IASOA Radiation & Cloud Working Group

January 24, 2018

Attendees: Sara Morris, Taneil Uttal, Chris Cox, Barbara Casati, Diane Stanitski, Kim Strong, Lei Liu, Andreas Massling, Allison McComiskey, Alessio Bozzo, Chuck Long, Gijs de Boer, Von Walden

Role Call of group members

IASOA and YOPP:

- YOPP is an international activity initiated by World Meteorological Organization's World Weather Research Program (WWRP) at a component of the Polar Prediction Project (PPP)
- YOPP will take place from mid-2017 go mid-2019 (want full annual cycle)
- YOPP goal: to significantly advance our environmental prediction capabilities for the polar regions and beyond
- YOPP verification task team: supersites multivariate process-based evaluation (model focused)
    - Supersites primarily IASOA observatories within the Arctic region (also have Antarctic supersites for YOPP)
    - Focusing on surface energy budgets, fluxes, clouds, turbulence, etc.
- Special Observing Periods were chosen (Feb-March & July-August) for Arctic and Antarctic
    - These periods are to concentrate focus on ensuring all obs available at during these periods (model output will remain the same during these SOPs as the rest of the year)
- Drafted list of observations details available/contributing from each of the IASOA stations online
- Overview of supersite NWP model outputs table
    - Radiation: UW, DW, vertical profiles, albedo, momentum fluxes (latent/sensible heat flux)
- YOPP activities requiring observations/model validations from IASOA stations/observatories
- YOPP planning to archive model data around IASOA stations
- Observations require large effort to unify measurements and output formats
    - Create observatory "gold-files" where data is formatted into one format so easier to use by modeling community for comparisons
    - Will add in variables in addition to model requested data obs
- Suggestions for how to sync model and observations outputs
    - N-ICE project: netCDF file outputs, open source for code to covert files to netCDF (for each station), find good way to share how to convert data
    - Surface energy budget fluxes, create netCDF to start, then work on derived products from flux observations for inclusion into netCDF files
    - Need to have DOI for each file so that folks creating files get credit for their creation (author list)
    - For each of the identified measurements/observations need to have a lead in charge of formatting that specific file obs type
    - Need to have consistent file names, file formats, etc. (same as model formats?)
        - ARM format compliant?, need to determine time frequency and format that correlates with model outputs

    - Identify specifics for each observation/measurement so that not giving ten different cloud heights within a file, should find best option and stick to that across all stations
        - Perspective: different instruments have different sensitivities

Action Items:

- YOPP and IASOA discussion to continue online