

IASOA Flux Group Meeting Notes for Nov 10, 2015

Present by Phone: Glen Lesins, Mika Aurela, Eugenie Euskirchen, Larry Hinsman

At NOAA: Sandy Starkweather, Chris Fairall, Janet Inrieri, Elena Konopleva, Andrey Grachev, Sara Crepinsek

1. Update on Flux Workshop

Sandy and Eugenie updated us on the nomination process, with 27 nominees submitted, for the Organizing Committee for the planned Flux Workshop. The Committee will meet during the ASSW in Fairbanks on March 14 to organize a Flux Workshop in about a year from now. Larry suggested holding an open forum session during the meeting to solicit ideas from attendees at large. A proposal was submitted to IASC to obtain some travel funds for early career scientists. Everyone's input is welcome to help in the selection process. The Organizing Committee should have experts from various flux disciplines including permafrost, data management and Russian representation.

2. Creation of new Gold files for High Arctic towers

Glen asked for input concerning the creation of Gold files for High Arctic fluxes. The intent is to allow users to compute fluxes from the provided raw data files for comparison with our "standard" analysis. It is not intended to be a "best" data set for the Arctic although perhaps the two objectives can be combined. Taneil is leading an effort to get a best data set in part to be able to do closure studies. It is suggested that the Tiksi tower will be provide the initial raw data and that Glen will work with Andrey to select an appropriate time period and document all corrections applied to the raw measurements. The time period in the Gold Files should encompass a variety of flux scenarios and have elements that are unique to High Arctic locations. The creation of separate closed versus open loop files need to be considered.

3. Data Management and Availability

Glen raised concerns about data archiving on different servers and inconsistent levels of derived products. NOAA is able to archive data from sites for which it has established a special relationship. Some sites require data to be maintained solely at home servers. This is not a problem since users can enter the various servers from the single IASOA data portal. Glen felt it would be beneficial to pursue the establishment of a derived High Arctic flux data base in which a consistent analysis procedure was applied. It is hoped that such a derived data set would find much more use compared to raw data by the modeling and satellite communities that require validation products for their computed fluxes. Glen will contact the various tower managers (perhaps Sandy can provide him with the contact information) to find out if there is a willingness to participate in this project. Chris expressed the complementary nature of the Gold files project to ensure quality with the consistent derived product project that allows regional comparisons. A consistent analysis approach is probably more critical than claiming that there exists only one correct analysis regime.

4. Issues with Winter Measurements

Eugenie and Mika chimed in their interest concerning winter measurements. Mika has had success with the Metek sonic anemometer and the Licors in winter campaigns. Eugenie has worked on methods to ensure quality measurements in spite of heaters on the instruments. A paper about her work is forthcoming soon. The issue of best practices for winter measurements should remain a priority for our group. The processes that determine fluxes in the winter may be quite different and traditional turbulence covariance methods may need to be reconsidered. Mika expressed an interest in continuing a dialogue on this subject. In an email following the teleconference Sara remarked about issues

encountered with the ATI sonics at Tiksi with rimming of the transducers and water leaking into the board. They are hoping to install Metek sonics and do comparisons. Perhaps we should encourage the companies that make these instruments to be involved in an intercomparison campaign in the High Arctic.

5. Your Ideas

I think the success of any working group is determined by the amount of interaction and feedback. I encourage everyone to provide suggestions about what directions our group should move in and what collaborative projects would be of particular interest to you.