U.S. Dep't. of Commerce / OMAO / NOAA / Aircraft Operations Center

FLT ID: 20130705H1	From: KMQY	To: KMQY
FLT #:	Blk In: 2128 Z	Lnd Time: Z 2123
ETD: 1500 Z	Blk Out: 1445 Z	T/O Time: ~~1445~~ Z 1452
ETE: 6+30	Total Blk:	Total Flt: 6.5
Sponsoring Org: OAR	Program: SENEX	Purpose: ST LOUIS/OZARK

AOC Flight Crew

Aircraft Commander: SWEENEY	SSA: BOSKO
Co-Pilot: PRICE / DIDIER	AVAPS: /
Navigator: SLOAN /	Scientists: WERTI, ANDRE
Flight Eng: DARBY /	Scientists DEGOUW, JOOST
Flt Director: SEARS /	Scientists LAW, DAN
SEB: NEWMAN / /	Scientists: GRAUS, MARTIN
Crew Chief:	Visitors: PEISCHL JEFF / /

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure				

AS REQUIRED BY ORM	YES / NO	REMARKS
VOLCANIC ASH	X	
SCIENCE MISSION WITHIN BOUNDARY LAYER		
LACK OF PRECIPITATION		
RELATIVE HUMIDITY AT OR ABOVE 80%		
LARGE AIR-SEA TEMPERATURE GRADIENT		
HIGH SURFACE WINDS		
LONG FETCH AND/OR DURATION OF SFC WIND		
SEA SALT ACCRETION FORECAST		
SEA SALT ACCRETION OBSERVED		

Dropsondes		Good:	Bad:	Sent:
AXBT		Good:	Bad:	Sent:

List other data sources in Remarks section

Remarks (Storm VDM Identifier, Mission ID, Fix Times)	Fix #	VDM Ob Num	Fix Time / SLP
Storm Number Identifier (VDM): (ie: AL072012)			
TCPOD/WSPOD Mission ID: SENEX15 (ie: NOAA2 2418A SANDY)			

Remarks:

N42RF ERROR SUMMARY
SENEX 2013 KMQY
05 July 2013

Flight ID: 20130705H1

Sensor or system	Number or Name
Static Pressure Probe	PSM.2
Dynamic Pressure Probe	PQM.2
Total Temperature Probe	TTM.1
Dewpoint Temp. Probe	TDM.2
Vertical Accelerometer	AccZI.1
Altimeter	AltIGPS.1
INE Selection	1
Differential Attack Pressure Probe	PDALPHA.1
Differential Sideslip Pressure Probe	PDBETA.1
Dynamic Attack Pressure Probe	PQALPHA.1
Dynamic Sideslip Pressure Probe	PQBETA.1
Flight Directory	acdata/MET/2013/20130705H1

Local Met Data:	Takeoff (1452Z)	Landing (2123Z)
Aircraft Static Pressure	1002.6mb	1002.7mb
Tower Pressure (corrected)	1001.omb	1000.0mb

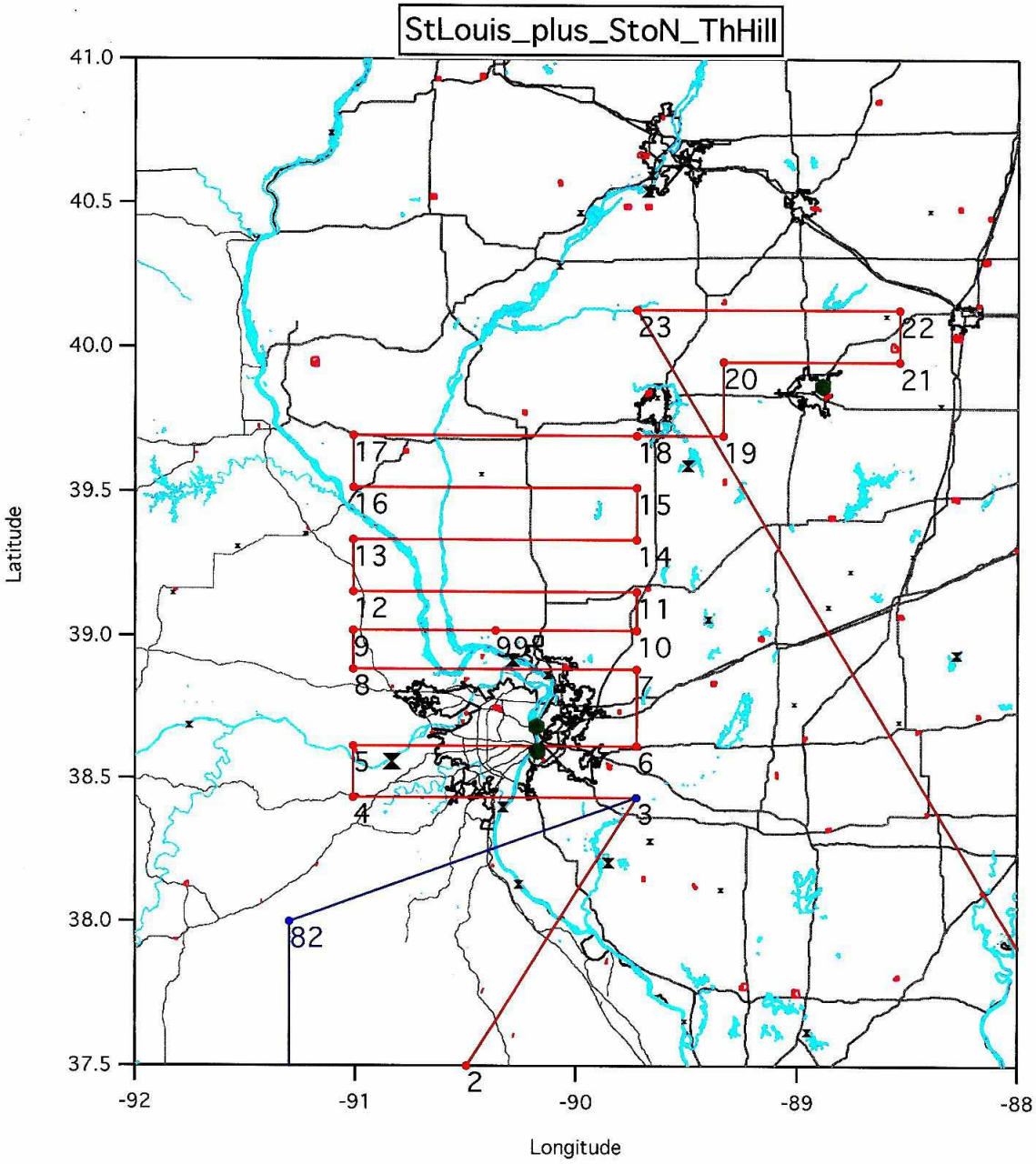
Notes:
All AOC instruments worked properly.

After the aircraft returned to MacDill AFB, a few instruments that were installed on N42RF were removed and calibrated in the AOC calibration laboratory. The final Quality Control data sets use the post project calibration coefficients for determining the output of the instruments.
The following parameters that have been updated from the original data set follow.

PDALPHA.2 - Radome Attack Differential Pressure Measured
PDBETA.2 - Radome Sideslip Differential Pressure Measured
PDALPHA.1 - Fuselage Attack Differential Pressure Measured
PQALPHA.1 - Fuselage Attack Dynamic Pressure Measured
PDBETA.1 - Fuselage Sideslip Differential Pressure Measured
PQBETA.1 - Fuselage Attack Dynamic Pressure Measured
PQM.3 - Measured Fuselage Dynamic Pressure, Two Sources --co-pilot
PQM.4 - Radome Dynamic Pressure Measured
TTM.1 - Measured Total Temperature Degree
TTM.2 - Measured Total Temperature Degree

Any derived value using the outputs from the measured parameters listed above have changed slightly from the values measured in real-time.
See SENEX_READ_ME.txt for file information.

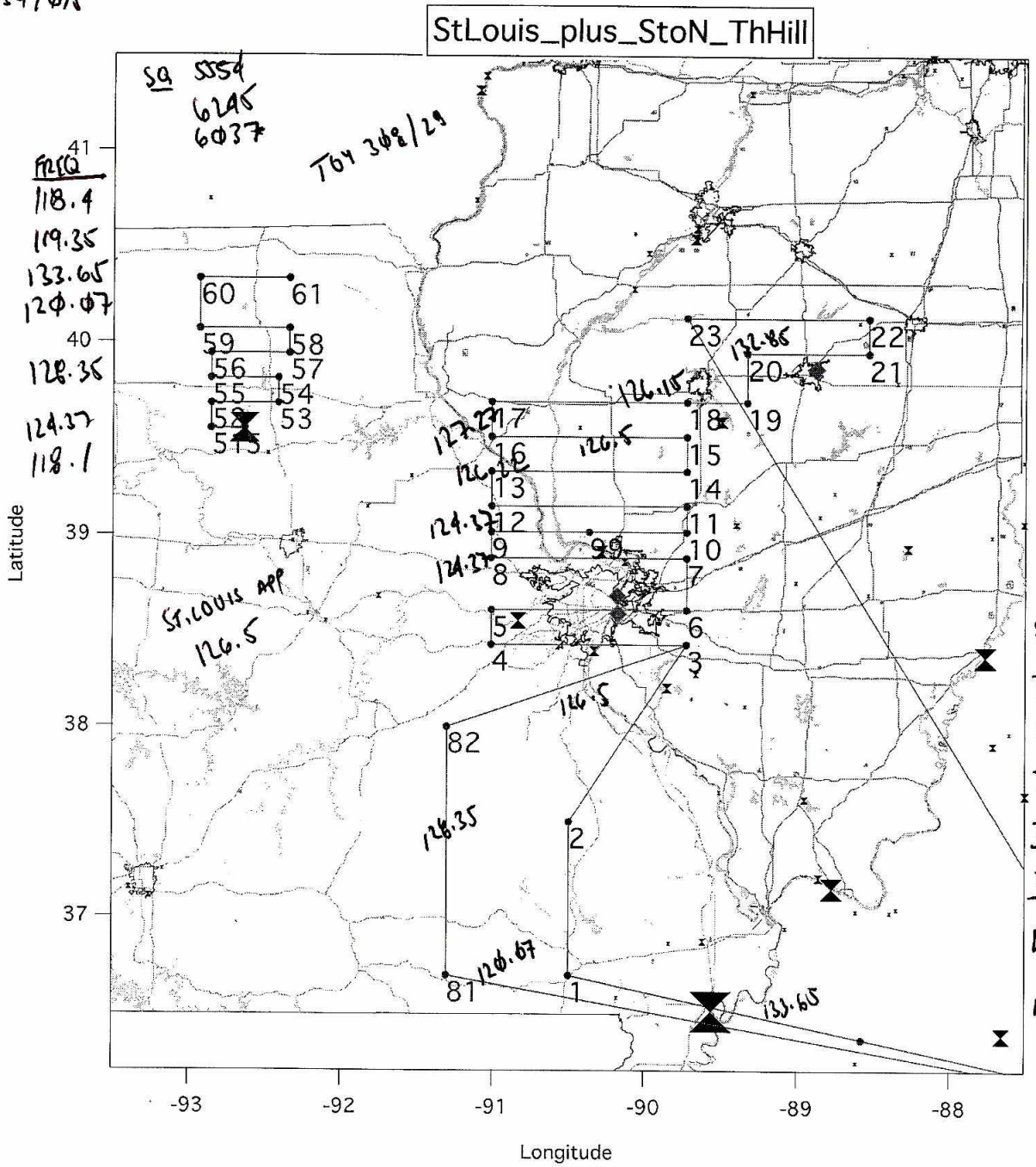
Flight Director: *Ian Sears*
Phone #: *(813) 828-3310 ext. 3039*


StLouis_plus_StoN_ThHill
41.0
40.5
40.0
39.5
39.0
38.5
38.0
37.5
Latitude
-92
-91
-90
-89
-88
Longitude
23
22
20
21
17
18
19
16
15
13
14
12
11
9
10
8
7
5
6
4
3
82
2

16 k
GO HOME 325HM @ 300kts

CSX 129/015

CLHC - ~~TAXI~~ 19 7/5/2013
~~3~~ 'F' B/C
~~3013~~ X19



Alternate:
If Salem MOA not active:
Go from Smyrna to Pt 3
via Pt 81 (36.7, -91.3)
& Pt 82 (38.0, -91.3)
include enroute up&down profile
btwn Pt 82 and Pt 3

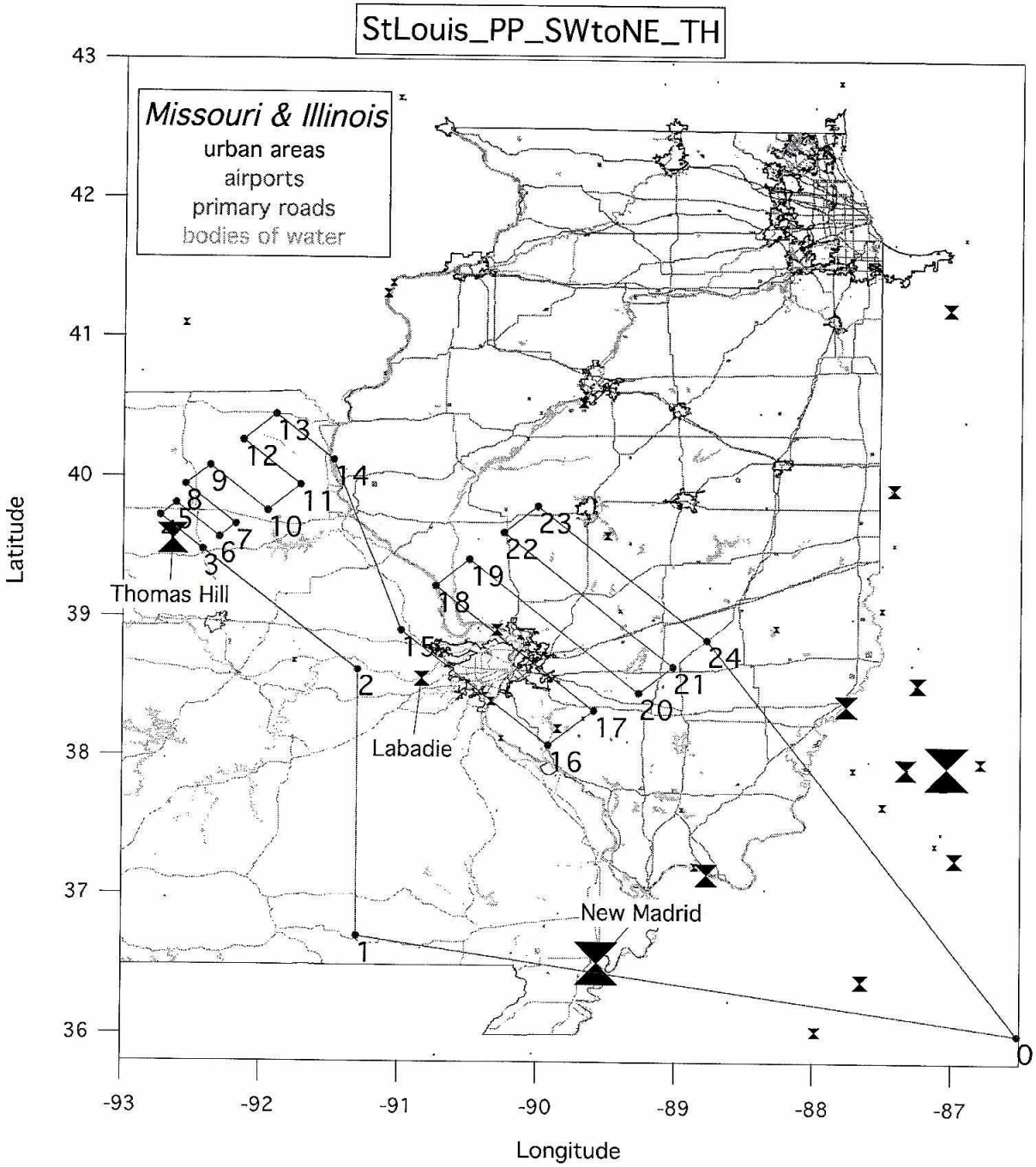
If Pruitt MOA active or wsp low:
Include Thomas Hill Power Plant legs
After Pt 12 go to Pt 51 - Pt 61
enroute up&down (Pt12 to Pt 51)
(adjust plume study
according to winds)
then return to Smyrna

FUEL

1443 / 48.7 > 5.6
1549 / 42.9 > 6.4
1657 / 36.5 > 4.8
1753 / 32.1 > 5.2
1857 / 26.5
1947 / 22.3

START - 1438/1443
TAXI - 1445
V - 1447 / HS 19 (1451) / RT 220 CLR T/O
T/O - 1453
IV - 1454
III - 1456
LAND - 2124
IM -

est_time	altit_ft	Comments	lat_deg	lat_min	lng_deg	lng_min	lat	lng	point	AGL_MSL
0:00:00	543	KMQY Smyrna	36	0.54	-86	31.2	36.009	-86.52	0	MSL
0:10:00	10000									MSL
0:20:00	10000									MSL
0:30:00	2000	enroute down					36.3664	-88.579		AGL
~~0:58:19~~	~~2000~~		~~36~~	~~42~~	~~-90~~	~~30~~	~~36.7~~	~~-90.5~~	~~1~~	~~AGL~~
~~1:12:33~~	~~2000~~		~~37~~	~~30~~	~~-90~~	~~30~~	~~37.5~~	~~-90.5~~	~~2~~	~~AGL~~
1:32:22	2000		38	26	-89	43.74	38.4334	-89.729	3	AGL
1:50:14	2000		38	26	-91	0.67	38.4334	-91.011	4	AGL
1:53:26	2000		38	36.81	-91	0.67	38.6136	-91.011	5	AGL
2:11:15	2000		38	36.81	-89	43.74	38.6136	-89.729	6	AGL
2:16:04	2000		38	53.03	-89	43.74	38.8838	-89.729	7	AGL
2:33:49	2000		38	53.03	-91	0.67	38.8838	-91.011	8	AGL
2:36:13	2000	note max plume location	39	1.14	-91	0.67	39.019	-91.011	9	AGL
2:53:56	2000	note max plume location	39	1.14	-89	43.74	39.019	-89.729	10	AGL
3:02:26	2000	enroute up to max plume					39.019	-90.37	99	
3:08:26	8000	spiral up at max plume					39.019	-90.37	99	
3:16:56	8000	return to Pt 10	39	1.14	-89	43.74	39.019	-89.729	10	AGL
3:22:56	2000	spiral down at Pt 10	39	1.14	-89	43.74	39.019	-89.729	10	AGL
3:25:21	2000		39	9.25	-89	43.74	39.1541	-89.729	11	AGL
3:43:02	2000		39	9.25	-91	0.67	39.1541	-91.011	12	AGL
3:46:14	2000		39	20.06	-91	0.67	39.3343	-91.011	13	AGL
4:03:53	2000		39	20.06	-89	43.74	39.3343	-89.729	14	AGL
4:07:05	2000		39	30.87	-89	43.74	39.5145	-89.729	15	AGL
4:24:41	2000		39	30.87	-91	0.67	39.5145	-91.011	16	AGL
4:27:53	2000		39	41.68	-91	0.67	39.6946	-91.011	17	AGL
4:45:26	2000		39	41.68	-89	43.74	39.6946	-89.729	18	AGL
4:50:46	2000		39	41.68	-89	20.34	39.6946	-89.339	19	AGL
4:55:19	2000		39	57	-89	20.34	39.95	-89.339	20	AGL
5:06:15	2000		39	57	-88	32.23	39.95	-88.537	21	AGL
5:09:27	2000		40	7.8	-88	32.23	40.13	-88.537	22	AGL
5:25:39	2000		40	7.8	-89	43.74	40.13	-89.729	23	AGL
5:41:39	18000	enroute up								MSL
6:35:37	18000	enroute down								MSL
6:51:37	543	KMQY Smyrna	36	0.54	-86	31.2	36.009	-86.52	0	MSL



If time permits:
A) Add additional legs downwind of Thomas Hill
or
repeat leg near top of PBL
~ plus 20 min

B) repeat an urban transect near top of PBL
~ plus 35 min

StLouis_PP_SWtoNE_TH

est_time	altit_ft	Comments	lat_deg	lat_min	lng_deg	lng_min	lat	lng	point	AGL_MSL
0:00:00	543	KMQY Smyrna	36	0.54	-86	31.2	36.009	-86.52	0	AGL
0:15:00	15000	enroute up								
0:25:00	15000	enroute down								
0:38:00	1500	across ag fields								
1:09:33	1500	Ozarks	36	42	-91	18	36.7	-91.3	1	AGL
1:43:44	1500	Ozarks	38	37.28	-91	18	38.6213	-91.3	2	AGL
1:54:44	12000	enroute up & down								
2:05:29	1500	Thomas Hill PP	39	28.71	-92	25.41	39.4786	-92.424	3	AGL
2:11:33	1500		39	43.16	-92	44.15	39.7194	-92.736	4	AGL
2:13:51	1500		39	48.67	-92	37.01	39.8111	-92.617	5	AGL
2:19:54	1500		39	34.22	-92	18.28	39.5703	-92.305	6	AGL
2:22:13	1500		39	39.72	-92	11.14	39.662	-92.186	7	AGL
2:29:16	1500		39	56.58	-92	33	39.943	-92.55	8	AGL
2:32:43	1500		40	4.83	-92	22.29	40.0806	-92.372	9	AGL
2:40:46	1500		39	45.57	-91	57.31	39.7595	-91.955	10	AGL
2:45:23	1500		39	56.58	-91	43.03	39.943	-91.717	11	AGL
2:53:25	1500		40	15.84	-92	8.01	40.264	-92.134	12	AGL
2:58:00	1500		40	26.85	-91	53.74	40.4475	-91.896	13	AGL
3:06:03	1500	Thomas Hill PP	40	7.59	-91	28.75	40.1264	-91.479	14	AGL
3:17:03	12000	enroute up & down								
3:28:46	1500	St Louis	38	54.48	-90	58.96	38.908	-90.983	15	AGL
3:49:38	1500		38	4.79	-89	55.25	38.0798	-89.921	16	AGL
3:56:04	1500		38	20.08	-89	35.64	38.3346	-89.594	17	AGL
4:18:30	1500		39	13.59	-90	44.26	39.2265	-90.738	18	AGL
4:23:17	1500		39	25.05	-90	29.55	39.4176	-90.493	19	AGL
4:47:17	1500		38	27.72	-89	16.04	38.462	-89.267	20	AGL
4:52:06	1500		38	39.19	-89	1.34	38.6531	-89.022	21	AGL
5:16:05	1500		39	36.52	-90	14.85	39.6087	-90.248	22	AGL
5:20:51	1500		39	47.99	-90	0.15	39.7998	-90.002	23	AGL
5:44:48	1500	St Louis	38	50.66	-88	46.63	38.8443	-88.777	24	AGL
6:00:00	18000	enroute up								
6:26:28	18000	enroute down								
6:44:28	1500	KMQY Smyrna	36	0.54	-86	31.2	36.009	-86.52	0	AGL