

Flt ID: H011215	From: KPAE	To: KPAE
Flt No.: 02-17	Blk In: 0406Z	ATA: 0402Z
ETD: 2200Z	Blk Out: 2148Z	ATD: 2159Z
ETE:	Blk Time: 6:18 (6.3)	Flt Time: 6:03 (6.1)
Sponsor Org: OAR	Program: IMPROVE 2	Purpose: FLT#6

AOC Personnel

AC: TAGGART ✓	Sys Eng: ROLES ✓
CP: TENNESEN / TEBEST ✓	Data Sys: McMILLAN
Nav: ADLER ✓	Radar:
FE: BAST ✓	GPS/BT:
Avionics: ROGERS ✓	Cld Phys:
FD: DAMIANO ✓	

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
BOND, N ✓	PI	UW/PMEL
GRIMIT, E ✓	RADAR	UW

Proposed/Actual Mission/Remarks (Recco, Fixes, Storm, PENET, NHOP #)

RA154 not working at all for entire flt Did missed approach at BEND 0029Z down to 6K
Bal DW1 2215Z
DW3 2217Z
DW2 2257Z
0001Z
0211Z DW1 flt

1006.4

1002.7

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center

AOCWF2

Flt ID: H011215 Time Off: 2159Z Time On: 0402Z

	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	<u>986.42</u>	<u>29.72</u>	<u>981.3</u>	<u>29.63</u>

	Number	Data Disposition/Date/Quality
Slow/Fast Flt Lvl Tapes	<u>2</u>	
Radar Tapes	<u>1</u>	
Cloud Physics Tapes	<u>1</u>	
Video Tapes	<u>1</u>	
AXBT		
AXCP		
AXCTD		
Dropsondes		

Video					Remarks
	Forward	Left Side	Right Side	Down	
Time On					
Time Off					
Rate					

Remarks

130/1520 RA-45m
29.61
29.63
5
4

IMPROVE II

Flight #6 011215H

<u>Sensor or system</u>	<u>Number or Name</u>
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	1 (Gen. Eastern)
Altitude (for vertical wind)	Pressure Alt.
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2013.CON

Notes:

There were no time/data gaps.

The General Eastern dewpoint probe was balanced from 2213Z - 2216Z. The spike generated by this action was removed and patched over using DW3, the Buck Research dewpoint probe, as a reference.

There were numerous instances where the General Eastern dewpoint probe, DW1, was measuring too warm compared to ambient temperature. The following modifications to the data were done to minimize this occurrence. For the following time frame, DW1 was modified with respect to DW3, the Buck Research dewpoint probe, using statistical analysis: 2241Z - 2244Z, 2359Z - 0002Z, 0007Z - 0009Z, 0018Z - 0023Z, 0037Z - 0040Z, 0210Z - 0212Z, 0240Z - 0243Z and 0248Z - 0250Z.

There were other instances of these phenomena occurring where it was decided that no modification of the data could be done.

The Johnson-Williams Liquid Water probe appeared to be iced-up from 0138Z - 0155Z.

All other instruments worked optimally during the flight.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	986.3mb	981.5mb
Corrected tower pressure	984.4mb	980.7mb

The aircraft INE positions were renavigated with respect to GPS.

SPECIAL NOTE!!! Locations 80, 81 and 82 of record five on the standard tape contain vertical ground, vertical air and vertical speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm.
It is recommended that these values be used for vertical wind analysis.

Flight Director: A. Barry Damiano, (813) 828-3310 ext. 3073

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _s	Press. AL	Geo. AL	Slc Press.	Press. Slc	Dyn. Press	Remarks
221800	4706	12309	202	212	276	55	-14.4	-21.2	4609	4504	999.6	569.1	69.3	BTN CLD
223400	4553	12302	175	185	276	48	-11.7	-33.3	4584	4083	953.1	570.9	82.5	BTN THN CLD
224557	4501	12302	177	188	264	44	2.4	2.6	1849	1773	1003.3	810.0	79.2	PT. A BTN CLD
225700	4419	12302	179	189	270	39	3.2	3.4	1828	1704	997.6	812.2	73.8	IN CLD
230505	4348	12302	179	188	262	38	3.9	5.1	1841	1627	988.1	811.3	77.2	PT. F IN CLD
231003	4346	12236	358	349	277	37	1.5	1.7	2441	1600	918.7	752.6	69.0	PT. G IN CLD
231900	4422	12234	1	353	280	33	1.1	1.0	2439	1921	952.9	752.6	80.2	IN CLD
232810	4458	12234	359	349	268	41	0.3	-1.4	2439	2058	969.0	751.8	76.5	PT. B ^{CLR} BTN CLD
233230	4501	12208	94	96	275	46	-5.3	-4.7	3356	2178	873.0	670.2	71.0	PT. C ^{PW} IN CLD
234200	4423	12205	180	190	276	44	-5.3	-5.5	3353	1733	839.5	670.1	73.1	IN THN CLD
235025	4349	12205	180	190	280	39	-4.9	-5.4	3351	1745	828.6	670.4	67.6	PT. H ^{BTN} CLD
235450	4346	12140	89	87	283	48	-8.5	-14.6	3980	2682	864.6	618.2	66.7	PT. I ^{THN} IN CLD
000400	4422	12137	359	350	282	41	-7.7	-31.0	3979	2959	896.6	617.9	67.3	BTN CLD CLR
001330	4501	12137	2	353	273	40	-8.9	-12.0	3982	2629	850.0	618.1	72.4	PT. D CLR
003715	4418	12131	302	299	280	41	-11.5	-34.3	at 15K					PT. K CLR
005215	4347	12232	246	251	276	29	0.3	1.5	2462	1985	952.1	750.4	79.7	PT. G RW-
010120	4422	12234	0	353	265	34	0.0	0.6	2461	1977	955.4	750.4	77.9	RW-
011017	4459	12234	1	353	258	41	-1.4	-2.2	2462	2051	962.2	750.4	72.7	PT. B RW-
011435	4501	12208	91	95	259	49	-5.8	-5.9	2383	2125	875.6	667.8	74.2	PT. C —
012500	4421	12205	179	192	274	49	-5.5	-9.2	3378	2023	858.2	668.3	66.5	—
013359	4346	12205	180	192	271	42	-4.6	-4.2	3379	1774	820.2	668.3	71.6	PT. H —
015455	4422	12337	294	290	270	51	-13.2	-41.2	4882	4356	924.9	549.3	71.9	PT. P
020100	4424	12306	88	89	269	49	-13.3	-38.0	4882	4789	994.0	548.7	75.2	—
020845	4425	12206	89	89	270	49	-15.3	-34.4	4887	3668	887.4	548.7	78.5	PT. N
022300	4424	12308	270	271	268	48	-10.0	-36.5	4412	4336	997.7	584.7	82.3	—
022658	4424	12329	272	272	267	48	-8.7	-35.8	4279	3814	961.7	593.0	79.7	PT. P —
024000	4425	12207	90	93	254	43	-11.6	-26.8	4258	3227	892.5	596.0	73.4	—
024	4425	121												PT. N
030540	4424	12251	272	270	255	45	0.7	1.9	2133	1792	977.8	781.0	75.9	PT. M S-POL

5 02512
4 4000001301020 E PT
4 AN-
BL

12144

14-512

don't 10K lower

NOAA • AOC • SED Flight Performance Log

Aircraft : N42RF

Project : IMPROVE 01

Mission : ImproveSED Crew: McMillan, Roles, RogersFlight ID : 011215HPre-Flight: 1430

Take-Off: _____

Landing: _____

System			Pre-Flight	In-Flight	Post-Flight		
NAV	INE #1	Aligned to :	STM				
	INE #2	Aligned to :	STM				
	GPS		mon		Lat	Long	GS
RADAR	Nose						
	L/F	R/T SN :			Mod Switch Off ? <u>mon</u>		
	Tail	R&T SN : /			Mod Switch Off ? <u>mon</u>		
	MARS Data System	<u>DAT?</u>		Start: <u>2204</u> Stop: <u>0352</u>	# DATs :		
PMS	2DG-C	Ch 1/64: /					
	2DG-P	Ch 1/64: /					
	FSSP	Ref VDC:	STM				
	SEA Data System	<u>?</u>	STM	Start: <u>2240</u> Stop: <u>0403</u>	# DATs :		
TEMP		Cal High	Cal Low			Cal High	Cal Low
	Temp #2			STM			
	Temp #1			STM			
	Dewpoint #1			↑			
	Dewpoint #2			↓			
	Dewpoint #3						
PRES	Attack Angle (AP/DAP)		STM				
	Slip Angle (BP/DBP)		STM				
	Differential (PQ1/PQ2/PQ3/PQ4)		STM				
	Absolute (PS1/PS2)		STM				
	Radome Transducers Plugs ?		STM				
	Cabin Transducer (Station 5)		STM				
FLTLVL	Apn-159	SN: <u>SW 71-01</u>				Off? : <u>mon</u>	
	Apn-232	SN: <u>1797</u>	MEQ			Off? : <u>mon</u>	
	King Liquid Water		STM				
	J&W Liquid Water		STM				
	Down PRT-5 (SST)		mon				
	Side PRT-5 (CO ²)		mon				
	Up PRT-5 ✓ Shutter?					Shutter? <u>mon</u>	
	RAMS Data System <u>DAT?</u>	CPU : A <u>(B)</u>	STM	Start: <u>2147</u> Stop: <u>0407</u>	Errors 8: <u>✓</u>	9: <u>✓</u>	# DATs :
	F/D Laptop						
	C.I. Printer		MEQ				
ASDL Mission#		NA	Freq Time:	Blk Time:			
MISC	Exterior Walk Around						
	Video	<u>(N)</u> L R D		Start: <u>2148</u> Stop: <u>0358</u>	VHS <u>15-VHS</u>	2 / <u>(12)</u>	
	FCU	- A - B - C -			UPS Off : ?		
USER					Accelerometers		
					#1 (2 G) :		
					#2 (2.5 G) :		
					#3 (3 G) :		
					#4 (3.5 G) :		

