CVI File Variable Information for ICE-L Users: 4 March 2009, *Updated 20 Dec 2010*

Files are in NASA 1001 Format: See http://espoarchive.nasa.gov/archive/docs/formatspec_2_0.pdf
(but data is fairly self-explanatory if you look at files)

TIME	sec	Time in sec after midnight, UTC
FXFLOWS		CVI Flow Flag (which users on CVI, see supplementary information below)
INLET		CVI Inlet Flag: 0=CVI, 1=ambient (counterflow off)
CVRAD	microns	CVI cut radius
CFACT	none	CVI concentration factor
CVCWC	g m-3	CVI condensed water content (set to 0.000 if INLET flag=1)
FX1C	vlpm	CVI user flow 1 (CSU CFDC)
FX2C	vlpm	CVI user flow 2 (DMT SP-2)
FX3C	vlpm	CVI user flow 3 (CalTech AMS)
FX4C	vlpm	CVI user flow 4 (UCSD ATOFMS)
FCN2C	vlpm	CVI user flow 5 (U. Ill. Electrometer)

Notes: Original CVI data unlagged by 4 sec to better match aircraft cloud probes. Note cut size was increased whenever a sample was changed or users were brought on or off—CVCWC will be low during that time (only the largest drops sampled). CVI also measures drizzle and ice w/ imperfect efficiency due to fuselage location, so CVCWC will generally be higher than other probes during these periods. CVI residual number available but invalid during ice periods--contact Twohy (Twohy@coas.oregonstate.edu) for data and caveats.

20 Dec 2010 Update: CVCWC data has been reprocessed for better accuracy at the relatively low CWC conditions for most of the ICE-L cases. Initial calibrations used a non-linear fit to calibration data which focused on higher CWCs often encountered in other projects, so lower CWCs were not as accurate. The reprocessed data use a linear fit to calibration points only at lower humidity conditions, which are more relevant to ICE-L wave clouds.

Volumetric flow variable	Instrument
FX1C	CSU CFDC
FX2C	DMT SP2
FX3C	CalTech AMS
FX4C	UCSD ATOFMS
FCN2C	Ill. Electrometer

FXFLOWS KEY (which user instruments on CVI at any particular time)

0 NONE
1 FX1 (Note whenever FX1 is on, FX4--UCSD AMS--is assumed to be also on)
2 FX2
3 FX1, FX2
4 FX3
5 FX1, FX3
6 FX2, FX3
7 FX1, FX2, FX3
8 FCN2
9 FX1, FCN2
10 FX2, FCN2
11 FX1, FX2, FCN2
12 FX3, FCN2
13 FX1, FX3, FCN2
14 FX2, FX3, FCN2
15 FX1, FX2, FX3, FCN2