

Minutes from GrEAT Network call- 12th September 2018

Telecon Agenda

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| <p>1) Summary and discussion from BNU meeting
-please upload your presentation using:
https://owncloud.gla.ac.uk/cloud/s/4LQaKrs45KQm5gS
-Notes from meeting are here:
https://owncloud.gla.ac.uk/cloud/s/IMss0B6apLyHNcy
To access above links, you need this: BNU2018</p> <p>2) Next steps for Work Packages
-how will Work Packages organise themselves?</p> | <p>3) Plans for coming meetings/telecons
-monthly telecons for Work Package leads to report activities</p> <p>4) Possible new network members
-Portsmouth (Andy Lundgren, Laura Nuttall, Ian, Harry)
-Wuhan University (Zong-Hong Zhu)
-Shanghai Astronomical Observatory (Wenbiao Han)</p> |
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Siong: Firstly. Thank you to Prof Zong Hong Zhu for hosting us at BNU.

Please those that gave talks upload your talks:

<https://owncloud.gla.ac.uk/cloud/s/4LQaKrs45KQm5gS>

You need this: BNU2018

1) Summary and discussion from BNU meeting -please upload your presentation using:
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So all presentations can be collected and be made public and will be on the website for the BNU meeting. You can also have a look at the talks uploaded already. At the end of the meeting we had a debrief discussion to summarize the points of the meeting link:

This link should also take you to a PDF with a set of slides with the notes.

The slides goes through each of the WP and summarizes the action points from each.

2) Next steps for Work Packages -how will Work Packages organize themselves?

WP1 Ec growth and innovation, one thing to note is that there are leads associated with each package and these should be added to the website in the future. The first thing to do is to create a database of expertise in the great network that we would like to discuss Eco growth and innovation with China and so forth. We want to know what technologies are available and the logistics of this are being set up.

Des: The first step is to gather capability for commercialisation also getting people to sign up in the wiki.

Mariela: We are going to make the wiki accessible for each member within the next couple of days, if anyone else should be added please email so we can add them.

Des: Once we have the database stablish we could stablish separate workshops and identify the different themes.

Siong: Any questions for WP1? Moving on to WP2. Martin sent a comprehensive email with a summery of things at his end. A lot of the outreach will be through the Planetarium as a first step and we will work with them to create mobile exhibits. A lot of detail from Martin's email:

“A brief update on the EPO work package, from my perspective.

I had a very useful visit to Beijing Planetarium on Friday 1st September, following Jin Ma's excellent presentation on Thu 30th August.

Beijing Planetarium attracts about 1 million visitors per year. They run "summer camp" astronomy activities for

young people during the summer and a teacher training workshop in September. I think it is realistic to plan to include GW elements in the summer camp and teacher training workshop in 2019. Our target audience would probably be secondary-age students, i.e. teenagers, although clearly lots of the visitors to the Planetarium are much younger.

I believe there are good opportunities to augment some of the existing exhibit materials at the Planetarium, which already describe gravitational lensing and cosmology at quite a high level (but also involve fun and visually impressive interactive displays).

I attended a presentation in the main planetarium dome and it was impressive. There is a full-dome presentation on cosmology currently being planned, so I think a realistic target (given the long timescale and high cost of creating a completely new multimedia presentation) is to aim to get some references and brief content about GW astronomy into the cosmology show.

There is also a temporary exhibition space (currently housing an exhibit on space weather) and I discussed with Jin Ma and the Planetarium Director (who has a background and PhD in EM follow-up of GRBs, so understands our field well) a possible exhibit to be displayed at some point next year. We didn't get into specifics of content, or who would design, or costs, but I plan to try begin those discussions within the next ~month, with Zong-Hong's help.

We agreed that any such exhibition should focus on the entire GW spectrum and make appropriate links to Chinese projects and expertise - particularly in relation to a space-based detector and linking to FAST, and possibly the CMBR polarisation experiment in Tibet.

We also discussed pathways to "scale up" and extend such an exhibition and take it to other regions of China. While that might be a follow-on goal (i.e. we may not have time to do this within the timescale of the current STFC grant) it was encouraging to learn about the various committees and organisations into which Beijing Planetarium is connected, including the Chinese Astronomical Society and Association of Science Centres. So I think that working with Beijing Planetarium in the first instance will give us a very good platform upon which to build."

Patrick: We should have some exiting events with O3 so it would be worth having some materials for that.

Siong: You should get in contact with Martin.

Ed: Checking if I am one of the leads in this package. Do people see this as education to the public or to students? Trying to get a feel how much is expected.

Siong: Education is a very broad definition, outreach is being focused on the planetarium because is a good vehicle.

Ed: Important to thing about to whether and to what extent China needs to encourage younger students at Uni level to GW sciences, and it would be good to know how we can help.

Zong: At university level we have general physics experiments.

Ed: Happy to work with you and others. Should get in touch so we can all work together.

Siong: One of the points is to look into GW experiments to place in undergrad labs and such.

Ed: It might be good to also have experiments where we can do mapping of impurities in optics and they are probably amiable to tabletop versions, surveying and characterization experiments might be useful outside the GW field such as industry so it might be a good idea to investigate that further.

Siong: Before moving to WP3 is to contact WP2 aXXX and he will give a presentation on how his work can be used for GW. WP3 leads are Nils, XXX. There were two main themes discussed, the modeling and I think one of the key things was to identify the persons of interest with GW modelling in both China and UK and have a directed telecon to this. So there will be an email related to this very soon. The other point was that given the analysis of

both ground and space, the other theme raised was multi-band and multi-detector analysis. Taken as a very broad idea. If we look at time lines there's could be two space detectors running at the same time and multiple ground detectors. Multi-detector analysis needs to be explored and look at the overlaps with WP1 as machine learning and modelling that could be applicable to WP3.

Junewi- couple of comments from WP3, very important to identify each person skills on field. We also need to hire some interested students and potential advisers in the UK and maybe specific data analysis and research topics. And we should have this discussion by email.

Siong: To verify you are proposing to identify students and pair them with suitable host in either country.

Siong: WP4: Lead Stuart, Giles, In china there's move to establish a small experiment to train students. Such as locking instruments. They would like to send more students to the UK for training. Also some discussion between potential collaborations on change management, fiber pulling.

Baoqing: Siong, I have a comment on WP4, we have some experiments in the university and we had planned on setting up a 1m experiments and if its OK we

Siong: We should discuss this later on the new members. There are good aspects into adding new people but there's some admin issues that need discussed.

WP5 – space detectors both Tim and Alberto (who couldn't attend the call) points discusses where bonding for optical bench. Motion to see if we could work for longer terms collab between space China and UK. Any questions or comments?

Siong: That's more or less the collab research. Last package is WP6. Mariela will give access to all the members in the Wiki. (update: *Wiki should be accessible to everyone this week*)

3) Plans for coming meetings/telecons

Siong: We will be having monthly telecons for Work Package, leading to report activities.

4) Possible new network members

In addition there are also an opportunity to add new members as we need to sign a new collab agreement so we have the opportunity now. It would be good to still keep it compact. We should include all this people and maybe have a system of network friends/ external collab who engage in the science but maybe no need to be part of other parts of the collab. Since not everyone is on the call I will send to emails, one on the WP to make sure there are discussion and a separate email about new members and organizing new members.

End of the formal agenda, are there any other comments or anything that would like to be said. Thank you for attending, the next call will be in a month