

# **OFFICIAL U.S. NAVY LOG**

## **Project IMPROVE Westport, WA**

**Rawinsonde Soundings  
Station: USN-SPOL 2001  
Position: 46.91N/124.13W**

**07 January 2001 through 14 February 2001  
(All entries in Universal Coordinated Time)**

Log initiated by Shaun M. Kelly, AG1, USNR

Log maintained by AG1 Shaun M. Kelly,  
AG1 Lee Ann Smart,  
AG2 Thomas Dann,

**07 JAN 2001**

0030: AG1 Kelly arrives in Westport with signed MWS equipment and digital camera from MET WI. Checks into hotel and settles.

**08 JAN 2001**

0115: Checks in with AG3 Will Downey at S-POL site for start of turnover. Site is located at the South Jetty, Westhaven State Park, Westport, Washington. On S-POL radar research site are University of Washington radar scientists, headed by scientist John Locatelli, NCAR Radar Team (National Center for Atmospheric Research, Boulder, CO), maintenance/handling/security personnel, and scientific visitors. Dr. Locatelli maintains constant telephone and radio contact between Mark Stoelinga, Project IMPROVE Coordinator at UW, and the Convair-580 Flight Crew when aircraft is deployed during IOP.

0300: AG1 Kelly stands by for 03 UTC launch. Continues turnover approx. 1400.

1800: AG1 Kelly properly relieves AG3 Downey as IMPROVE rawinsonde operator. Trailer combinations, laptop computer, MRS MW-12, peripheral equipment, contact information, and keys turned over.

2358: Continuing Launches for IOP #2 (Intensive Observation Period).

Sonde: OMEGA Balloon: 100-gram

Surface Data:

Pressure (hPa): 1010.8 Temp (c): 9.6 RH(%): 87 DDDFF: 250/08

Cloud Group: N/A

Sounding ends after 80min 38sec at 78.2mb (17,727 MSL).

0307: Launches Sonde: OMEGA Balloon: 100-gram.

Error message at start-up; okay afterwards.

Surface Data:

Pressure (hPa): 1011.8 Temp (c): 9.1 RH(%): 92 DDDFF: 220/14

0425: No info returned from MRS to HyperTerminal. Runs a check at both points:

LAPTOP: States free disk space "critically low" and would be "unable to achieve acceptable performance" unless some files are cleared. Hard drive fragmented at 2%. Initiates defragmentation function.

MRS: Checks run okay.

0510: Defragmentation of laptop hard drive complete. Runs Scan Disk function. All okay now.

- 0515: Spoke with Mark (Project IMPROVE coordinator, University of Washington); launches not required until 1800 UTC 09 JAN. Will continue launches at that time.
- 1835: Trailer USN-SPOL 2001 cleaned and secured. IMPROVE Manual in possession of AG1 Kelly for review.

**09 JAN 2001**

- 1620: USN-SPOL opened and equipment inspected.
- 1735: Prepares for launch 1 of IOP #3. Sonde: OMEGA Balloon: 100-gram.
- 1752: Launch of sounding. HyperTerminal has somehow reset itself, thus connection/legible language not received. Phoned AG3 Downey for consultation. Returned to USN-SPOL and uncovered incorrect Properties settings, then input correct parameters (refer to AG3 Downey's "Launching Balloons" document on the laptop's Desktop). Reset the connection following corrections. Both MRS and the HyperTerminal reconnect with sounding at 465.1 mb (5989 m).
- 1822: S-POL personnel suggest another immediate launch. AG1 Kelly advises to wait until current sounding is complete, to see if we receive the post-sounding coded values.
- 1910: MRS sends post-termination data in full; written, saved and delivered to S-POL.

\*Current Inventory:

18	OMEGA sondes
20	100-gram balloons
7	200-gram balloons
3	GPS sondes
4	Helium tanks

- 1945: Synoptic Situation: Upper level cold – passage expected 2045 UTC. John recommends early launch (pre-2100 UTC) to advance incoming front.
- 2015: Launch 2 of IOP #3. Sonde: OMEGA Balloon: 100-gram.  
Surface Data:  
Pressure (hPa): 998.4 Temp (c): 7.2 RH(%): 76 DDDFF: 140/08  
Cloud group: 8/5//  
All checks okay – good sounding.
- 2040: AG1 Kelly supplies S-POL personnel with requested RH profile, indicating extreme moisture aloft:

<u>Height/Pressure</u>	to	<u>Height/Pressure</u>	<u>Values</u>
SFC			76%
73m/991.2		417/950.7	Steady to 38%
417/950.7		1040/880.7	≤ 40%
1103/873.9		1576/823.8	Steady to 45%
1615/819.7		2034/777.6	66 ---- 80%
2034/777.6		4072/598.9	≥ 80%
4217/587.6		11116/214.3	Steady to 02%

2035: Executes surface observations while tracking the sounding.

CIG drops to 008. OVC AC  
BKN SC and RW-

Surface Data:

Pressure (hPa): 998.1 Temp (c): 7.4 RH(%): 86 DDDFF: 12010G20

2122: Another observation:

2 CUFRA 005 5 SC 008 1 AC/AS 080 997.6 mb 7.2 C RW moderate  
Winds 10014G24

2138: Sounding bursts at 73.6 mb (18026 msl).

2150: Phones MET WI regarding inventory and sondes for planning purposes. Sondes and balloons (under Navy supply) located in the USN-SPOL trailer are all we have for this project. Discussion with Mark regarding arrival of secondary receiver (Vaisala DigiCORA MW-11), currently located in Pacific Beach, will improve inventory situation. Project IMPROVE provides the LORAN sondes and more 200-gram balloons.

2210: Synoptic Situation:

System aloft passage occurred at approx. 2100 UTC. Winds expected SW equal to or greater than 16 kts. Surface front behind approx. 60 nm. S-POL personnel request immediate launch.

2225: Launches sounding 3 of IOP #3. Sonde: OMEGA Balloon: 100-gram.

Surface Data:

Pressure (hPa): 996.1 Temp (c): 7.6 RH(%): 81 DDDFF: 190/12G24

Cloud Group: 8/53/

CIG increased to approx. 025. RW very light.

2238: Message up on MRS: "From PtuEquCo: DataRout msg queue full!" AG1 Kelly immediately notifies MET-WI for assistance.

\*\*\*Since HyperTerminal queue is not purged after power-down or closure, each sounding is saved and added onto the previous data until the queue fills. It is imperative to CREATE a new HyperTerminal connection after every 2 or 3 soundings. Then the "old" connection should be deleted to save on disk space.

2325: Immediately launches another sounding (#4). At approx. 40 ft above harbor waters, in high wind, sonde separates from plastic clasp and falls to sea. Balloon bursts immediately following. Postpone new launch until synoptic hour.

2357: New Launch #5. Sonde: OMEGA Balloon: 100-gram.

Surface Data:

Pressure (hPa): 996.0 Temp (c): 7.2 RH(%): 86 DDDFF: 180/16G28

Cloud Group: 8/53/ Precip: RW moderate.

### **10 JAN 2001**

0200: Launches sounding 6 of IOP #3. Sonde: OMEGA Balloon: 100-gram.

Surface Data:

Pressure (hPa): 996.8 Temp (c): 6.5 RH(%): 95 DDDFF: 190/22G30

Cloud Group: 8/53/ Gusty winds with moderate rain showers.

0244: Sounding terminates at 189.2 mb. Arranged all post-sounding data. IOP #3 concluded. Stand-down authorized by UW.

0330: USN-SPOL cleaned and secured for stand-down.

### **11 JAN 2001**

OPERATIONAL STAND-DOWN. Used this period to prepare reports and clean up launching trailer/environs. Contacted Mark and Kevin (Pacific Beach) regarding arrival of the DigiCora receiver.

### **12 JAN 2001**

2130: Arrival of DigiCORA MW-11 from Pacific Beach. Afternoon/evening spent installing/placing LORAN antenna and MW-11. Created another HyperTerminal (Desktop: "digicora") configured for interface with the MW-11. (Refer to Microsoft Word document "Launching Balloons" Section E.) Accompanying the MW-11 are manuals. Used most of the day to reconfigure MW-11 and contend with setbacks regarding LORAN information, et al. Antenna placed atop the

Navy trailer and secured with cable ties. Interface equipment located MW-11; simplified instructions, thus far, located herein and Word document.

**13 JAN 2001**

0115: MW-11 Test launch.

Sonde: RS-80L Balloon: 200-gram.

Surface Data:

Pressure (hPa): 1016.5 Temp (c): 7.4 RH(%): 78 DDDFF: NA

Cloud Group: No Input option.

Input data is slightly different from the MW-12, but not insurmountable. The difficulty is approached when contending with SYSGEN and other configuration functions. For example, a sounding number must be entered each instance.

0150: No information has been received; problem traced to interface once again. Jump box from NCAR personnel is utilized, and what is needed for successful communication is a 25 (male) – 9 (female) cable connected to MW-11 P-2 slot and laptop, along with a non-modem adapter, if needed. More stand-down time spent attempting to completely set up the MW-11. Another problem is that MW-11 tracks descent of the sonde without terminating sounding. Upon manual termination, options to receive printed data not available or programmed.

1210: Launch Sounding 1 of IOP #4. Sonde: OMEGA Balloon: 100-gram.

Surface Data:

Pressure (hPa): 1016.2 Temp (c): 4.5 RH(%): 99 DDDFF: 190/06

Cloud Group: 8/5// RW-

1509: Launch Sounding 2. Sonde: GPS (RS-80. 15G) Balloon: 200-gram.

Surface Data:

Pressure (hPa): 1015.6 Temp (c): 4.2 RH(%): 98 DDDFF: 210/08

Cloud Group: NA RW-

1615: Receives wind profile. Balloon burst at 51.5 mb (20,232 msl). Post-sounding: Plots a rough sketch Skew-T with winds (dddff) profile. Purpose is to provide an immediate graphic representation. Scientists expected inversion, but none are evident.

1802: Launch Sounding 3. Sonde: OMEGA. Balloon: 100-gram.

Surface Data:

Pressure (hPa): 1015.5 Temp (c): 5.2 RH(%): 94 DDDFF: 230/08

Cloud Group: 8/52/

1955: Terminates sounding at 110 mb. Plotted Skew-T. No inversion, but extreme moisture aloft and a secondary tropopause are discovered.

2115: Launch Sounding 4 of IOP #4. Sonde: GPS (RS-80. 15G) Balloon: 200-gram.  
Surface Data:  
Pressure (hPa): 1017.2 Temp (c): 6.2 RH(%): 88 DDDFF: 130/10  
Cloud Group: 8/532.

Sounding manually terminated at 128.8 mb (14,403 msl). IOP #4 concludes.  
Post-sounding data processed.

2245: USN-SPOL 2001 secured for stand-down. Maintained prompt contact with  
IMPROVE Status Line: Perimeter to site inspected and locked by AG1 Kelly.

#### **14 JAN 2001**

OPERATIONAL STAND-DOWN. Used this period to prepare reports, continue study of  
the MW-11, and clean up launching trailer/environs.

\*\*\* ALL SOUNDINGS ARE SAVED TO FLOPPY AND STORED IN LAUNCH  
TRAILER. ALL SOUNDINGS ARE ALSO SAVED TO LAPTOP HARD DRIVE  
UNDER ag1smk.

#### **15 JAN 2001**

OPERATIONAL STAND-DOWN. Used this period to configure and prepare Official  
U.S.N. Log for project. Maintained steady contact with IMPROVE Status Line.

#### **16 JAN 2001**

OPERATIONAL STAND-DOWN. Used this period to configure and prepare Official  
U.S.N. Log for project. Maintained steady contact with IMPROVE Status Line.

2315: AG1 Lee Ann Smart arrives in Westport and contacts AG1 Kelly.

#### **17 JAN 2001**

OPERATIONAL STAND-DOWN. Used this period to configure and prepare Official  
U.S.N. Log for project. Maintained steady contact with IMPROVE Status Line.

0035: AG1 Kelly conducts overview of Project IMPROVE with AG1 Smart on S-POL  
radar site. Training to continue later this day.

1800: Training of AG1 Smart begins on-site. Since this day is an operational stand-  
down, we will not use actual sondes for training, but instead focus on balloon

inflation, HyperTerminal connections/communications, procedures, and MRS training.

**18 JAN 2001**

OPERATIONAL STAND-DOWN. Used this period to continue MW-11 familiarity and to prepare Official U.S.N. Log for project and training relief operator. Maintained steady contact with IMPROVE Status Line. AG1 Kelly initiated procedure, through NMORA 2089 and MET, NASWI, to extend orders for contributory support and training of relief.

0020: Secures USN-SPOL2001.

1400: Opens Site for preparation of IOP #5. Notified approval of on-site extension for AG1 Kelly.

1500: Launch Sounding 1 of IOP #5. Sonde: OMEGA (RS-80.15N) Bln: 100-gram.

Surface Data:

Pressure (hPa): 1022.0 Temp (c): 6.8 RH(%): 95 DDDFF: 260/06

Cloud Group: 8/52/.

Burst at 73.3 mb (18,133 msl). Post-sounding data processed, and sounding graphed for S-POL crew.

1803: Launch Sounding 2 of IOP #5. Sonde: OMEGA (RS-80.15N) Bln: 100-gram.

Surface Data:

Pressure (hPa): 1023.3 Temp (c): 6.9 RH(%): 94 DDDFF: 100/08

Cloud Group: 8/62/.

1835: Burst at 368.2 mb (7,900 msl). Post-sounding data processed, and 3<sup>rd</sup> sounding recommended

1902: Launch Sounding 3 of IOP #5. Sonde: OMEGA (RS-80.15N) Bln: 100-gram.

Surface Data:

Pressure (hPa): 1023.3 Temp (c): 8.0 RH(%): 88 DDDFF: 260/06

Cloud Group: 8/52/.

1940: Burst at 300.3 mb (9,304 msl). Operators suspect ML159-A 100g balloons to be too old for launches. Recommend under inflation next launch.

2100: Launch Sounding 4 of IOP #5. Sonde: LORAN (RS-80.15LN) Bln: 200-gram.

LORAN sonde used to test compatibility with MW-12 MRS. Sounding successful except for absence of upper level wind data.

Surface Data:

Pressure (hPa): 1023.0 Temp (c): 7.9 RH(%): 79 DDDFF: 170/04

Cloud Group: 8/52/.



2247: Burst at 74.3 mb (18,003 msl). Post-sounding data processed, and sounding graphed for S-POL crew.

### **19 JAN 2001**

0228: Launch Sounding 5 of IOP #5. Sonde: LORAN (RS-80.15LN) Bln: 200-gram.  
Surface Data:

Pressure (hPa): 1021.0 Temp (c): 7.8 RH(%): 100 DDDFF: 190/10  
Cloud Group: 8/62/. Inventory completed.

0330: Sounding manually terminated at 396.4 mb (7,270 msl). Post-sounding data processed. IOP #5 completed; stand-down.

0403: Secured USN-SPOL2001.

### **20 JAN 2001**

1200: Opens USN-SPOL2001. Preparations for IOP #6. AG1 Kelly slowly turns over launch responsibilities to AG1 Smart. Confidence in her ability: high. AG1 Kelly continues to configure MW-11 and establish workable interface between laptop and receiver.

1239: Launch Sounding 1 of IOP #6. Sonde: OMEGA Bln: 100-gram.  
Surface Data:

Pressure (hPa): 1017.4 Temp (c): 6.9 RH(%): 85 DDDFF: 080/04  
Cloud Group: 8/251.

Delays due to changing of helium tank and faulty balloons. Two 100-gram balloons are found to have extensive mold damage and are discarded.

1456: Launch Sounding 2 of IOP #6. Sonde: OMEGA Bln: 100-gram.  
Surface Data:

Pressure (hPa): 1016.9 Temp (c): 7.4 RH(%): 82 DDDFF: 080/10  
Cloud Group: 8/252.

1810: Launch Sounding 3 of IOP #6. Sonde: OMEGA Bln: 100-gram.  
Surface Data:

Pressure (hPa): 1017.3 Temp (c): 8.4 RH(%): 77 DDDFF: 100/10  
Cloud Group: 8/052.

Sonde detaches from balloon.

1840: Launch Sounding 4 of IOP #6. Sonde: OMEGA Bln: 100-gram.  
Surface Data: Same as 1810 sounding.

Sounding bursts at 368mb; this is the final sounding in which the "bad" 100-gram balloons are utilized. Recommend using a 200-gram for the 0000Z launch.

1915: Runs another operator test on the MW-11. System faulty.

**21 JAN 2001**

0005: Launch Sounding 5 of IOP #6. Sonde: OMEGA Bln: 200-gram.

Surface Data:

Pressure (hPa): 1018.0 Temp (c): 9.3 RH(%): 92 DDDFF: 200/04  
Cloud Group: 8/525.

0015: Runs another test on the MW-11. Start-up continues to detect system faults, but with option to continue. Preparing test sonde RS-80/15 LH LORAN, with 100-gram vehicle. But with HyperTerminal in use by MW-12, monitoring of MW-11 must be done by VDU only.

0024: Upon connection of battery to LORAN sonde, MW-12 displays confused signal, then tunes into LORAN frequency. Immediately disconnect of battery; will stand by until completion of OMEGA sounding.

0201: Burst at 34.7 mb (22,826msl). Securing of IOP #6.  
Chief scientist stands by for inventory of sounding equipment.  
Decision made to conserve sondes and exclusively utilize MW-12 for all subsequent soundings.

0235: Inventory is as follows:

OMEGA rawinsondes:	3
GPS rawinsondes:	1
RS-80/15 sondes:	36
200-gram balloons(USN):	4
200-gram balloons(UW):	35
100-gram balloons(USN):	3

0250: USN-SPOL2001 secured until preparations for IOP #7.

1730: AG1 Kelly opens USN-SPOL2001 to prepare for turnover. USN Log maintained/updated; disks/data situated; equipment and trailer inspected; contact information prepared.

As per John Locatelli, MW-11 will not be in use for the remainder of Project IMPROVE Phase One. Recommend power-down and disconnection until disassembly and pack-up can occur.

2000: Final training confirmation for AG1 Smart.

2130: AG1 Kelly conducts turnover of USN-SPOL2001 to AG1 Smart.

22 JAN 2001

OPERATIONAL STAND-DOWN.

0000: AG1 Shaun M. Kelly properly relieved by AG1 Lee Ann Smart. Launch equipment turned over, in addition to USN and UW property.

Laptop computer for interface; MWS; Digital Camera; Balloons and sondes; Floppy disks; Helium tanks; Tool kits; MRS (MW-12); DigiCORA (MW-11) with manuals; Antenna equipment; Keys and combinations.

NOTE: THE MWS AND DIGITAL CAMERA MUST BE RETURNED PROMPTLY TO MET WHIDBEY ISLAND UPON COMPLETION OF PROJECT IMPROVE. POC: EITHER AGC POTTS OR LTJG CONWAY. PHONE: (360) 257-0384.

1530: AG1 Kelly departs Westport for NAS Whidbey Island. Will debrief MET WI crew, then check out from A.T. Log turned over to AG1 Smart for maintenance. **AG1 Kelly returned the digital camera as noted on the weather kit log sheet.**

OPERATIONAL STAND-DOWN. Used this period to configure and prepare official U.S.N Log for project. Maintained steady contact with IMPROVE Status Line.

23 JAN 2001

1700Z USN S-POL opened and equipment inspected.

1715Z Open Site for preparation of IOP #7. A rain band was tracking through the operational area.

1757Z: Launch Sounding 1 of IOP #7. Sonde: OMEGA Bln: 100-gram.

Surface Data:

Pressure (hPa): 1012.8 Temp (c): 8.4 RH(%): 77 DDDFF: 100/05

Cloud Group: 8/052.

1825Z: Sounding terminated, due to balloon burst? There was a bad signal, and the sounding was cancelled.

1855Z: Launch Sounding 2 of IOP #7. Sonde: OMEGA Balloon: 100-gram.

Surface Data:

Pressure (hPa): 1012.8 Temp (c): 9.0 RH(%): 74 DDDFF:

100/05

Cloud Group: 8/052

Had problems launching second sounding, the MRS was still picking-up the signal from the first launch. Tried turning off machines, rebooted, tried trouble-shooting. Nothing

worked. Contacted Whidbey Is for assistance. Awaited a call back. Phone lines were not working (contacted at the hotel later on). The balloon was NOT released.

2051Z Re-Launch of Sounding 2 of IOP #7. Sonde : OMEGA Balloon 100-gram.

Surface Data:

Pressure (hPa): 1012.0      Temp (c): 9.6    RH(%): 72    DDDFF:

100/08

Cloud Group: 8/052

Sounding was good! Balloon burst at 174.8 mb, 12,533 (msl).

2330Z Secured Site for lunch/dinner.

0030Z Opened Site, continuation of IOP #7.

0115Z: Launch Sounding 3 of IOP #7. Sonde : OMEGA Balloon 100-gram.

Surface Data:

Pressure (hPa): 1010.6      Temp ( c): 8.6    RH (%) : 83    DDDFF:

100/05

Cloud Group: 8/526

0122Z: Had to check signal, worked on the machine, signal came in strong. Prepared to launch. Received the RELEASE cue on the MRS. Launched balloon.

Sounding was good! Balloon burst at 69.9 mb, 18,409 (msl).

Reviewed synoptic situation with Dr. Locatelli the frontal movement has slowed and weakened. The researchers were looking for a clear surface frontal passage with a wind shift on the model run. Reviewing the models and determined that launching another balloon would not be worth it.

0500Z: Secured IOP #7.

### **24 JAN 2001**

OPERATIONAL STAND-DOWN. Used this time to configure and prepare Official U.S.N. Log for project. Maintained steady contact with IMPROVE Status Line.

### **25 JAN 2001**

1800Z AG2 Thomas Dann arrived to Westport. A tech arrived on site to work on the DigiCORA machine. We tried to launch a LORAN-C balloon, but the machine did not seem to pick-up the balloon signal correctly. So, talking with the researchers the DigiCORA machine will not be used. The LORAN-C sonde will work with the MRS, as tested before. As the trial was being conducted AG2 Dann prepared and launched the balloon under the MRS machine. It was a good launch. The sounding was manually terminated for further training. Reviewed procedures : balloon launching, gas tank handling, safety issues around the site and inside the trailer, reviewed the set-up of the

hyperterminal, also the copying of data onto the hard drive and disk, and answered any questions he had concerning the operation. AG1 Smart secured the spaces and handed over the keys, the weather kit and all else to AG2 Dann. Properly relieved by AG2 Dann.

0100Z Secured for the day.

**26 JAN 2001**

0700- AG2 Thomas Dann assumes the watch.

OPERATIONAL STAND-DOWN. Used this period to configure and prepare operations equipment, also to study the procedures of operation. Maintained steady contact with IMPROVE Status Line.

**27 JAN 2001**

OPERATIONAL STAND-DOWN. Maintained steady contact with IMPROVE Status Line.

**28 JAN 2001**

0600- Operations for project up and at the ready.

0615- Instructed to launch Rawinsonde's up every 3 hours, starting at 1500Z (0700W) to 29JAN01 0900Z (0100W)

0659- 1500Z Launch Sounding 1 of IOP #8. Sonde: OMEGA Bln: 200-gram.

Surface Data:

Pressure (hPa): 1013.4 Temp (c): 4.3 RH(%): 87 DDDFF: 120/03

Cloud Group: 8/052.

0755- Successful launch, all data in.

0945- 1800Z Launch is cancelled by Dr. Locatelli, due to unsignifigagent weather.

1305- 2100Z Launch Sounding 2 of IOP #8. Sonde: OMEGA Bln: 200-gram.

Surface Data:

Pressure (hPa): 1010.0 Temp (c): 7.8 RH(%): 72 DDDFF: 090/08

Cloud Group: 8/037.

1430- Successful launch, all data in.

1600- 29/0000Z Launch Sounding 3 of IOP #8. Sonde: OMEGA Bln: 200-gram.

Surface Data:

Pressure (hPa): 1008.2 Temp (c): 7.4 RH(%): 78 DDDFF: 080/07

Cloud Group: 8/052.

1715- Successful launch, all data in.

1900- 29/0300Z Launch Sounding 4 of IOP #8. Sonde: OMEGA Bln: 200-gram.

Surface Data:

Pressure (hPa): 1005.4 Temp (c): 6.9 RH(%): 83 DDDFF: 110/04  
Cloud Group: 8/052.  
2000- Successful launch, all data in.

2300- 29/0700Z Launch Sounding 5 of IOP #8. Sonde: OMEGA Bln: 200-gram.  
Surface Data:

Pressure (hPa): 100.2 Temp (c): 5.4 RH(%): 90 DDDFF: 120/12  
Cloud Group: 8/052.  
0030- Successful launch, all data in.

0500Z- Secured IOP #8.

### **29 JAN 2001**

OPERATIONAL STAND-DOWN. Maintained steady contact with IMPROVE Status Line. Field day. Ops shed is secured.

### **30 JAN 2001**

OPERATIONAL STAND-DOWN. Maintained steady contact with IMPROVE Status Line.

1100- Received 6 more helium tanks from Mark. Positioned tanks in Operations shed. Took an inventory.

### **31 JAN 2001**

OPERATIONAL STAND-DOWN. Maintained steady contact with IMPROVE Status Line.

0400- Traveled to NAS Whidbey island to go to PSD/NAR.  
1700- Returned.

### **01 FEB 2001**

0800- Inspection of operational floor/equipment.

1400- Prepared for 02/0000Z launch.

1605- 02/0000Z Launch Sounding 1 of IOP #9. Sonde: OMEGA Bln: 200-gram.  
Surface Data:

Pressure (hPa): 1018.1 Temp (c): 12.4 RH(%): 58 DDDFF: 140/05  
Cloud Group: 8/042.  
1715- Successful launch, all data in.

1800- 0300Z Launch is cancelled by Dr. Locatelli, due to unsignifigant weather.

2100- 0600Z Launch Sounding 2 of IOP #9. Sonde: OMEGA Bln: 200-gram.

Surface Data:

Pressure (hPa): 1016.7 Temp (c): 08.9 RH(%): 89 DDDFF: 140/19

Cloud Group: 8/026.

2230- Successful launch, all data in.

0200- 1000Z Launch Sounding 3 of IOP #9. Sonde: OMEGA Bln: 200-gram.

Surface Data:

Pressure (hPa): 1017.0 Temp (c): 09.0 RH(%): 85 DDDFF: 150/14

Cloud Group: 8/026.

0400- Successful launch, all data in.

### **02 FEB 2001**

OPERATIONAL STAND-DOWN. Maintained steady contact with IMPROVE Status Line. Used this time to configure and prepare Official U.S.N. Log for project.

### **03 FEB 2001**

OPERATIONAL STAND-DOWN. Maintained steady contact with IMPROVE Status Line.

1300-AG2 Schmid arrives at S-POL, turnover duties to him.

1430- Properly relieved by AG2 Schmid.

### **04 FEB 2001**

OPERATIONAL STAND-DOWN. Maintained steady contact with IMPROVE Status Line.

### **05 FEB 2001**

OPERATIONAL STAND-DOWN. Maintained steady contact with IMPROVE Status Line.

### **06 FEB 2001**

OPERATIONAL STAND-DOWN. Maintained steady contact with IMPROVE Status Line.

### **07 FEB 2001**

OPERATIONAL STAND-DOWN. Maintained steady contact with IMPROVE Status Line.

### **08 FEB 2001**

0300- 1200Z Launch Sounding 1 of IOP #9. Sonde: OMEGA Bln: 200-gram.

Surface Data:

Pressure (hPa): 1017.6 Temp (c): 5.9 RH(%): 100 DDDFF: 180/05  
Cloud Group: 8/5//.  
0530- Successful launch, all data in.

0600- 1500Z Launch Sounding 2 of IOP #9. Sonde: OMEGA Bln: 200-gram.  
Surface Data:  
Pressure (hPa): 1015.0 Temp (c): 5.0 RH(%): 100 DDDFF: 180/09  
Cloud Group: 8/5//.  
0800- Successful launch, all data in.

1000- 1800Z Launch Sounding 3 of IOP #9. Sonde: OMEGA Bln: 200-gram.  
Surface Data:  
Pressure (hPa): 1014.9 Temp (c): 5.1 RH(%): 100 DDDFF: 180/09  
Cloud Group: 8/53/.  
1200- Successful launch, all data in.

1300- 2100Z Launch Sounding 4 of IOP #9. Sonde: OMEGA Bln: 200-gram.  
Surface Data:  
Pressure (hPa): 1013.5 Temp (c): 5.9 RH(%): 88 DDDFF: 160/08  
Cloud Group: 8/53/.  
1500- Successful launch, all data in.

**09 FEB 2001**  
**10 FEB 2001**  
**11 FEB 2001**  
**12 FEB 2001**  
**13 FEB 2001**  
**14 FEB 2001**