

ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE (CERN)
EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN)

Addendum No. X KEXYZ/TE/HL-LHC

to

THE FRAMEWORK COLLABORATION AGREEMENT KN2358

between

**THE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH
(CERN)**

and

THE FACULTY OF PHYSICS OF UNIVERSITY OF BELGRADE ("FP-UB")

Concerning

**Collaboration in the design, manufacture and test of the Jacks for magnets, crab
cavities and absorbers in the framework of the High Luminosity LHC Project**

2019

The European Organization for Nuclear Research (“CERN”), an Intergovernmental Organization with its seat at Geneva, Switzerland, represented by its Director-General, Dr Fabiola Gianotti,

on the one hand,

and

The Faculty of Physics of the University of Belgrade (“FP-UB”), established in Belgrade, Serbia, represented by its Rector or Dean or xyz, Professor somebody,

on the other hand,

hereafter collectively referred to as the “Parties” and individually as the “Party”,

CONSIDERING THAT:

- The Framework Collaboration Agreement KN2358 (the “Agreement”) concluded between CERN and FP-UB (individually the “Party” and collectively the “Parties”) defining the framework applicable to collaboration between them in areas of mutual interest, including but not limited to the domains of particle and accelerator physics;
- FP-UB, which has extensive experience in working with CERN, has offered to collaborate with CERN in the design, manufacture and test of the Jacks for magnets, crab cavities and absorbers in the framework of the High Luminosity LHC Project, using its expertise for this purpose;
- This addendum (the “Addendum”) is concluded in application of Article 2.1 of the Agreement, which stipulates that its execution is subject to the conclusion of Addenda detailing, for each research project, the co-operation between the Parties in terms of objectives, programme, resources and deliverables, and any other aspect;

HAVE AGREED AS FOLLOWS:

Article 1
Scope

- 1.1 Under the terms of this addendum (the "Addendum"), the Parties shall collaborate in the design, manufacture and test of the Jaws for magnets, crab cavities and absorbers in the framework of the High Luminosity LHC Project (the "Project").
- 1.2 Except as agreed otherwise by the Parties, each Party shall bear the cost of its participation in the Project.
- 1.2 This Addendum defines the Project between the Parties and shall form an integral part of, and be subject to, the Agreement. In case of conflict between the terms of this Addendum and the terms of the Agreement, the terms of this Addendum shall prevail.

Article 2
Duration

Subject to the continued validity of the Agreement, this Addendum shall enter into force upon signature by the authorized representatives of the Parties and shall remain valid until 31 December 2024 (inclusive), or, failing completion of the Project by that date, on such later date as the Parties may agree. It is understood that this Addendum shall also cover any work relating to the Project executed by the Parties prior to the entry into force of this Addendum.

Article 3
Scope of the FP-UB's contribution

- 3.1 The work to be performed by FP-UB as its contribution to the Project is set out in the list given hereunder, and shall be defined in detail between the Parties before the start of each task.

FP-UB shall provide:

- a) A Quality Plan covering the activities included in this Addendum according to the HL-LHC Quality Plan (the “Quality Plan”):

<https://edms.cern.ch/document/1513591/2.0>.

- b) The engineering design, the component drawings, the assembly drawings and procedures for the construction of the Jacks, taking into account the motorization and control specifications supplied by CERN;
- c) A pre-production series of twenty (20) Jacks, as specified in Annex 1;
- d) A production series of one hundred fifty four (154) Jacks, as specified in Annex 1;
- e) The preassembly of the pre-production and production Jacks at FP-UB or in industry;
- f) The documentation relative to the full life cycle of the Jacks covered by this agreement as requested in the Quality Plan for review and acceptance, in accordance with the milestones defined in Annex 1. Such documentation and records shall be made available in either French or English; and
- g) All tooling agreed during the Steering Committee meetings to be delivered to CERN by FP-UB as necessary for the maintenance and repair at CERN of each Jack over the HL-LHC operational life.

3.2 Upon discussion between the Parties, once the Jacks for magnets, crab cavities and absorbers (the “Deliverables”) are delivered at CERN, it may be decided that FP-UB shall also contribute to the Project through experts for the installation of the Deliverables at CERN (the “FP-UB Experts”). During their stay at CERN, the FP-UB Experts shall be appointed as Associated Members of the Personnel pursuant to Article 4 of the Agreement. Subject to the FP-UB Experts’ continued employment by FP-UB, throughout their stay at CERN, CERN shall pay a subsistence allowance to the FP-UB Experts in accordance with, and subject to, the limitations set out in its Staff Rules and Regulations.

3.3 To the extent that FP-UB contracts with third parties in the execution of the Project, FP-UB shall:

- a) Inform CERN in due time of its selection of industry partners;
- b) Ensure that the provisions of its contracts with any industry partners are consistent with the provisions of this Addendum and the Agreement, including but not limited to the provisions dealing with intellectual property; and
- c) Inform CERN as to the terms of any contracts with its industry partners.

- 3.4 Where FP-UB considers that it would be necessary for experts who do not qualify for association with CERN as per Article 4 of the Agreement to come to the CERN site in the execution of the Project (as may in particular be the case for the employees of any industry partners referenced above), FP-UB shall so notify CERN three months ahead of the intended date of arrival of such experts at CERN. CERN shall facilitate the granting to such experts of a (non-personel) status that will allow FP-UB to execute its contribution effectively.

FP-UB's contribution is further detailed in Annex 1.

A more detailed agreement on the organisation of the shipment of the Deliverables and the associated formalities shall be established during the execution of the Project work, on the occasion of the first meeting of the Steering Committee.

Article 4 **CERN's contribution**

CERN shall be responsible for the overall co-ordination of the installation of the Deliverables at CERN's premises (LHC tunnel).

CERN shall contribute to the Project by providing:

- Office facilities, laboratories, equipment, materials and services on the CERN site as required for the execution of FP-UB's contribution;
- The functional specifications and conceptual design of the Deliverables, as summarized in Annex 1 of this Addendum;
- An interface specification, summarizing the interfaces with other relevant accelerator components;
- The technical specifications of the motorization and controls to be eventually integrated with the Deliverables;
- Sample of motors and control applications to allow the testing of the Deliverabl at FP-UB or in industry;
- Training on the application of the HL-LHC Quality Plan and on the tools for the management of the documents and records linked to the Deliverables.

CERN shall define the acceptance criteria for the production of the Deliverables, to be agreed by the Parties in the Steering Committee meetings. The acceptance criteria that CERN will apply will be based on four steps:

- Verification of conformity with requirements during production at FP-UB;
- Verification of conformity with requirements with pre-assembly at FP-UB;
- Verification of conformity with requirements upon final assembly at CERN; and
- Verification of safety conformity in accordance with Article 5, below.

Initial conformity to requirements will be analyzed during the Production Readiness Reviews (the “PRRs”). Production shall not start before the validation of the PRRs.

Article 5 Safety documentation

CERN shall provide the specific safety requirements that the Deliverables must comply with. FP-UB shall provide the safety documentation/certification as agreed with CERN to establish the conformity of the Deliverables with CERN’s safety rules.

Article 6 Acceptance procedure

The CERN Technical Coordinator shall grant acceptance of the Deliverables in two phases:

Phase 1:

FP-UB shall arrange for shipping of the Deliverables (and any related insurance) to CERN at its cost.

CERN shall approve shipment to CERN of each Deliverable, not later than one (1) month from approval of all documents and records linked to the lifecycle of the Deliverables including non-conformities.

Phase 2:

CERN shall grant final acceptance within six (6) months from the date of delivery to CERN, and following successful completion of acceptance tests at CERN.

After shipment to CERN, in the event of non-acceptance of a Deliverable, after shipment to CERN, because of a defect of the series production unit concerned, the Parties shall establish a protocol either for repairing such series production unit at the CERN premises by FP-UB Experts with support by CERN, or for returning such Deliverables to FP-UB for repair.

Non-conformities shall be treated according to the CERN Quality Plan.

The Deliverables shall eventually be integrated in the LHC and shall become CERN property upon the issuance of the final acceptance certificate.

FP-UB shall intervene and repair any possible hidden defect that is caused by the non-compliant execution of the quality procedures forming part of FP-UB's scope of delivery and that may be discovered within two (2) years from the acceptance.

Article 7 Organization and Coordination

Steering Committee

The Parties shall create a Steering Committee comprising of qualified representatives from each Party.

The Steering Committee shall monitor the execution of this Addendum. It shall ensure compliance with the requirements set out in Annex 1 and if necessary, and upon the Technical Coordinators' advice, it shall recommend solutions to the Parties in the event of execution problems, it being understood that this does not diminish the obligations of the Party responsible for the work concerned. The Steering Committee may also propose any modification to this Addendum, which it deems required in technical and financial matters.

The Steering Committee shall also act as a body enabling the Parties to resolve any differences or disputes.

The Steering Committee shall meet at least once a year, or more frequently upon the request of a Party, in the presence of FP-UB and CERN ad hoc representatives. Meetings may be conducted by electronic means.

Each Steering Committee representative may be assisted, in an advisory capacity only, by any specialist of his or her choice, including the Technical Coordinator referred to in Article 5.2 below, subject to prior written notification to the other Party.

The FP-UB representatives on the Steering Committee shall be:

XYZ – Rector/Dean of FP-UB
ZYX – Deputy

The CERN representatives on the Steering Committee shall be:

Frédéric Bordry – Director for Accelerators and Technology
Lucio Rossi – HL-LHC Project Leader

Each Party may nominate a successor/successors to the Steering Committee delegates identified above, subject to prior written notification to the other Party.

Technical Coordinators

For the purpose of the technical co-ordination of this Project, CERN's representative shall be:

- Vittorio Parma, TE-MS-CMI
e-mail: vittorio.parma@cern.ch

And FP-UB's representative shall be:

- xyz, FP-UB
e-mail: xy.z@ff.bg.ac.rs

or such successors as each Party may designate and communicate to the other Party.

The Technical Coordinators shall liaise with each other at regular intervals in order to define the detailed work packages and time schedules, to monitor the execution the execution of the Project and to ensure corrective actions in case any difficulty arises in the execution of a Party's contribution.

Article 8 Intellectual property

- 8.1 Any Deliverable (including in the form of intellectual property) provided by FP-UB under this Addendum shall be deemed to include a perpetual license for their free and unlimited use, including for their repair, reproduction, modification and replacement by CERN, or by any third party designated by CERN, within the scope of CERN's scientific program.
- 8.2 The documentation provided by FP-UB with each Deliverable and the information therein shall belong to CERN.
- 8.3 The provisions in this Article 8 shall apply in addition to the intellectual property provisions in Article 6 of the Agreement.

Article 9 Confidentiality

- 9.1 Except as expressly authorised by, and subject to any obligations under this Addendum, each Party agrees to keep confidential and not to disclose to any third party any information, document or other material which is designated as confidential or which should reasonably be understood to be confidential. Each Party shall limit the circle of recipients of such confidential information on a need-to-know basis and shall ensure that the recipients are aware of and comply with the obligations as defined in this Article.
- 9.2 The obligation of confidentiality applies in particular to the information contained in the documentation provided by FP-UB with each Deliverable.
- 9.3 Notwithstanding the above, no confidentiality obligation shall apply to such information, document or other material which:
- The receiving Party demonstrates was in the public domain prior to its communication by the disclosing Party;
 - Became part of the public domain after such communication but not through any fault of the receiving Party;
 - Has been lawfully received by the receiving Party from a third party without any confidentiality obligation; or
 - Has been developed by the receiving Party independently and outside the scope of this Agreement.

Article 10 Miscellaneous

- 10.1 FP-UB shall grant access to CERN personnel or third-party personnel mandated by CERN, and, where so required, subject to the establishment of non-disclosure agreements and with modalities to be agreed, to its own premises and to the premises of industrial partners involved in the execution of the work under this Addendum.
- 10.2 Subject to the continued validity of the Agreement, this Addendum shall remain in force for as long as necessary to give effect to the Parties' respective rights and obligations under this Addendum.
- 10.3 This Addendum may be amended by written agreement by the Parties.

Article 11 Governing law and dispute resolution

- 11.1 The terms of this Addendum shall be interpreted in accordance with their true meaning and effect and as a consequence of CERN's status as an Intergovernmental Organization, independently of national and local law. Provided that if and insofar as this Addendum does not expressly stipulate, or any of its terms is ambiguous or unclear, then in those circumstances only and not in respect of this Addendum as a whole, reference shall be made to Swiss substantive law.
- 11.2 The Parties shall settle any difference concerning this Addendum amicably. Where this is not possible, the Parties shall resort to arbitration in accordance with a procedure to be specified by the Parties. Notwithstanding reference of the dispute to arbitration, the Parties shall continue to perform their obligations under this Addendum.

Article 12 Termination

- 12.1 In the event of a substantial breach by FP-UB of its obligations under this Addendum, CERN may terminate this Addendum in whole or in part if no corrective action satisfactory to CERN is taken within two (2) months of the issue of a letter of notice by CERN to FP-UB. In the event of such termination by CERN, FP-UB shall reimburse CERN for all costs wholly and necessarily incurred by it as a result of such termination.
- 12.2 In the event of a substantial breach by CERN of its obligations under this Addendum, FP-UB may terminate this Addendum in whole or in part if no corrective action satisfactory to FP-UB is taken within two (2) months of the issue of a letter of notice by FP-UB. In the event of such termination by FP-UB, CERN shall reimburse FP-UB for all costs wholly and necessarily incurred by it as a result of such termination. The amount of such reimbursement shall not exceed the remaining amount payable by CERN to FP-UB as of the date of termination of this Addendum.

Article 13 Documentation

All documents concerning this Addendum shall bear the reference:

"Addendum No XYZ KEXYZ/TE/HL-LHC"

FP-UB shall send technical documents to:

CERN
For the attention of V. Parma – e-mail: vittorio.parma@cern.ch
CH-1211 Geneva, 23
Switzerland
FAX:

All documents to be sent to FP-UB shall be sent to:

XYZ

University of Belgrade

Faculty of Physics

12 Studentski trg.

11001 Belgrade

Republic of Serbia

Done in two (2) copies in the English language.

For the European Organization
for Nuclear Research (CERN)

For the Faculty of Physics of the
University of Belgrade (FP-UB)

.....

.....

Dr Fabiola Gianotti
Director-General

Professor xyz
Rector/Dean

Date2019

Date2019

Annex 1 Technical details

The detailed technical specifications for the construction of the Deliverables