

10th RD50 Workshop

Report of Contributions

Contribution ID: 2

Type: **not specified**

Discussion Session (Defect and Material Characterization & New Materials)

Monday 4 June 2007 12:20 (30 minutes)

Presenter: SVENSSON, Bengt

Session Classification: Defect and Material Characterization & New Materials

Contribution ID: 5

Type: **not specified**

Epitaxial silicon detectors irradiated with 23 GeV protons

Monday 4 June 2007 14:10 (20 minutes)

H. Hoedlmoser (a), M. Moll (a), J. Haerkoenen (b), K. Kaska (a), M. Kronberger (a), J. Trummer (a), P. Rodeghiero (c)

(a) CERN, Switzerland; (b) Helsinki Institute of Physics, Finland; (c) Universite Catholique de Louvain

Presenter: MOLL, Michael (CERN)

Session Classification: Pad Detector Characterization & Material Engineering

Contribution ID: 14

Type: **not specified**

Discussion Session (Pad Detector Characterization & Material Engineering)

Monday 4 June 2007 16:00 (30 minutes)

Presenters: FRETWURST, Eckhart; KRAMBERGER, Gregor

Session Classification: Pad Detector Characterization & Material Engineering

Contribution ID: **15**

Type: **not specified**

Introduction

Monday 4 June 2007 09:10 (10 minutes)

Presenter: MOLL, Michael

Session Classification: Workshop Welcome

Contribution ID: **16**

Type: **not specified**

Update of 3D activity at ITC-irst

Maurizio Boscardin
ITC-irst Trento (Italy)

Presenter: BOSCARDIN, Maurizio (ITC-irst)

Contribution ID: 17

Type: **not specified**

Characterisation of a 3D-stc p-type prototype module read out with ATLAS SCT electronics

S.Eckert¹, M.Boscardin², G.-F.Dalla Betta², T.Ehrich¹,
K.Jakobs¹, S.KÄ¼hn¹, M.Maassen¹, U.Parzefall¹,
C.Piemonte², A.Pozza², S.Ronchin², N.Zorzi²
¹ University of Freiburg, ² ITC-irst, Trento

Presenter: ECKERT, Simon (University of Freiburg)

Contribution ID: **18**

Type: **not specified**

Discussion Session (3D detectors and New Structures)

Contribution ID: 20

Type: **not specified**

Absolute charge measurements using laser setup.

Peter Kodys and Prague group
Charles University

Presenter: KODYS, Peter (Prague)

Contribution ID: 21

Type: **not specified**

Negative charge measurements with ATLAS SCT readout HW and SW.

Peter Kodys and Prague group
Charles University

Presenter: KODYS, Peter (Charles University, Prague)

Contribution ID: 22

Type: **not specified**

Annealing of TID radiation effects in SMART SSD, MOS and Capacitance test structures

H. F.-W. Sadrozinski, C. Betancourt, R. Heffern, I.
Henderson, J. Pixley, A. Polyakov, M. Wilder M.
Boscardin, C. Piemonte, A. Pozza, N. Zorzi, G.-F. Dalla
Betta
UC Santa Cruz, ITC-irst, Univ. of Trento

Presenter: SADROZINSKI, Hartmut (SCIPP)

Contribution ID: 23

Type: **not specified**

Gamma and Neutron Radiation Hardness Tests on 3 different SiGe IHP Technologies for S-LHC

S. Díez, M. Ullán, F. Campabadal, M. Lozano, G. Pellegrini
CNM - Barcelona

Presenter: DÍEZ, Sergio (CNM - Barcelona)

Contribution ID: 24

Type: **not specified**

Charge collection of p-type detectors irradiated with neutrons

C. Lacasta S. Martí, G. Pellegrini, F. Campabadal,
C. Escobar, C. García, M. Miñano, M. Lozano, J.M. Rafi,
M. Ullan
IFIC-Valencia CNM-IMB

Presenter: LACASTA, Carlos (IFIC)

Contribution ID: 25

Type: **not specified**

Discussion Session (Full Detector Systems)

Presenter: CASSE, Gian (Liverpool University)

Contribution ID: 27

Type: **not specified**

Full 3D Simulations of BNL Silicon 3D Detectors and Comparisons with other Types of 3D Detectors

Wednesday 6 June 2007 09:00 (20 minutes)

Tanja Palviainen 1,2 and Zheng Li 1

1 Brookhaven National Laboratory 2 Lappeenranta University of Technology

Presenter: PALVIAINEN, Tanja (Lappeenranta University of Technology)

Session Classification: 3D detectors

Contribution ID: 28

Type: **not specified**

3D Simulation Studies of Irradiated BNL One-Sided Dual-column 3D Silicon Detector up to $1\text{E}16\text{ neq/cm}^2$

Wednesday 6 June 2007 09:20 (20 minutes)

Zheng Li¹ and Tanja Palviainen²

¹Brookhaven National Laboratory ²Lappeenranta University of Technology

Presenter: LI, Zheng (BNL)

Session Classification: 3D detectors

Contribution ID: 29

Type: **not specified**

Simulation results from double-sided and standard 3D detectors

Wednesday 6 June 2007 09:40 (20 minutes)

David Pennicard and others
University of Glasgow

Presenter: PENNICARD, David (University of Glasgow)

Session Classification: 3D detectors

Contribution ID: 30

Type: **not specified**

Laser Tests of a p-type 3D Ministrip-Detector, equipped with LHC-Speed electronics

Wednesday 6 June 2007 10:30 (20 minutes)

S.Eckert ¹, M.Boscardin ², G.-F. Dalla Betta ³, S. Kuehn ¹, U. Parzefall ¹, K. Jakobs ¹, C. Piemonte ², S. Ronchin ²

¹ University of Freiburg, Germany, ² ITC-irst Trento, Italy, ³ University of Trento, Italy

Presenter: ECKERT, Simon (Freiburg University)

Session Classification: 3D detectors

Contribution ID: **31**

Type: **not specified**

Position Sensitive TCT Evaluation of Irradiated 3D-stc Detectors

Wednesday 6 June 2007 10:50 (20 minutes)

M. Zavrtanik, V. Cindro, G. Kramberger, J. Langus, I. Mandić, M. Mikuž, M. Boscardin, G. F. Dalla Betta, C. Piemonte, A. Pozza, S. Ronchin, N. Zorzi,
Jožef Stefan Institute and Department of Physics, University of Ljubljana, Slovenia ITC-irst and
University of Trento, DIT, Trento, Italy

Presenter: KRAMBERGER, Gregor (Jozef Stefan Institute)

Session Classification: 3D detectors

Contribution ID: 32

Type: **not specified**

Discussion Session on New Structures

Wednesday 6 June 2007 11:30 (45 minutes)

Presenter: PARKS, Chris (Glasgow University)

Session Classification: 3D detectors

Contribution ID: 33

Type: **not specified**

Welcome

Monday 4 June 2007 09:00 (10 minutes)

Presenter: VAITKUS, Juozas (Vilnius University)

Session Classification: Workshop Welcome

Contribution ID: 34

Type: **not specified**

The WODEAN project - outline and present status

Monday 4 June 2007 09:20 (30 minutes)

G. Lindstroem for the WODEAN collaboration (see memberlist given in the talk)
Universities of Hamburg, Florence, Minsk, Oslo, Vilnius; NIMP Bucharest, CERN-PH, JSI Ljubljana,
Kings College London, ITME Warsaw

Presenter: LINDSTROEM, Gunnar (Hamburg University)

Session Classification: Defect and Material Characterization & New Materials

Contribution ID: 35

Type: **not specified**

INTERACTION OF INTRINSIC DEFECTS WITH OXYGEN IN NEUTRON-IRRADIATED MCZ-SI: An Infrared Absorption Study

Monday 4 June 2007 10:30 (20 minutes)

Leonid I. Murin 1,2 and Bengt G. Svensson 2

1 Joint Institute of Solid State and Semiconductor Physics, Minsk, Belarus

2 Oslo University, Centre for Materials Science and Nanotechnology, Oslo, Norway

Presenter: MURIN, Leonid

Session Classification: Defect and Material Characterization & New Materials

Contribution ID: 36

Type: **not specified**

Comparison of neutron damage in thin FZ, MCz and epitaxial silicon detectors

Monday 4 June 2007 13:50 (20 minutes)

E. Fretwurst (a), L. Andricek (b), F. Hönniger (a), K. Koch (a), G. Kramberger (c), G. Lindström (a), H.G. Moser (b), I. Pintilie (a,d), R. Richter (b), R. Röder (e)

(a) University of Hamburg, (b) MPI-Semiconductor Laboratory Munich, (c) J. Stefan Institute Ljubljana, (d) NIMP Bucharest, (e) CiS Institute for Microsensoric Erfurt

Presenter: FRETWURST, Eckhart

Session Classification: Pad Detector Characterization & Material Engineering

Contribution ID: 37

Type: **not specified**

Update on bias dependent damage in different silicon material

Monday 4 June 2007 15:10 (20 minutes)

G. Kramberger, V. Cindro, I. Mandić, M. Zavrtanik, M. Mikuž, M. Jožef Stefan Institute

Presenter: KRAMBERGER, Gregor (JSI, Ljubljana)

Session Classification: Pad Detector Characterization & Material Engineering

Contribution ID: **38**

Type: **not specified**

p-type Silicon irradiated with 24 GeV/c protons

Monday 4 June 2007 14:30 (20 minutes)

Vladimir Cindro, Gregor Kramberger, Igor Mandić, Marko Mikuž, Marko Zavrtanik; Jožef Stefan
Institute and University of Ljubljana

Presenter: CINDRO, Vlado (JSI, Ljubljana, Slovenia)

Session Classification: Pad Detector Characterization & Material Engineering

Contribution ID: 39

Type: **not specified**

Space charge sign inversion and electric field reconstruction in 24 GeV proton irradiated MCZ Si p⁺/n(TD)/n⁺ detectors processed via thermal donor introduction

Monday 4 June 2007 14:50 (20 minutes)

Zheng Li, E. Verbitskaya¹, V. Eremin, J. Härkönen

Brookhaven National Laboratory, Upton, NY 11973-5000 Ioffe Physico-Technical Institute of Russian Academy of Sciences, St. Petersburg, Russia Helsinki Institute of Physics, CERN/PH, 1211 Geneva, Switzerland

Presenter: HÄRKÖNEN, Jaakko (Helsinki Institute of Physics)

Session Classification: Pad Detector Characterization & Material Engineering

Contribution ID: 40

Type: **not specified**

Determination of the Charge Collection Efficiency in irradiated Silicon Detectors

Tuesday 5 June 2007 09:00 (20 minutes)

M. K. Petterson, H.F.-W. Sadrozinski, C. Betancourt, F. Hurley M. Bruzzi
SCIPP, UC Santa Cruz, USA INFN and Università di Firenze, Italy

Presenter: SADROZINSKI, Hartmut (SCIPP)

Session Classification: Pad Detector Characterization II

Contribution ID: 41

Type: **not specified**

Extraction of the doping density of irradiated silicon detectors using C-V data

Tuesday 5 June 2007 10:00 (20 minutes)

M. K. Petterson, H.F.-W. Sadrozinski, C. Betancourt, F. Hurley M. Bruzzi
SCIPP, UC Santa Cruz, USA INFN and Università di Firenze, Italy

Presenter: SADROZINSKI, Hartmut

Session Classification: Pad Detector Characterization II

Contribution ID: 43

Type: **not specified**

Systematic Simulations of Charge Collection in Planar (2D) and 3D Si detectors at Various Fluences and Thicknesses

Tuesday 5 June 2007 09:40 (20 minutes)

Zheng Li

BNL, Upton, NY 11973-5000, USA

Presenter: LI, Zheng

Session Classification: Pad Detector Characterization II

Contribution ID: 44

Type: **not specified**

Discussion Session - Simulation of Pad detectors

Tuesday 5 June 2007 10:50 (20 minutes)

Session Classification: Pad Detector Characterization II

Contribution ID: 45

Type: **not specified**

Radiation damage on MOS-structure

Tuesday 5 June 2007 11:10 (20 minutes)

Q. Wei, L. Andricek, H-G. Moser, R. H. Richter
Max-Planck-Institute semiconductor laboratory

Presenter: WEI, Qingyu (MPI Munich)

Session Classification: Full Detector Systems

Contribution ID: 46

Type: **not specified**

Thin planar pixel detectors for highest radiation levels

Tuesday 5 June 2007 11:30 (20 minutes)

R. Richter, L. Andricek, E. Fretwurst, C. Goessling, G. Lindstroem, G. Kramberger, R. Nisius, H.-G. Moser,
MPI fuer Physik, Munich; Uni Hamburg; Uni Dortmund; Josef Stefan Institute, Ljubljana

Presenter: RICHTER, Rainer (MPI Munich (HLL))

Session Classification: Full Detector Systems

Contribution ID: 47

Type: **not specified**

Construction of rebondable module and first measurements with RD50 micron sensors and 3D-stc sensors

Tuesday 5 June 2007 11:50 (20 minutes)

S.Kuehn 1, M.Boscardin 2, G.-F. Dalla Betta 3, S. Eckert 1, U. Parzefall 1, K. Jakobs 1, C. Piemonte 2, S. Ronchin 2

1 University of Freiburg, Germany, 2 ITC-irst Trento, Italy, 3 University of Trento, Italy

Presenter: KÜHN, Susanne (University of Freiburg)

Session Classification: Full Detector Systems

Contribution ID: 48

Type: **not specified**

ALIBAVA : A PORTABLE READOUT SYSTEM FOR SILICON MICROSTRIP SENSORS

Tuesday 5 June 2007 13:50 (20 minutes)

Ricardo Marco-Hernández

Instituto de Física Corpuscular (CSIC-UV), Valencia, Spain

Presenter: MARCO, Ricardo (IFIC, Valencia)

Session Classification: Full Detector Systems

Contribution ID: 49

Type: **not specified**

Neutron irradiation results of Si miniature detectors

Tuesday 5 June 2007 14:10 (20 minutes)

G. Casse
University of Liverpool

Presenter: CASSE, Gianluigi (Liverpool University)

Session Classification: Full Detector Systems

Contribution ID: 50

Type: **not specified**

Annealing and charge collection measurements of p-type strip detectors irradiated with neutrons

Tuesday 5 June 2007 14:30 (20 minutes)

G. Pellegrini, C. Lacasta, V. Lacuesta, S. Martí, F. Campabadal, C. Escobar, C. García, M. Miñano, M. Lozano, J.M. Rafi, M. Ullan
CNM Barcelona and IFIC Valencia

Presenter: PELLEGRINI, Giulio (CNM)

Session Classification: Full Detector Systems

Contribution ID: 51

Type: **not specified**

Absolute charge measurements using laser setup - progress

Tuesday 5 June 2007 14:50 (20 minutes)

Peter Kodys
IPNP, Charles University, Prague

Presenter: KODYS, Peter (Prague)

Session Classification: Full Detector Systems

Contribution ID: 52

Type: **not specified**

Silicon Beam Telescope for Super-LHC Detector Studies

Tuesday 5 June 2007 15:10 (20 minutes)

Panja Luukka, Sandor Czellar, Jaakko Härkönen, Eija Tuominen, Jorma Tuominiemi, Esa Tuovinen (Helsinki Institute of Physics, HIP), Lenny Spiegel (Fermilab), Tobias Barvich, Martin Frey, Alexander Furgeri, Frank Hartmann, Bernhard Ledermann, Hans Jürgen Simonis, Pia Steck (Universität Karlsruhe), Bernard De Callatay, Thomas Keutgen, Vincent Lemaitre, Otilia Militaru, Pierre Rodeghiero (Université catholique de Louvain), Alexander Kaminskiy, Dario Bisello (Università di Padova), Regina Demina, Yuri Gotra, Sergey Korjenevski (University of Rochester)

Presenter: TUOMINEN, Eija (Helsinki Institute of Physics)

Session Classification: Full Detector Systems

Contribution ID: 53

Type: **not specified**

Results from the Common RD50 Run at Micron

Tuesday 5 June 2007 16:00 (20 minutes)

M. K. Petterson, H.F.-W. Sadrozinski, C. Betancourt, M. Gerling
SCIPP, UC Santa Cruz, USA

Presenter: SADROZINSKI, Hartmut

Session Classification: Full Detector Systems

Contribution ID: 54

Type: **not specified**

Discussion Session on Full Detector Systems

Tuesday 5 June 2007 16:20 (40 minutes)

Session Classification: Full Detector Systems

Contribution ID: 55

Type: **not specified**

Analyze of microinhomogeneity of irradiated Si by Hall and magnetoresistance effects.

Monday 4 June 2007 09:50 (20 minutes)

J.Vaitkus, A.Mekys, J.Storasta et al

Vilnius University, Institute of Materials Science and Applied Research and ?

Presenter: MEKYS, A.

Session Classification: Defect and Material Characterization & New Materials

Contribution ID: 56

Type: **not specified**

Investigation of kinetics of complex defects formation during thermal treatment of neutron irradiation silicon using Fourier transform infrared absorption spectroscopy

Monday 4 June 2007 10:10 (20 minutes)

Hancza Barbara Surma

Institute of Electronic Materials Technology, 01-919 Warszawa, ul. Wólczyńska 133, Poland

Presenter: SURMA, Barbara (ITME)

Session Classification: Defect and Material Characterization & New Materials

Contribution ID: 57

Type: **not specified**

Investigation of fluence-dependent lifetime variations in proton and neutron highly irradiated Si

Monday 4 June 2007 11:40 (20 minutes)

E.Gaubas, A.Kadys, A.Uleckas, J.Vaitkus

Vilnius University Institute of Materials Science and Applied Research

Presenter: GAUBAS, Eugenius

Session Classification: Defect and Material Characterization & New Materials

Contribution ID: 58

Type: **not specified**

Radiation-induced structure modification in monocrystalline silicon under high-energy ion irradiation

Monday 4 June 2007 12:00 (20 minutes)

A.A. Aleev, Yu.V. Polovinkina, M.A. Kozodaev, O.N. Makeev, S.V. Rogozhkin, A.G. Zaluzhnyi
State Scientific Center of Russian Federation, Institute for Theoretical and Experimental Physics,
Moscow, Russia

Presenter: ALEEV, Andrey (SSC RF ITEP)

Session Classification: Defect and Material Characterization & New Materials

Contribution ID: 59

Type: **not specified**

Production status of 3D detectors at ICEMos and CNM

Wednesday 6 June 2007 11:10 (20 minutes)

Presenter: CELESTE FLETA

Session Classification: 3D detectors

Contribution ID: 60

Type: **not specified**

Photoluminescence characterisation of the WODEAN samples

Monday 4 June 2007 11:20 (20 minutes)

Kriteshwar Kohli, Gordon Davies, King's College London

Presenter: DAVIES, Gordon

Session Classification: Defect and Material Characterization & New Materials