Minutes from GCI – CUSP data workshop, CEDAR 24.6 2018

Present at the meeting:
Jøran Moen (UiO), Kolbjørn Blix (ASC), Andres Spicher (UiO), Miguel Larsen (Clemson Uni), Doug Rowland (NASA Goddard), Anja Strømme (NSC), David Miles (U of Iowa), Craig Kletzing (U of Iowa), Jim LaBelle (Dartmouth College), Matt Zettergren (Embry-Riddle)

Presentation & opening remarks: (Moen)

- GCI CUSP must have 4 phases:
  - Important to share data through common data base
  - Solar minimum, solar medium, solar max and solar minimum

Presentation SIOS database: Øystein Godøy (Met.no/SIOS)

- SIOS might help PI's generating meta data by handing out prepared EXCEL spreadsheets that automate this process
- SIOS data is of the same standard as NASA, ESA etc, and JAXA is coming after
- SIOS data center does not link to personal computers

Everyone puts a bit more effort into the meta data part (using the same vocabulary) , and thereby ease the use and increase the flexibility of the data from various instruments

Craig: will use CDF. Have all tools and knowhow. No funding for move to NetCDF

Question to Øystein: How much work to move from CDF to NetCDF? Not easy to say

NASA has tools to do this translation from CDF to NetCDF

Miguel: has data in form of 180 GB of pictures per campaign. How to publish those into SIOS? Could end up publishing 4D data of winds, drifts etc

NetCDF main adv:

- Connected to opendap
- Not a format in itself, but a data
- structure using HDF storage format

Craig: uncertain about the advantage of streaming compared to having data on own computer
Craig and Jim: wondered/discussed how well netCDF would handle very high frequency data?

Anja: streaming eases the use of multiple data sets, that prepared locally the old way would cause lots of work

Craig: Iowa uses AUTOPLOT tool (java) that can read CDF, NetCDF, HDF etc, and create outputs for IDL, Matlab etc. Developed over a decade. Can be downloaded and used free of charge. Plots data in local and remote files, and from servers

Talk by Doug: get talk

- Awarded 12 hrs EISCAT (POC Kjellmar)
- Split descriptions in three; data (for SIOS), instruments, auxiliary
- Can use VISIONS data (2013) as a precursor for SIOS to check how well this will work, and discover any hiccups/challenges, but needs work by Doug first to make sure all descriptions are ok.

Coffee break

Craig gave a brief intro to Autoplot (autoplot.org)

- Could this be of use/interest for SIOS data center?
- Autoplot used for G-CHASER? (Kolbjørn to check with Chris)

Jøran:

- Skeleton files for the CDF format are very important
- Use Dougs data description Excel setup for each mission
- Proper documentation of the data is key to later use by other groups
- SIOS should link to only the highest quality allsky camera systems at Svalbard
- SIOS will announce funding program for young scientists to take part in operations at Svalbard
    - Doug: Burchill could maybe use this opportunity if CSA funding to og to Ny-Ålesund fails

Craig:

- Keep raw files original
- Physical units are changeable

- Data descriptions: Each PI must coordinate their own mission
- Andres coordinate GCI over all, so all PI's send to him
- Craig share old rocket data descriptions by 1. August (needs nagging)
- UiO discuss with Øystein in SIOS

Doug:

- If someone uses data from SIOS base to create data products - are they obliged to enter those products into the SIOS base?
    - Andres will check
- Who coordinates EISCAT time (24 hrs in total for the US PI's)?
    - Jøran: Kjellmar handles this and should be contacted
    - Anja:
        - should talk to the UK, Jap and other EISCAT coordinators
        - 6 months cycles
- Who coordinates with Saito?
    - Jøran will do this

Milestones:

- **Monthly Skype meetings from late autumn (Oct, Nov etc) to coordinate data sharing actions**

Future steps:

- **Craig to provide a skeleton for the CDF files to all PI's**

Minutes by Kolbjørn Blix