From: ht ht@riken.jp Subject: Re: Fwd: MOU Date: 13 Mar 2015 06:46

To: Giulio Saracino saracino@na.infn.it

Cc: ht ht@riken.jp, Strolin Paolo strolin@na.infn.it, ht@eri.u-tokyo.ac.jp

Dear Giulio,

Here are my comments.

- There seems no description of payment of disassembling, mounting and transporting of the ERI telescope, which will cost 30-50k euros. We probably did not discuss this matter in Tokyo?
- "ERI will collaborate to the development of a second generation of INFN detectors, contributing to their construction and providing funding for detectors to be operated in Japan."

This statement must be clarified because ERI cannot contribute funding for detectors to be operated in Japan if we do not have money.

It is better to add some note somewhat like "based on the acquirement of external funds in Japan"

I think

http://www.jsps.go.jp/english/e-c2c/index.html

is appropriate for this.

- "In case of a Prompt action these telescopes will be installed in Japan immediately after testing, without any minimum time of data taking at the Vesuvius." sounds controversial against "3.2 After its validation the INFN detector will acquire data at the Vesuvius for at least 1 year. If during this period a PROMPT ACTION is required, only the ERI detector will be transported in Japan."

Sincerely, Hiroyuki

On Thu, 12 Mar 2015 17:06:18 +0100 Giulio Saracino <saracino@na.infn.it> wrote:

Dear Hiroyuki,

Paolo told me that perhaps we had some problems in the e-mail exchange.

As you can see below, the last mail I have received from you was dated 22 jan 2015 and I answered to you the 5 Feb 2015. Maybe you didn't received this last mail or you received but your answer was not received by me. I don't know what happened exactly.

Please, if you sent me an e-mail after the 5 Feb, re-send it again because I did not received it. If you did not received my e-mail of the 5 Feb, you can read it now....

Sincerely Giulio

Begin forwarded message:

From: Giulio Saracino <saracino@na.infn.it>

Subject: MOU

Date: 5 Feb 2015 10:59:55 GMT+1

To: ht <ht@riken.jp>

Cc: Giulio Saracino saracino@na.infn.it, Strolin Paolo strolin@na.infn.it, Giovanni Macedonio macedonio@ov.ingv.it, "Raffaello D'Alessandro" candi@fi.infn.it

Dear Hiroyuki

First of all I apologise for the long time I have taken to answer you. We had our collaboration meeting, where we discussed about the MOU, but then I had a flu that stopped me for one week.

Let me also thank you for the support of WLS fibers, we appreciated it.

Returning to the question of the MOU, in attachment there is a very preliminary document that we elaborated on the base of the discussions we had in Tokyo. We hope this document could be a starting point toward a definition of a collaboration between our institutes.

Please let us know your opinion.

I also will be honoured to invite you at the University of Naples for a seminar and for spending some time trying to finalise the MOU, once that the document will be more mature. Let me know if you think to have some available time to spend here in the next future.

My best regards Giulio

On 22 Jan 2015, at 08:24, ht <ht@riken.jp> wrote:

Dear Giulio,

I have ordered a 1-mm^phi BCF92MC (multi clad) Saint-Gobain WLS fiber. The length is 400 m. It will be sent to us in one month. Then I will send it to you.

I am excited to collaborate with the MURAVES group and also to see a new type of muography telescope with a new concept in the near future.

Please let me know a list of collaborators in your mind.

Sincerely, Hiroyuki

On Thu, 15 Jan 2015 10:43:54 +0100 Giulio Saracino <saracino@na.infn.it> wrote:

Dear Hiroyuki

I really appreciate your proposal of support, I will take it in consideration. Actually we use 1 mm fibers, facing a 1.3x1.3 mm^2 MPPC. The use of a 1.5 mm fiber probably can introduce some inefficiency in the light collection, since a remarkable part of light in the fiber is transported in the outer part of the fiber. More over, for the time of flight measurement, we use BCF92 Saint-Gobain fiber, that are fast emitting (2.2 ns) WLS fiber. I need some time to understand if the 1.5 mm fiber can be used without introducing inefficiency, and if they are fast emitting. Concerning the list of collaborators of the MURAVES project, you can find it a pag. 20 and 21 of the proposal, that I attached in the mail.

Let me take the opportunity of this mail to up-date you on the MOU. Next Thursday we will have a collaboration meeting, where we will discuss also of the draft document that we want to propose to you. We have some delay in this editing since a lot of activities are overlapping in this period, including the Christmas holidays...so I apologize for this long pause. I will inform you as soon we will make some improvement in the MOU proposal.

Thank you again for your proposition of support of MURAVES Sincerely Giulio