0	43.0	210	8.0	NA	0	120	10	NA	40.3	NA	M	M	M	M	M	M	M	M		
2001-09-18	08:53	2452171.3701389	1013.0	65.0	45.0	170	6.0	NA	0	120	10	NA	48.3	NA	M	M	M	M	M	M	M	M		
2001-09-18	09:53	2452171.4118056	1012.9	63.0	46.0	190	8.0	NA	0	120	10	NA	53.8	NA	M	M	M	M	M	M	M	M		
2001-09-18	10:53	2452171.4534722	1012.9	55.0	45.0	0	0.0	NA	0	120	10	NA	68.9	NA	M	M	M	M	M	M	M	M		
2001-09-18	11:53	2452171.4951389	1013.3	49.0	46.0	0	0.0	NA	0	120	10	NA	89.3	0.00	71	49	49.8	M	32	M	M	M		
2001-09-18	12:53	2452171.5368056	1013.3	46.0	45.0	350	3.0	NA	0	120	10	NA	96.3	NA	M	M	M	M	M	M	M	M		
2001-09-18	13:53	2452171.5784722	1013.7	46.0	44.0	0	0.0	NA	0	120	10	NA	92.7	NA	M	M	M	M	M	M	M	M		
2001-09-18	14:53	2452171.6201389	1014.1	62.0	45.0	200	6.0	NA	0	120	10	NA	53.6	NA	M	M	M	M	M	M	M	M		
2001-09-18	15:53	2452171.6618056	1014.0	66.0	44.0	200	10.0	NA	0	120	10	NA	44.9	NA	M	M	M	M	M	M	M	M		
2001-09-18	16:53	2452171.7034722	1014.0	70.0	43.0	160	4.0	NA	0	120	10	NA	37.6	NA	M	M	M	M	M	M	M	M		
2001-09-18	17:53	2452171.7451389	1014.0	74.0	41.0	220	9.0	NA	0	120	10	NA	30.4	NA	74	45	M	M	M	M	M	M		
2001-09-18	18:53	2452171.7868056	1013.5	77.0	42.0	200	8.0	NA	0	120	10	NA	28.6	NA	M	M	M	M	M	M	M	M		
2001-09-18	19:53	2452171.8284722	1012.8	78.0	41.0	NA	5.0	NA	0	120	10	NA	26.6	NA	M	M	M	M	M	M	M	M		
2001-09-18	20:53	2452171.8701389	1011.9	81.0	38.0	NA	4.0	NA	0	120	10	NA	21.5	NA	M	M	M	M	M	M	M	M	0.11	0.006
2001-09-18	21:53	2452171.9118056	1011.1	84.0	37.0	NA	4.0	NA	0	120	10	NA	18.7	NA	M	M	M	M	M	M	M	M		
2001-09-18	22:53	2452171.9534722	1010.8	84.0	38.0	0	0.0	NA	0	120	10	NA	19.5	NA	M	M	M	M	M	M	M	M		
2001-09-18	23:53	2452171.9951389	1010.5	84.0	39.0	160	8.0	NA	0	120	10	NA	20.3	NA	85	74	78.8	M	93	M	M	M		
2001-09-19	00:53	2452172.0368056	1010.1	82.0	42.0	130	9.0	NA	0	120	10	NA	24.3	NA	M	M	M	M	M	M	M	M		
2001-09-19	01:53	2452172.0784722	1009.7	80.0	46.0	120	7.0	NA	0	120	10	NA	30.2	NA	M	M	M	M	M	M	M	M		
2001-09-19	02:53	2452172.1201389	1009.8	66.0	51.0	330	6.0	NA	0	120	10	NA	58.4	NA	M	M	M	M	M	M	M	M		
2001-09-19	03:53	2452172.1618056	1010.6	68.0	45.0	310	13.0	NA	0	120	10	NA	43.5	NA	M	M	M	M	M	M	M	M		
2001-09-19	04:53	2452172.2034722	1011.5	65.0	44.0	310	17.0	23.0	0	120	10	NA	46.5	NA	M	M	M	M	M	M	M	M		
2001-09-19	05:53	2452172.2451389	1012.5	64.0	44.0	NA	5.0	NA	0	120	10	NA	48.1	NA	84	64	M	M	M	M	M	M		
2001-09-19	06:53	2452172.2868056	1012.8	61.0	43.0	250	4.0	NA	0	120	10	NA	51.5	NA	M	M	M	M	M	M	M	M		
2001-09-19	07:53	2452172.3284722	1013.7	59.0	46.0	200	6.0	NA	0	120	10	NA	62.0	NA	M	M	M	M	M	M	M	M		
2001-09-19	08:53	2452172.3701389	1013.8	54.0	47.0	120	3.0	NA	0	120	10	NA	77.1	NA	M	M	M	M	M	M	M	M		
2001-09-19	09:53	2452172.4118056	1014.1	57.0	46.0	180	8.0	NA	0	120	10	NA	66.6	NA	M	M	M	M	M	M	M	M		
2001-09-19	10:53	2452172.4534722	1014.6	57.0	48.0	210	9.0	NA	0	120	10	NA	71.8	NA	M	M	M	M	M	M	M	M		
2001-09-19	11:53	2452172.4951389	1015.2	55.0	48.0	220	7.0	NA	0	120	10	NA	77.2	0.00	64	52	49.6	M	32	M	M	M		
2001-09-19	12:53	2452172.5368056	1015.8	53.0	47.0	0	0.0	NA	0	120	10	NA	80.0	NA	M	M	M	M	M	M	M	M		
2001-09-19	13:53	2452172.5784722	1016.2	54.0	46.0	210	6.0	NA	0	120	10	NA	74.2	NA	M	M	M	M	M	M	M	M		
2001-09-19	14:53	2452172.6201389	1017.0	58.0	46.0	220	4.0	NA	0	120	10	NA	64.2	NA	M	M	M	M	M	M	M	M		
2001-09-19	15:53	2452172.6618056	1017.2	63.0	46.0	NA	4.0	NA	0	120	10	NA	53.8	NA	M	M	M	M	M	M	M	M		
2001-09-19	16:53	2452172.7034722	1017.6	67.0	43.0	260	4.0	NA	0	120	10	NA	41.7	NA	M	M	M	M	M	M	M	M		
2001-09-19	17:53	2452172.7451389	1017.8	68.0	42.0	NA	6.0	NA	0	120	10	NA	38.8	NA	69	51	M	M	M	M	M	M		
2001-09-19	18:53	2452172.7868056	1017.8	71.0	41.0	220	4.0	NA	0	120	10	NA	33.7	NA	M	M	M	M	M	M	M	M		
2001-09-19	19:53	2452172.8284722	1017.6	72.0	41.0	200	7.0	NA	0	120	10	NA	32.5	NA	M	M	M	M	M	M	M	M		
2001-09-19	20:53	2452172.8701389	1017.3	73.0	39.0	NA	5.0	NA	0	120	10	NA	29.1	NA	M	M	M	M	M	M	M	M	0.31	0.021
2001-09-19	21:53	2452172.9118056	1016.8	75.0	39.0	220	8.0	NA	0	120	10	NA	27.2	NA	M	M	M	M	M	M	M	M		
2001-09-19	22:53	2452172.9534722	1016.5	75.0	39.0	NA	3.0	NA	0	120	10	NA	27.2	NA	M	M	M	M	M	M	M	M		
2001-09-19	23:53	2452172.9951389	1016.0	75.0	41.0	310	4.0	NA	0	120	10	NA	29.4	NA	76	68	78.4	M	93	M	M	M		
2001-09-20	00:53	2452173.0368056	1016.0	73.0	38.0	0	0.0	NA	0	120	10	NA	28.0	NA	M	M	M	M	M	M	M	M		
2001-09-20	01:53	2452173.0784722	1016.0	71.0	43.0	160	5.0	NA	0	120	10	NA	36.4	NA	M	M	M	M	M	M	M	M		
2001-09-20	02:53	2452173.1201389	1016.0	67.0	44.0	100	4.0	NA	0	120	10	NA	43.3	NA	M	M	M	M	M	M	M	M		

Data file for psc.txt

2001-09-24	23:53	2452177.9951389	1008.8	91.0	37.0	290	7.0	NA	0	120	10	NA	15.0	NA	93	82	76.4	M	91	M	M	M	M
2001-09-25	00:53	2452178.0368056	1008.5	82.0	45.0	0	0.0	NA	0	120	10	NA	27.2	NA	M	M	M	M	M	M	M	M	M
2001-09-25	01:53	2452178.0784722	1008.6	78.0	48.0	140	4.0	NA	0	120	10	NA	34.8	NA	M	M	M	M	M	M	M	M	M
2001-09-25	02:53	2452178.1201389	1009.1	69.0	53.0	120	4.0	NA	0	120	10	NA	56.7	NA	M	M	M	M	M	M	M	M	M
2001-09-25	03:53	2452178.1618056	1009.0	63.0	53.0	10	5.0	NA	0	120	10	NA	69.8	NA	M	M	M	M	M	M	M	M	M
2001-09-25	04:53	2452178.2034722	1009.2	60.0	52.0	360	3.0	NA	0	120	10	NA	74.8	NA	M	M	M	M	M	M	M	M	M
2001-09-25	05:53	2452178.2451389	1008.8	59.0	49.0	310	3.0	NA	0	120	10	NA	69.4	NA	91	59	M	M	M	M	M	M	M
2001-09-25	06:53	2452178.2868056	1008.3	56.0	48.0	320	5.0	NA	0	120	10	NA	74.4	NA	M	M	M	M	M	M	M	M	M
2001-09-25	07:53	2452178.3284722	1007.9	53.0	48.0	310	5.0	NA	0	120	10	NA	83.1	NA	M	M	M	M	M	M	M	M	M
2001-09-25	08:53	2452178.3701389	1007.8	55.0	48.0	0	0.0	NA	0	120	10	NA	77.2	NA	M	M	M	M	M	M	M	M	M
2001-09-25	09:53	2452178.4118056	1006.8	51.0	48.0	290	4.0	NA	0	120	10	NA	89.4	NA	M	M	M	M	M	M	M	M	M
2001-09-25	10:53	2452178.4534722	1006.5	49.0	47.0	330	5.0	NA	0	120	10	NA	92.8	NA	M	M	M	M	M	M	M	M	M
2001-09-25	11:53	2452178.4951389	1005.5	55.0	46.0	330	6.0	NA	0	120	10	NA	71.6	0.00	58	49	M	47.7	M	36	M	M	M
2001-09-25	12:53	2452178.5368056	1004.9	53.0	44.0	310	8.0	NA	0	120	10	NA	71.4	NA	M	M	M	M	M	M	M	M	M
2001-09-25	13:53	2452178.5784722	1004.6	55.0	44.0	340	5.0	NA	0	120	10	NA	66.3	NA	M	M	M	M	M	M	M	M	M
2001-09-25	14:53	2452178.6201389	1004.3	60.0	44.0	220	5.0	NA	0	120	10	NA	55.4	NA	M	M	M	M	M	M	M	M	M
2001-09-25	15:53	2452178.6618056	1004.8	64.0	46.0	250	7.0	NA	0	120	10	NA	51.9	NA	M	M	M	M	M	M	M	M	M
2001-09-25	16:53	2452178.7034722	1004.3	67.0	44.0	90	3.0	NA	0	120	10	NA	43.3	NA	M	M	M	M	M	M	M	M	M
2001-09-25	17:53	2452178.7451389	1005.0	69.0	44.0	120	7.0	NA	0	120	10	NA	40.5	NA	69	52	M	M	M	M	M	M	M
2001-09-25	18:53	2452178.7868056	1004.5	74.0	51.0	240	4.0	NA	0	120	10	NA	44.4	NA	M	M	M	M	M	M	M	M	M
2001-09-25	19:38	2452178.8180556	NA	75.0	50.0	230	20.0	25.0	1	120	3	NA	41.4	NA	M	M	M	M	M	M	M	M	M
2001-09-25	19:53	2452178.8284722	1004.5	77.0	50.0	230	30.0	36.0	6	6	2	NA	38.7	NA	M	M	M	M	M	M	M	M	M
2001-09-25	20:46	2452178.8652778	NA	73.0	52.0	230	16.0	21.0	8	6	3	NA	47.7	NA	M	M	M	M	M	M	M	0.24	0.014
2001-09-25	20:53	2452178.8701389	1005.2	73.0	51.0	220	24.0	30.0	6	18	5	NA	46.0	NA	M	M	M	M	M	M	M	0.24	0.014
2001-09-25	21:01	2452178.8756944	NA	73.0	50.0	220	24.0	30.0	6	120	7	NA	44.3	NA	M	M	M	M	M	M	M	M	M
2001-09-25	21:53	2452178.9118056	1006.7	75.0	50.0	210	20.0	26.0	0	120	10	NA	41.4	NA	M	M	M	M	M	M	M	M	M
2001-09-25	22:53	2452178.9534722	1006.7	73.0	51.0	220	18.0	24.0	1	120	10	NA	46.0	NA	M	27	M	M	M	M	M	M	M
2001-09-25	23:53	2452178.9951389	1006.9	72.0	51.0	210	16.0	NA	1	120	10	NA	47.5	NA	77	69	76.0	M	90	M	M	M	M
2001-09-26	00:53	2452179.0368056	1007.5	70.0	53.0	210	17.0	NA	8	80	10	NA	54.8	NA	M	M	M	M	M	M	M	M	M
2001-09-26	01:53	2452179.0784722	1008.4	64.0	56.0	210	18.0	25.0	6	95	10	NA	75.2	NA	M	27	M	M	M	M	M	M	M
2001-09-26	02:53	2452179.1201389	1009.5	62.0	54.0	220	21.0	27.0	8	95	10	NA	75.0	NA	M	M	M	M	M	M	M	M	M
2001-09-26	04:53	2452179.2034722	1011.2	62.0	53.0	230	17.0	22.0	8	85	10	NA	72.3	NA	M	M	M	M	M	M	M	M	M
2001-09-26	05:53	2452179.2451389	1011.9	62.0	52.0	220	16.0	20.0	8	85	10	NA	69.7	NA	72	61	M	M	M	M	M	M	M
2001-09-26	06:53	2452179.2868056	1012.6	61.0	51.0	230	12.0	NA	6	95	10	NA	69.6	NA	M	M	M	M	M	M	M	M	M
2001-09-26	07:53	2452179.3284722	1013.0	60.0	49.0	230	7.0	NA	1	120	10	NA	66.9	NA	M	M	M	M	M	M	M	M	M
2001-09-26	08:53	2452179.3701389	1013.1	61.0	47.0	210	8.0	NA	0	120	10	NA	59.9	NA	M	M	M	M	M	M	M	M	M
2001-09-26	09:53	2452179.4118056	1013.6	60.0	46.0	240	7.0	NA	0	120	10	NA	59.8	NA	M	M	M	M	M	M	M	M	M
2001-09-26	10:53	2452179.4534722	1013.6	59.0	47.0	150	6.0	NA	0	120	10	NA	64.3	NA	M	M	M	M	M	M	M	M	M
2001-09-26	11:53	2452179.4951389	1013.6	57.0	47.0	170	7.0	NA	0	120	10	NA	69.1	0.00	62	57	M	47.5	M	32	M	M	M

Data file for geg.txt

Data file for geg#
 # This data is from: Spokane Airport (stn. code geg)
 #
 #
 Geiger Field Site and Instrument specifications
 Spokane, WA
 NWS: This site is a National Weather Service site.

Archived data available via this UW link since: 01 Jul 1996

STATION NAME	ID	LAT	LON	ELEV M	ELEV FT	WMO																
SPOKANE INTL AR WA US	KGEG	47.63	-117.53	721 m	2365 ft	72785																
# Station precip: maximum and daily avg (inches) over entire period of record							-----*															
# Station extrema: daily hi/lo temperatures over entire period of record							-----*															
# Station average: daily hi/lo temperatures over entire period of record							-----*															
# Station 6-hour hi/lo temperatures							-----*															
# Rain Gauge (inches)							-----*															
# Relative humidity (%)							-----*															
# Solar irradiance (W/m^2)							-----*															
# Visibility (miles)							-----*															
# Cloud height (100's of feet)							-----*															
# Cloud cover (1/8ths of sky)							-----*															
# Wind peak (nautical miles per hour)							-----*															
# Wind speed (nautical miles per hour)							-----*															
# Wind direction (clockwise degrees from North)							-----*															
# Dewpoint temperature (F)							-----*															
# Air temperature (F)							-----*															
# Pressure (millibars)							-----*															
Date(GMT)	Julian date	Pres	Tair	Tdew	Dir	Spd	Peak	Cc	Cht	Vis	Radn	RelH	Rain	hi	lo	hi	lo	hi	lo	max	avg	
2001-08-24 08:56	2452146.3722222	1017.8	50.0	46.0	180	7.0	NA	6	200	10	NA	86.1	NA	M	M	M	M	M	M	M	M	M
2001-08-24 09:56	2452146.4138889	1018.3	49.0	46.0	170	9.0	NA	3	120	10	NA	89.3	NA	M	M	M	M	M	M	M	M	M
2001-08-24 10:56	2452146.4555556	1019.0	49.0	44.0	180	9.0	NA	0	120	10	NA	82.8	NA	M	M	M	M	M	M	M	M	M
2001-08-24 11:56	2452146.4972222	1019.2	48.0	43.0	160	8.0	NA	1	120	10	NA	82.7	0.10	57	48	M	53.2	M	37	M	M	M
2001-08-24 12:56	2452146.5388889	1019.7	47.0	43.0	160	7.0	NA	3	120	10	NA	85.9	NA	M	M	M	M	M	M	M	M	M
2001-08-24 13:56	2452146.5805556	1020.2	48.0	44.0	160	11.0	NA	3	120	10	NA	85.9	NA	M	M	M	M	M	M	M	M	M
2001-08-24 14:56	2452146.6222222	1020.9	51.0	45.0	200	10.0	NA	3	120	10	NA	79.8	NA	M	M	M	M	M	M	M	M	M
2001-08-24 15:56	2452146.6638889	1020.9	55.0	46.0	200	9.0	NA	3	120	10	NA	71.6	NA	M	M	M	M	M	M	M	M	M
2001-08-24 16:56	2452146.7055556	1020.8	60.0	42.0	220	10.0	NA	3	120	10	NA	51.3	NA	M	M	M	M	M	M	M	M	M
2001-08-24 17:56	2452146.7472222	1020.7	63.0	42.0	240	9.0	NA	3	120	10	NA	46.1	NA	63	46	M	M	M	M	M	M	M
2001-08-24 18:56	2452146.7888889	1020.7	63.0	42.0	NA	4.0	NA	3	120	10	NA	46.1	NA	M	M	M	M	M	M	M	M	M
2001-08-24 19:56	2452146.8305556	1020.6	65.0	42.0	0	0.0	NA	3	120	10	NA	43.0	NA	M	M	M	M	M	M	M	M	M
2001-08-24 20:56	2452146.8722222	1020.5	66.0	42.0	NA	3.0	NA	3	120	10	NA	41.5	NA	M	M	M	M	M	M	M	0.51	0.022
2001-08-24 21:56	2452146.9138889	1020.1	66.0	41.0	150	7.0	NA	3	120	10	NA	40.0	NA	M	M	M	M	M	M	M	M	M
2001-08-24 22:56	2452146.9555556	1019.7	69.0	40.0	NA	5.0	NA	3	120	10	NA	34.7	NA	M	M	M	M	M	M	M	M	M
2001-08-24 23:56	2452146.9972222	1019.6	69.0	40.0	NA	4.0	NA	3	120	10	NA	34.7	NA	70	62	80.9	M	99	M	M	M	M
2001-08-25 00:56	2452147.0388889	1019.3	68.0	39.0	NA	3.0	NA	3	120	10	NA	34.5	NA	M	M	M	M	M	M	M	M	M
2001-08-25 01:56	2452147.0805556	1019.0	67.0	39.0	170	3.0	NA	1	120	10	NA	35.7	NA	M	M	M	M	M	M	M	M	M

Data file for geg.txt

2001-08-27	11:56	2452149.4972222	1014.8	58.0	39.0	0	0.0	NA	1	120	10	NA	49.1	0.00	65	54	M	52.5	M	39	M	M
2001-08-27	12:56	2452149.5388889	1015.4	56.0	39.0	120	3.0	NA	1	120	10	NA	52.7	NA	M	M	M	M	M	M	M	M
2001-08-27	13:56	2452149.5805556	1016.0	57.0	38.0	150	6.0	NA	1	120	10	NA	48.9	NA	M	M	M	M	M	M	M	M
2001-08-27	14:56	2452149.6222222	1016.4	63.0	40.0	140	5.0	NA	1	120	10	NA	42.7	NA	M	M	M	M	M	M	M	M
2001-08-27	15:56	2452149.6638889	1016.8	69.0	47.0	190	7.0	NA	0	120	10	NA	45.3	NA	M	M	M	M	M	M	M	M
2001-08-27	16:56	2452149.7055556	1016.8	74.0	49.0	170	8.0	NA	0	120	10	NA	41.3	NA	M	M	M	M	M	M	M	M
2001-08-27	17:56	2452149.7472222	1016.8	78.0	49.0	200	10.0	NA	1	120	10	NA	36.1	NA	78	55	M	M	M	M	M	M
2001-08-27	18:56	2452149.7888889	1016.4	81.0	49.0	170	10.0	NA	1	120	10	NA	32.7	NA	M	M	M	M	M	M	M	M
2001-08-27	19:56	2452149.8305556	1015.9	84.0	48.0	230	10.0	14.0	1	120	10	NA	28.6	NA	M	M	M	M	M	M	M	M
2001-08-27	20:56	2452149.8722222	1015.1	87.0	46.0	240	10.0	15.0	1	120	10	NA	24.1	NA	M	M	M	M	M	M	0.83	0.030
2001-08-27	21:56	2452149.9138889	1014.7	86.0	44.0	230	6.0	NA	3	120	10	NA	23.1	NA	M	M	M	M	M	M	M	M
2001-08-27	22:56	2452149.9555556	1013.7	87.0	43.0	240	9.0	16.0	3	120	10	NA	21.5	NA	M	M	M	M	M	M	M	M
2001-08-27	23:56	2452149.9972222	1013.3	87.0	41.0	240	6.0	NA	3	120	10	NA	19.9	NA	89	78	80.0	M	96	M	M	M
2001-08-28	00:56	2452150.0388889	1013.3	86.0	41.0	240	11.0	NA	3	120	10	NA	20.5	NA	M	M	M	M	M	M	M	M
2001-08-28	01:56	2452150.0805556	1013.1	83.0	42.0	230	8.0	NA	3	120	10	NA	23.5	NA	M	M	M	M	M	M	M	M
2001-08-28	02:56	2452150.1222222	1013.3	76.0	40.0	210	7.0	NA	1	120	10	NA	27.4	NA	M	M	M	M	M	M	M	M
2001-08-28	03:56	2452150.1638889	1013.4	74.0	39.0	210	8.0	NA	1	120	10	NA	28.1	NA	M	M	M	M	M	M	M	M
2001-08-28	04:56	2452150.2055556	1013.2	70.0	38.0	220	10.0	NA	1	120	10	NA	31.0	NA	M	M	M	M	M	M	M	M
2001-08-28	05:56	2452150.2472222	1012.9	69.0	39.0	210	9.0	NA	1	120	10	NA	33.3	NA	87	69	M	M	M	M	M	M
2001-08-28	06:56	2452150.2888889	1012.7	69.0	41.0	210	10.0	NA	1	120	10	NA	36.0	NA	M	M	M	M	M	M	M	M
2001-08-28	07:56	2452150.3305556	1012.6	65.0	41.0	170	6.0	NA	1	120	10	NA	41.4	NA	M	M	M	M	M	M	M	M
2001-08-28	08:56	2452150.3722222	1012.6	66.0	41.0	170	11.0	NA	3	120	10	NA	40.0	NA	M	M	M	M	M	M	M	M
2001-08-28	09:56	2452150.4138889	1012.9	61.0	41.0	170	6.0	NA	3	120	10	NA	47.6	NA	M	M	M	M	M	M	M	M
2001-08-28	10:56	2452150.4555556	1013.3	59.0	41.0	140	7.0	NA	3	120	10	NA	51.2	NA	M	M	M	M	M	M	M	M
2001-08-28	11:56	2452150.4972222	1013.5	57.0	40.0	140	9.0	NA	3	120	10	NA	52.9	0.00	71	57	M	52.2	M	40	M	M
2001-08-28	12:56	2452150.5388889	1013.9	56.0	41.0	140	9.0	NA	6	100	10	NA	57.0	NA	M	M	M	M	M	M	M	M
2001-08-28	13:56	2452150.5805556	1014.3	58.0	42.0	160	6.0	NA	6	130	10	NA	55.1	NA	M	M	M	M	M	M	M	M
2001-08-28	14:56	2452150.6222222	1014.7	60.0	45.0	150	8.0	NA	6	110	10	NA	57.6	NA	M	M	M	M	M	M	M	M
2001-08-28	15:56	2452150.6638889	1015.1	64.0	47.0	160	6.0	NA	6	110	10	NA	53.9	NA	M	M	M	M	M	M	M	M
2001-08-28	16:56	2452150.7055556	1015.1	67.0	48.0	160	7.0	NA	6	150	10	NA	50.4	NA	M	M	M	M	M	M	M	M
2001-08-28	17:56	2452150.7472222	1015.3	68.0	48.0	150	6.0	NA	6	150	10	NA	48.7	NA	68	56	M	M	M	M	M	M
2001-08-28	18:56	2452150.7888889	1014.8	70.0	49.0	NA	4.0	NA	6	200	10	NA	47.2	NA	M	M	M	M	M	M	M	M
2001-08-28	19:56	2452150.8305556	1014.7	72.0	48.0	190	4.0	NA	6	200	10	NA	42.5	NA	M	M	M	M	M	M	M	M
2001-08-28	20:56	2452150.8722222	1014.3	77.0	48.0	140	7.0	NA	3	120	10	NA	36.0	NA	M	M	M	M	M	M	0.62	0.014
2001-08-28	21:56	2452150.9138889	1013.9	79.0	47.0	170	7.0	NA	3	120	10	NA	32.4	NA	M	M	M	M	M	M	M	M
2001-08-28	22:56	2452150.9555556	1013.3	79.0	46.0	0	0.0	NA	3	120	10	NA	31.2	NA	M	M	M	M	M	M	M	M
2001-08-28	23:56	2452150.9972222	1012.8	81.0	46.0	NA	4.0	NA	3	120	10	NA	29.2	NA	81	67	79.6	M	98	M	M	M
2001-08-29	00:56	2452151.0388889	1012.5	81.0	46.0	180	5.0	NA	3	120	10	NA	29.2	NA	M	M	M	M	M	M	M	M
2001-08-29	01:56	2452151.0805556	1012.3	79.0	45.0	210	4.0	NA	1	120	10	NA	30.1	NA	M	M	M	M	M	M	M	M
2001-08-29	02:56	2452151.1222222	1012.5	76.0	46.0	0	0.0	NA	1	120	10	NA	34.5	NA	M	M	M	M	M	M	M	M
2001-08-29	03:56	2452151.1638889	1012.8	70.0	45.0	140	6.0	NA	1	120	10	NA	40.6	NA	M	M	M	M	M	M	M	M
2001-08-29	04:56	2452151.2055556	1012.8	67.0	46.0	140	8.0	NA	0	120	10	NA	46.8	NA	M	M	M	M	M	M	M	M
2001-08-29	05:56	2452151.2472222	1012.7	65.0	46.0	140	7.0	NA	0	120	10	NA	50.1	NA	82	65	M	M	M	M	M	M
2001-08-29	06:56	2452151.2888889	1012.6	64.0	46.0	140	7.0	NA	0	120	10	NA	51.9	NA	M	M	M	M	M	M	M	M
2001-08-29	07:56	2452151.3305556	1012.7	64.0	47.0	110	3.0	NA	0	120	10	NA	53.9	NA	M	M	M	M	M	M	M	M
2001-08-29	08:56	2452151.3722222	1012.5	62.0	46.0	0	0.0	NA	0	120	10	NA	55.7	NA	M	M	M	M	M	M	M	M
2001-08-29	09:56	2452151.4138889	1012.7	60.0	46.0	0	0.0	NA	0	120	10	NA	59.8	NA	M	M	M	M	M	M	M	M
2001-08-29	10:56	2452151.4555556	1012.9	57.0	46.0	0	0.0	NA	0	120	10	NA	66.6	NA	M	M	M	M	M	M	M	M
2001-08-29	11:56	2452151.4972222	1012.9	59.0	48.0	70	4.0	NA	0	120	10	NA	66.8	0.00	66	56	M	52.0	M	39	M	M
2001-08-29	12:56	2452151.5388889	1012.9	58.0	49.0	0	0.0	NA	0	120	10	NA	71.9	NA	M	M	M	M	M	M	M	M
2001-08-29	13:56	2452151.5805556	1013.3	58.0	49.0	30	3.0	NA	0	120	10	NA	71.9	NA	M	M	M	M	M	M	M	M
2001-08-29	14:56	2452151.6222222	1013.4	62.0	50.0	70	6.0	NA	0	120	10	NA	64.7	NA	M	M	M	M	M	M	M	M
2001-08-29	15:56	2452151.6638889	1013.5	65.0	50.0	50	5.0	NA	0	120	10	NA	58.3	NA	M	M	M	M	M	M	M	M
2001-08-29	16:56	2452151.7055556	1013.1	70.0	50.0	40	6.0	NA	1	120	10	NA	49.0	NA	M	M	M	M	M	M	M	M
2001-08-29	17:56	2452151.7472222	1012.8	75.0	51.0	30	6.0	NA	3	120	10	NA	43.0	NA	75	56	M	M	M	M	M	M
2001-08-29	18:56	2452151.7888889	1011.9	80.0	48.0	30	5.0	NA	3	120	10	NA	32.6	NA	M	M	M	M	M	M	M	M
2001-08-29	19:56	2452151.8305556	1011.1	82.0	47.0	NA	4.0	NA	3	120	10	NA	29.4	NA	M	M	M	M	M	M	M	M

Data file for geg.txt

2001-09-13	06:56	2452166.2888889	1010.3	64.0	38.0	10	5.0	NA	0	120	10	NA	38.1	NA	M	M	M	M	M	M	M	M
2001-09-13	07:56	2452166.3305556	1010.3	65.0	39.0	50	4.0	NA	0	120	10	NA	38.3	NA	M	M	M	M	M	M	M	M
2001-09-13	08:56	2452166.3722222	1010.5	60.0	39.0	10	5.0	NA	0	120	10	NA	45.7	NA	M	M	M	M	M	M	M	M
2001-09-13	09:56	2452166.4138889	1010.8	60.0	39.0	0	0.0	NA	0	120	10	NA	45.7	NA	M	M	M	M	M	M	M	M
2001-09-13	10:56	2452166.4555556	1011.3	53.0	36.0	350	3.0	NA	0	120	10	NA	52.3	NA	M	M	M	M	M	M	M	M
2001-09-13	11:56	2452166.4972222	1011.2	58.0	38.0	10	5.0	NA	0	120	10	NA	47.2	0.00	71	52	M	47.6	M	33	M	M
2001-09-13	12:56	2452166.5388889	1011.7	57.0	38.0	50	3.0	NA	1	120	10	NA	48.9	NA	M	M	M	M	M	M	M	M
2001-09-13	13:56	2452166.5805556	1012.3	56.0	39.0	20	6.0	NA	1	120	10	NA	52.7	NA	M	M	M	M	M	M	M	M
2001-09-13	14:56	2452166.6222222	1012.8	65.0	41.0	20	5.0	NA	1	120	10	NA	41.4	NA	M	M	M	M	M	M	M	M
2001-09-13	15:56	2452166.6638889	1013.2	67.0	41.0	30	7.0	NA	3	120	10	NA	38.6	NA	M	M	M	M	M	M	M	M
2001-09-13	16:56	2452166.7055556	1013.6	70.0	42.0	50	6.0	NA	3	120	10	NA	36.2	NA	M	M	M	M	M	M	M	M
2001-09-13	17:56	2452166.7472222	1013.4	75.0	42.0	40	6.0	NA	3	120	10	NA	30.6	NA	75	55	M	M	M	M	M	M
2001-09-13	18:56	2452166.7888889	1013.3	79.0	43.0	60	6.0	NA	3	120	10	NA	27.8	NA	M	M	M	M	M	M	M	M
2001-09-13	19:56	2452166.8305556	1013.1	81.0	44.0	NA	3.0	NA	3	120	10	NA	27.1	NA	M	M	M	M	M	M	M	M
2001-09-13	20:56	2452166.8722222	1012.9	84.0	44.0	NA	3.0	NA	6	200	10	NA	24.6	NA	M	M	M	M	M	M	0.93	0.041
2001-09-13	21:56	2452166.9138889	1012.2	86.0	42.0	NA	4.0	NA	6	200	10	NA	21.4	NA	M	M	M	M	M	M	M	M
2001-09-13	22:56	2452166.9555556	1012.2	86.0	42.0	NA	4.0	NA	6	200	10	NA	21.4	NA	M	M	M	M	M	M	M	M
2001-09-13	23:56	2452166.9972222	1011.8	86.0	41.0	60	8.0	NA	6	200	10	NA	20.5	NA	87	75	73.7	M	91	M	M	M
2001-09-14	00:56	2452167.0388889	1011.8	85.0	41.0	0	0.0	NA	3	120	10	NA	21.2	NA	M	M	M	M	M	M	M	M
2001-09-14	01:56	2452167.0805556	1012.0	80.0	40.0	170	4.0	NA	3	120	10	NA	24.0	NA	M	M	M	M	M	M	M	M
2001-09-14	02:56	2452167.1222222	1012.6	71.0	41.0	170	5.0	NA	1	120	10	NA	33.7	NA	M	M	M	M	M	M	M	M
2001-09-14	03:56	2452167.1638889	1013.1	68.0	41.0	190	6.0	NA	1	120	10	NA	37.3	NA	M	M	M	M	M	M	M	M
2001-09-14	04:56	2452167.2055556	1013.5	66.0	40.0	180	4.0	NA	1	120	10	NA	38.4	NA	M	M	M	M	M	M	M	M
2001-09-14	05:56	2452167.2472222	1013.6	64.0	40.0	140	5.0	NA	0	120	10	NA	41.2	NA	86	64	M	M	M	M	M	M
2001-09-14	06:56	2452167.2888889	1014.0	63.0	41.0	130	6.0	NA	1	120	10	NA	44.4	NA	M	M	M	M	M	M	M	M
2001-09-14	07:56	2452167.3305556	1014.4	60.0	40.0	150	7.0	NA	0	120	10	NA	47.5	NA	M	M	M	M	M	M	M	M
2001-09-14	08:56	2452167.3722222	1014.6	59.0	40.0	130	4.0	NA	0	120	10	NA	49.2	NA	M	M	M	M	M	M	M	M
2001-09-14	09:56	2452167.4138889	1014.9	58.0	40.0	120	5.0	NA	0	120	10	NA	51.0	NA	M	M	M	M	M	M	M	M
2001-09-14	10:56	2452167.4555556	1015.5	56.0	40.0	0	0.0	NA	0	120	10	NA	54.8	NA	M	M	M	M	M	M	M	M
2001-09-14	11:56	2452167.4972222	1015.9	54.0	39.0	0	0.0	NA	0	120	10	NA	56.7	0.00	64	54	M	47.3	M	32	M	M
2001-09-14	12:56	2452167.5388889	1016.2	56.0	44.0	60	5.0	NA	1	120	10	NA	64.0	NA	M	M	M	M	M	M	M	M
2001-09-14	13:56	2452167.5805556	1016.7	58.0	45.0	50	7.0	NA	1	120	10	NA	61.8	NA	M	M	M	M	M	M	M	M
2001-09-14	14:56	2452167.6222222	1017.2	62.0	46.0	40	8.0	NA	1	120	10	NA	55.7	NA	M	M	M	M	M	M	M	M
2001-09-14	15:56	2452167.6638889	1017.6	66.0	45.0	50	8.0	NA	0	120	10	NA	46.6	NA	M	M	M	M	M	M	M	M
2001-09-14	16:56	2452167.7055556	1017.8	69.0	46.0	40	7.0	NA	0	120	10	NA	43.7	NA	M	M	M	M	M	M	M	M
2001-09-14	17:56	2452167.7472222	1017.5	74.0	47.0	60	6.0	NA	0	120	10	NA	38.3	NA	74	54	M	M	M	M	M	M
2001-09-14	18:56	2452167.7888889	1017.1	78.0	47.0	40	5.0	NA	0	120	10	NA	33.5	NA	M	M	M	M	M	M	M	M
2001-09-14	19:56	2452167.8305556	1016.6	83.0	47.0	NA	3.0	NA	1	120	10	NA	28.5	NA	M	M	M	M	M	M	M	M
2001-09-14	20:56	2452167.8722222	1015.8	86.0	45.0	350	5.0	NA	3	120	10	NA	24.0	NA	M	M	M	M	M	M	1.06	0.032
2001-09-14	21:56	2452167.9138889	1015.1	87.0	43.0	NA	3.0	NA	3	120	10	NA	21.5	NA	M	M	M	M	M	M	M	M
2001-09-14	22:56	2452167.9555556	1014.7	87.0	42.0	0	0.0	NA	3	120	10	NA	20.7	NA	M	M	M	M	M	M	M	M
2001-09-14	23:56	2452167.9972222	1014.3	87.0	42.0	50	6.0	NA	3	120	10	NA	20.7	NA	88	74	73.3	M	91	M	M	M
2001-09-15	00:56	2452168.0388889	1014.0	85.0	41.0	50	3.0	NA	1	120	10	NA	21.2	NA	M	M	M	M	M	M	M	M
2001-09-15	01:56	2452168.0805556	1014.1	82.0	40.0	0	0.0	NA	1	120	10	NA	22.5	NA	M	M	M	M	M	M	M	M
2001-09-15	02:56	2452168.1222222	1014.6	72.0	38.0	230	4.0	NA	0	120	10	NA	28.9	NA	M	M	M	M	M	M	M	M
2001-09-15	03:56	2452168.1638889	1014.5	67.0	38.0	220	4.0	NA	0	120	10	NA	34.3	NA	M	M	M	M	M	M	M	M
2001-09-15	04:56	2452168.2055556	1014.5	65.0	38.0	220	5.0	NA	0	120	10	NA	36.8	NA	M	M	M	M	M	M	M	M
2001-09-15	05:56	2452168.2472222	1014.1	65.0	38.0	0	0.0	NA	0	120	10	NA	36.8	NA	87	62	M	M	M	M	M	M
2001-09-15	06:56	2452168.2888889	1013.9	59.0	37.0	210	4.0	NA	0	120	10	NA	43.7	NA	M	M	M	M	M	M	M	M
2001-09-15	07:56	2452168.3305556	1013.9	57.0	37.0	0	0.0	NA	0	120	10	NA	47.0	NA	M	M	M	M	M	M	M	M
2001-09-15	08:56	2452168.3722222	1013.6	57.0	37.0	0	0.0	NA	0	120	10	NA	47.0	NA	M	M	M	M	M	M	M	M
2001-09-15	09:56	2452168.4138889	1013.6	57.0	39.0	0	0.0	NA	0	120	10	NA	50.9	NA	M	M	M	M	M	M	M	M
2001-09-15	10:56	2452168.4555556	1013.4	54.0	37.0	0	0.0	NA	0	120	10	NA	52.4	NA	M	M	M	M	M	M	M	M
2001-09-15	11:56	2452168.4972222	1013.0	60.0	44.0	40	8.0	NA	0	120	10	NA	55.4	0.00	68	53	M	47.0	M	31	M	M
2001-09-15	12:56	2452168.5388889	1013.4	57.0	44.0	40	5.0	NA	0	120	10	NA	61.7	NA	M	M	M	M	M	M	M	M
2001-09-15	13:56	2452168.5805556	1013.8	57.0	44.0	30	4.0	NA	1	120	10	NA	61.7	NA	M	M	M	M	M	M	M	M
2001-09-15	14:56	2452168.6222222	1014.1	62.0	45.0	40	7.0	NA	1	120	10	NA	53.6	NA	M	M	M	M	M	M	M	M

Data file for geg.txt

2001-09-18	05:56	2452171.2472222	1011.3	60.0	36.0	230	5.0	NA	3	120	10	NA	40.6	NA	82	60	M	M	M	M	M	M
2001-09-18	06:56	2452171.2888889	1010.9	62.0	37.0	140	9.0	NA	3	120	10	NA	39.3	NA	M	M	M	M	M	M	M	M
2001-09-18	07:56	2452171.3305556	1011.3	61.0	36.0	160	9.0	NA	6	200	10	NA	39.2	NA	M	M	M	M	M	M	M	M
2001-09-18	08:56	2452171.3722222	1011.2	61.0	39.0	190	10.0	NA	1	120	10	NA	44.1	NA	M	M	M	M	M	M	M	M
2001-09-18	09:56	2452171.4138889	1011.2	57.0	39.0	170	11.0	NA	0	120	10	NA	50.9	NA	M	M	M	M	M	M	M	M
2001-09-18	10:56	2452171.4555556	1011.5	56.0	35.0	190	12.0	NA	0	120	10	NA	45.0	NA	M	M	M	M	M	M	M	M
2001-09-18	11:56	2452171.4972222	1011.2	55.0	36.0	160	14.0	NA	1	120	10	NA	48.6	0.00	63	55	M	46.2	M	25	M	M
2001-09-18	12:56	2452171.5388889	1012.4	53.0	35.0	190	7.0	NA	3	120	10	NA	50.2	NA	M	M	M	M	M	M	M	M
2001-09-18	13:56	2452171.5805556	1013.0	53.0	37.0	180	12.0	NA	3	120	10	NA	54.4	NA	M	M	M	M	M	M	M	M
2001-09-18	14:56	2452171.6222222	1013.3	55.0	37.0	170	12.0	NA	3	120	10	NA	50.5	NA	M	M	M	M	M	M	M	M
2001-09-18	15:56	2452171.6638889	1013.4	59.0	38.0	180	11.0	NA	3	120	10	NA	45.5	NA	M	M	M	M	M	M	M	M
2001-09-18	16:56	2452171.7055556	1013.6	64.0	37.0	200	9.0	NA	3	120	10	NA	36.7	NA	M	M	M	M	M	M	M	M
2001-09-18	17:56	2452171.7472222	1013.7	67.0	36.0	210	10.0	NA	1	120	10	NA	31.7	NA	67	52	M	M	M	M	M	M
2001-09-18	18:56	2452171.7888889	1013.4	70.0	35.0	200	10.0	17.0	1	120	10	NA	27.5	NA	M	M	M	M	M	M	M	M
2001-09-18	19:56	2452171.8305556	1012.8	72.0	34.0	200	11.0	16.0	6	200	10	NA	24.7	NA	M	M	M	M	M	M	M	M
2001-09-18	20:56	2452171.8722222	1012.1	75.0	33.0	200	12.0	19.0	1	200	10	NA	21.5	NA	M	M	M	M	M	M	0.68	0.033
2001-09-18	21:56	2452171.9138889	1011.9	75.0	32.0	190	12.0	17.0	3	120	10	NA	20.6	NA	M	M	M	M	M	M	M	M
2001-09-18	22:56	2452171.9555556	1011.7	74.0	32.0	200	11.0	NA	1	200	10	NA	21.3	NA	M	M	M	M	M	M	M	M
2001-09-18	23:56	2452171.9972222	1011.4	74.0	32.0	220	13.0	NA	6	200	10	NA	21.3	NA	76	67	71.8	M	93	M	M	M
2001-09-19	00:56	2452172.0388889	1011.2	72.0	32.0	230	8.0	NA	8	200	10	NA	22.8	NA	M	M	M	M	M	M	M	M
2001-09-19	01:56	2452172.0805556	1011.0	68.0	34.0	210	7.0	NA	6	200	10	NA	28.3	NA	M	M	M	M	M	M	M	M
2001-09-19	02:56	2452172.1222222	1011.1	65.0	34.0	200	7.0	NA	6	200	10	NA	31.4	NA	M	M	M	M	M	M	M	M
2001-09-19	03:56	2452172.1638889	1010.8	62.0	35.0	190	8.0	NA	6	200	10	NA	36.3	NA	M	M	M	M	M	M	M	M
2001-09-19	04:56	2452172.2055556	1010.4	63.0	36.0	200	10.0	NA	1	120	10	NA	36.5	NA	M	M	M	M	M	M	M	M
2001-09-19	05:56	2452172.2472222	1010.1	62.0	37.0	210	10.0	NA	0	120	10	NA	39.3	NA	74	62	M	M	M	M	M	M
2001-09-19	06:56	2452172.2888889	1010.0	58.0	37.0	210	9.0	NA	1	120	10	NA	45.3	NA	M	M	M	M	M	M	M	M
2001-09-19	07:56	2452172.3305556	1009.9	53.0	37.0	170	8.0	NA	0	120	10	NA	54.4	NA	M	M	M	M	M	M	M	M
2001-09-19	08:56	2452172.3722222	1010.1	53.0	37.0	180	10.0	NA	1	120	10	NA	54.4	NA	M	M	M	M	M	M	M	M
2001-09-19	09:56	2452172.4138889	1011.1	51.0	38.0	200	13.0	NA	0	120	10	NA	60.9	NA	M	M	M	M	M	M	M	M
2001-09-19	10:56	2452172.4555556	1011.5	49.0	38.0	200	12.0	NA	0	120	10	NA	65.6	NA	M	M	M	M	M	M	M	M
2001-09-19	12:56	2452172.5388889	1012.5	47.0	39.0	200	13.0	NA	1	120	10	NA	73.5	NA	M	M	M	M	M	M	M	M
2001-09-19	13:56	2452172.5805556	1013.6	46.0	39.0	200	11.0	NA	1	120	10	NA	76.4	NA	M	M	M	M	M	M	M	M
2001-09-19	14:56	2452172.6222222	1014.4	50.0	39.0	180	8.0	NA	1	120	10	NA	65.7	NA	M	M	M	M	M	M	M	M
2001-09-19	15:56	2452172.6638889	1014.8	53.0	39.0	200	10.0	NA	3	120	10	NA	58.8	NA	M	M	M	M	M	M	M	M
2001-09-19	16:56	2452172.7055556	1015.5	57.0	38.0	210	8.0	NA	3	120	10	NA	48.9	NA	M	M	M	M	M	M	M	M
2001-09-19	17:56	2452172.7472222	1015.7	62.0	38.0	220	9.0	NA	3	120	10	NA	40.9	NA	62	46	M	M	M	M	M	M
2001-09-19	18:56	2452172.7888889	1015.8	65.0	38.0	180	9.0	19.0	3	120	10	NA	36.8	NA	M	M	M	M	M	M	M	M
2001-09-19	19:56	2452172.8305556	1015.8	68.0	37.0	220	14.0	NA	3	120	10	NA	31.9	NA	M	M	M	M	M	M	M	M
2001-09-19	20:56	2452172.8722222	1015.7	71.0	37.0	220	12.0	NA	6	200	10	NA	28.8	NA	M	M	M	M	M	M	0.33	0.026
2001-09-19	21:56	2452172.9138889	1015.8	68.0	35.0	210	7.0	NA	6	200	10	NA	29.5	NA	M	M	M	M	M	M	M	M
2001-09-19	22:56	2452172.9555556	1015.9	71.0	34.0	260	9.0	20.0	6	200	10	NA	25.6	NA	M	M	M	M	M	M	M	M
2001-09-19	23:56	2452172.9972222	1016.0	70.0	34.0	260	9.0	NA	6	200	10	NA	26.4	NA	72	62	71.4	M	98	M	M	M
2001-09-20	00:56	2452173.0388889	1016.3	67.0	34.0	240	10.0	NA	8	200	10	NA	29.3	NA	M	M	M	M	M	M	M	M
2001-09-20	01:56	2452173.0805556	1016.7	63.0	35.0	210	8.0	NA	6	200	10	NA	35.1	NA	M	M	M	M	M	M	M	M
2001-09-20	02:56	2452173.1222222	1017.0	59.0	35.0	200	8.0	NA	6	200	10	NA	40.4	NA	M	M	M	M	M	M	M	M
2001-09-20	03:56	2452173.1638889	1017.3	56.0	34.0	200	6.0	NA	6	200	10	NA	43.3	NA	M	M	M	M	M	M	M	M
2001-09-20	04:56	2452173.2055556	1017.3	52.0	33.0	220	7.0	NA	6	200	10	NA	48.1	NA	M	M	M	M	M	M	M	M
2001-09-20	05:56	2452173.2472222	1017.1	54.0	34.0	190	7.0	NA	1	120	10	NA	46.5	NA	70	52	M	M	M	M	M	M
2001-09-20	06:56	2452173.2888889	1017.5	49.0	34.0	160	5.0	NA	0	120	10	NA	56.0	NA	M	M	M	M	M	M	M	M
2001-09-20	07:56	2452173.3305556	1017.4	48.0	34.0	150	7.0	NA	0	120	10	NA	58.1	NA	M	M	M	M	M	M	M	M
2001-09-20	08:56	2452173.3722222	1017.3	48.0	34.0	140	6.0	NA	0	120	10	NA	58.1	NA	M	M	M	M	M	M	M	M
2001-09-20	09:56	2452173.4138889	1017.4	47.0	34.0	140	8.0	NA	0	120	10	NA	60.3	NA	M	M	M	M	M	M	M	M
2001-09-20	10:56	2452173.4555556	1017.2	48.0	35.0	140	9.0	NA	0	120	10	NA	60.5	NA	M	M	M	M	M	M	M	M
2001-09-20	11:56	2452173.4972222	1017.3	48.0	37.0	140	7.0	NA	0	120	10	NA	65.5	0.00	53	46	M	45.6	M	32	M	M
2001-09-20	12:56	2452173.5388889	1017.5	47.0	37.0	130	4.0	NA	6	200	10	NA	68.0	NA	M	M	M	M	M	M	M	M
2001-09-20	13:56	2452173.5805556	1017.7	48.0	37.0	80	3.0	NA	6	200	10	NA	65.5	NA	M	M	M	M	M	M	M	M
2001-09-20	14:56	2452173.6222222	1017.8	49.0	38.0	70	4.0	NA	6	200	10	NA	65.6	NA	M	M	M	M	M	M	M	M

Data file for geg.txt

2001-09-25	11:56	2452178.4972222	1009.5	55.0	40.0	40	6.0	NA	1	120	10	NA	56.8	0.00	65	52	M	44.1	M	22	M	M
2001-09-25	12:56	2452178.5388889	1008.7	55.0	37.0	40	6.0	NA	3	120	10	NA	50.5	NA	M	M	M	M	M	M	M	M
2001-09-25	13:56	2452178.5805556	1008.4	54.0	37.0	30	7.0	NA	6	200	10	NA	52.4	NA	M	M	M	M	M	M	M	M
2001-09-25	14:56	2452178.6222222	1007.4	57.0	38.0	20	9.0	NA	6	200	10	NA	48.9	NA	M	M	M	M	M	M	M	M
2001-09-25	15:56	2452178.6638889	1005.9	64.0	40.0	40	9.0	NA	3	120	10	NA	41.2	NA	M	M	M	M	M	M	M	M
2001-09-25	16:56	2452178.7055556	1004.8	68.0	41.0	40	11.0	NA	6	200	10	NA	37.3	NA	M	M	M	M	M	M	M	M
2001-09-25	17:56	2452178.7472222	1003.4	71.0	40.0	50	8.0	NA	6	200	10	NA	32.4	NA	72	53	M	M	M	M	M	M
2001-09-25	18:56	2452178.7888889	1003.1	79.0	42.0	NA	5.0	NA	6	200	10	NA	26.8	NA	M	M	M	M	M	M	M	M
2001-09-25	19:56	2452178.8305556	1005.0	73.0	36.0	190	23.0	28.0	6	200	4	NA	25.9	NA	M	M	M	M	M	M	M	M
2001-09-25	20:56	2452178.8722222	1006.7	68.0	37.0	190	15.0	NA	8	130	10	NA	31.9	NA	M	M	M	M	M	M	0.33	0.009
2001-09-25	21:56	2452178.9138889	1006.7	69.0	43.0	190	23.0	28.0	8	130	10	NA	38.9	NA	M	M	M	M	M	M	M	M
2001-09-25	22:21	2452178.9312500	NA	70.0	46.0	190	25.0	31.0	8	100	1	NA	42.2	NA	M	M	M	M	M	M	M	M
2001-09-25	22:27	2452178.9354167	NA	70.0	46.0	210	22.0	31.0	8	13	75	NA	42.2	NA	M	M	M	M	M	M	M	M
2001-09-25	22:40	2452178.9444444	NA	70.0	46.0	210	25.0	31.0	9	8	50	NA	42.2	NA	M	M	M	M	M	M	M	M
2001-09-25	22:56	2452178.9555556	1006.2	70.0	48.0	220	24.0	29.0	8	5	75	NA	45.5	NA	M	M	M	M	M	M	M	M
2001-09-25	23:29	2452178.9784722	NA	66.0	46.0	210	22.0	27.0	9	8	1	NA	48.4	NA	M	M	69.2	M	87	M	M	M
2001-09-25	23:49	2452178.9923611	NA	66.0	46.0	210	12.0	NA	8	11	2	NA	48.4	NA	M	M	69.2	M	87	M	M	M
2001-09-26	00:56	2452179.0388889	1008.9	65.0	48.0	190	10.0	NA	8	100	10	NA	54.1	NA	M	M	M	M	M	M	M	M
2001-09-26	01:56	2452179.0805556	1010.5	58.0	54.0	130	9.0	NA	8	44	10	NA	86.5	NA	M	M	M	M	M	M	M	M
2001-09-26	02:56	2452179.1222222	1010.3	57.0	54.0	90	8.0	NA	8	50	10	NA	89.7	NA	M	M	M	M	M	M	M	M
2001-09-26	04:56	2452179.2055556	1010.7	56.0	53.0	160	11.0	NA	8	50	10	NA	89.6	NA	M	M	M	M	M	M	M	M
2001-09-26	05:25	2452179.2256944	NA	55.0	54.0	170	17.0	23.0	8	25	5	NA	96.4	NA	M	M	M	M	M	M	M	M
2001-09-26	05:56	2452179.2472222	1010.9	54.0	52.0	180	17.0	NA	8	15	10	NA	92.9	NA	67	54	M	M	M	M	M	M
2001-09-26	06:56	2452179.2888889	1010.6	53.0	52.0	170	17.0	21.0	8	18	7	NA	96.4	NA	M	M	M	M	M	M	M	M
2001-09-26	07:56	2452179.3305556	1011.1	53.0	51.0	180	19.0	NA	8	10	10	NA	92.9	NA	M	M	M	M	M	M	M	M
2001-09-26	08:56	2452179.3722222	1011.8	52.0	51.0	180	18.0	25.0	8	15	10	NA	96.4	NA	M	M	M	M	M	M	M	M
2001-09-26	09:56	2452179.4138889	1012.2	52.0	50.0	180	15.0	21.0	8	15	10	NA	92.9	NA	M	M	M	M	M	M	M	M
2001-09-26	10:33	2452179.4395833	NA	52.0	50.0	170	14.0	NA	8	36	10	NA	92.9	NA	M	M	M	M	M	M	M	M
2001-09-26	10:56	2452179.4555556	1012.6	52.0	50.0	180	14.0	NA	6	40	10	NA	92.9	NA	M	M	M	M	M	M	M	M
2001-09-26	11:56	2452179.4972222	1013.0	50.0	48.0	170	14.0	NA	6	65	10	NA	92.8	0.16	54	50	M	43.8	M	25	M	M

Data Extracted:2002-12-27 15:31:23

[TOUCHET](/station_info/station_info_840.html), 1.5 MI S of
Touchet, Wa
Lat:46.0 Lng:118.6 elevation:492

Dates Range From 1989-01-01 To 2002-12-26

DATE	Hour Of the Day	Avg Wnd Vel MPH	Total Precip in.
Gregorian	PST	6.6ft	
2001-09-25	01:00	1.01	.00
2001-09-25	02:00	1.78	.00
2001-09-25	03:00	2.17	.00
2001-09-25	04:00	1.95	.00
2001-09-25	05:00	2.06	.00
2001-09-25	06:00	2.00	.00
2001-09-25	07:00	3.00	.00
2001-09-25	08:00	5.93	.00
2001-09-25	09:00	8.33	.00
2001-09-25	10:00	5.36	.00
2001-09-25	11:00	9.91	.00
2001-09-25	12:00	13.21	.00
2001-09-25	13:00	20.56	.00
2001-09-25	14:00	18.99	.00
2001-09-25	15:00	11.92	.00
2001-09-25	16:00	6.03	.00
2001-09-25	17:00	5.66	.00
2001-09-25	18:00	10.54	.06
2001-09-25	19:00	14.11	.01
2001-09-25	20:00	15.24	.00
2001-09-25	21:00	11.33	.00
2001-09-25	22:00	9.55	.00
2001-09-25	23:00	9.42	.00
2001-09-25	24:00	6.39	.00

Spokane International Airport
(Courtesy of Spokane Clean Air Pollution Control Authority)

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

SPOKANE, WA

SEPTEMBER 2001 GEG WBAN # 24157

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum of Different (See Note)	2400 LST	
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24			Water	Equip.
01													01												01		0.00		
02													02													02		0.00	
03													03													03		0.00	
04													04													04		0.00	
05													05													05		0.00	
06													06													06		0.00	
07													07													07		0.00	
08													08													08		0.00	
09													09													09		0.00	
10													10													10		0.00	
11													11													11		0.00	
12													12													12		0.00	
13													13													13		0.00	
14													14													14		0.00	
15													15													15		0.00	
16													16													16		0.00	
17													17													17		0.00	
18													18													18		0.00	
19													19													19		0.00	
20													20													20		0.00	
21													21													21		T	
22													22													22		0.00	
23													23													23		0.00	
24													24													24		0.00	
25													25													25		0.00	
26	T	T											26													26		0.16	
27													27													27		0.01	
28													28													28		0.00	
29													29													29		0.00	
30													30													30		0.00	

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.02	.03	.05	.06	.07	.08	.09	.09	.09	.09	.09	.09
Ending Date	25	25	25	25	25	25	25	25	25	25	25	25
Ending Time (Hour/Min)	2107	2112	1735	1744	1744	1803	1808	1809	1809	1809	1809	1809

Date and time are not entered for TRACE amounts.

Note: The sum of the hourly totals is given when it differs from the daily total. NWS does not edit ASOS hourly values but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

Rude, Brett

From: Ron Edgar [rjedgar@scapca.org]
Sent: Friday, December 20, 2002 4:25 PM
To: Rude, Brett
Subject: Comments on Sept 25, 2001 Dust Event

Brett,
Here is the comments I have on the September 25, 2001 dust event.

I have reviewed the data from September 25, 2001. The continuous PM10 data from the TEOM at Freya and Ferry in Spokane show that the majority of the dust came through during the 1500 to 1700 PST hours. Comparing this with National Weather Service records from Spokane International Airport west of the city show the measurable rain falling in the 1700 to 1900 PST hours time period. Once the rain started the dust cleared. The dust was pushed along ahead the precipitation by the high wind of the storm front. A review of the visibility photos taken from the roof the Spokane Regional Health Building near Downtown Spokane verifies this event. Some additional points regarding the meteorological records also show no significant rain fall for the entire month until just after the end of the dust event. This Event comes near the end of 5 months, May through September, of below normal rainfall in the area. Winds speeds on the West Plains above the Spokane Valley were higher than those measured down in the Spokane River Valley by Ecology met stations.



Ronald J Edgar
Chief of Technical Services
Spokane County Air Pollution Control Authority

1101 W College Ave., Suite 403
Spokane, WA 99201-2094

Phone: (509) 477-4727 x 111 Fax: (509) 477-6828
E-mail: rjedgar@scapca.org Web site: www.scapca.org

I was in Spokane for a meeting on September 25, 2001. The morning of the 25th was sunny and clear with few clouds. The meeting room was equipped with half windows running both the width and length of the room. From my seat, I would see changes in the weather. By noon, the sun was peeking and out, with no rain. At approximately 1:30 pm., the group traveled to a straw-bale house construction site for a tour and questions. During the tour, the wind picked up considerably and the sky grew dark. There was no rain at this time. After the tour, the group returned to the meeting site and dispersed. By 3:30 pm I was driving back to the hotel and my lights turned on automatically. The sun became completely blocked out and the landscape took on a brownish-yellowish hue.

The radio station traffic alert segment read the National Weather Service message the Spokane was in the midst of a dust storm. I returned to the hotel, and actually walked through Riverfront Park in the midst of the "dust storm." I then walked around the downtown sector and headed back to the hotel. On the way back, an intermittent, almost spitting rain started. It was about 5:40 pm when I returned to my room. At about 6:15 I left again to meet a friend for dinner. It was raining steadily by that time, making for a miserable drive. It was still lightly raining when we departed for the restaurant at about 7:00 pm. By the time we left the restaurant, the rain had completely stopped.

Melissa McEachron
Department of Ecology
Air Quality Program
P.O. Box 47600
Olympia, WA 98504
(360) 407-6860
mmce461@ecy.wa.gov

Appendix C

BACM Assessment: Benton County, Spokane County and Walla Walla County, Washington

Core4 Better soil. Cleaner Water. Greater Profits. Brighter Future.

Conservation for Agriculture's Future



Crop Residue Management

[What's Core 4 Conservation?](#)

Walla Walla County, Washington

2000

[Core 4 Conservation Partners](#)

[News](#)

[Core 4 Conservation Brochures](#)

[Conservation Tillage](#)

[Nutrient Management](#)

[Weed & Pest Management \(IPM\)](#)

[Conservation Buffers](#)

[Ag Events Calendar](#)

[CTIC Partners Newsletter](#)

[Catalog](#)

[Resource Links](#)

[Aa-Earth Partners](#)

[MAX](#)

	Total Planted Acres	Conservation Tillage			Conventional Tillage	
		No-Till	Ridge-Till	Mulch-Till	15-30% Residue	0-15% Residue
Corn (FS)	6,667	667	0	2,667	2,000	1,333
Corn (DC)	0	0	0	0	0	0
Small Grain (SpSg)	91,899	22,871	0	27,653	35,464	5,911
Small Grain (FISg)	138,189	8,147	0	54,311	47,370	28,361
Soybeans(FS)	0	0	0	0	0	0
Soybeans (DC)	0	0	0	0	0	0
Cotton	0	0	0	0	0	0
Grain Sorghum (FS)	0	0	0	0	0	0
Grain Sorghum (DC)	0	0	0	0	0	0
Forage Crops	3,000	0	xxxxxxx	0	750	2,250
Other Crops	56,797	0	0	11,538	13,408	31,851
TOTAL	296,521	31,685	0	96,169	98,992	69,706
Permanent Pasture	0	0	xxxxxxx	0	0	0
Fallow	125,589	6,279	xxxxxxx	62,795	37,677	18,838

Conservation Reserve Program (CRP) Acres
148,894

FS – Full Season	SpSg – Spring Seeded Small Grain
DC – Double Cropped	FISg – Fall Seeded Small Grain

Core4 Better soil. Cleaner Water. Greater Profits. Brighter Future.

Conservation for Agriculture's Future



Crop Residue Management

Benton County, Washington

2000

[What's Core 4 Conservation?](#)

[Core 4 Conservation Partners](#)

[News](#)

[Core 4 Conservation Brochures](#)

[Conservation Tillage](#)

[Nutrient Management](#)

[Weed & Pest Management \(IPM\)](#)

[Conservation Buffers](#)

[Ag Events Calendar](#)

[CTIC Partners Newsletter](#)

[Catalog](#)

[Resource Links](#)

[Aa-Earth Partners](#)

[MAX](#)

	Total Planted Acres	Conservation Tillage			Conventional Tillage	
		No-Till	Ridge-Till	Mulch-Till	15-30% Residue	0-15% Residue
Corn (FS)	28,000	1,988	0	2,212	18,004	5,796
Corn (DC)	0	0	0	0	0	0
Small Grain (SpSg)	25,800	500	0	0	9,500	15,800
Small Grain (FISg)	135,000	0	0	0	89,100	45,900
Soybeans(FS)	0	0	0	0	0	0
Soybeans (DC)	0	0	0	0	0	0
Cotton	0	0	0	0	0	0
Grain Sorghum (FS)	0	0	0	0	0	0
Grain Sorghum (DC)	0	0	0	0	0	0
Forage Crops	100	0	xxxxxxxx	0	750	100
Other Crops	43,200	0	0	0	7,598	35,602
TOTAL	232,100	2,488	0	2,212	124,202	103,198
Permanent Pasture	0	0	xxxxxxxx	0	0	0
Fallow	131,488	3,550	xxxxxxxx	0	67,979	59,959

Conservation Reserve Program (CRP) Acres

75,132

FS – Full Season
DC – Double Cropped

SpSg – Spring Seeded Small Grain
FISg – Fall Seeded Small Grain

Core4 Better soil. Cleaner Water. Greater Profits. Brighter Future.

Conservation for Agriculture's Future



Crop Residue Management

Spokane County, Washington

2000

[What's Core 4 Conservation?](#)

[Core 4 Conservation Partners](#)

[News](#)

[Core 4 Conservation Brochures](#)

[Conservation Tillage](#)

[Nutrient Management](#)

[Weed & Pest Management \(IPM\)](#)

[Conservation Buffers](#)

[Ag Events Calendar](#)

[CTIC Partners Newsletter](#)

[Catalog](#)

[Resource Links](#)

[Aa-Earth Partners](#)

[MAX](#)

	Total Planted Acres	Conservation Tillage			Conventional Tillage	
		No-Till	Ridge-Till	Mulch-Till	15-30% Residue	0-15% Residue
Corn (FS)	560	0	0	0	0	560
Corn (DC)	0	0	0	0	0	0
Small Grain (SpSg)	76,700	7,670	0	23,010	30,680	15,340
Small Grain (FISg)	96,800	9,680	0	24,200	48,400	14,900
Soybeans(FS)	0	0	0	0	0	0
Soybeans (DC)	0	0	0	0	0	0
Cotton	0	0	0	0	0	0
Grain Sorghum (FS)	20	0	0	0	0	20
Grain Sorghum (DC)	0	0	0	0	0	0
Forage Crops	1,000	100	xxxxxxx	500	400	0
Other Crops	66,616	0	0	6,662	26,646	33,308
TOTAL	241,696	17,450	0	54,372	106,126	63,748
Permanent Pasture	0	0	xxxxxxx	0	0	0
Fallow	23,300	1,165	xxxxxxx	2,330	15,145	4,660

Conservation Reserve Program (CRP) Acres

29,011

FS – Full Season
DC – Double Cropped

SpSg – Spring Seeded Small Grain
FISg – Fall Seeded Small Grain