**Arizona MAP 2016 Annual Report**

**COMPRES Facilities Comments**

**Bin Chen**

The COMPRES Multi-Anvil Cell Assembly Development program supplies ~3500 standardized assemblies to users worldwide, as well as many special parts and truncated tungsten carbide cubes. The revenues in the past year is around $476K from the sells of the materials.

A new pressure gauge based on the (Ge,Si)O2 and cohesive diffusion pair has been developed in collaboration with researchers at Sandvik Hyperion. The gauge is supplied to users free of charge. This is most useful for new labs to establish the pressure calibrations up to 10 GPa at high T. The development of the electrical conductivity assembly also appears to be quite successful.

Kurt is active in the outreach activities to the COMPRES community, through workshops and one-to-one collaborations with researchers in the community. ASU is trying to acquire a Very Large Volume Press, while Kurt is willing to provide cell assembly help if Lisa Danielson is successful with the press acquisition.

The list of publications benefited from the cell assembly development is provided. There was a suggestion last year that a note on proper acknowledge to COMPRES on the cell assembly development need to included in the package to the users. I am not sure if Kurt has already done so. With thousands of cell assemblies supplied to users worldwide, the publication list may be longer if each published work acknowledges COMPRES for the assembly developments.

**Arianna Gleason**

Facility meeting needs of user community: Yes. Science Highlights are lacking or lean, but publication record and list of customers is very promising. Coordination with Chinese labs looks very promising. Beamline developments and planned activities seem very beneficial to COMPRES user community.

**Anne Pommier**

*-Science:*  A new pressure calibrant (SiO2-GeO2) and an electrical cell have been developed. *[I cannot comment on the latter – conflict of interest].* One can regret that the report lacks scientific highlights.

*-User community:*  0 request was turned down this year (from 33 users, 30 institutions). Glass making capabilities have been improved to provide SiO2-GeO2 to all users for free: the facility helps standardizing pressure calibration among the COMPRES community. The MAP helps the development of several HP labs in China. 2 undergrads have been hired and 4 grad students got involved this year.

*-Management team:* K. Leinenweber (1 month/ yr of COMPRES support), involved in research. Following the recommendation from last year’s Facility committee report, a list of 15 pubs citing the MAP project is presented.

*-Facility:* The facility works very well, answering all orders received for cell assemblies and making new developments. >$475k obtained from cell assemblies sales, providing leveraging while COMPRES funding keeps being used for cell development. Still trying to get a large-volume MA at ASU: what is the timeline? The facility is involved in the development of a setup for conducting experiments at 50GPa in the MA (together with Yanbin Wang). This will be a significant improvement for MA experiments, expanding the pressure range.

**Mark Rivers**

They are providing a large number of cell assemblies (3483) to the community, which is very impressive and demonstrates how useful this project is.

COMPRES has funded the carbide development part of this project for 2 years, but there is no report on progress on this testing, just discussion of plans for the future.

They do include some publications this year, but this must still be far from a complete list. I think they should break down the publications by category: those resulting from the development projects, and the science papers resulting from the cell assemblies they provide to users.

**Dan Shim**