**APS Sector 3 2016 Annual Report**

**COMPRES Facilities Comments**

**Bin Chen**

The performance metrics of Sector 3 and 30 presented in the reports is outstanding. COMPRES users have received large share of the total available beamtime (~40%) and 14 COMPRES user groups have been allocated beamtime in the past year.

The beamline staff at Sector 3 and 30 have actively organized workshops and user trainings for the community. Dr. Bi also conducted her own research and actively developing high-pressure techniques for the COMPRES users. One PUP on "the low temperature and high-pressure NRIXS capability at sector 3" has sunset, which has reached its goals.

It is good to see that Sector 3 finally has a Raman system for users. The planned and ongoing technical developments are well tuned for the Earth science and high pressure community. Most of the developments and upgrades are supported by APS.

Wenli Bi's salary is low at her level. COMPRES only contributes 70% of her salary, with the rest by APS. A merit-based raise may be appropriate, considering the success of the program.

**Arianna Gleason**

Facility meeting needs of user community: Yes. Science Highlights on important core and mantle materials are very exciting. I’m impressed with the beamline development and planned activities. These all seem very well suited to the COMPRES community. I have a concern about the level of brand new user groups having access to these end-stations. Over the years there seems to be the same groups getting beamtime again and again. The science is excellent but looking for ways to broaden user groups at 3-ID might be good. Student and early career scientist involvement looks reasonable. Bi’s scientific portfolio is extensive, but is there a way he can take more ownership of a particular project.

**Anne Pommier**

*-Science:* Well-written highlights are provided on 4 selected Earth-related studies (velocity-density in inner core, core temperature, spin crossover in Mw, iron isotopic fractionation). Similar to last year’s Facility Committee report, it is still unclear how many pubs come from the use of the Mössbauer equipment. Metrics for Mössbauer are now provided: 18 groups (list of users), 30 samples analyzed (mail-in service)

*-User community:* GUP to COMPRES users and PUP with COMPRES (1 week/cycle used by 4 groups: this is a lot of groups in 1 week – is there a way to increase the number of weeks/cycle?). High acceptance rate for COMPRES proposals compared to general acceptance rate (70 and 47% vs. 30%). 25 grad students and 4 undergrads involved in experiments. 40% of the available time goes to COMPRES users.

*-Management team:* Professional development is provided to staff W. Bi, who is active in research (involved in pubs and proposals) while helping users, organizing the APS-COMPRES workshop, presenting results at the COMPRES meeting.

*-Facility:* The high-speed chopper is part of the “anticipated activities”: not operational? Last year’s committee report requested details about its usefulness, but this is still not addressed in this year’s report.

**Mark Rivers**

This report is well written, and they continue to make progress and have high-impact publications for a small project.

I have a concern about Wenli Bi’s salary, which appears to be about $70K/year, which is low compared to other COMPRES beamline scientists.

They have reported statistics for the offline Mossbauer system, which is what we asked them to do last year.

Now that they are running the offline Raman system from GSECARS it would be good if they reported some statistics for this as well. How many users, how much Raman vs ruby fluorescence, etc.

The fraction of users with NSF-EAR support is high, which is excellent for COMPRES.

**Dan Shim**

I found no additional comments after reading other comments. I like the fact that they have some users which are not from traditional high pressure mineral physics. They have some petrology users for their offline Mossbauer.