

SATURDAY, 4 JUNE 2005

17:00–19:00 Registration

SUNDAY, 5 JUNE 2005

08:30 Registration

10:00–10:40 **OPENING ADDRESSES**

10:40–13:00 **SESSION 1:
ACCELERATOR FACILITIES**

Chairperson: N. Ramamoorthy, IAEA

<i>No of Paper IAEA-CN-115-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
01	H. Schopper	Switzerland	40	Accelerators for Science and Society
02	M. Jakšić	Croatia	20	Accelerator laboratory of the Ruder Boskovic Institute
03	W. Kutschera	Austria	20	VERA, the Vienna Environmental Research Accelerator
04	K. Bharuth-Ram	South Africa	20	Review of Accelerator Facilities in South Africa
05	P.V. Bhagwat	India	20	Status of Heavy Ion Accelerator Technology activities at BARC
06	Bum-Soo Han	Republic of Korea	20	Application and Economics of Electron Beam Wastewater Treatment

13:00–14:20 **Lunch Break**

SUNDAY, 5 JUNE 2005

**14:20–15:20 SESSION 2:
ACCELERATOR MASS SPECTROMETRY**

**Chairperson: I. Bogdanovic-Radovic,
Croatia**

<i>No of Paper IAEA-CN-115-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
09	M.L. Roberts	USA	20	Continuous-Flow Accelerator Mass Spectrometry
10	J.Southon	USA	20	High throughput, high precision 14C AMS with a small accelerator
11	A. Priller	Austria	20	AMS with ¹⁰ Be from Environmental Samples

15:20–15:40 Coffee Break

**15:40–17:00 SESSION 2 cont'd:
ACCELERATOR MASS SPECTROMETRY**

**Chairperson: I. Bogdanovic-Radovic,
Croatia**

12	A. Wallner	Austria	20	Boundaries in Measuring different Pu Isotopes via AMS and alpha-spectrometry
13	Shoaib Ahmad	Pakistan	20	A comparative study of the identification of heavy carbon clusters with Direct Recoil Spectroscopy (DRS) and ExB velocity spectrometer on PINSTECH accelerator
14	M.A.Hamid Khan	Bangladesh	20	Measurement of Composition and Thickness of Thin Targets using 3 MeV Van de Graaff Accelerator

18:00 Joint IAEA/IRB Reception

MONDAY, 6 JUNE 2005

9:00–10:40

SESSION 3: MATERIALS MODIFICATION ION BEAM ANALYSIS

Chairperson: K. Bharuth-Ram, South Africa

<i>No of Paper IAEA-CN-115-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
15	L. Longoria Gándara	Mexico	20	Characterisation of Materials using Accelerators
16	S. Fazinic	Croatia	20	Analysis of inorganic pigments by Nuclear Microprobe: the case of the paintings by the Master HGG
17	M. Roumie	Lebanon	20	Pixe Protocol Setup For Cluster Analysis Of Archeological Samples
18	A.K.M.Fazlul Hoque	Bangladesh	20	Study of human milk composition using PIXE-PIGE techniques
20	I. Bogdanovic- Radovic	Croatia	20	Amorphus Silicon Solar Cell Characterization using Ion-Induced Electron Emission ERDA on the Nuclear Microprobe in Zagreb

10:40–11:00

Coffee Break

11:00–12:20

SESSION 3 cont'd: MATERIALS MODIFICATION ION BEAM ANALYSIS

Chairperson: K. Bharuth-Ram, South Africa

21	S. Bamford	IAEA	20	Optimization of RBS Analysis as an Input for Quantification in X-ray Emission Techniques
22	A. Gurbich	Russian Federation	20	Current Status of the Problem of Cross Section Data for Ion Beam Analysis
23	E.J. Teo	Singapore	20	Proton beam writing of microstructures in silicon
24	A. Bettioli	Singapore	20	Fabrication of polymeric photonic structures using proton beam

12:20–14:20

Lunch Break

MONDAY, 6 JUNE 2005

14:20–15:20 **SESSION 4:
ELECTRON AND
PHOTON BEAM IRRADIATION**

Chairperson: O. Güven, Turkey

<i>No of Paper IAEA-CN-115</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
26	A. Gurbich	Russian Federation	20	Accelerator Based Technique of Fission Fragment Implantation for Wear Studies
27	A. Wysoka-Rabin	Poland	20	6 MeV Radiographic Facility at Swierk
28	A. Sharma	India	20	Intense Pulsed Power Electron Accelerators Developed at BARC

15:20–15:40 **Coffee Break**

15:40–17:00 **SESSION 4 cont'd:
ELECTRON AND
PHOTON BEAM IRRADIATION**

Chairperson: O. Güven, Turkey

29	C. Giovedi	Brazil	20	Effect of Electron Beam Irradiation on Carbon Fiber Tensile Properties
30	E.S. Pino	Brazil	20	Mechanical Properties of Electron Beam Irradiated Polyamide 6,6
31	Jianhua Zu	China	20	Use of electron beam in pre-irradiation grafting of material for industrial application

TUESDAY, 7 JUNE 2005

08:40–10:40

**SESSION 4 cont'd:
ELECTRON AND
PHOTON BEAM IRRADIATION I**

Chairperson: Bum-Soo Han, Rep. of Korea

<i>No of Paper IAEA-CN-115-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
33	A. Chmielewski	IAEA	20	Electron Accelerator Applications for Radiation Processing
34	Z. Zimek	Poland	20	Safe Industrial Electron Accelerators Operation in Extended Period of Exploitation
35	D. Ighigeanu	Romania	20	Electron Beam Sterilization of the Agarose Gel Used for Electrophoresis
36	Myun-Joo Lee	Rep. of Korea	20	Evaluation on ecological stability and biodegradation of dyeing wastewater pre-treated by electron beam
37	S.F. Sabato	Brazil	20	Effect of ionizing radiation in Tilapia protein biofilms
38	Yu Ri Kim	Republic of Korea	20	Disinfection of Total Coli-forms in the Effluent from Municipal Wastewater Plant with Electron Beam

10:40–11:00

Coffee Break

11:00–15:20

**SESSION 5:
ACCELERATOR DRIVEN SYSTEMS**

**Co-Chairpersons: W. Gudowski, Sweden
A. Stanculescu, IAEA**

80	A. Stanculescu	IAEA	20	IAEA Activities in the Area of Partitioning and Transmutation
81	W. Gudowski	Sweden	20	High Power Accelerators – an Interesting Option for Future Innovative Nuclear Systems
82	V.N. Shvetsov	Russian Federation	20	The subcritical assembly at DUBNA (SAD): coupling all major components of an accelerator driven system (ADS) for nuclear waste incineration
83	A. Mueller	France	20	A Reference Concept for ADS Accelerators
84	L. Lukovac	France	20	Optimisation of accelerator reliability for ADS: example of SC cavities and the associated RF power couplers
85	H. Ait Abderrahim	Belgium	20	MYRRHA – A Proof-of-Principle ADS Facility
86	H.I. Kiyavitskaya	Belarus	20	Application of Low Energy Accelerators for the Investigation of ADS Neutronics

13:20

Free Afternoon

TUESDAY, 7 JUNE 2005

14:40-15:00

**SESSION 5 cont'd:
ACCELERATOR DRIVEN SYSTEMS**

**Co-Chairpersons: W. Gudowski, Sweden
A. Stanculescu, IAEA**

<i>No of Paper</i>	<i>Name</i>	<i>Designating Member</i>	<i>Time</i>	<i>Title of Paper</i>
<i>IAEA-CN-115</i>		<i>State/Organization</i>	<i>(min)</i>	

15:00

Optional boat/city tour

WEDNESDAY, 8 JUNE 2005**9:00–10:40****SESSION 6:
ELECTRON AND
PHOTON BEAM IRRADIATION II****Chairperson: Z. Zimek, Poland**

<i>No of Paper IAEA-CN-115/</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
43	O. Güven	Turkey	20	New Opportunities for the Utilization of Electron Accelerators in Polymer Processing Industries
48	D. Martin	Romania	20	Synergistic Effects Obtained by Combined Electron Beam and Microwave Irradiation
49	D. Craciun	Romania	20	Electron Beam Processed Polyelectrolytes
50	Bum-Soo Han	Republic of Korea	20	Electron Beam treatment Plant for Textile Dyeing Wastewater
51	C. Lopes Duarte	Brazil	20	Present Status Of Environmental Application Of Electron Beam Accelerator In Brazil

10:40–11:00**Coffee Break****11:00–13:00****SESSION 7:
BIOMEDICAL APPLICATIONS****Chairperson: R. Lanza, USA**

53	D. Schardt	Germany	40	Tumor Therapy with Heavy Ions at GSI Darmstadt
54	K. Slosarek	Poland	20	New Possibilities for Accelerators in Radiotherapy
55	M. Kimura	Japan	20	Heavy-ion cancer therapy in Fukuoka
56	J. Ncapayi	South Africa	20	Upgrading of the accelerator facilities to increase the production of radionuclides at iThemba LABS
57	S-J. Heselius	Finland	20	Accelerators for PET

13:00–14:20**Lunch Break**

WEDNESDAY, 8 JUNE 2005

14:20–15:20 **SESSION 8:
APPLICATIONS OF ACCELERATORS
FOR THE SAFETY AND
SECURITY OF PEOPLE**

Chairperson: D. Miljanic, Croatia

<i>No of Paper IAEA-CN-115/</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
58	R. Lanza	USA	40	Accelerators for Safety and Security
59	G. Nebbia	Italy	20	The Use of Neutron Generators for the Detection of Illicit Materials in the Sea Transportation System

15:20–15:40 **Coffee Break**

15:40–17:00 **SESSION 8 cont'd:
APPLICATIONS OF ACCELERATORS
FOR THE SAFETY AND
SECURITY OF PEOPLE**

Chairperson: D. Miljanic, Croatia

60	V.A. Gribkov	Poland	20	Plasma Accelerator for Detection of Hidden Objects by Using Nanosecond Impulse Inspection System
61	A. Kuznetsov	Russian Federation	20	Using of Neutron Generator with APT/NNA for Detection of Explosives
62	A. Buffler	South Africa	20	Using Fast Neutrons to Detect Explosives and Illicit Materials
64	L. Lakosi	Hungary	20	Photoneutron interrogation of U-samples by a 4 MeV LINAC. A feasibility study

19:00 **Conference dinner (optional)**

THURSDAY, 9 JUNE 2005

9:00–10:00 **SESSION 9:
ACCELERATOR TECHNOLOGY**

Chairperson: S. Fazinic, Croatia

<i>No of Paper IAEA-CN-115/</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Time (min)</i>	<i>Title of Paper</i>
65	D. Trbojevic	USA	20	Non-Scaling Fixed Field Gradient Accelerator (FFAG) Design for Proton and Carbon Therapy
67	C. Franklyn	South Africa	20	Compact variable-energy neutron generators for fast neutron applications
68	K. Govender	South Africa	20	Use of plasma window for enhanced ion beam transmission from vacuum to air

10:40–11:00 **Coffee Break**

11:00–12:40 **SESSION 10 :
ROUND TABLE ON UTILIZATION OF
ACCELERATORS**

Chairperson: H. Vera-Ruiz, Bolivia

12:40–13:00 **SYMPOSIUM CLOSING**