**PX2 2016 Annual Report**

**COMPRES Facilities Comments**

**Bin Chen**

**Arianna Gleason**

Facility meeting needs of user community: Yes. Science Highlights on Earth sciences and materials research is excellent. Beamline developments and planned work is in excellent agreement with the user community needs. Again HPSTAR engagement/cooperation is very strong. The student and early career scientist involvement is reasonable. I agree with Anne that the current status of laser heating is not well addressed.

**Anne Pommier**

*-Science:* Clear scientific highlights underline new results relevant to Earth sciences, such as phase equilibria in the Fe-O-H system, and investigations of high-pressure phases possibly present in subduction zones (omphacite, pyroxenes). 6 pubs from PX^2 are listed in the report, answering concerns from last year’s Facility report about the lack of publications.

*-User community:* Capabilities are available under the APS GU Time for COMPRES. The subscription rate is low (1.25): what can be done to make the facility more visible in the community? 31 users from 15 institutions, new users are trained by D. Zhang. A broad user base has been developed in the COMPRES community, and COMPRES members get >77% of total beamtime granted.

*-Management team:* D. Zhang receives full COMPRES support and seems to benefit from professional development, as he is active in research and outreach activities. The budget expenditure (PX^2+COMPTECH) shows surprisingly low staff salary (?).

*-Facility:* It seems that the facility is progressing rather well. There was concern last year about the design of the single-sided laser heating system, and it is unclear whether or not the design works well. Last year’s Facility committee recommended to organize a hands-on workshop together with ALS 12.2.2, and this has not done. It is not even mentioned as part of planned activities (whereas the ALS report suggests it will be organize): will this workshop take place?

**Mark Rivers**

PX2 continues to progress quite well. They had 5 publications on high-pressure single-crystal diffraction, compared to 1 from ALS 12.2.2 which has been running single-crystal for longer. One is a high-profile Nature paper.

They received 45 beamtime requests, compared to 22 in 2015.

Last year we said the following:

COMPRES is now supporting two stations that do single crystal diffraction, ALS 12.2.2 and PX^2 at APS beamline 13-BM-C. It is important that these groups coordinate to avoid duplication of effort and to provide complementary capabilities where appropriate. Users should be able to process data from either facility with the same set of software. We recommend that each facility provide a hands-on workshop for user training. Staff from 12.2.2 should visit PX^2, and vice-versa, either as part of these workshops or separately.

This is not addressed at all in this report.

They did not mention the plans for laser heating, but they already have the laser and should have a plan for integrating it.

Dera is investing in the facility outside of COMPRES by stationing 2 students on year-long stays at the APS doing single-crystal studies.

Why has the fringe rate increased from <35% of all salaries (including Zhang’s) in previous year to 50.9% this year?

**Dan Shim**

While I read this proposal, it was hard to distinguish what exactly belong to this program and what exactly belong to COMPTECH. I found the development they made is exciting, but I found that not much difference has been made since the last year.