ADDENDUM

to

THE MEMORANDUM OF UNDERSTANDING FOR A MULTI-LATERAL COLLABORATION

between

THE INSTITUTIONS AND FUNDING AGENCIES OF THE CTF3 COLLABORATION

concerning

THE CONTRIBUTION OF

THE CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, INSTITUT NATIONAL DE PHYSIQUE NUCLEAIRE ET DE PHYSIQUE DES PARTICULES (CNRS)

TO THE CTF3 COLLABORATION

April 2006

CONSIDERING:

The Memorandum of Understanding ("the MoU") defining the framework applicable to the construction of a 3rd generation Compact Linear Collider Test Facility (CTF3) and the performance of Experiments to demonstrate the feasibility of key issues of the CLIC scheme;

That Article 1.2 of the MoU envisages Addenda defining each contribution pledged to the CTF3 Collaboration,

THE CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, INSTITUT NATIONAL DE PHYSIQUE NUCLEAIRE ET DE PHYSIQUE DES PARTICULES (CNRS), in its capacity as Member of the CTF3 Collaboration, **HEREWITH AGREES** to make the following contributions:

Already provided until/inclusive 31 December 2004

The LAL Orsay laboratory is a member of the CTF3 collaboration since its beginning and contributed to the CTF3 project by providing two thermionic guns and pre-buncher cavities.

The manpower, made available by LAL Orsay from CNRS to the Collaboration is 15 man.years, valued at 2,25 MCHF.

The LURE Laboratory has agreed to provide 32 quadruples from the decommissioned SUPER-ACO ring as well as one prototype, representing a total value of 500 k€, among which the part of CNRS is 375 k€.

Design, procurement and commissioning of elements of the probe beam linac.

The manpower for these activities will amount to a total of 8 man*years for CNRS: 3 man.years from LAL, 5 man.years from LAPP.

The components will be shipped and mounted at CERN in 2007, after the completion of the CLEX building. The commissioning will start at the beginning of 2008.

The different sub-systems as well as the charges and responsibilities of each Party are defined hereunder.

Contribution from CNRS

Two CNRS laboratories will contribute to this new phase of CTF3 collaboration: LAL Orsay and LAPP Annecy.

1. LAL Orsay contribution: Photo-injector. Design and construction of the RF gun including a 2 and a half cell RF cavity with its girder, the focalisation solenoid with its power supply, horizontal and vertical steering coils mounted on the beam tubes, and the vacuum system. Computation of the beam dynamics within the gun will also be performed. The estimated material cost is 200 k€.

2. LAPP Annecy Contribution:
   - Development of the analogue read out electronics for the Beam Position Monitors for the Combiner Ring
   - Production monitoring, reception tests, and installation for the final boards
   - Conceptual design of a digital electronics to be installed very closely to the BPMs.
     - In the case this electronics is attractive for the project and accepted by the collaboration :
       - Production monitoring, reception tests, and installation for the final boards
       - Modification of the existing Data Acquisition program to include the new hardware
   - Maintenance and operation of the electronics
   - Manpower to perform the task, hired in the framework of the accepted MOU between CERN and the Departement de la Haute Savoie.
   - Daily project management

   And jointly with other Members:
   - Installation, operation and data analysis for the BPMs

   The manpower for these activities is covered by the IN2P3-CNRS and the MOU between CERN and the Departement de la Haute Savoie.

   The total estimated cost for the production of the electronics is 100 k€.

The contributions of the two laboratories will be funded at a level of 100 k€ per year in 2006, 2007 and 2008.

All the amounts are given in reference to a value in 2006.

This Addendum shall form an integral part of the MoU.

Done in Geneva on April 25, 2006

For Centre National de la Recherche Scientifique /
Institut National de Physique Nucleaire et de
Physique des Particules (CNRS/ IN2P3)

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE
INSTITUT NATIONAL DE PHYSIQUE NUCLEAIRE IN2P3 ET DE PHYSIQUE DES PARTICULES

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Directeur de l'IN2P3