**APS Sector 3 2017 Annual Report**

**COMPRES Facilities Comments**

**Bin Chen**

The operation of this user facility is extremely successful in many aspects. The facility has provided support to many research groups from COMPRES affiliates, resulting in a great number of geoscience-related publications. COMPRES currently provides 60% of the salary for Wenli Bi, with the rest covered by APS. This is a very good investment of COMPRES resources. It has been raised in the past few reporting period that the salary for Dr. Bi is low, which is not much higher than the salary for a postdoc. Is there a mechanism from COMPRES for the promotion of beamline scientist with salary increase after certain years’ service?

I fully support the addition of the online Ruby system. The price seems to be a bit steep, but this is long-term investment and will make the high/low temperature experiments possible.

**Arianna Gleason**

-The facilities and demonstrated capabilities are a major asset to the COMPRES community. Scientific drivers include sound velocity measurements at extreme conditions enabling the synergy between mineral physics data and seismic observables.

-It seems like many of the same users over and over. It looks like Sector 3 is an excellent COMPRES investment but with a narrow user base. Would there be ways to help facilitate new user interest.

-partnership between COMPRES and the PIs looks steady and strong.

-I fully support the addition of an online ruby system. If the price could be minimize a bit that would be better, 60 k perhaps.

**Anne Pommier**

*-Science*: This facility keeps being very successful and offers unique capabilities that are used by the COMPRES community to address excellent Earth-science related scientific questions, as shown in the research highlights (works on lower mantle (ferropericlase, bridgmanite), core-mantle interactions). All pubs listed (p.8) are in Earth and planetary science journals.

*-User community:* 18 COMPRES groups (COMPRES users get good access to the facility), 23 students and 16 postdocs. 13 COMPRES groups have used the Mössbauer lab (mail-in service)

Improved time management between Sectors 3 and 30 has given more time for COMPRES users.

Following a comment on last year’s report, it is still not easy to see the statistics for each piece of equipment.

There is a good involvement of the facility in community activities (e.g., several workshops organized).

*-Management team:* One researcher (Bi) co-funded (60%) by COMPRES. Bi provided a detailed and well-written report, underlining a good involvement in research and in proposal writing, as well as in outreach activities. Compared to the number of projects Dr. Bi directly contributed to (24), the number of co-authored papers is pretty small.

There was a concern last year that Bi’s salary was small compared to COMPRES scientists (was $70k/yr). This year’s budget suggests it has increased ($79.5k/yr).

*-Facility:* A new monochromator (not paid by COMPRES) has significantly improved the experiments. Also, a new Mössbauer spectrometer has been acquired.

(Is the NRS experiment setup on 119Sn part of this facility’s development since it is located in Sector 30? It seems both are linked, but I do not know).

Plan for the next year to acquire a Raman system for in situ HP measurements is exciting and would allow new Earth science studies to be conducted in this facility (as pointed out by written statements from several users).

Budget: 75k required, 56k from COMPRES and matching funds from APS for 19k. Is this in agreement with what the facility submitted as part of COMPRES IV?

**Mark Rivers**

This facility continues to produce high-impact science and provide excellent leverage of COMPRES funds for a unique beamline in this country. The report is very well written in providing the information that we have requested, including on the offline Mossbauer and Raman labs.

In their budget they have reduced the requested support for Wenli Bi so that they could request capital equipment for an online Raman system. The justification for this was good, including supporting letters from their users.

**Dan Shim**

**They make a good case for the online ruby/Raman system.  It will enhance the productivity. They need to maintain stable alignment for their offline Raman system. Do they need to have two separate ruby systems? Can they reconfigure the offline system for the online measurements?**