LIGO India Call

19th December 2019, 11:30-12:30 UK (17:00-18:00 IST)

1) Purchasing of components for Indian based projects.
   This call was focused on proposals for Indian based projects and where to spend funds before March with commitments before late January. Suresh conducted an international workshop and asked professors there for some ideas. IUCAA assures that there is space for LIGO tech. Suresh sent over a budget proposal for three WP that can be tackled together or separately as they are all self-contained.

Giles: With the document ready we can begin to talk through it.

1st Package:
Suresh: The first is a suspension damping control package and progress has been made already. HAMEAux design makes it easier for remote colleges to machine. It has in air suspension, take out vacuum components and a mathematical model with software controlled electronics. A student licence is available for control software and the costs comes to **4k in total.**

Giles: 4 or 5 could be built at 4k each, digit control system can be precured quickly.

Suresh: We can fabricate as a bulk order and save some money otherwise can give them design to machine parts in house.
Sanjit: concerns about machine costs, around 500 pounds for this
Giles: Could do 6 machines at 4k each as an upper limit, easy for us to buy digital components, the question is if we wanted to make multiple systems what's the timeline for manufacturing in India?.
Suresh: Can be made in one month.
Giles: For funding use internal India funds and reroute funds to LIGO India.
Suresh: Rotate a purchase order.
Giles: How much should be ordered?
Suresh: Go for 6 as they tend to work in twos.
Giles: Can you send the specs for the electronics?
Suresh: Yes, within a week.
Sanjit: What about the laser, how much? We have been in talks for a reasonable price
Giles: Make it under 10k

Giles: We should aim to spend the funds available to us, what is required from India is very little but we may need IUCAA to supply funds for machining of suspension but then be reimbursed by LIGO India.

2nd Package:
Suresh: The idea is to coach people how to tune the laser and the target is undergrad students. Scheme is to have tuneable laser in visible region one. Integrated optics have a laser for about 4100 dollars, helium neon 633nm. Optics that go with it can be purchased locally much cheaper but uncertain on quality.

Giles: What is the timeline of lasers? They are in production but not in stock need to request delivery time, we should push stabilisation from Ed and get it sent to India. How many lasers do you need?
Suresh: No prior experience with them so start at 2 to test, the optics we can get from suppliers we know. Three systems in total does that sound OK?
This would come to 14k. We have to make a couple of orders from national instruments, to skip fund regulations. Follow up with Ed to get laser stabilisation to see what there is there.

3rd:
The third package is a seismic isolation project. WP 1 and 2 can go on top of the 3rd one. Requires seismic sensors, 6 or 12 l4c sensors, quoted for 1k dollars.
Giles: Initial thought is that it is a bit more tangential to LIGO isolation but if it is a general thing and using LIGO sensors then that is a benefit. Direct focus on the control system rather than isolator, one system is a good starting point. Should we also get broadband seismometer? It is roughly 6k pounds for recent one. A set of 4 to hold appropriate weights. We should get the specs then think about an order.

Giles: Anything else we missed to buy? I was wondering to get LIGO in your hands setups to use right away for control systems, this can be looked into that by talking to Borja. It is 5K and expensive on shipping, getting one is easy but getting multiple is hard.

Should another LIGO in your hands be made? Get quotes and add up the value to make sure it fits to budget. Purchasing to start early January and to get quotes over the break. India to handle fabrication of suspension then UK will transfer the money in February after India purchases in January. Start to look at data acquisition and optical mechanics. Identify how to ship safely. Agreed to do shopping list of the budget.

Visits:
A poster winner wants to come over to UK after March. Flights can be purchased before-hand and accommodation later from the new grant. Any travels even if happening in summer can we purchase flights before March?

During finesse workshop, the winning team gets a two week internship LSC related institutions. There should be money available to book travel in the current budget before March. If anyone needs to go to India you can contact Jordan/Mariela.

AOB?
Stuart: Q-measurement system is packaged and about to be weighed for shipment. Follow up on this with Karthik and Jordan.

Great talking to you as usual, we will follow up with Suresh and start getting those placed, thanks all happy holidays.