

**AMENDMENT**

**to**

**ADDENDUM I**

**to**

**EXPERIMENTS PROTOCOL II**

**between**

**THE DEPARTMENT OF ENERGY  
OF THE UNITED STATES OF AMERICA (DOE)  
and**

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

**to**

**THE CO-OPERATION AGREEMENT**

**concerning**

**SCIENTIFIC AND TECHNICAL CO-OPERATION  
IN NUCLEAR AND PARTICLE PHYSICS**

**2023**

**Amendment to Addendum I to Experiments Protocol II  
for Participation by the U.S. Department of Energy  
in the High-Luminosity Large Hadron Collider  
ATLAS and CMS Detector Upgrades**

The Department of Energy of the United States of America ("DOE"),

and

The European Organization for Nuclear Research ("CERN"), an Intergovernmental Organization having its seat at Geneva, Switzerland,

(hereafter collectively referred to as "the Parties"):

**CONSIDERING:**

That the Parties continue to collaborate to their mutual benefit under the Co-Operation Agreement concerning Scientific and Technical Co-Operation in Nuclear and Particle Physics signed May 7, 2015 (hereinafter the "2015 Co-Operation Agreement"), Experiments Protocol II signed December 18, 2015 (hereinafter "Experiments Protocol II") for cooperation on the Large Hadron Collider (LHC) experiments' particle physics program and in the High-Luminosity (HL)-LHC ATLAS and CMS detector upgrades, and under Addendum I to Experiments Protocol II concerning Participation by DOE in the HL-LHC ATLAS and CMS Detector Upgrades signed April 28 and May 2, 2017 (hereinafter the "Addendum");

That the Parties mutually desire to update the framework of the total contributions by DOE to the HL-LHC ATLAS and CMS Detector Upgrades, as they are set out in the Addendum; and

That Article 7 of the Addendum provides that the Parties may amend the Addendum at any time by mutual written consent,

**HAVE AGREED AS FOLLOWS:**

## **Article 1**

### **Amendments**

- 1.1 Article 4.1 shall be deleted and replaced with the following text:

To enable the U.S. Participating Organizations to meet their responsibilities during design, research and development, prototyping and the construction phases of the HL-LHC ATLAS and CMS detector upgrades, DOE shall provide total funding, established following the standard DOE accounting practice, up to \$420,000,000 (which includes contingency). The DOE funding is intended to be split approximately equally between the two detectors. Funding for the HL-LHC ATLAS and CMS detector upgrades shall be subject to the availability of appropriated funds.

- 1.2 Article 4.3 shall be deleted and replaced with the following text:

The funds identified in Article 4.1 of this Addendum shall only be used for those U.S. responsibilities that are in accordance with Experiments Protocol II, Article 3 of this Addendum, and the associated MOUs or as communicated to CERN in writing via letter by DOE, including by the DOE-designated lead national laboratory on behalf of the U.S. Participating Organization for the respective HL-LHC ATLAS and CMS detector upgrades.

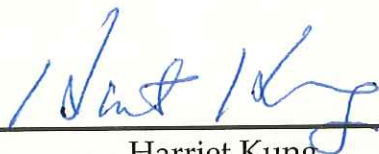
## **Article 2**

### **Final Provisions**

- 2.1 Except for the amendments described in Article 1 herein, all other provisions of the Addendum remain unchanged.
- 2.2 This Amendment shall enter into force upon signature of the last of the Parties to sign.

DONE at Geneva, Switzerland, in duplicate in the English language, on 4 October 2023.

**FOR THE DEPARTMENT  
OF ENERGY OF THE UNITED  
STATES OF AMERICA:**



---

Harriet Kung  
Deputy Director for  
Science Programs  
Office of Science

**FOR THE EUROPEAN  
ORGANIZATION FOR NUCLEAR  
RESEARCH:**



---

Fabiola Gianotti  
Director-General