

**ADDENDUM**

**to**

**THE MEMORANDUM OF UNDERSTANDING FOR A  
MULTILATERAL COLLABORATION**

**between**

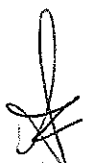
**THE INSTITUTIONS AND FUNDING AGENCIES OF  
THE CTF3 COLLABORATION**

**concerning**

**THE CONTRIBUTION OF THE SINCROTRONE TRIESTE  
(ELETTRA), ITALY**

**TO THE CTF3 COLLABORATION**

**April 2010**

A handwritten signature in black ink, located in the bottom right corner of the page. The signature is stylized and appears to be a single name.

Considering:

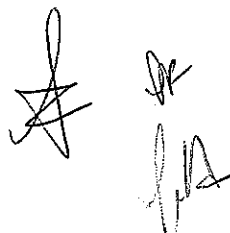
The Memorandum of Understanding ("the MoU") defining the framework applicable to the construction of a 3<sup>rd</sup> generation Compact Linear Collider test facility (CTF3) and the performance of equipments to demonstrate the feasibility of key issues of the CLIC scheme.

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

The Sincrotrone Trieste S.C.p.A. (ST) in its capacity as Members of the CTF3 Collaboration, herewith agrees to make the following contributions:

- 1) ST will contribute with one engineer (about one man-month) to the pre-brazing activities and assembly of the X-band structures, designed in the framework of the collaboration between PSI and CERN.
- 2) ST will participate with one engineer (about two man-months) to the tuning process and RF low level measurements of the X-band structures above mentioned, before and after the brazing process.
- 3) ST makes available its own LLRF measurement bench to be used in Trieste, consisting of:
  - Agilent PNA-X, 4 ports 26.5 GHz Network Analyzer
  - Agilent PSA-E4440A, 26.5 GHz PSA
  - Agilent E8257D-520, 20 GHz Analog Signal Generator
  - Agilent 3046C-X, Noise Source, 10MHz-26.5 GHz
  - Boonton 4500B, RF Peak Analyzer
  - Tektronix DPO71254, 12.5 GHz, 50 Gsps Digital Oscilloscope
  - Tektronix P7513, 13 GHz Trimode probes.to CERN for the above mentioned measurements.
- 4) ST will perform the study and characterization of the above mentioned X-band structure in terms of wake fields. This work will be carried out in collaboration with the University of Naples (prof. V. Vaccaro).
- 5) ST will loan its spare X-band accelerating structure, now under construction, to CERN for high power RF tests. The loan will have a duration of about 1 (one) year. ST will participate to these tests with one engineer for about 3 (three) man-months.
- 6) ST will collaborate for the development, construction and tests of X-band waveguide components.

The total financial equivalent of these contributions will be approximately CHF 298.000,00 (Swiss franc twohundredninetyeightthousand/00) .

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Estimated duration of the collaboration 30 (thirty) months.

Furthermore the Sincrotrone Trieste wishes to add to article 8, Liability the following:

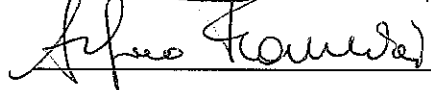
***Disclaimer of Liability***

Except as otherwise specifically mentioned in Memorandum of Understanding and the Addendum thereto, neither ST, nor any party acting on its behalf:

- makes any warranty, express or implied, with respect to the completeness or use of any information, apparatus, method or process disclosed under this Addendum or that such use may not infringe privately owned rights of third parties;
- assumes any liability with respect to the uses of, or for any damages resulting from the use of, any information, apparatus, method or process disclosed under this Addendum;
- will be liable to the other or to any other entity for any indirect, special, consequential or incidental damages, however caused and on any theory of liability arising out of this Addendum, whether or not such party has been advised of the possibility of such damage.

13 0 APR. 2010

For the Sincrotrone Trieste S.C.p.A.



Prof. Alfonso Franciosi

Chief Executive Officer

