

DAE- BRNS
Indian Particle Accelerator Conference -2013
InPAC-2013

November 19-22, 2013

Venue
Meghnad Saha Auditorium, VECC/SINP Complex

Scientific Program

Monday, Nov 18, 2013

15:00-18:00 hrs:

Registration at VECC

Tuesday Nov 19, 2013

09:00-09:30 hrs:

Registration at Symposium Venue
(Meghnad Saha Auditorium, SINP- VECC Complex)

09:30-11:00 hrs:

Inaugural Session

11:00-11.30 hrs:

Tea

11:30-13.00 hrs:

Session 1

Status Report

Chairman: Dr Amit Roy

IT-01 (30 min): Accelerator activities at the Variable Energy Cyclotron Centre, Kolkata *D. K. Srivastava*

IT-02 (30 min): Recent Progress in Accelerator Activities at Raja Ramanna Centre for Advanced Technology, Indore *P. D. Gupta*

IT-03 (30 min): Accelerators and associated developmental activities at IUAC *Dinakar Kanjilal*

13:00-14.00 hrs:

Lunch

14:00-16.00 hrs:

Session 2

Proton and Ion Accelerators

Chairman: Dr R G Pillay

IT-04 (20 min): Status and future plans for radioactive ion beams development programme at VECC
Alok Chakrabarti

IT-05 (20 min): High Intensity Accelerator Development for ADS Program *P. Singh*

IT-06 (20 min): Development and research activities in accelerator mass spectrometry (AMS) at Inter University Accelerator Centre (IUAC), New Delhi, India *S Chopra*

IT-07 (20 min): Recent developmental activities and performance of pelletron accelerator A. K. Gupta

IT-08 (20 min): Recent activities at Pelletron Linac Facility, Mumbai *Vandana Nanal*

IT-09 (20 min): Transport and matching of low energy space charge dominated beams *V. S. Pandit*

16:00-16.20 hrs:

Tea

16:20–18.00 hrs:	Session 3						Poster Session					
ID:	13	17	20	21	22	24	27	28	30	32	35	38
	42	43	44	45	46	47	50	51	55	56	60	61
	63	64	66	68	69	72	74	76	77	78	79	81
	82	83	84	85	86	87	88	89	91	94	95	96
	99	100	103	106	107	108	109	110	111	114	115	116
	117	120	121	122	123	124	126	127	129	130	132	134
	135											

17:45-18:30 hrs: General Body meeting of ISPA: Venue -Hall-1

18:30 -20:00 hrs: Cultural Programme
20:00-21:30 Hrs: Dinner

Wednesday Nov 20, 2013

09:30–11.00 hrs: **Session 4** **Main Hall: Accelerator Technology**
Chairman: Dr Pitamber Singh

- IT–10 (20 min):** Completion and Operation of Superconducting Linac at IUAC *S. Ghosh et.al.*
IT–11 (20 min): Superconducting Radio Frequency Cavities: Design, Development and some Results
P. N. Prakash
IT–12 (20 min): Magnet development program at VECC *Gautam Pal*
IT–13 (30 min): Indian institutions and Fermilab collaboration on accelerator technologies *Shekhar Mishra*

11:00–11.30 hrs: **Tea**

11:30– 13.00 hrs: Parallel Session 5 **Main Hall: RF and Power Supply**
Chairman: Dr K C Mittal

- ITS-01 (15 min):** Amplitude and phase controlled three-phase RF system of superconducting cyclotron with cavity analysis and measurement *Sumit Som*
ITS-02 (15 min): Development of high power radio frequency (RF) technologies / systems for particle accelerators *Manjiri Pande*
ITS-03 (15 min): RF Power Sources for Electron Linacs *Kavita P Dixit*
ITS-04 (15 min): Recent Advances in High Power RF Systems of Indus Synchrotron *Mahendra Lad et.al.*
Oral 01 (10 min): ID: 318 IOT based rf power systems as an alternative to klystron amplifier in indus-2 @ 505.812 MHz *M.K. Jain et.al.*
Oral 02 (10 min): ID: 312 Design and development of a prototype cavity for a 80 KW, CW, 505.8 MHz Klystron tube. *Parul Gupta et.al.*
Oral 03 (10 min): ID: 054 Solid-state RF power amplifiers development at BARC *V Ramarao Bala et.al.*

11:30–13.00 hrs: Parallel Session 6 **Hall-1: Beam Dynamics**
Chairman: Shri G. Singh

- Oral 05 (10 min):** ID: 278 Studies on linear lattice for a 1GeV proton accumulator ring *Pradeep Kumar et.al.*
Oral 06 (10 min): ID: 230 Closed orbit analysis for ISNS accumulator ring's FODO lattice *Chirag Patidar et.al.*
Oral 07 (10 min): ID: 104 Design & fabrication of radio frequency quadrupole accelerator at IUAC, New Delhi *Rajeev Ahuja, et.al.*
Oral 08 (10 min): ID: 156 Buncher design & optimization for 10 MeV RF electron linac *Vijay Nimje, et.al.*
Oral 09 (10 min): ID: 019 Commissioning and beam trials of 6 MeV RF electron linac for cargo- scanning *Shiv Chandan. Et.al.*

Oral 10 (10 min): ID: 308 Electron gun and Target design for the dual mode radiotherapy linac at SAMEER
Tanuja Dixit et.al.

Oral 11 (10 min): ID: 362 First beam acceleration through a four-vane RFQ at BARC *S. V. L. S. Rao et.al.*

Oral 12 (10 min): ID: 252 Enhancement of THz radiation from the CUTE-FEL using an S-band pre-buncher
Shankar Lal et.al.

Oral 13 (10 min): ID: 378 First resonator cavity of IUAC drift tube LINAC *B. P. Ajith Kumar et.al.*

13:00–14.00 hrs: Lunch

14:00–16.00 hrs: Session 7 Main Hall: Accelerators Technology
Chairman: Dr D. Kanjilal

IT-14 (30 min): Beam Based Characterization of Phase Space and Transport at VECC *Yu-Chiu Chao et.al.*

IT-15 (30 min): The RF System of the K-800 Superconducting Cyclotron at INFN-LNS *Caruso Antonino et.al.*

IT-16 (20 min): Design and development of IH LINAC 3 & 4 for VECC RIB Facility and beam acceleration results *Arup Bandyopadhyay et.al.*

IT-17 (20 min): Electromagnetic design issues in elliptic superconducting radio frequency cavity for H linac
Vinit Kumar et.al.

IT-18 (20 min): Commissioning of PK-ISIS superconducting ECR ion source at Van de Graaff, BARC
P. V. Bhagwat et.al.

16.00–16.20 hrs: Tea

16.20 –18.00 hrs: Session 8 Poster Session

ID	136	137	138	139	140	142	143	144	145	146	147	148
	150	153	159	161	162	163	164	168	169	170	171	172
	174	175	176	177	178	182	183	184	185	191	193	194
	197	200	201	202	203	204	205	206	207	208	210	214
	216	217	218	219	220	221	222	223	224	226	227	228
	229	231	232	237	239	241	242	244	245	246	250	251
	253	254										

18:00-18:15 hrs: Tea

18:15-19:15 hrs: Divatia Memorial Lecture: Dr R K Bhandari

19:30-22:00 hrs: BANQUET

Thursday Nov 21, 2013

09:30 – 11.00 hrs: Session 9 Main Hall: Accelerators
Chairman: Dr Alok Chakrabarti

IT-19 (20 min): Industrial electron accelerators development and applications *K. C. Mittal*

IT-20 (20 min): Particle accelerators: The next generation *Srinivas Krishnagopal*

ITS-05 (15min): Intense Giga watt pulsed electron accelerators for HPM and FXR Generation
Archana Sharma

ITS-06 (15 min): Update on the VECC-TRIUMF collaboration for superconducting e-linac development
V. Naik et.al.

Oral 14 (10 min): ID: 377 Magnetic field Correction and Present Status of VECC Superconducting Cyclotron
Malay Dey, et.al.

Oral 15 (10 min): ID: 289 In beam test of digital rf control for superconducting resonator at PLF, Mumbai
R. G. Pillay, et.al.

11:00–11.30 hrs Tea

11:30–13.00 hrs: Parallel Session 10

Main Hall: Cryogenics & Accelerator Technology

Chairman: Shri Gautam Pal

IT-21: (20 min): How accelerator programme benefitted from superconductivity & cryogenics : Indian scenario *T. S. Datta*

IT-22: (20 min): Cryogenics activities at RRCAT for development of superconducting rf cavities
P. K. Kush et.al.

ITS-07 (15 min): Cryogenic Activities at VECC *Sandip Pal*

ITS-08 (15 min): SCRF Cavity Development at RRCAT *A. M. Puntambekar*

Oral 16 (10 min): ID: 105 Development of end group for 1.3 GHz nine cell SCRF cavity *Ajay Yedle, et.al.*

Oral 17 (10 min): ID: 034 Design, fabrication and low power RF testing of a prototype beta=1, 1050 MHz cavity developed for electron linac *Shreya Sarkar, et.al.*

11:30 – 13.00 hrs: Parallel Session 11

Hall-1: Ion sources and Control

Chairman: Shri P V Bhagwat

ITS-09 (15 min): Ion beam diagnostics of high current RF ion source *P. Y. Nabhiraj et.al.*

ITS-10 (15 min): Development and characterization of high current electron cyclotron resonance proton ion source for LEHIPA *Pradip Roychowdhury et.al.*

ITS-11 (15 min): Recent Developmental Activities on Beam Diagnostics and Controls at VECC
Sarbajit Pal

ITS-12 (15 min): Design & development of power supplies at VECC for accelerators *S. K. Thakur*

Oral 18 (10 min): ID: 098 Characterization of high intensity beam from 2.45 GHz microwave ion source
Anuraag Misra, et.al.

Oral 19 (10 min): ID: 215 Performance of the large current H⁺ ion source: Operational aspects
Sanjeev Kumar Sharma et.al.

Oral 20 (10 min): ID: 073 Development of Tabletop 50 kV Ion Accelerator *Raj Kumar, et.al.*

13:00 –14.00 hrs

Lunch

14:00 – 16.00 hrs: Session 12

Main Hall: Thesis Presentation

Chairman: Dr V. S. Pandit

Th-01 (15+2 min): Resonant converter topologies for constant-current power supplies and their applications
Mangesh Borage

Th-02 (15+2 min): Studies on dynamics of space charge dominated beam in a low energy beam transport system
Paritosh Sing Babu

Th-03 (15+2 min): Studies of niobium and development of niobium resonant rf cavities for accelerator driven system
Jayanta Mondal

Th-04 (15+2 min): Study on ion beam for development of micro devices *Ranjini Menon*

Th-05 (15+2 min): Studies of space charge dominated beam in the spiral inflector and central region of cyclotron
Animesh Goswami

Th-06 (15+2 min): Analytical, numerical and experimental investigations of higher order modes in accelerator RF cavities
Vikas Kumar Jain

Th-07 (15+2 min): Study of laser driven plasma based electron acceleration and bremsstrahlung radiation emission using ultra-high intensity laser pulses *B. S. Rao*

16.00–16.20 hrs:

Tea

16.20–18.00 hrs: Session 13**Poster Session**

ID 256	258	259	260	261	264	266	267	268	273	274	276
277	279	280	281	282	283	284	285	286	287	288	290
291	295	298	299	300	302	303	304	305	306	307	309
311	315	316	317	319	320	321	322	323	324	326	327
329	334	335	336	339	341	342	343	345	346	347	348
349	350	352	354	359	364	365	366	367	368	370	371
373	374	379									

19:30-21:30 hrs:**Dinner****Friday, Nov 22, 2013****09:30 – 11.05 hrs: Session 14****Main Hall: Applications**

Chairman: Sri Subimal Saha

IT-23 (20 min): Medical Radioisotope Production in Cyclotron: Indian Scenario *M. K. Das*IT-24 (20 min): Accelerators: Radiation safety and regulatory compliance *Tapas Bandyopadhyay*IT-25 (20 min): Applications of microtron facility *Ganesh Sanjeev*ITS-13 (15 min): Status Report on Operation of the Folded Tandem Ion Accelerator and Low Energy Accelerator Facility at BARC *Shrikrishna Gupta et.al.*Oral 21 (10 min): ID: 301 Research facilities and programs at the National Centre for Accelerator Based Research: An upcoming 3 MV Pelletron facility *Parmendra Bajpai, et.al.*Oral 22 (10 min): ID: 016 Low energy beam acceleration in higher harmonics in k130 Variable Energy Cyclotron *Prodyut Sankar Chakraborty et.al.***11:05 –11:30 hrs:****Tea****11:30 –12:35 hrs: Session 15****Main Hall: Laser-Plasma Acceleration**

Chairman: Dr S. Krishnagopal

ITS-14 (15 min): Recent results on particle acceleration in ultra-short laser produced plasmas at RRCAT, Indore *J. A. Chakera*ITS-15 (15 min): Progress in Free Electron Laser activity at RRCAT *K. K. Pant et.al.*ITS-16 (15 min): Compact and energy saving magnet technology for particle accelerators *A. Baurichter*Oral 23 (10 min): ID: 015 Laser wakefield acceleration of electrons in a density-modulated plasma *D. N Gupta*Oral 24 (10 min): ID: 361 Development of plasma source for plasma wakefield accelerator experiment at the Institute for Plasma Research *K. K. Mohandas, et.al.***12:35 –13:30 hrs: Session 16****Main Hall: Concluding session**

Chairman: Dr D K Srivastava

12:35-12:50 (15 min): Summary: *Dr Amit Roy*

12:50-13:00 (10 min): Prize Distribution by ISPA

13:00-13:30 (30 min): Comments from Participants

13:30 –14.30 hrs**: Lunch****14:30: Visit to Labs**