**Carnegie IR 2016 Annual Report**

**COMPRES Facilities Comments**

**Bin Chen**

To bridge the gap between NSLS-I and II, an offline IR system has been setup and accept user proposals. Almost 30 user proposals have been allocated laboratory time. This partly reflects the user base of the upcoming IR beamline at NSLS-II. The temporary IR setup at 1.4.3 beeline of ALS seems to be a good solution for the "dark" period. The mail-in service appears to be quite successful.

Significant progress has been made in the commissioning of the IR beamline at NSLS-II. The report listed the planned activities with adequate funding from NSLS-II and clear time lines.

**Arianna Gleason**

Facility meeting needs of user community: Yes. Science Highlights on hybrid perovskites are exciting but very material science or applied physics focused. Planned activities and beamline developments are reasonable. It wasn’t clear what the breakdown is for student and early career scientist involvement is. Publication list is strong but not necessarily geophysically relevant studies – this isn’t bad but I wonder if these users are member of compres? Mail in service seems very successful.

**Anne Pommier**

A large part of the proposal is focused on *future* developments and the *future* budget: is this relevant to the annual report? The work done over the past year lacks emphasis/clarity (the report is hard to understand for me).

*-Science:* Scientific highlights are well-written and show new results on perovskite, structure of zeolite, molecular bonds, nanotubes. But most of the work is not related to Earth Sciences, and it seems that they still do a lot of non-Earth science work that is supported by COMPRES (as mentioned last year).

*-User community:* “Up to 50% of the AP beamline *could be* allocated to COMPRES users as needed”. One can regret the absence of outreach activities in the report (like advertising the facility). What is the oversubscription rate? I could not find a lot of metrics information.

*-Management team:* Last year’s Facility report mentioned COMPRES support for a staff. It is unclear to me if this person is still present at this facility (Liu and Hemley do not mention COMPRES support). It is unclear from this report how beamline scientist Z. Liu helps with COMPRES activities. Last year’s report also recommended strongly to have a detailed quarterly work plan for Z. Liu, but it is unclear if this has been done.

*-Facility:* The FIS/MET system is not operational yet and it is not planned to be accessible for use before Spring 2017. An off-line IR lab has been established (since 05/2016) to bridge the gap between NSLS and NSLS-II and permits operations, as shown by the list of pubs that use this equipment. Following the Committee’s suggestion, a mail-in service has been established (since 01/2016). Last year’s Facility report mentioned the absence of an operational BNL PASS system (that would allow COMPRES users to get BNL badges), but this system is not in this year’s annual report: has it been canceled?

**Mark Rivers**

The offline lab at NSLS-II appears to be up and running now. The user base and science output are well documented.

There is very little information about the program at the ALS. Last year we said:

ALS may have a new IR beamline with a large dipole magnet opening angle, which would permit operations into the far IR. Liu proposes temporarily moving the new Vertex spectrometer there if that beamline is available much sooner than FIS. We support exploring this possibility.

Advertise the ALS 1.4 capabilities once it is officially running.

There is no update on these items.

The NSLS-II has issued the purchase orders for the FIS/MET experimental stations, and for the IR extraction port on the storage ring. These are both very welcome, and provide reason to hope that there will indeed be IR beam at NSLS-II in 2018, 4 years after the shutdown of NSLS.

What is the timing of the new post-doc position for this project? Is that in Year 1 or 2 of the COMPRES renewal proposal?

**Dan Shim**

* My group found that the XRD+IR combination that ALS can offer is really helpful for users to conduct unique experiments.
* However, the beamline scientists at 1.4.4 were unsure about retention of the system installed there after NSLS-II. They reported impression that the system will return to the east coast eventually.
* The IR system installed there works fine but appears to be installed temporarily. The system is install on a thin aluminum breadboard which is very unstable. With small investment the system would be much more stable and user friendly.
* I found the travel budget of 6k sounds too much for COMPRES support for the activity they suggest.