

From: [Jamie Shiers](#)
To: [Jamie Shiers](#)
Subject: FW: hep ssc - ESFRI projects
Date: Tuesday, November 03, 2009 10:45:31

From: Bob Jones
Sent: Friday, October 30, 2009 15:22
To: Jamie Shiers
Subject: RE: hep ssc budget

Hi Jamie,

Concerning ESFRI projects, here is some suggested text

S-LHC:

The Large Hadron Collider (LHC) at CERN, now starting, will be the energy frontier machine for the foreseeable future and it has the highest priority to fully exploit its physics potential. Depending on the nature of the discoveries made at the LHC, higher-statistics studies of these phenomena would naturally call for an increase in luminosity. This upgrade – referred to as Super-LHC – should increase the luminosity by a factor ten. Super-LHC features in the European Strategy Forum on Research Infrastructures (ESFRI) roadmap document [ref]. The HEP SSC will work with the team planning the Super-LHC to ensure their simulation models can be deployed on the EGI production grid infrastructure.

ILC:

The results of the LHC will be complemented with measurements at a future electron-positron linear collider. Such a linear collider will provide a unique scientific opportunity at the precision and energy frontiers. This programme can be carried out by the International Linear Collider (ILC) or, if multi-TeV energies are needed, by a novel design called the Compact Linear Collider (CLIC) which has the potential to deliver such energies. For essentially every new physics scenario involving particles in the linear collider energy range, detailed and very promising research programmes have been formulated which will require on detailed computer simulations of the machine and detectors. The HEP SSC will work with the ILC and CLIC teams to ensure their simulation software can be deployed on the EGI production grid infrastructure.

FAIR:

The HEP SSC team will also have similar interactions with the Facility for Antiproton and Ion Research (FAIR) which will soon become an international research centre in Darmstadt (Germany). Construction Facility for Antiproton and Ion Research (FAIR) has already started at GSI in Darmstadt. FAIR will provide high energy primary and

secondary beams of ions of highest intensity and quality, including an “antimatter beam” of antiprotons allowing forefront research in five different disciplines of physics. CERN will interact with the FAIR collaboration to exchange of knowledge and skills of the accelerator, detector and grid technology.

Cheers, Bob.