**Stony Brook MAP 2017 Annual Report**

**COMPRES Facilities Comments**

**Bin Chen**

It is good to see the timeline for the XPD-D development activities, which assures us the project is moving forward. In the past few reporting periods, there were concerns on the slow progress of the XPD development.

Due to the uncertainty for the fate of the 6-BM-B, Haiyan Chen, I believe, must have been under extreme pressure on the stability of her position as a beamline scientist. My impression is that it is mostly Chen who is supporting the users to 6-BM-B. I hope things can be improved on the professional development for Haiyan.

It is great to see that most of the publications are Earth science related.

**Arianna Gleason**

-Certainly meeting the needs of the user base – despite a number of setbacks.

-Looks to be a strong user base – could be a bit more diverse.

-Management team and approach is excellent.

-I don’t see how Chen has any opportunity for professional development given the break down in time allocation to various duties – maybe this can be improved.

-Very detailed description of what went on in 2016/2017 – seems like there was some difficulties in dealing with BNL so it’s unclear how supportive the host facility really is.

**Anne Pommier**

*-Science*: Very interesting science highlights (in appendix) from a few different groups.

However, 2016 publications should not be listed as they should be part of last year’s report (it seems this was also an issue last year).

6 pubs in 2017, most of them in Earth science journals.

*-User community:* There seems to be a good access to the 6-BM-B facility for COMPRES users, though I worry a bit about the diversity of the crowd: it seems that it is a pretty small group of people that uses the facility (from the names listed in the tables). Is this facility sufficiently advertised?

Good involvement of student users (18 at 6-BM-B + XPD-D)

It is good to see that about 88% of the proposals at 6-BM-B are Earth science related.

The tables are very confusing (a few summary tables would be much better than the 12 tables of the Excel file).

XPD-D: only 1 proposal received. Need for a Partner User Agreement with COMPRES (ongoing process).

The list of community activities is long but some items seem out of place (for instance, how is this facility benefitting the community when PI Whitaker becomes a General User at APS 11-ID-B? This seems a community activity for the PI, not the facility).

*-Management team:* COMPRES support at 100% for Chen and Whitaker, 25% for Huebsch.

The involvement of Chen as part of publications is still meager (2+1 abstract) though she assisted a lot of users. It is reported this year that she got involved in proposal writing (2 GUPs).

(Personal report from Whitaker not available at that time).

*-Facility:* It is good to see that the PIs followed the Committee’s recommendation by highlighting the timeline for each planned activity.

The development for the past year focuses (in detail) mostly on XPD-D (not 6-BM-B). The feeling from last year was that progress on XPD was quite slow and way behind schedule, and it seems that efforts were spent this year to improve the situation (though I cannot evaluate that in detail).

The DT25 instrument would definitely offer the possibility to conduct exciting research. There was concern last year regarding the use of a monochromatic beam: I cannot understand from this year’s report how this has been fixed (assuming it has).

Planned development and timeline for 6-BM-B focuses on software+hardware upgrade: is this enough?

Budget: it is clearly written that potential unanticipated failures won’t be covered as all the funding was spent; this is a bit concerning and sounds like poor management. Is there no plan at all to fix these failures in case they happen?

**Mark Rivers**

Focusing the beam with the mirror at XPD has increased flux for diffraction, but the vertical field of view is too small for imaging. They propose to overfocus, so the beam has increased in size at the sample position. This probably will not work. At GSECARS the mirror can be bent the “wrong” way, i.e. into a convex shape rather than concave, so demagnifies and directly increases the beam size. Is this possible at XPD?

The first science commissioning experiment was scheduled for 12/02-12/04/2017. It would be good to know how it went.

The projects they describe are scientifically interesting and important.

The publication numbers are low for 2017. Only 4 in print. It will take ~2 years before first XPD publications are likely to appear.

The statistics in the report should be compiled into the main document rather than being sheets in a spreadsheet. This is hard for the committee to view and print.

I believe COMPRES needs to think hard about the multi-anvil support going forward. Should NSF-EAR be funding 4 multi-anvil beamlines (13-ID-D, 13-BM-D, 6-BM-A, XPD)? Could they be consolidated to use the best source and maximize beam time? The new module being developed for XPD would work better at 13-ID-D in that 1000 ton press, since it has a monochromatic undulator beam, not a wiggler. And it could get more than 10% of beam time. 6-BM-A and 13-BM-D could be combined to take advantage of good mirror focusing and perhaps a 100% dedicated station.

There is no beamline report from Matt Whittaker due to an injury he suffered recently. However, the facility report itself has a fair amount of detail on his activities, whereas Haiyan’s are in a separate report.

**Dan Shim**

* **This report is well written and highlights their technical achievements at 6BM very well.**
* **The plan for transition from 6BM to NSLS is not clear in this document. Also, future plan is not clear for me.**