

7th International Conference on  
**Advanced Technology and Particle Physics**  
Villa Olmo, October 15-19, 2001

Organizing Committee:

M.Barone, Democritos  
E.Borchi, INFN and University of Florence  
J.Huston, Michigan State University  
C.Leroy, University of Montreal  
P.G.Rancoita, INFN-Milano  
P.L.Riboni, ETH-Zurich  
R.Ruchti, University of Notre Dame

International Advisory Committee:

S.Baccaro, ENEA-Rome  
B.Borgia, INFN and University of Rome1  
W.Braunschweig, Aachen  
A.Breskin, Weizmann Institute  
A.Capone, INFN and University of Rome1  
K.Freudenreich, ETH-Zurich  
S.Giani, CERN  
E.Longo, INFN and University of Rome1  
K.Luebelsmeyer, Aachen  
E.Nappi, INFN-Bari  
A.Penzo, INFN-Trieste  
S.Pospisil, CTU Prague  
L.Price, ANL  
R.Reinhard, ESA-Estec  
L.Rossi, CERN  
T.J.Ruth, TRIUMF  
S.Volontè, ESA  
P.Weilhammer, CERN  
G.Westfall, Michigan State University

<http://villaolmo.mib.infn.it/Conference2001.html>

A special Covenant connects the Villa Olmo “A.Volta” Centre for Scientific Culture to the “Politecnico di Milano”, the University of  
Milano and the University of Pavia and Brescia

INTERNATIONAL CONFERENCE ON  
**ADVANCED TECHNOLOGY AND PARTICLE PHYSICS**  
 CENTRO DI CULTURA SCIENTIFICA A.VOLTA  
 VILLA OLMO (COMO-ITALIA)

## Conference Overview

Monday 15	Tuesday 16	Wednesday 17	Thursday 18	Friday 19
9.30: registration	8.30 Radioth.&Med .Imag. (plenary)	8.30 HEP experiments (plenary)	8.30 New Detectors (plenary)	8.30 Selected papers (plenary)
	10.30	10.30	10.30	10.30
10.50: Opening	10.30-11.00 Coffee break			
Space experiments (plenary)	11.00  Industry (plenary)	11.00  Industry (plenary)	11.00 //sessions  Silicon tracker III (XVI) Radioth.&Med .Im.(XVII) Radiation Damage (XVIII) Calorimetry (XIX)	11.00  Selected papers (plenary)
	13.00	13.00	13.00	
13.00-14.30 Lunch				13.00: Concluding Remarks
14.30 // sessions:	14.30 // sessions:	14.30 // sessions:	14.30 // sessions:	
Space experiments (I) Silicon tracker I (II) Medium ener.exp. (III) Calorimetry (IV)	Radiation damage (V) Passive part. Phys. (VI) Radioth.&Med .Im.(VII) Software applic.s (VIII)	Silicon tracker II (IX) Particle identification.(X) Tracker non Si sub. (XI) Medical App. Instr. (XII)	HEP experiments (XIII) New detectors (XIV) Crystal detectors (XV) POSTER SESSION	
16.00	16.00	16.00	16.00	
16.00-16.30 Coffee break				
16.30  sessions continuation				
18.00				
18.00 Adjourn				
20.00: supper with relevant guest of opening session	20.00: meeting for for organizers and advisory c. members	20.00: BANQUET	20.00: meeting for organizing committee members	

### **Plenary Session Organizers:**

M.Barone (Democritos) : 2nd Industry session  
A.Breskin (Weizmann Institute): New detectors  
J.Huston (Michigan) : Selected papers  
L.Price (ANL): High Energy Physics experiments  
P.L.Riboni (ETH-Zurich) : 1st Industry session  
T.J.Ruth (TRIUMF): Radiotherapy and Medical Imaging  
S.Volontè (ESA): Space experiment

### **Parallel Session Organizers:**

S.Baccaro (ENEA, Rome): Radiation Damage (both sessions)  
W.Braunschweig (Aachen): Tracker with non-silicon Substrate  
A.Breskin (Weizmann Institute): New detectors  
A.Capone (Rome1): Passive Particle Physics  
K.Freudenreich (ETHZ) : Silicon Tracker II and III  
S.Giani (CERN): Software applications  
C.Leroy (University of Montreal): Calorimetry (both sessions)  
E.Longo (Rome1): Crystal Detectors  
E.Nappi (INFN-Bari): Particle Identification  
S.Pospisil (CTU, Prague): Medical Application Instrumentation  
L.Price (ANL): High Energy Physics Experiments  
R.Reinhard (ESA-Estec): Space Experiments  
R.Rutchi (University of Notre Dame): Poster session  
T.J.Ruth (TRIUMF): Radiotherapy and Medical Imaging (both sessions)  
P.Weilhammer (CERN): Silicon Tracker I  
G.Westfall (Michigan State University): Medium Energy Physics

**Industry participation:  
Organizers of Plenary Sessions and Exhibition**

P.L.Riboni (CERN): 1st Industry session

M.Barone (Democritos): 2nd Industry session

The two industry sessions are for R&D activities going on in industries. These are related to technologies to be used in experiments, in particular in particle physics (space, underground, submarine and accelerator) experiments.

**POSTER session is scheduled on Thursday 18**  
(organized by R.Ruchti, University of Notre Dame)

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M O N D A Y 15			
9.30 REGISTRATION			
10.50: Opening  Space Experiments Ses.Org.:S.Volontè Chairm.: S.Volontè  Room: Salone			
13.00-14.30 Lunch			
14.30  (I) Space Experiments Ses.Org.:R.Reinhard Chairm.:R.Reinhard Room: Salone	14.30  (II) Silicon tracker I Ses.Org.:P.Weilhammer Chairm.:K.Freudenreich Room: Sala Ovale	14.30  (III) Medium Energy Phys. Ses.Org.: G.Westfall Chairm.: G.Westfall Room: Sala Bacco	14.30  (IV) Calorimetry Ses.Org.:C.Leroy Chairm.:C.Leroy Room: Sala Musica
16.00-16.30 Coffee break			
16.30  session continuation	16.30  session continuation	16.30  session continuation	16.30  session continuation
18.00 Adjourn			

## Conference programme

(the time allocated for talks includes a short discussion )

Monday 15

9.30 : REGISTRATION

**plenary session: 10.50 - 13.00**

Opening session: (Chairman: S.Volontè, ESA)

**room: Salone**

10.50 : Conference opening

morning session: (Chairman: S.Volontè, ESA)

Space Experiments (session organizer: S.Volontè, ESA)

- S. Vitale (Trento) : The LISA and SMART-2 missions
- D. Santos (Grenoble) : The Planck mission
- S. Buchman (Stanford) : Gravity Probe B
- R. Battiston (Perugia): The Alpha Magnetic Spectrometer (AMS) on the ISS

**Monday 15**

**parallel sessions: 14.30 - 18.00**

parallel session I on Space Experiments: (Chairman: R. Battiston, Perugia)

session organizer: R.Reinhard,ESA- Estec

**room: Salone**

N. Lockert (Strathclyde): The Satellite Test of the Equivalence Principle (STEP)  
P. Touboul (ONERA, Paris): The MICROSCOPE Project  
A.Landragin ( ): HYPER-precision cold atom interferometry in space  
M.Mazziotta (INFN-Bari): GLAST, a large Area Telescope for Gamma-Ray studies  
J.Lund (Stockholm): The anticoincidence shield of the Pamela satellite experiment

**16.00 - 16.30 coffee break**

L. Scarsi (Palermo): The Extreme Universe Space Observatory (EUSO) on the ISS  
N. Dimarq (LHA, Paris): Cold atom clocks in space  
D.Grandi (Univ. of Milano and INFN): A complete simulation of primary Cosmic Ray access to Space Station  
C. Sbarra (INFN-Bologna): The time of flight system of the AMS-02  
G.Schweiring (Aachen): The Transition Radiation Detector of the AMS-2 Experiment  
P.Musico (INFN-Genoa): Development of the photon detector for a space based observatory of very high energy cosmic rays.

parallel session II on Silicon Tracker I (Chairman:K.Freudenreich, ETHZ)

session organizer: P.Weilhammer, CER

**room: Ovale**

A. Bean (Kansas): Design of an Upgraded D0 Silicon Microstrip Tracker for Fermilab Run2  
E. Kajfasz (Marseille): Production and Operation of the D0 Silicon Microstrip Tracker  
E. Palmonari (Fermilab): CDF II silicon tracking system  
M.Bishai (Fermilab): The Silicon data acquisition system and front-end electronics for CDF RUN II

**16.00 - 16.30 coffee break**

I. Fiori (Padova): CDF online silicon vertex tracker  
S. D'Auria (Glasgow ): Commissioning and operation of the CDF SVX detector  
C. Cecchi (Perugia): AMS tracker version 1 and 2  
W. Wallraff (Aachen): AMS Alignment System  
W.Braunschweig (Aachen): Alignment System, Endcap structure

parallel session III Medium Energy Physics (Chairman: G.Wesrfall, Michigan State University)

session organizer: G.Wesrfall, Michigan State University

**room: Sala Bacco**

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Juergen Friese (T.U. Muenchen): HADES

J. Pietraszko (Jagellonian Univ.): Development of Preshower detector for HADES Experiment

A.Ferretti (Torino): Recent results of the R&D on low-resistivity RPCs for the ALICE dimuon Spectrometer

16.00 - 16.30 coffee break

H.R. Schmidt (GSI Darmstadt): The Time-Projection Chamber for the CERN-LHC Heavy-Ion Experiment ALICE

A.S.Tremsin (Univ.of Ca, Berkeley): New development in position sensitive detectors based on microchannel plate

N.Basharuli (MEPhI): Spectrometry of charged particles by inorganic scintillators coupled with  $\mu$ cell Si APDg

*parallel session IV on Calorimetry (Chairman: C.Leroy, University of Montreal)*

*session organizer: C.Leroy, University of Montreal*

**room: Sala Musica**

H. Heath (Bristol Univ.): An overview of the CMS Electromagnetic Calorimeter

O. Lobban (FNAL): Intercalibration of the Longitudinal Segments of a Calorimeter System

S. Simion (Nevis Labs, Columbia): The Readout of the Atlas Liquid Argon Calorimeter

16.00 - 16.30 coffee break

A. Ziegler (Hamburg Univ.): A new W/Scintillator Electromagnetic Calorimeter for ZEUS

F. Djama (CPPM, Marseille): Performance of the ATLAS Liquid Argon Electromagnetic Calorimeter Modules under Test Beam

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T U E S D A Y      16			
8.30  Radiotherapy & Med.Img. Ses.Org.: T.J.Ruth Chairm.: T.J.Ruth Room: Salone			
10.30-11.00 Coffee break			
11.00 Industry Ses.Org. Barone & Riboni Chairm.:P.L.Riboni Room: Salone			
13.00-14.30 Lunch			
14.30  (V) Radiation Damage Ses.Org.:S.Baccaro Chairm.S.Baccaro Room: Salone	14.30  (VI) Passive Physics Exp. Ses.Org.:A.Capone Chairm.:A.Capone Room: Sala Ovale	14.30  (VII) Radioth.&Med.Img. Ses.Org.:T.J.Ruth Chairm.: T.J.Ruth Room: Sala Bacco	14.30  (VIII) Software applications Ses.Org.:S.Giani Chairm.:S.Giani Room: Sala Musica
16.00-16.30 Coffee break			
16.30  session continuation	16.30  session continuation	16.30  session continuation	16.30  session continuation
18.00 Adjourn			

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**Tuesday 16**

**plenary sessions: 8.30 - 13.00**

8.30-10.30 plenary session: on Radiotherapy and Medical Imaging (Chairman:T.J.Ruth, TRIUMF)

session organizer:T.J.Ruth, TRIUMF

**room: Salone**

R. Menke (Sincrotrone Trieste): Recent developments in Diffraction Enhanced Imaging

M Zalutsky (DUKE): Targeted Alpha-Particle Radiotherapy

10.30 - 11.00 coffee break

11.00-13.00 1st plenary session: on Industry (Chairman: P.L.Riboni, ETH-Zurich)

session organizers: M.Barone (Democritos) and P.L.Riboni (ETH-Zurich)

**room: Salone**

J.Routti (Helsinki University of Technology): European Research and Innovation System for knowledge Economies

P.Della Porta (President and CEO of the SAES-Getters group): Interaction between Industrial Research and large Particle Physics Centers

F.Bourgeois (CERN): Patenting and licensing in publicly funded research organization

F.Gagliardi (CERN): From the Web to the GRID, Industrial Potentiality of the Technology

**Tuesday 16**

**parallel sessions: 14.30 - 18.00**

parallel session V on Radiation Damage: (Chairman: S.Baccaro, ENEA-Rome)

session organizer: S.Baccaro, ENEA-Rome

**room: Salone**

- M. Bruzzi (Firenze): Radiation effects in silicon detectors for future high energy physics experiments: An overview
- N.Croitoru (INFN-MI and Univ.of Tel Aviv): Influence of radiation damage on physical properties of silicon and on parameters of electron devices.
- V. Re (Univ. di Bergamo and INFN Pavia): Study of the radiation tolerance of a 0.18  $\mu\text{m}$  CMOS Process

**16.00 - 16.30 coffee break**

- M. Menichelli ( INFN-Perugia): Total dose test for commercial off-the-shelf components to be used in space experiments: a survey on current technologies
- C. Leroy (Univ. of Montreal): Liquid Argon Pollution Tests of the ATLAS Detector Material at IBR-2 Reactor in Dubna
- J.J. Velthuis (Nikhef): Irradiation test of the ZEUS vertex detector frontend chips, the Helix 3.0.
- G. Vitale (CAEN): Radiation tolerance and behavior in magnetic field of CAEN HV and LV boards for LHC experiments

parallel session VI on Passive Physics Experiments (Chairman: A.Capone, Rome1)

session organizers: A.Capone, Rome1

**room: Sala Ovale**

TBD: SNO

- C.Vignoli (INFN-Pavia): Test of a novel detector technique: the Icarus T600 module
- G. Trincherò (Torino): MONOLITH, a massive magnetized iron detector for atmospheric neutrinos
- G. Bellini (Milano): Borexino detector
- D. Bastieri (INFN-Padoa): Development and Performances of the MAGIC Telescope

**16.00 - 16.30 coffee break**

AMANDA: TBD

- B. K. Lubsandorzhiev (INR): New developments of photodetectors for the lake Baikal Neutrino Experiment
- H. Lafoux (DAPNIA Saclay): The ANTARES front-end electronics
- R. Papaleo (INFN/LNS Catania): Technology development for a km<sup>3</sup> neutrino detector
- A. B. Rice (Univ. of Kansas): Radio neutrino detection

parallel session VII on Radiotherapy and Medical Imaging (Chairman: T.J.Ruth, TRIUMF)

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*session organizer: T.J.Ruth, TRIUMF*

**room: Sala Bacco**

Soga (NIRS): Progress Heavy Ion Therapy  
D. Jones (NAC): Proton Therapy: The Promise of Precision

16.00 - 16.30 coffee break

C. W.E. van Eijk (Delft University of Technology): Scintillating Crystals for Medical Applications  
Donetti - (INFN, Torino): A solution for dosimetry and quality assurance in IMRT and hadron therapy: the pixel ionization chamber.  
V. Sossi (UBC, Vancouver): Biological interpretation of quantitative PET brain data.  
G.Gambarini (Milano): Characterization of the BNCT epithermal column of the fast reactor TAPIRO (ENEA) and dose measurements in phantom utilizing non-conventional detection

*parallel session VIII on Software Applications (Chairman: S.Giani, CERN)*

*session organizer: S.Giani, CERN*

**room: Musica**

L. Sarlo (EUMETSAT): Management of Large Software Intensive Systems in Scientific Applications  
M.G.Pia (INFN): Simulation Software: Application and Results in the Bio-Medical Domain  
P.Arce (Instituto de Physica de Cantabria): Software for Neutrino Factory Studies in the R&D Phase

16.00 - 16.30 coffee break

V.Grichine (Lebedev Physics Institute): Simulation of X-ray Transition Radiation in the GEANT4 Package  
K.Amako (KEK): Software Architecture for an LHC experiment  
P.Nieminen (ESA): Space Applications of Simulation Software at ESA  
S.Paoli (CERN): A Database for Detector Conditions Data of Current and Future HEP Experiments

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W E D N E S D A Y 17			
8.30 HEP Experiments Ses.Org.:L.Price Chairm.:L.Price Room: Salone			
10.30-11.00 Coffee break			
11.00 Industry Ses.Org.:Barone & Riboni Chairm.:M.Barone Room: Salone			
13.00-14.30 Lunch			
14.30 (IX) Silicon tracker II Ses.Org.: K.Freudenreich Chairm.: K.Freudenreich Room: Salone	14.30 (X) Particle Identification Ses.Org.:E.Nappi Chairm.: E.Nappi Room: Sala Ovale	14.30 (XI) Tracker with non-Si sub Ses.Org.: W.Braunschweig Chairm.: W.Braunschweig Room: Sala Bacco	14.30 (XII) Medical App. Instr. Ses.Org.:S.Pospisil Chairm.: :S.Pospisil Room: Sala Musica
16.00-16.30 Coffee break			
16.30 session continuation	16.30 session continuation	16.30 session continuation	16.30 session continuation
18.00 Adjourn			

**Wednesday 17**

**plenary sessions: 8.30 - 13.00**

8.30-10.30 plenary session on HEP Experiments (Chairman: L.Price, ANL)

session organizer: L.Price, ANL

**room: Salone**

J. Spalding (Fnl): Run II upgrades and physics prospects  
S. Kopp (U. Texas at Austin): The MINOS detector for Neutrino Oscillations  
M. Mazzucato (Padova): Grids and OO: new directions in computing for HEP  
P. Checchia (Padova) Detectors for a linear collider

**10.30 - 11.00 coffee break**

11.00-13.00 2nd plenary session: on Industry (Chairman: M.Barone, Democritos)

session organizers: M.Barone (Democritos) and P.L.Riboni (ETH-Zurich)

**room: Salone**

C.Pettenati (CERN): Electronic Publishing  
D. Campi (CERN): The Industry contribution to the CMS magnet  
L.Tsoussis (Dir.R&D- Hourdakis Electronics S.A.-Athens): DAQ cards for CMS, a TT successful case  
S. Bodrato (International Operations Manager Intrasoft S.A., Bruxelles): A review of the company main activities

Wednesday 17

**parallel sessions: 14.30 - 18.00**

parallel session IX on Silicon Tracker II (Chairman: K.Freudenreich, ETHZ)

session organizer: K.Freudenreich, ETHZ

**room: Salone**

A. Lusiani (Pisa): Performance of the BaBar silicon vertex tracker  
C. Krauss(Heidelberg) : Charged particle tracking with the HERA-B detector  
H.Henschel (Zeuthen): The Backward and Forward Silicon Trackers of H1  
A. Polini (DESY): The ZEUS microvertex detector

16.00 - 16.30 coffee break

G. Van Nieuwenhuizen (MIT): Performance results of the PHOBOS Silicon Detectors  
H. Kagan (Ohio State Univ.): New Results on the Radiation Hardness of CLEO Silicon  
S. Cabrera (Duke Univ./NC): Run 2b CDF upgrade of the silicon vertex and layer 00 detectors  
L. Moroni ( INFN-Milano): Current R&D status of the BTeV pixel detector  
Y. Gornushkin (IReS Strasbourg ): Monolithic CMOS Pixels for Charged Particle Tracking

parallel session X on Particle Identification (Chairman: E.Nappi, INFN-Bari)

session organizer: E.Nappi, INFN-Bari

**room: Sala Ovale**

C. Williams (INFN-Bologna): Development of high time resolution multigap RPCs for the TOF detector of ALICE  
S. Eisenhardt (Edinburgh University): The LHCb Ring Imaging Cherenkov Detectors  
J. Ocariz (Paris 6-7 University): DIRC, the particle identification system for BaBar

16.00 - 16.30 coffee break

M. Girone (Imperial College): The pixel hybrid photon detectors for the LHCb-RICH counters  
M. Staric (Ljubljana University): Particle Identification with the HERA-B RICH  
R. Gernhaeuser (Technische Universitaet Muenchen): Lepton Identification in HADES with a CsI based RICH  
G.M.Urciuoli (Rome): A Rich detector for hadron identification at Jefferson Lab Hall A  
F.Giordano (Bari): The silicon Transition Radiation Detector: beam test results  
A. Andronic (Gsl Darmstadt): The TRD detector of the ALICE experiment

parallel session XI on Tracker with non Si substrates (Chairman :W.Braunschweig, Aachen)

session organizer: W.Braunschweig, Aachen

**room: Sala Bacco**

E.Berdermann (GSI Darmstadt) : The Diamond Project of GSI-Status and Perspectives

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Sung Han (Ohio State Univ.) : Recent Results from CVD Diamond Trackers, and ATLAS and CMS Pixel Detectors on CVD  
R.Wedenig (IHEP der Akademie der Wissenschaften, Vienna) : Recent Results on the Radiation Hardness of CVD Diamond

16.00 - 16.30 coffee break

A.N.Georgobiani (Lebedev.Phys.Inst. of RAS, Moscow) : Radical Beam Gettering Epitaxi of ZnO and GaN  
F.Simon (TU Muenchen) : GEM Detectors for COMPASS  
B.Grube (TU Muenchen) : Architecture for a Common GEM and Silicon Readout for COMPASS

*parallel session XII on Medical Application Instrumentation (Chairman: S.Pospisil, CTU Prague)*

*session organizer S.Pospisil, CTU Prague*

**room: Sala Musica**

F. Deconinck (Vrije Universiteit Brussel; Belgian Nuclear Research Centre (SCK-CEN), Mol): Nuclear Imaging in Medical Imaging Context  
R. Lecomte (Sherbrooke U.): PET detector technology for small animal imaging in biomedical research

16.00 - 16.30 coffee break

M. Marek (Nuclear Research Institute, Rez near Prague): Instrumentation for BNCT  
C. Riddell (INSERM, Paris; General Electric Medical Systems in Buc): Image Reconstruction Algorithms  
C. Froejdh (Mitthoegskolan, Sundsvall): Dental X-Ray Imaging System  
J. C. Clemens (CPP Marseille): Results of XPAD Pixel Module in X-Ray Synchrotron Beam  
D. Meier (Univ. of Michigan): Results from Silicon Pad Sensors with Self-Triggering Readout for a Compton Camera

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<b>THURSDAY 18</b>			
8.30 New Detectors Ses.Org.:A.Breskin Chairm.:E.Nappi <b>Room: Salone</b>			
10.30-11.00 <b>Coffee break</b>			
11.00 (XVI) Silicon tracker III Ses.Org.:K.Freudenreich Chairm.: W.Braunschweig <b>Room: Salone</b>	11.00 (XVII)Radioth.&Med.Imag Ses.Org.:T.J.Ruth Chairm.: T.J.Ruth <b>Room: Sala Ovale</b>	11.00 (XVIII) Radiation Damage Ses.Org.:S.Baccaro Chairm.: S.Baccaro <b>Room: Sala Bacco</b>	11.00 (XIX) Calorimetry Ses.Org.:C.Leroy Chairm.:C.Leroy <b>Room: Sala Musica</b>
13.00-14.30 <b>Lunch</b>			
14.30 (XIII) HEP Experiments Ses.Org.: L.Price Chairm.:L.Price <b>Room: Salone</b>	14.30 (XIV) New Detectors Ses.Org.:A.Breskin Chairm.:E.Nappi <b>Room: Sala Ovale</b>	14.30 (XV) Crystal Detectors Ses.Org.:E.Longo Chairm.: E.Longo <b>Room: Sala Bacco</b>	14.30 POSTER Session Ses.Org.: R.Ruchti <b>Room: Sala Musica</b>
16.00-16.30 <b>Coffee break</b>			
16.30 session continuation	16.30 session continuation	16.30 session continuation	16.30 session continuation
18.00 Adjourn			

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**Thursday 18**

**plenary session : 8.30 - 10.30**

8.30-10.30 plenary session: on *New Detectors* (Chairman : E.Nappi, INFN-Bari)

session organizer: A.Breskin, Weizmann

**room: Salone**

H.Wiemann (LBL): Recent Developments in TPC Technology and the STAR TPC at RHIC

F.Fraga (Coimbra): Gas detectors with optical readout

A.Gaddi (CERN): Gravitational Wave Interferometers for VIRGO

**10.30 - 11.00 coffee break**

Thursday 18

**parallel sessions: 11.00 - 13.00**

parallel session XVI Silicon tracker III (Chairman: W.Braunschweig, Aachen)

session organizers W.Braunschweig, Aachen and K.Freudenreich, ETHZ

**room: Salone**

P.Netchaeva (INFN Genova) : Recent Results on the ATLAS Pixel Detector  
D.Ferrere (DPNC Univ. de Geneve) : Silicon Strip Module Production for ATLAS  
M.Biasini (Univ.and INFN Perugia) : The CMS silicon strip tracker  
M.Lenzi (CERN) : Automatic Module Assembly of CMS Silicon Detectors  
A.Dierlamm (Univ.Karlsruhe) : CMS Silicon Tracker : Milestone 200 Testing  
V.Zhukov (Lomonosov State Univ.) : CMS Silicon Detectors in the PSI Test  
T.Rohe (PSI Villigen) : The CMS Pixel Detector

parallel session XVII on Radiotherapy and Medical Imaging (Chairman:: T.J.Ruth, TRIUMF)

session organizer T.J.Ruth, TR

**room: Sala Ovale**

C. Thompson (MNI, Montreal): Development of Instrumentation for Positron Emission Mammography in the Detection of Breast Cancer  
D. Phillips (LANL) & B Zhukov (INR, Moscow): Production of Medical Radioisotopes Using Proton Accelerators of Greater than 100 MeV  
G. Beyer (CERN): Radioactive Ion Beams for Biomedical Research and Nuclear Medical Application.  
T. Ruth (TRIUMF) : Production of radioisotopes for Imaging and Therapy at low energies.

parallel session XVIII on Radiation Damage (Chairman: S.Baccaro, ENEA-Rome)

session organizer: S.Baccaro, ENEA-Rome

**room: Sala Bacco**

M.Nikl (Inst. of Physics, AS. CR, Prague): Radiation induced color centres in Tb<sup>3+</sup>-doped phosphate scintillation glasses  
R.M. Montereali (ENEA Frascati): Point defects in Lithium Fluoride films induced by gamma irradiation  
Ziegler (Univ. of Hamburg): In situ measurements of radiation damage in scintillating fibers  
M.Korzhik (Institute for Nuclear Problems, Minsk): Lead Tungstate Scintillator for Electromagnetic Calorimetry At The Beams With High Luminosity  
Q. Ingram (PSI): Study of optical glues for the CMS detector at the LHC

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parallel session XIX on Calorimetry (Chairman: C.Leroy, University of Montreal)

session organizer: C.Leroy, University of Montreal

**room: Sala Musica**

L.Price (ANL): The ATLAS tile calorimeter

P. Sempere Roldan (CERN-Santiago de Compostela): Construction of first CMS-ECAL fully operational module (400 lead tungstate crystals)

F. Steinbuegl (MPI, Munich): A new concept for an active element for the large cosmic ray calorimeter ANI

V. Hagopian (Florida State Univ., Tallahassee): What's new with the compact muon solenoid (CMS) hadron calorimeter

Thursday 18

**parallel sessions: 14.30 - 18.00**

parallel session XIII High Energy Physics Experiments (Chairman: L.Price, ANL)

session organizer: L.Price, ANL

**room: Salone**

A. Di Ciaccio (Roma): The ATLAS Muon Spectrometer  
A. Marin (Boston Univ.): ATLAS MDT Muon End Cap System  
M. Giorgini (Bologna): Performance of the MACRO limited streamer tubes in drift mode for measurements of neutrino-induced muon energy  
H. Sanders (U. Chicago): Multi-Channel Timing Chip

16.00 - 16.30 coffee break

B. De Girolamo (CERN): Exploitation of ATLAS DAQ Prototypes for Test Beam and Lab Activities  
S. Movchan (JINR): Cathode Strip Chamber performance  
S. Hagopian (Florida State Univ.): Run II Muon System of the D0 Detector  
S. Tentindo Repond (Florida State Univ.): The New Online Central Tracker System of D0

parallel session XIV on New Detectors (Chairman: E.Nappi, INFN-Bari)

session organizer: A.Breskin, Weizman

**room: Sala Ovale**

A.Tremsim (Univ.California-Berkeley): New position sensitive detectors based on microchannel plates  
W.Dominik (Warsaw): The Sand-Glass Gas detector  
E.Grigoriev (IKEP-Karlsruhe): SCIFIs readout with microcell Si APDg.

16.00 - 16.30 coffee break

S.Andriamonje (Saclay): The MICROMEGAS neutron detector for CERN n TOF  
A.Patwa (Fermilab): SCIFI-based inner tracker for D0  
A.Paoloni (INFN-Rome): Tests of RPCs for ARGO  
S.Kane ( ): A study of Micromegas with preamplification with single GEM  
I. E. Kreslo (CERN): Large liquid scintillator tracker for OPERA

parallel session XV on Crystal Detectors (Chairman: E.Longo, University Rome)

session organizer: E.Longo, University of Rome

**room: Sala Bacco**

J. E. Grove (NRL, Washington): Treatment of the CsI(Tl) Crystals for the GLAST Calorimeter

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I.Dafinei (INFN, Rome): Lead Tungstate Crystals for the CMS Electromagnetic Calorimeter at the LHC

P.P. Rebecchi (CERN, Geneva): Monitoring of radiation damage of PbWO<sub>4</sub> crystals under strong Cs<sup>137</sup> gamma irradiation in GIF-ECAL

N. Belcari (Pisa University): Increase in photon collection from a YAP:Ce matrix coupled to Wavelength Shifting

16.00 - 16.30 coffee break

T. Frank (MPI, Munich): Development of 300 g scintillating calorimeters for WIMP searches

R. Novotny, (Giessen University): Scintillators for photon detection at medium energies

F. Maas (Mainz University): First experiences with the Mainz Leadfluoride Calorimeter

*POSTER SESSION (Chairman: R.Ruchti, University of Notre Dame)*

*session organizer: R.Ruchti, University of Notre Dame*

**room: Sala Musica**

J. Miyamoto: A study of Micromegas with preamplification by a single GEM

V. Brunella (Dip. di Chimica, Univ. of Turin): Irradiation Effects on Poly (Vinyl Chloride)

S. Guarino (Univ di Perugia and CERN): Polymeric adhesives for high energy physic experiments

Ventura, (Florence): Temperature thermal characterization of support materials for massive cryogenic detectors and Ti-based transition edge sensors for Cryogenic detectors

Pasca (Florence): Electron-phonon decoupling in NTD<sub>31</sub> Ge

Pasqualetti (Pisa): The VIRGO vacuum system

Dattilo (Pisa): The antiseismic suspensions for VIRGO

Z. Aftab: (Frascati) The Gas System for a Large Multi-Cells

Y. Erchov (JINR): Cathode strip chambers

H.R. Schmidt (GSI Darmstadt): The Time-Projection Chamber for the CERN-LHC Heavy-Ion Experiment ALICE

A.Papanestis (Rutherford Appleton Laboratory): A proposal for the alignment of the LHCb RICH detector

S. Raino' (INFN-Bari): The Silicon Transition Radiation Detector: a full Monte Carlo Simulation

S. Tentindo Repond (FNAL): The D0 Online Central Tracking System

N.Zorzi (IRST-Trento): Fabrication of microstrip detectors and integrated electronics on high resistivity silicon

C.Leroy (Montreal): Review of large mass superheated droplet detectors characterization

P. Moissenz (JINR): Cathode Strip Chamber data analysis

S.Braccini (INFN-Frascati): ATLAS muon chamber

I.Bolshakova : Influence of the neutron-caused defects on the parameters of magnetic microsensors and methods for improvement of their radiation hardness

S.Tomassini (LNF): The gas system for a large multi-cell detector

M.Mazziotta (INFN-Bari): GLAST tracker trays dynamic and thermal performance

V. Vignoli (Siena): CMOS circuit to linearly drive quantum well diodes

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FRIDAY 19	
8.30	
Selected papers Ses.Org.: J.Huston Chairm.: J.Huston Room: Salone	
10.30-11.00	
Coffee break	
11.00	
session continuation	
13.00	
CONCLUDING Remarks	

**Friday 19**

**plenary session: 8.30-13.00**

8.30-13.00 plenary session: on Selected papers (Chairman: J.Huston, Michigan)

Selected Contributed paper (session organizer: J.Huston, Michigan)

**room: Salone**

J. Linnemann : The D0 Trigger in Run II  
B.Dolgoshein (MEPHI): The Advanced Study of the Silicon Photo Multiplier(SiPM)  
R. Orr (Toronto Univ.): Overview of the ATLAS Liquid Argon Calorimeter System

**10.30 - 11.00 coffee break**

J.Pinfeld (Alberta Univ.): ATLAS Hadronic Argon Calorimetry in the Endcap and Forward Direction  
E. Meschi (CERN): Data Acquisition System for the CMS Experiment at LHC  
R. Ruchti (Univ. of Notre Dame): Quarknet and the Education/Outreach Effort

**Concluding Remarks by J. Huston**