ADDENDUM 30
TO
COLLABORATION AGREEMENT K1577/AB

Between

The European Organization for Nuclear Research ("CERN"), an Intergovernmental Organization having its seat at Geneva, Switzerland, duly represented by its Director – General, Prof. Fabiola Gianotti,

And

The European Spallation Source ERIC (ESS), established at Lund, Sweden, duly represented by its Director – General, John Womersley,

Hereinafter "Party" and collectively "Parties".

CONSIDERING THAT:

The Parties have concluded Framework Collaboration Agreement K1577/AB (the "Agreement") establishing the framework for collaboration between them in areas of mutual interest, including but not limited to fundamental physics, information technologies and engineering;

Article 2.1 of the Agreement provides that each Party's contribution to a specific collaboration ("Project") and all related details shall be set out in an Addendum to the Agreement;

The Parties now wish to conclude Addendum 30 (the "Addendum"). The Addendum shall be subject to the provisions of the Agreement, it being understood that in case of divergence the provisions of this Addendum shall prevail;

AGREE AS FOLLOWS:

1.   Scope of the Project

The Parties will collaborate to develop, use, improve, and document reliability and availability tools and data in the field of particle accelerators ("Project"),

2.   Personnel of the Project

Technical co-ordinators:

ESS: Enric Bargalló,   e-mail: Enric.Bargallo@esss.se
CERN: Michael Jonker,   e-mail: Michael.Jonker@cern.ch
Or such successor as each Party may designate.

Contact persons:

ESS: Enric Bargalló,   e-mail: Enric.Bargallo@esss.se
CERN: Odei Rey Orozco   e-mail: odei.rey.orozco@cern.ch

3.   Project Work Plan: 3 Work Packages

3.1.   *WP1: Reliability and availability modelling tools*

ESS and CERN will work together to develop, improve, and document the AvailSim software and its future upgrades. The software will remain open source and be only used for non-commercial activities.

3.1.1.   ESS will govern the core development of the AvailSim software.

3.1.2.   CERN, in collaboration with ESS and other parties, will define a common implementation-neutral modelling language. CERN will develop a toolbox to create model translators that translate models specified in the implementation neutral format into an implementation specific format. All software related to the translator tools, under the governance of CERN, will be made available as open source. This part of the software will not be restricted to non-commercial use.

3.1.3.   Any auxiliary tools to evaluate and visualize the results of the AvailSim reliability and availability simulations will be made mutually available.

3.2.   *WP2: Reliability and availability modelling databases*

ESS and CERN will collaborate for storing and sharing reliability and availability data.

3.2.1.   Data used to model reliability and availability of the accelerators at ESS and CERN may be shared. This includes data extracted from operational experience, and may further include reliability data from other public sources.

3.2.2.   Data will be made available as is. Although both Parties strive to provide maximum data quality, there is no explicit or implicit guarantee as to the fitness of the data for application in a different context.

3.2.3.   ESS and CERN will share data in terms of machine performance, faults, maintenance activities, etc.

3.2.4.   In particular, CERN will make available the results of the 2017 LINAC-4 reliability run, together with the developed availability model.

3.3.   *WP3: Other areas*

This collaboration between CERN and ESS is further extended into the domain of training and/or workshops related to dependability studies. In particular, attendance to training and workshops at each institute will be open to participants from the other institute at equivalent conditions as the participants from the organizing institutes.

4.   Resource contributions

The Parties will provide, where justified, access to the computing resources needed to tests and exercise the contribution set out under Article 3. This access will be provided through dedicated computing user-accounts.
No other financial or infrastructure related resources need to be provided between the parties.

5.   Duration and Termination

5.1. This Addendum shall enter into force on the date of its signature by authorised representatives of the Parties.

5.2. Each Party shall have the right to terminate this Addendum at any time by giving the other Party two (2) months' prior written notice.

5.3. All data and tools delivered in the framework of this collaboration will remain available to both Parties after the termination of this Agreement.

IN WITNESS WHEREOF,

this Addendum has been executed in two (2) originals, of which the Parties have received one (1) each.

Subject to the continued validity of the Agreement, the Addendum shall remain in force for as long as necessary to give effect to the Parties' respective rights and obligations under the Addendum.

The Addendum may be amended by written agreement by the Parties.

Thus drawn up in two copies in the English language.

For the European Organization for Nuclear Research (CERN)

For European Spallation Source ERIC (ESS)

Date……………………2017

Date………..………..2017