

**CDF-II Memorandum of Understanding  
among the  
Fermi National Accelerator Laboratory,  
the CDF-II Collaboration  
and Trieste/Udine**

## I. Personnel and Coordination of Responsibilities

A. The following members of Trieste/Udine (INFN/University) are presently participants in the collaboration. All of the tenured staff ( designated as “Physicist” ) are presently committed to LHC to some degree. Their level of commitment to CDF is therefore expected to decrease with the startup of LHC.

<u>Name</u>	<u>Title</u>	<u>Usual Location</u>	<u>Total CDF Fraction</u>	<u>Other Commitments</u>
S. Belforte	Physicist	Trieste	30%	CMS
M. P. Casarsa	Post Doc.	Trieste	100%	
D. Cauz	Physicist	Udine	50%	Teach, ATLAS
G. Pauletta	Physicist	Udine	60%	Teach, ATLAS
M. Giordani	Post Doc.	Udine	100%	
A. Penzo	Physicist	Trieste	50%	CMS
M. Rossi	Grad. Student	Udine	100%	
L. Santi	Physicist	Udine	50%	Teach, ATLAS
A. M. Zanetti	Physicist	Trieste	90%	CMS

B. The coordinator for Udine is G. Pauletta and for Trieste is A.M. Zanetti. The representative on the CDF-II Executive Board is G. Pauletta. The alternative member for the Executive Board is A. Zanetti. Each participating CDF-II institution has one member on the CDF-II Executive Board.

## II. Responsibilities of Trieste/Udine

### A. Project: Detector Subsystems

1. Udine will have principal responsibility for the plug laser calibration system. They will ensure the integration, operation, maintenance, and repair of the system.

### B. Project: Muon Scintillation Counter Subsystem (change...)

1. Udine (G. Pauletta) has born the overall responsibility for coordinating the upgrade work on the muon counters and has supervised all assembly, testing, maintenance, and integration work at FNAL.
2. Trieste (A. Penzo) has worked on new counters development and testing of the PMTs (H5783), used on the new counters. Trieste technicians have taken part in counter assembly and installation at FNAL. They have acquired competence for counter maintenance and repair.

- a) The muon scintillation counter subsystem is the joint responsibility of the institutions which have collaborated in its construction, assembly, and testing, i.e. Cantabria, J.I.N.R., MSU, Pisa, and Trieste/Udine. Trieste/Udine will share responsibility for the maintenance of this subsystem where “maintenance” implies ensuring the continued functionality of the muon counter subsystem, i.e.:
  - (1) Ensuring integration into CDF.
  - (2) Ensuring the continued presence of on-call experts.
  - (3) Monitoring and validation.
  - (4) Repair/replacement of faulty components.
3. Although Udine coordinated counter maintenance during commissioning and the initial phase of data taking, this role has now been taken over by the Dubna group.
4. Udine/Trieste personnel will be available as on-call experts for ~ 2 months a year ( with a strong preference for the summer months) and will participate in repair/replacement of muon counter subsystem elements as the need arises. Technicians with experience in maintaining the counters can be made available for ~ 1 month/year.
5. Udine/Trieste will be responsible for procuring eventual replacements for the H5783 PMT’s of the new counters.

**C. Project: New Preshower (CPR2) Subsystem**

1. Trieste physicist (A. Penzo) and technicians have taken part in counter assembly, testing and installation at FNAL. They have acquired competence for counter maintenance and repair.
  - a) Trieste personnel will be available to participate in repair/replacement of preshower subsystem elements, sharing responsibility with the institutions which have collaborated in its construction, and in particular the italian groups of Pisa and Rome.

**D. Project: Silicon Vertex Tracker (SVT)**

1. Trieste group (S. Belforte, A.M. Zanetti) will:

- a) Participate to the overall operation and validation of the SVT system.
- b) Be responsible for continued operation, maintenance, and repair of the following SVT boards:
  - (1) Merger: 30 boards
  - (2) Hit buffer (run IIa board): 17 boards. We expect to end this responsibility in summer 2005 when the board is supposed to be replaced (SVT upgrade).
  - (3) XTF-c: 8 boards
  - (4) Bypass: 1 board
- c) Be responsible for the maintenance of the common software framework (SVTVME package) to interface high level code to all SVT VME boards as it is implemented right now. We expect this responsibility to end during 2005 when major changes and addition will be required for the SVT upgrade.

**E. Offline Representative**

S. Belforte (Trieste), M.Giordani (Udine)

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Fermilab Directorate

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date

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CDF-II Detector Operations Department Head

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CDF-II Detector Operations Department Head

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CDF-II Offline Operations Organization Head

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CDF-II Offline Operations Organization Head

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CDF-II Spokesperson

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CDF-II Spokesperson

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Coordinator for Trieste/Udine

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date