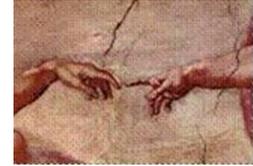




ASPERA Common Call

ET R&D

Networking and R&D for the Einstein Telescope



Meeting Minutes

WP1	WP2	WP3	WP4	MC	GM	Other
					X	

Title of the Meeting:	Third general meeting, Telecon,
hyperlink:	
Date:	21/06/2013
Location (or phone)	phone

Participants

01	Harald Lück (author of the notes)	02	Andreas Freise
03	Sergey Vyatchanin	04	Stuart Reid
05	Iain Martin	06	Tomasz Bulik
07	Istvan Rasz	08	Valentin Rudenko
09	Jerome Degallaix	10	Stuart Reid
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Agenda

- 1) General Project Status
- 2) status of the working groups
- 3) Conferences and Meetings
- 4) AOB

1) General Project Status

Progress with the signing of the MUO is slow. Harald Lück only got feedback from Hungary and Glasgow. The Glasgow administration asked for some amendments and pointed out that there are two different definitions of the management committee in the MOU draft, i.e. in one occasion that 1 representative per party is included in the Management Committee and in the other case that it is one representative per country.

In this teleconference we agreed that the favourable arrangement will be one representative per country + the working group chairs + the project coordinator + a deputy project coordinator.

Hence the initial composition of the MC (to be confirmed or changed in the first session of the MC once the MOU has been signed) will be:

Project Coordinator: Harald Lück

Deputy Coordinator: TBD

Working group chairs: Sathyaprakash, Jo v.d. Brand, Ronny Nawrodt, Andreas Freise

Country representatives:

- Netherland (TBD)
- Germany (TBD)
- UK (TBD, likely a representative from Uni Glasgow)
- Poland (Thomasz Bulik)
- Russia (Valentin Rudenko)
- Italy (TBD)
- France (TBD)

To avoid too strong imbalances Harald suggests defining a maximum of one representative per party, which would mean that Netherlands and Germany do not get an additional country representative and "TBD" would be obsolete in those cases. So far it is not in the MOU, but Harald suggests including countries with associated parties as non-voting members of the MC.

Thomasz Bulik, Valentin Rudenko and the UK representatives present in this teleconference agreed to the proposal of having one representative per country.

2) status of the individual working groups

Working group 1:

There was no representative from working group 1 present in this telecon. Hence we postpone the report on progress in this working group to the next telecon.

Working group 2:

The working group leader Jo van den Brand was not present in this call, so there is no update from the Dutch side.

Valentin Rudenko, being connected from the Baksan Neutrino Observatory, reported that the situation at Baksan and plans for experiments is being studied right now. It was initially assumed that the Nikhef group would provide measurement equipment. Valentin also contacted Fulvio Ricci to discuss the availability of measurement equipment in Italy. Seismic measurement equipment has been installed in the mine in Sardinia. Valentin reported that Fulvio agreed to try to find equipment for the Baksan experiments. Valentin reported that in the meantime the experimenters at the Baksan mine have found to have sufficient experimental equipment to perform the measurements. Data taking will start soon and last to the end of the project. First results will be presented in the report at the end of this year.

Working group 3:

Due to flooding problems in Jena after a heavy thunderstorm Ronny could not be present in this telecon.

In a preceding e-mail he reported that the Silicon sample that had been sent from Hannover to Jena has been brought back to Hannover and first birefringence measurements will start soon. In Jena work on investigating material parameters has been started. There silicon wafers have been cut into pieces and the

lateral electric conductivity has been measured. The distribution of electric conductivity is taken as an indication for the homogeneity of dopants and impurities.

At Glasgow University absorption measurements are going on. The experimental equipment for the polarisation measurements is being bought. Experiments will start within the next month.

At the University of the West of Scotland the influence of different doping concentrations in silicon on optical absorption will be measured. Next week an e-beam evaporated coating will be brought onto one of the samples. Detailed work plans will be elaborated soon.

At LMA detailed plans for future and coordination with the other partners in WG3 will also be made soon. Experimental investigations of n-type silicon have been made. A p-type Silicon sample has been bought. From theoretical considerations it is not expected that n-type silicon and p-type silicon will show the same behaviour. This will be tested soon. In a cryogenic experiment the dependence of the optical absorption as a function of temperature has been measured. In a next step the mechanical loss angle of the coating as a function of temperature will be investigated. ITM (injection test mass) and ETM (end test mass) like coatings, having different numbers of layers, will be produced to check the influence of the number of layers on the mechanical losses. In addition to float zone silicon also high resistivity Czochralsky silicon samples will be investigated.

Working group 4:

Andrea Freise reported that the second meeting of working group 4 had been held.

Birmingham is still in the process of hiring the working group 4 project student. The software package Finesse has passed a major milestone in reaching Version 1.0 and Andreas promised at the GWADW meeting that radiation pressure will be implemented in the Finesse codewithin one year.

Birmingham plans to do some experimental tests of noise cancellation. In a first stage some experiments with a seismometer array for seismic noise subtraction is being designed.

In continuation of the recently published Sagnac paper the Birmingham group will look into control signals for alternative topologies. The main work of the Birmingham group will be focused on the baseline ET design though.

Sergey Vyatchanin's group at MSU will investigate the effects of large detunings of the interferometer arm cavities and the possibilities of creating a stable optical spring based on the recent work of Sergey Tarabrin, including differential and common mode effects. In parallel some aspects of thermal noise calculations for ET and GEO600 will be studied.

Hannover is also presently in the state of hiring a Ph.D. project student for working group 4.

3) Conferences and Meetings

5th Einstein Telescope symposium:

The fifth Einstein Telescope symposium will be held on October 22 and 23rd in Hannover. Limited travel support will be available and will be granted on a first-come first-served basis, once the website with all necessary information and registration tools will be available. The meeting will focus on ET R&D topics but also include general ET issues.

Amaldi:

the following presentations from the ET R&D community will be given at the Amaldi conference:

LMA: cryogenic measurement of silicon; bulk and coating

Glasgow: coating loss measurements and optical absorption; silicon and others

Birmingham: presentation on the recent paper on Sagnac topologies by Wang et al.

Hannover: introductory talk for future generation session.

The next teleconference meeting will be held on July 26.