ADDENDUM

to

THE MEMORANDUM OF UNDERSTANDING FOR A MULTILATERAL COLLABORATION

between

THE INSTITUTIONS AND FUNDING AGENCIES OF THE CTF3 COLLABORATION

concerning

THE CONTRIBUTION OF THE TSINGHUA UNIVERSITY OF BEIJING (CHINA) TO THE CTF3 COLLABORATION

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 equipments to demonstrate the feasibility of key issues of the CLIC scheme;

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

THE TSINGHUA UNIVERSITY OF BEIJING (CHINA) ("Tsinghua Un."),

in their capacity as Members of the CTF3 Collaboration and represented by **Professor Huaibi Chen and Professor Wenhui Huang.**

HEREWITH AGREE to make the following contributions:

1. Development of an accelerating structure with choke mode damping

Tsinghua University will take on the task of developing a CLIC accelerating structure based on choke-mode damping in order to evaluate a highly promising alternative design to the baseline CLIC waveguide-damped structure. This will consist first of designing a choke-mode structure with appropriate fundamental-mode properties, higher-order mode damping and expected high-power performance. Based on this design, a high-power test structure will then be designed and built. Tsinghua will take responsibility for the detailed rf design, mechanical design, cooling and vacuum system design, tendering, ordering, fabrication and assembly of the test structure.

CERN's role is to provide guidance to Tsinghua University staff throughout this process and to help them understand and apply the relevant techniques and technology. This includes joint supervision by Tsinghua University and CERN of one or two PhD students based partly at CERN. Jiaru Shi, currently a COFUND fellow at CERN, will play key role in coordinating activities in the two laboratories. In addition CERN will coordinate production steps for the test structure made at CERN which may include dimensional control, SEM inspections, bonding and rf measurements.

Deliverables: Publication of the rf design of the CLIC choke mode cavity and a test report of the high-power test structure.

Time schedule: 2009-2012

Resources: 1 to 2 PhD students at CERN

2. Fabrication and testing of a T18 accelerating structure

Tsinghua University will be responsible for producing a T18 high-power test accelerating structure. Comparison of eventual high-power test results with those from structures produced elsewhere will allow the Tsinghua's high-gradient manufacturing capability to be validated. Tsinghua University's role is to produce the structure. CERN's role is to provide the engineering drawings of the structure with the corresponding technical system. In addition CERN will coordinate production steps made at CERN which may include dimensional control, SEM inspections, bonding and RF checks.

Deliverables: Test report of the T18 accelerating structure

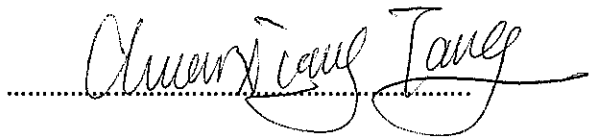
Time schedule: 2009-2012

Resources: 1 University faculty member.

Other agreements concerning this collaboration:

1. Tsinghua University will also collaborate in other areas related to CLIC, such as CLIC detectors development and the high energy particle physics of CLIC.
2. Detailed addenda will be signed for each collaboration item, which will be financial supported by both sides.

For the Tsinghua University of Beijing,



Professor Chuanxiang TANG

Chair of Engineering Physics Department

Signed on 16/10/2009