

Flt ID: H011208	From: KPAE	To: KPAE
Flt No.: 02-15	Blk In: 0325Z	ATA: 0320Z
ETD: 1945Z	Blk Out: 1938Z	ATD: 1950Z
ETE:	Blk Time: 7:47 (7.8)	Flt Time: 7:30 (7.5)
Sponsor Org: OAR	Program: IMPROVE 2	Purpose: FLT #4

AOC Personnel

AC: TALHART ✓	Sys Eng: ROLES ✓
CP: TENNESEN / TEBEEST	Data Sys: McMILLAN ✓
Nav: ADLER ✓	Radar:
FE: FLOYD / 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
COLLE, B	RADAR	UW SUNY
ATKINSON, D	OBS	UW
Rood, J	OBS	UW
ECKEL, T ✓	OBS	UW
MOWITT, W ✓	OBS	UNCO
SIMON, D ✓	OBS	UNCO

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

T/O delayed until 11:45am due to front slowing down.

Baldwi 2009Z

0154 180/12 10sm R-
13
2100
3900
29.94 6
4

44°19' → 10K
124°30'
13K ←

1014.5

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

AOCWF2

Flt ID: H011208		Time Off: 1950Z		Time On: 0320Z	
A/C (Take Off)		Wx Stn (Take Off)		A/C (Land)	
Pressure		990.3		29.90	
A/C (Land)		Wx Stn (Land)		993.6	
29.96					
Number		Data Disposition/Date/Quality			
Slow/Fast Flt Lvl Tapes		2			
Radar Tapes		1			
Cloud Physics Tapes		1			
Video Tapes		1			
AXBT					
AXCP					
AXCTD					
Dropsondes					
Video					
Forward		Left Side		Right Side	
Down		Remarks			
Time On					
Time Off					
Rate					
Remarks					
0253Z 17010 02040VC 0200VC 210 10 6 014 4					

IMPROVE II

Flight #4 011208H

<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 2005Z - 2010Z. The spike generated by this action was removed and patched over using DW3, the Buck Research dewpoint probe, as a reference.

There was an instance where the General Eastern dewpoint probe, DW1, was measuring too warm compared to ambient temperature. The following modification to the data was 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: 2134Z - 2138Z.

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

All other instruments worked optimally during the flight.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	990.3mb	993.6mb
Corrected tower pressure	990.5mb	992.5mb

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 _d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
200600	4714	12250	231	229	217	59	-15.4	-15.5	4382	4507	1002.6	570.7	81.0	IN CLD
201900	4628	12306	194	200	218	57	-15.0	-14.6	4549	4195	973.0	573.6	74.0	CLD+ICE
203800	4519	12300	185	191	222	36	-2	-1.9	1814	1761	1009.3	813.5	86.9	BTN CLD
204248	4501	12302	181	186	220	34	-2	-2	1815	1778	1011.4	813.5	93.5	PT A IN CLD
204900	4438	12302	179	186	225	30	0	-1.3	1811	1748	1007.1	813.8	83.7	IN/out CLD
205342	4421	12302	187	193	219	30	-4	-2.2	1811	1750	1005.5	813.8	76.1	TURN W IN CLD
210800	4418	12414	269	268	238	20	-5.4	-5.7	2399	2403	1018.4	756.4	73.2	IN CLD
211140	4418	12434	266	264	230	24	-4.9	-5.4	2418	2418	1017.2	775.8	75.2	FRONT
211600	4417	12453	268	267	258	45	-5.7	-8.1	2426	2426	1017.6	754.0	71.6	IN CLD
212400	4418	12433	88	97	215	48								FRONT
215030	4459	12349	203	208	299	18	-3.3	-3.3	1793	1354	982.1	815.7	72.2	PT A'
220100	4422	12305	178	189	283	43	-3.0	-3.7	1793	1565	988.3	815.5	75.3	IN CLD RW-
220959	4346	12350	181	189	278	24	-2.3	-2.8	1796	1463	984.4	815.5	69.7	PT F' IN CLD RW-
221415	4344	12410	294	294	285	20	-3.2	-3.3	1793	1809	1019.0	815.5	80.3	PT G' RW
222700	4429	12410	359	356	305	22	-3.3	-3.9	1783	1788	1018.5	816.7	77.6	RW ✖
223455	4459	12410	4	1	277	18	-3.8	-4.0	1785	18187	1018.6	816.9	73.3	PT B' RW
223810	4500	12352	114	117	265	10	-3.7	-3.8	1782	1602	984.2	816.9	77.2	PT A' RW
224700	4425	12350	179	186	296	28	-2.5	-3.8	1783	1648	1014.8	816.5	77.5	RW-
225355	4349	12350	198	209	288	38	-3.4	-4.5	1784	1629	1012.0	816.7	79.4	PT F' RW-
225955	4346	12408	284	286	284	33	-3.4	-3.8	1785	1686	1007.2	816.8	85.0	PT G' RW
231254	4429	12410	0	355	295	23	-3.3	-4.3	1782	1789	1019.0	816.7	75.9	RW ✖
231953	4459	12410	4	2	253	17	-3.9	-3.8	1786	1790	1019.2	816.7	72.3	PT B' RW-
232310	4500	12352	93	95	270	24	-3.9	-4.2	1786	1531	975.2	816.7	79.2	PT A' RW-
233700	4421	12324	180	187	297	24	-2.4	-4.0	1791	1678	1001.7	816.4	89.1	RW- THN CLD
234200	4401	12325	178	188	280	37	-2.0	-4.2	1784	1538	986.3	816.6	80.1	RW
234520	4348	12325	183	189	291	23	-3.4	-3.8	1781	1545	982.4	816.9	75.5	RW TURN
234920	4346	12304	86	86	279	11	-2.3	-3.0	1783	1513	980.0	816.7	80.2	PT F RW-
000848	4459	12302	6	4	265	11	-3.1	-3.5	1808	1781	1013.2	808.4	90.7	PT A RW-
001245	4501	12238	93	95	268	33	-6.1	-6.8	2395	2098	977.2	757.2	78.8	PT B RW-
002300	4422	12234	179	187	269	26	-6.1	-6.0	2381	1687	927.2	757.1	73.7	RW-
003150	4348	12234	170	174	229	24	-6.3	-9.1	2438	1941	952.4	757.1	78.0	PT G IN CLD
003638	4346	12207	93	103	221	56	-9.5	-8.9	3305	1549	831.8	674.6	66.0	PT H ICE-
004900	4440	12205	1	356	239	27	-11.5	-10.5	3308	2717	943.5	674.0	72.5	ICE-
005300	4458	12205	357	358	237	32	-11.2	-11.2	3306	2443	911.7	674.3	74.5	PT C ICE-
005835	4500	12231	266	268	280	33	-7.5	-8.1	2461	2053	974.4	755.8	63.2	PT B
010900	4420	12234	180	186	269	22	-6.1	-6.4	2402	1468	911.5	756.3	77.8	—
011715	4349	12231	179	185	262	18	-6.2	-7.6	2399	1930	962.5	765.5	68.8	PT G →
012150	4346	12209	92	100	221	44	-10.6	-11.5	3293	1633	836.8	675.5	70.6	PT H

NOAA • AOC • SED Flight Performance Log

Aircraft : N42RF

Project : IMPROVE 01

Mission : IMPROVE

SED Crew: Roles, Rogers, Damian, McMill

Flight ID : 011208H

Pre-Flight: 0630 Local Take-Off: 1949

Landing: 0320

System			Pre-Flight	In-Flight	Post-Flight		
NAV	INE #1	Aligned to :	STM				
	INE #2	Aligned to :	STM				
	GPS		STM			Lat	Long GS
RADAR	Nose						
	L/F	R/T SN : 103				Mod Switch Off ?	
	Tail	R&T SN : /				Mod Switch Off ?	
	MARS Data System DAT		MER	Start: 2004 Stop: 0256	# DATs :		
PMS	2DG-C	Ch 1/64: /					
	2DG-P	Ch 1/64: /					
	FSSP	Ref VDC: Range3(2019) Range2(2022) Range0(2032) Range1(2024) Range0(2252)					
SEA Data System				Start: 1938 Stop: 0250	# DATs :		
TEMP		Cal High	Cal Low			Cal High	Cal Low
	Temp #2			STM			
	Temp #1			STM			
	Dewpoint #1			↑			
	Dewpoint #2			↓			
	Dewpoint #3			STM			
PRESS	Attack Angle (AP/DAP)		↑				
	Slip Angle (BP/DBP)						
	Differential (PQ1/PQ2/PQ3/PQ4)						
	Absolute (PS1/PS2)		↓				
	Radome Transducers Plugs?		JR				
	Cabin Transducer (Station 5)		STM				
FLTLVL	Apn-159	SN: 71-01			Off ? : ✓	mer	
	Apn-232	SN: 1797			Off ? : ✓	mer	
	King Liquid Water		JR		✓	mer	
	J&W Liquid Water		JR		✓	mer	
	Down PRT-5 (SST)		STM		✓	mer	
	Side PRT-5 (CO²)		STM		✓	mer	
	Up PRT-5	Shutter	JR		Shutter? ✓	MER	
	RAMS Data System DAT CPU : A		MER	Start: 1935 Stop: 0324	Errors 8: 9: # DATs:		
	F/D Laptop		STM		✓	mer	
	C.I. Printer			ST: 1935 ST: 0324	✓	mer	
MISC	ASDL	Mission#	PA	Freq Time: Blk Time:			
	Exterior Walk Around		JR				
	Video	Ⓢ L R D		Start: 1937 Stop: 0117	VHS / S-VHS 2 / 12		
USER	FCU	- A-B-C -	STM		UPS Off : ?		
					Accelerometers		
					#1 (2 G):		
					#2 (2.5 G):		
					#3 (3 G):		
				#4 (3.5 G):			

