

April 4, 2007

CHAPS: status of issues and action items.

Items to watch are shown in **bold**.

1. Our most recent 'off-line' conference call was on March 30, with Yin-Nan, Liz, John J. Betsy, and John H. Details of AMS plumbing were discussed.
2. Status of CVI:
  - a. It has been installed and test flown, 3/14 & 3/16.
  - b. We are working on an instability in one of the flow meters (feedback with the zero-air regulator?)
  - c. Will be flown again with nephs and psaps, and again with AMS
  - d. See full status of CVI-related gear in item 14
3. Status of BNL AMS:
  - a. To be shipped by Yin-Nan to Liz on 4/20
  - b. To be installed 4/26
  - c. Yin-Nan and John J. will travel to Pasco to do final plumbing and tweaking starting 4/30
  - d. Test flights: 5/2, 5/3
4. Schedule of Events: coordinated by John H. and Carl B. See CHAPS webpage.
5. Instrumentation: See CHAPS webpage.
6. Floor Plan: coordinated by John H. See CHAPS webpage.
7. M300 Data Acquisition System: John H. and Stephen Sp. to designing and implementing tests to optimize acquisition rates.
8. **Can we deploy a reverse flow temperature probe?**
  - a. Probe housing is in hand
  - b. John H shopping for PRT sensor
9. **Can we deploy an OPC on the CVI to compliment the FIMS size range?**
  - a. Liz has a Lasair
  - b. Must integrate into the CVI flow budget
  - c. Must integrate into data acquisition
  - d. Must calibrate
10. Time stamps during the campaign: John H.
  - a. M300 will be sync'd to the GPS before starting data acquisition.
  - b. NTP will be available.
11. Flight Protocol for Participants. We'd like all scientists to help with the following
  - a. All observations recorded in UTC based on M300 clock. Work with John H. for exceptions.
  - b. Rough, non q.a'd time series from each instrument should be available for discussion with other scientists within 4 hours of flight completion.
  - c. Final data should be available per guidance in the DOE Data Policy as given in <http://www.asp.bnl.gov/datapolicy050505.html> .
12. Surface Site: Will Shaw is coordinating these activities.
  - a. Jeff Basara (Oklahoma Climatological Survey) offered to work with us in identifying a location for the site.
  - b. Scott Martin/Harvard wants to deploy an aerosol M/S at the site, thus justifying deployment of PNNL aerosol instrument rack.
13. Nephelometer/PSAP Intercomparison
  - a. Pat Sheridan is providing summaries on the Leipzig inter-comparison
14. Full status of CVI and downstream gear

(Questions, comments -> betsy.andrews@noaa.gov, 303-497-5171)

'-' indicates status

'-->' indicates some action is needed

> add a list of instruments including status of info you need and how ready they are?

NOTE: the 'CPD' referred to below is NOAA-developed software for controlling and monitoring various instruments. it is the software that will be used to ingest flow measurements (serial or analog) from all instruments on the CVI inlet and adjust the CVI counterflow accordingly.

our programmer needs to know how the flow will be fed to us and what the data stream will look at so he can incorporate the information into the CPD software

CVI CPC (particle concentration measurement)

- installed

- there is a calibrated MFM in the CVI flow control box that will measure the summed flow of the CVI PSAP, CVI CPC and CVI TDL.

- CPC flow is controlled by critical orifice at back of instrument.

- Flow through instrument+orifice has been measured and entered into CPD

--> are we going to swap CPCs? i.e., use the lower flow (0.9 lpm) G1 CPC on the CVI inlet and the 1.0 lpm NOAA CPC on the isokinetic inlet?

CVI TDL (water vapor measurement)

- installed

- there is a calibrated MFM in the CVI flow control box that will measure the summed flow of the CVI PSAP, CVI CPC and CVI TDL.

- TDL flow is controlled by critical orifice at back of instrument.

- Flow through instrument+orifice has been measured

CVI PSAP

--> needs to be installed, when it returns from leipzig.

- there is a calibrated MFM in the CVI flow control box that will measure the summed flow of the CVI PSAP, CVI CPC and CVI TDL.

--> need to make minor uncommenting changes in CPD once installed

- PSAP flow is controlled by valve on instrument.

--> PSAP flow needs to be calibrated, so we can set flow to value we want

CVI neph

--> needs to be installed, when it returns from leipzig.

- there is a calibrated MFC in CVI flow control box to monitor neph flow

--> need to make minor uncommenting changes in CPD once installed

AMS

--> needs to be installed

- have discussed flow control at length with liz/yin-nan/john j. flow is controlled using a critical orifice and pressure controlled inlet

--> they need to send info on the signals they will be providing to CPD, i believe liz thought it would be several analog voltage (0-9 Vdc) signals

--> flow controllers will need to be calibrated over operating range

--> betsy needs to send liz some connectors so she can feed the signal to our data acquisition system (umac box).

--> betsy needs to send a working umac box (this is the lu box that died that was supposed to be measuring RH in the zero air)

CVI TRAC

--> needs to be installed

--> flow is controlled how?? (i should know, but i forget)

--> Alex and Yuri have sent me a manual for the mass flow controller

they will use, but i haven't had a chance to dig through it to see what the serial data stream specs are yet

--> flow controller will need to be calibrated over operating range

CVI LAPA

--> needs to be installed

- flow is controlled using a critical orifice

--> claudio and dubey are still working on how they will send us a mass flow control signal. i believe they are considering using a TSI mass flow controller (same as will be used for the TRAC)

FIMS

--> need confirmation that it will be on CVI inlet

- needs to be installed

--> jay has sent us the specs on the flow serial data stream

--> flow signal needs to be calibrated

OPC (lasair) ??

--> need flow requirements

--> need how will control/measure flow

--> flow control will need calibration