On the call:
Gareth Funning (note taker)
Zhong Lu
Scott Baker
Meghan Miller
Eric Fielding
Matt Pritchard
Franz Meyer

Meeting called to order at 9.05 am PDT

1) Updates on recent activities:

- An AGU special session proposal was submitted, to be convened by Matt Pritchard, Franz Meyer, Scott Baker and Zhong Lu. We are waiting to hear back about this. A poster session scheduled on the Wednesday morning, as suggested by people last year, would enable more time for round table discussion at the Business meeting during lunch on Wednesday. We will see if there is enough interest from the community to support an oral session as well.

- Most of the EC members were at the ESA Living Planet Symposium in Prague a couple of weeks ago.
    - Zhong Lu gave the WInSAR presentation.
    - We met with ESA program managers Henri Laur and Wolfgang Lengert to discuss a change in access policy for WInSAR members. They agreed to allow distribution of ERS/Envisat archive data to Adjunct 2 members, in principle.
    - The ESA License Agreement can be 'signed' by clicking on a box on ESA's own sites – it should be straightforward to implement this on our own site, and it should be done, hopefully, by June 15.
    - We promised them a quarterly report on data access. Scott says that this can be implemented automatically… they do something similar for GAGE already.

2) The NGEO solicitation: request for community feedback

Meghan Miller: The Unavco board is seeking feedback on the capabilities needed for the facility, to be submitted by the end of the calendar year. Each different technique-based group (e.g. InSAR, LiDAR, GPS) are being asked separately. This will be a coordinated geophysical facility, and there will be funding allocated in two broad areas:

- 'Foundations' – maintaining existing facility capabilities. These will receive flat funding for 10 years, which will likely lead to some erosion of capabilities over time.
- 'Frontiers' – areas of expansion into new capabilities. There is $9M set aside for these per year, adding new value to the community going forward.

Each constituency within Unavco has been charged with coming up with responses to a set of questions [*GF notes: paraphrasing here, since I couldn't type them all quickly enough!*]

What are the essential existing capabilities of the facility that are required to do science?

The EC in our preliminary discussions suggested:

- The WInSAR data archive and multi-catalog searching tools (SSARA).
- Proposal management and PI SAR data sharing.
- The provision of training in InSAR processing and fundamentals.
- Distributing and sharing software tools for research (e.g. ISCE)
- Archiving processed data and issuing dois (e.g. the InSAR product archive)

What future, frontier directions could we foresee for the facility?

- Formal integration of InSAR into the PBO to get the full 3D deformation?
- Merging InSAR time series into the PBO?
- A facility that is not affiliated with a particular mission, that could develop tools for integrating these different mission data sets together (and with GPS). This could be a unique role for WInSAR/Unavco.
- Collocating active radio transponders with GPS stations to place InSAR in a reference frame (get absolute measurements!) It would also help with NISAR cal/val.
- Continuing to expand access to archive data via SSARA to data holdings worldwide (e.g. JERS, RADARSAT-1, and others), and advocating for open access for all.
- Producing a 'one-stop shop' for InSAR
- Online notification systems for data – you would look at the data online and subscribe to data sets, and as soon as the data arrive in the archive, you get an automatic notification (and hopefully an interferogram). As we move to automated processing of everything, maybe this wouldn't be burdensome to implement?
- 'Real time' deformation reports, similar to weather reports. Could this be of interest? Would it be possible?

Are there any synergies with other organizations?

- ASF is going to be the DAAC for NISAR, and they plan to host online processing. But where would processed data go? WInSAR could be an avenue for that through the existing product archive.
    - Can NSF/Unavco be involved in those plans? NSF has indicated a willingness to help to fund a data management system. ASF is interested in heading in that direction.
    - Perhaps we could organize an InSAR workshop at Unavco to discuss these issues… comparison with ESA's online exploitation platforms, etc. Maybe in the fall of this year?
    - NASA ESI-ROSES call… David Sandwell was thinking about putting in a proposal to that call for a workshop in early 2017… maybe we should be involved in this! It is almost 7 years since we had such a workshop!

    - Big data and cloud-based processing capability – for archive data as well as future data? We should contact David and ask him if he would be prepared to collaborate on this. A telecon to discuss these issues would also be a good idea? Franz and Scott should be involved in those discussions.
    - ESA has offered us access to their cloud-based exploitation platforms, which would be a useful point of comparison.
    - With many of the space agencies likely to implement such systems, we are going to have all of these parallel systems that we will need to learn – we should try and ensure that the frameworks are similar between the different agencies (e.g. similar workflows, similar algorithms or the means to add your own, similar APIs, similar interfaces?) Franz has already pointed that out to the ASF… but this could be another role for WInSAR as a user organization.
- The ARIA project (JPL/SAF). On-demand automated processing systems for ARIA (ASF) rely on these... and will likely be the backbone for the NISAR mission processing in future. ASF is currently running tests with Sentinel-1 as a proxy for this. Not just operational processing, but also on-demand processing will likely be offered.
- Synergies between InSAR and LiDAR (e.g. hi-res DEMs), e.g. though Open Topography?
    - DEM time series! There is a role for these, time stamped, so you could select the right DEM for your particular time period. Very useful for volcanoes, anthropogenic deformation…
    - Online processors should be developed to accommodate these DEMs… and also show you collocated optical imagery...
    - Formal collaboration with OpenTopography has been discussed within Unavco.
- SCEC Community Geodetic Model effort to make an integrated geodetic dataset for California. This could be a synergistic effort with integrating InSAR into the PBO, especially since the PBO people from MIT are participants in that effort.

The other questions, to ponder as part of the process:

What could be the broader impacts of the facility?

What metrics could we use to assess success?

3) WInSAR-sponsored summer training courses

We confirm there will be two courses: ‘WInSAR theory and practice’, held at Unavco in the 1st week of August; ‘GMTSAR’, held at Scripps in the 2nd week of August.

Instructors have agreed in principle. Paul Rosen might be a bit busy…

For the Unavco course:

The primary uncertainty that remains is how we are going to conduct training? Virtual machines? Enforce installation before they show up?

Beginning/basic InSAR instruction is in demand… most of the people who showed up last time were beginners. And that is the main 'customer' base. Installation is a major concern for such users, so we have to be carefult

Andy Hooper and David Baekart can both make it.

Is Matlab still going to be a requirement? Yes – it is needed for StaMPS and TRAIN. Student licenses are inexpensive, and many institutions have site licenses.

Are we going to require attendees to do their homework in advance? Or are we going to use virtual machines? The problem with the latter is the export restrictions on ISCE… they can't put it on 'unrestricted' cloud service at present. It is going to be difficult to get this set up in time, but maybe in the long-term we should look into it?

Zhong strongly favors the homework approach. Perhaps support from Unavco should be made contingent on completing the homework and installation before attending.

Should we arrange an instructor group telecon to hash out the plan? Or a group e-mail thread? Need to provide comprehensive installation help, and foolproof recipes if we are going to require it be installed...

4) The forthcoming WinSAR EC elections:

We no longer need a ⅔ quorum of voting member reps, according to the most recent version of the bylaws. But we should check through the list of members to see if people have moved/retired. Susanna should send out an official e-mail to check this as well…

Meeting adjourned at 10.05 PDT.