ICIS 2017

17th International Conference on Ion Sources

15-20 October 2017, CERN – CICG, Geneva

Topics:

- Fundamental processes
- Beam extraction, transport, and diagnostics
- Production of high intensity ion beams
- Production of highly charged ion beams
- Negative ion sources
- Ion sources for fusion
- Polarized ion sources
- Radioactive ion beams and charge breeders
- Applications and related technologies

ICIS 2017 GENEVA

VENUE

Getting to CERN globe:

By plane (Geneva Airport - Cointrin):

Free *public transport ticket (machine next to exit of baggage collection hall - before customs control).*

- **Bus Y** direction "CERN", Stop: (final) "**CERN**", proceed to **large Globe** on your right.
- **Bus 23**, **28** or **57**, Stop: "**Blandonnet**", then **tram 18**, Stop: (final) "**CERN**".

By train (Geneva Railways Station - Cornavin):

Ticket: "Tout Geneve" 3.20CHF

- **Tram 18**, Stop: (final) "**CERN**".

Square Galileo Galilei, Meyrin, 1217

Getting to CICG:

By plane (Geneva Airport - Cointrin):

Free public transport ticket (machine next to exit of baggage collection hall - before customs control).

- **Bus 5** direction "Thônex-Vallard", Stop: "**Vermont**".
- **Bus 28** direction "Jardin Botanique", Stop: "**Nations**".

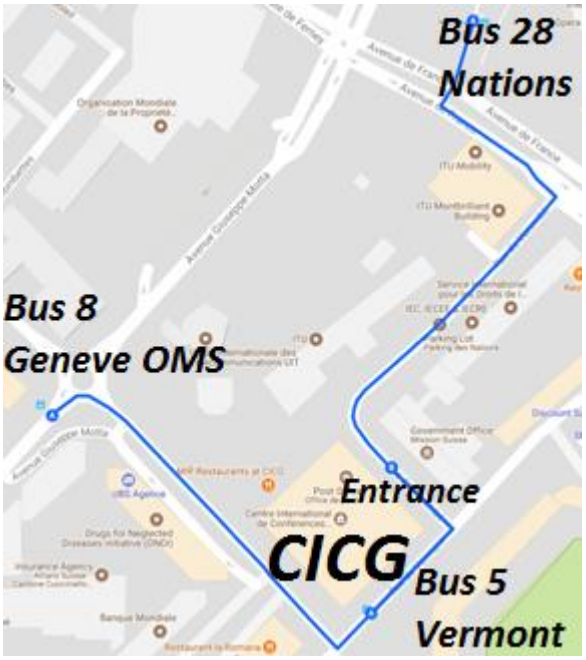
By train (Geneva Railways Station - Cornavin):

Ticket: "Tout Geneve" 3.20CHF

- **Bus 5** direction "Aeroport", Stop: "**Vermont**.
- **Bus 8** direction "Geneve, OMS", Stop: "**UIT**".
- **Tram 15** direction "Geneve, Nations", Stop: "**UIT**".

From CERN:

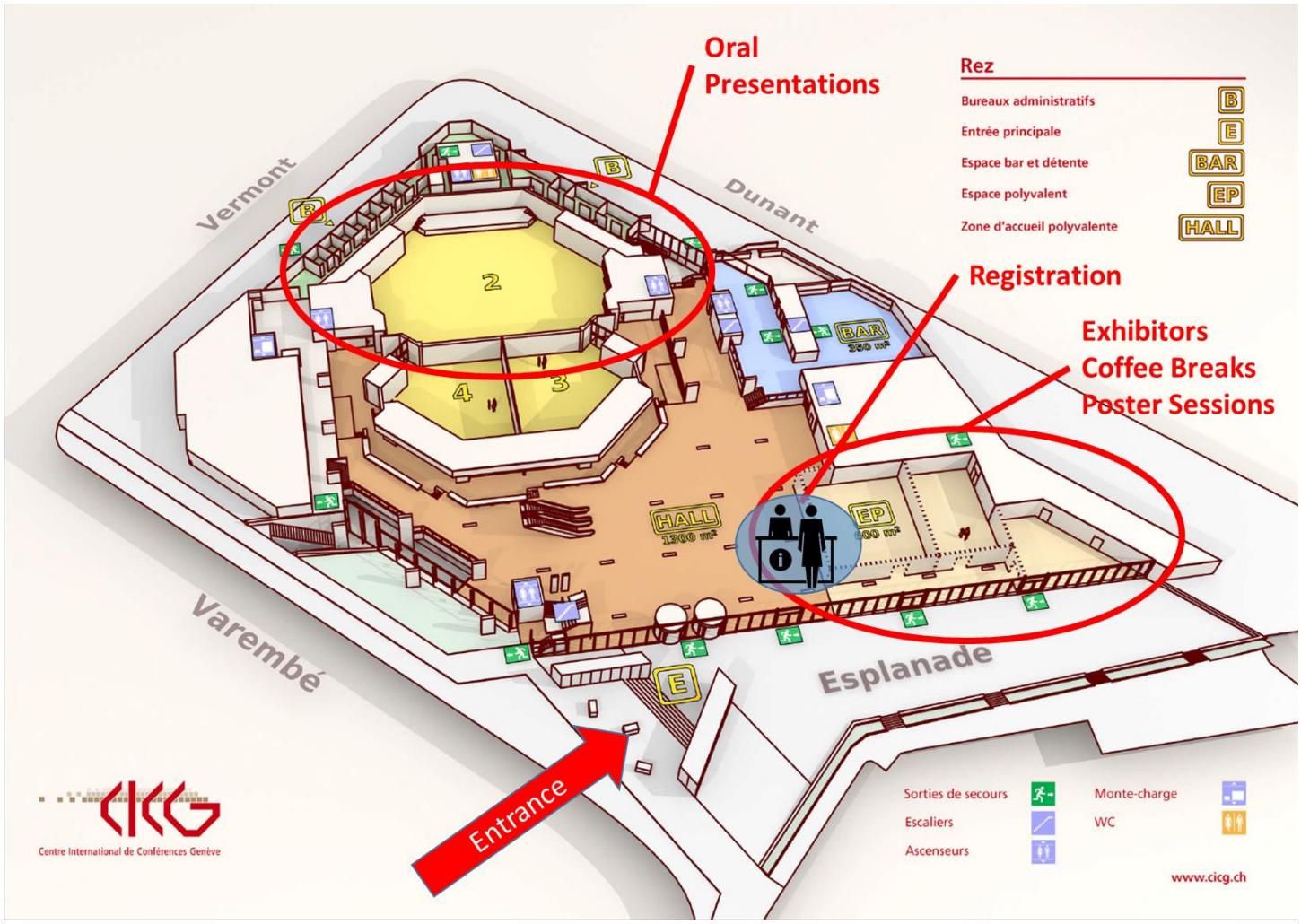
- **Tram 18** direction "Carouge", Stop: "**Cornavin**". Then follow ***By Train*** instructions. (Bus 5, Bus 8, Tram 15).



Rue de Varembé 17, 1211 Genève

CICG floor Map:

Located at the entrance level (**floor 0**), **auditorium 2** hosts all oral presentation in plenum. At the same level, coffee breaks, poster exhibition and Exhibitor's booth in a dedicated multi-purpose area. Registration will be at the lobby on Monday and then in the 2nd floor room 14.



PROGRAMME

Sunday 15 October, CERN Globe of Innovation:

16:30 - 17:00	Registration
17:00 - 19:00	Welcome Reception

Monday 16 October, CICG:

08:30 - 09:00			*Registration / Coffee*	
09:00 - 09:10			*P. Collier: Welcome*	
09:10 - 09:40	Alexander Ivanov Russia	W. Kraus	IPP	Deuterium results at ELISE
09:40 - 10:10		M. Kashiwagi	QST	Achievement of 1 MeV beam accelerations for 60 s toward high power NBIs
10:10 - 10:30		A. Simonin	CEA	Ongoing R&D towards a new generation of neutral beam heating systems for future fusion reactors
10:30 - 11:00				
11:00 - 11:30	Daniela Leitner USA	T. Thuillier	CNRS	Prospect for a multicharged ECR ion source operated at 60 GHz
11:30 - 11:50		E. Beebe	BNL	The Extended EBIS Intensity Upgrade at Brookhaven National Laboratory
11:50 - 12:10		E. Donets	JINR	Status report on development and commissioning of new Electron String Ion Source (ESIS) Krion-6T.
12:10 - 12:30		S. Gammino	INFN	Commissioning of the AISHA (Advanced Ion Source for Hadrontherapy) Ion Source
12:30 - 14:00				
14:00 - 14:30	Dan Faircloth UK	T. Day Goodacre	TRIUMF	Review of Chemically selective ion sources for radioisotope production
14:30 - 15:00		S. Lawrie	STFC	Recent H– Diagnostics, Plasma Simulations and 2X Scaled Penning Ion Source Developments at the Rutherford Appleton Laboratory
15:00 - 15:20		S. Briefi	AUGSBURG-UNIV.	Experimental benchmark of the EM-PIC-MCC code NINJA and its application for simulating the Linac4 H- ion source plasma
15:20 - 15:40		R. Welton	ORNL	Status of the New SNS Injector and External Antenna Ion Source
15:40 - 16:00		A. Ueno	JAEA	Conditions to Minimize Co-Extracted Electron Current and Beam Quality in J-PARC Cesiated RF-Driven H^- Ion Source 66 mA Operation
16:00 - 16:30				
16:30 - 19:00				

1. Fundamental processes in ion sources, plasma
2. Production of high intensity ion beams
3. Production of highly charged ion beams
4. Negative ion sources

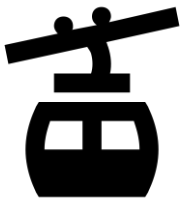
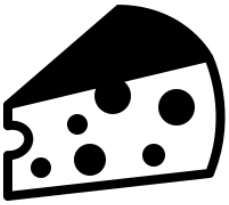
Tuesday 17 October, CICG:

08:30 - 09:00	*Ursel Fantz Germany*	M. Wada	DOSHISHA UNIV.	Plasma-surface interaction in negative hydrogen ion sources
09:00 - 09:30		K. Tsumori	NIFS	Flow patterns of H- ions measured with Directional Photodetachment Langmuir Probe
09:30 - 09:50		G. Castro	INFN-LNS	Plasma diagnostics update and consequences on the upgrade of existing sources
09:50 - 10:10		J. Laulainen	JYVASKYLA UNIV.	Photoelectron Emission Induced by Low Temperature Hydrogen Plasmas
10:10 - 10:30		J. Guo	IMP-CAS	45 GHz microwave power transmission and coupling scheme study with superconducting ECR ion source at IMP
10:30 - 11:00				
11:00 - 11:30	Beatrix Schunke France	D. Wünderlich	IPP Garching	Review of PIC modelling for the extraction region of large negative hydrogen ion sources
11:30 - 11:50		Y. Belchenko	BINP	RF driven Multiaperture Surface-Plasma Negative Ion Source: Beam Formation and Transport via the LEBT
11:50 - 12:10		E. Sartori	PADOVA UNIV.	First measurements of beam plasma in NIFS test stand
12:10 - 12:30		K. Ikeda	NIFS	First Results of Deuterium Beam Operation on Neutral Beam Injectors in the Large Helical Device
12:30 - 14:00				
14:00 - 14:30	Friedhelm Ames Canada	R. Vondrasek	ANL	Charge Breeding of Radioactive Isotopes at the CARIBU Facility
14:30 - 15:00		T. Kalvas	JYVASKYLA UNIV.	New challenges in ion beam extraction modelling
15:00 - 15:20		U. Fantz	IPP	Improved Understanding of the Caesium Dynamics in Large H Sources by Combining TDLAS Measurements and Modelling
15:20 - 15:40		R. Agnello	EPFL	The RAID experiment for the investigation of negative ion physics for fusion applications
15:40 - 16:00		F. Taccogna	CNR	Particle-based model of plasmadynamics in ITER-prototype negative ion source
16:00 - 16:30				
16:30 - 19:00		4. Negative ion sources 5. Ion sources for fusion 6. Polarized ion sources		6. Radioactive ion beams and charge breeders 7. Beam formation, extraction, transport, and diagnostics
18:00 - 18:45		*IAC Meeting* (Room 14, 2nd Floor)		
19:30 - 22:00		*IAC dinner*		

Wednesday 18 October, CICG:

08:30 - 09:00	*Santo Gammino Italy*	S. Steinke	LBNL	Direct laser ionization and acceleration using PW lasers
09:00 - 09:30		Y. Zhao	IMP	Superconducting ECR ion source: from 24-28 GHz SECRAL to 45 GHz FECR
09:30 - 09:50		V. Skalyga	IAP-RAS	Status of new developments in the field of high-current gasdynamic ECR ion sources at the IAP RAS
09:50 - 10:10		L. Celona	INFN-LNS	High intensity proton source and LEBT for the European Spallation Source
10:10 - 10:30		S. Ikeda	BNL	Investigation of laser energy absorption by ablation plasmas
10:30 - 11:00				
11:00 - 11:30	Hannu Koivisto Finland	A. Aanesland	Palaiseau, France	Innovative RF-driven ion source thruster for space applications
11:30 - 11:50		A. Kitagawa	QST	Status of ion sources at The National Institutes for Quantum and Radiological Science and Technology (QST)
11:50 - 12:10		T. Stora	CERN	Ion sources for medical radioisotopes produced by electromagnetic mass separation at CERN-MEDICIS
12:10 - 12:30		*Y. Martinez Palenzuela*	KU LEUVEN	Study and optimization of the VADLIS ion source for the production of radioactive beams at ISOLDE
12:30 - 14:00				
14:00 - 14:30	Hongwei Zhao China	A. Adonin	GSI	Progress on the MEVVA source VARIS at GSI
14:30 - 15:00		O. Tuske	CEA SACLAY	Commissioning of the ECR Ion Source of the High Intensity Proton Injector of the Facility for Anti Proton and Ion Research at CEA-Saclay
15:00 - 15:20		A. Garcia Sosa	FNAL	Implementation of Design Changes Towards a More Reliable, Hands-off Magnetron Ion Source
15:20 - 15:40		T. Nagatomo	RIKEN	Residual Gas Effect in LEBT on Transverse Emittance of Multiply-Charged Heavy Ion Beams Extracted from ECR Ion Source
15:40 - 16:00		A. Zelenski	BNL	The RHIC polarized H- ion source
16:00 - 16:30				
16:30 - 19:00		7. Beam formation, extraction, transport, and diagnostics 8. Industrial and medical application of ion sources 8. Other related technologies		
18:30 - 23:00		 Brightness dinner		

Thursday 19 October, CICG:

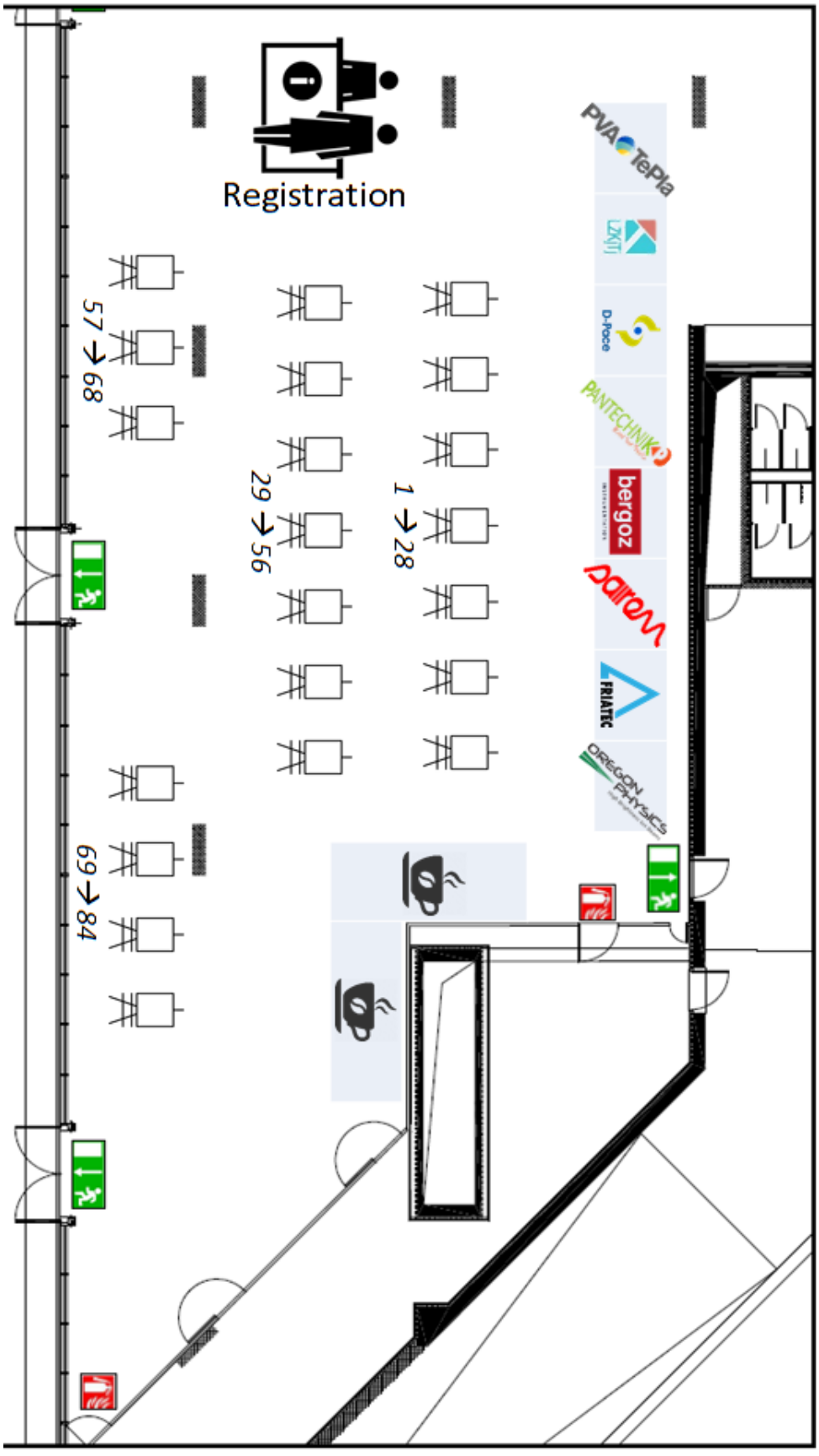
08:30 - 09:00	*Mi-Sook Won Korea*	A. Pikin	BNL	Generation of magneto-immersed electron beams
09:00 - 09:20		J. van Kan	Physics NUS	Design optimization of the nano-aperture ion source for proton beam writing applications
09:20 - 09:30		T. Cocolios	MEDICIS	Young talent's Award
09:30 - 09:40		J. Alonso, C. Xin	LZKjTj	Brightness Award
09:40 - 10:00		SNS Team: Stockli, Welton, Han		*Brightness Talk*
10:00 - 10:10		 Group Picture		
10:10 - 10:30				
10:30 - 16:30		 Aiguille du Midi  Gruyere  Chamonix Tour		
16:00 - 23:00		  Banquet: Chateau de Chillon		

Friday 20 October, CICG:

08:30 - 09:00	*Atsuski Kitagawa Japan*	Ferrar	KU LEUVEN	Advances in gas-cell based resonance laser ionisation methods for radioactive ion beam production.
09:00 - 09:30		Crespo López-Urrutia	Heidelberg	Design and test of the TRIUMF EBIS RIB Charge breeder
09:30 - 09:50		A. Lapierre	NSCL	On-line operation of the EBIT charge breeder of the ReA post-accelerator
09:50 - 10:20		*L. Penescu: ICIS17 Highlights*		
10:20 - 10:30		*Next ICIS*		
10:30 - 11:00				
11:00 - 11:15	Detlef Kuchler Switzerland	F. Tecker	CERN	CERN accelerators
11:15 - 11:30		M.G. Borgue	CERN ISOLDE	ISOLDE and n-ToF Physics
11:30 - 11:45		L. Gatignon	CERN	SPS physics
11:45 - 12:00		U. Wiedeman	CERN	LHC Phenomenology & Physics
12:00 - 12:15		K. Shaw	CERN	LHC detectors & physics
12:15 - 12:25		*J. Lettry: Conference Closing*		
12:25 - 13:15				
13:15 - 17:10		 CERN Visit		
17:10 - 17:40		 Departures to Airport		

POSTERS

Floor Map:



Monday 16 October (1):

Fundamental Processes:

Mo_01	*D. Fu*	Metal plasma formation for Duhocamis
Mo_02	*M. Cavenago*	Towards kinetic models of electron transport in negative ion source
Mo_03	*W. Wu*	Emission Spectroscopy Diagnostics of Quartz-chamber 2.45 GHz ECR Ion Source at Peking University
Mo_04	*I. Izotov*	Broadband microwave emission and electron losses associated with kinetic instabilities in ECR Plasmas
Mo_05	*Y. Kato*	4.0-6.0 GHz Extraordinary mode experiments on 2.45 GHz Electron Cyclotron Resonance Ion Source
Mo_06	*Y. Saito*	Investigation of Laser Ablation Plasma from Thin Graphite Target
Mo_07	*I. Yamada*	Development of a Compact Molecular Hydrogen Ion Source for Low Energy Surface Scattering Experiments
Mo_08	*T. Shibata*	Comparison of photometry measurement and numerical analysis for plasma density oscillation with doubled value of RF frequency in J-PARC RF ion source
Mo_09	*R. Endo*	Production of Hydrogen Negative Ions in high density Sheet Plasma.
Mo_10	*R. Racz*	Radial and azimuthal dependence of plasma parameters in a hexapole-trapped ECR discharge
Mo_11	*Y. Matsumoto*	Study of low-energy electron transport at extraction region in hydrogen negative ion source with an additional electrons source
Mo_12	*K. Hamada*	Enhanced Production of Electron Cyclotron Resonance Plasma by Positioning Plate-Tuner
Mo_13	*G.M. Saquilayan*	Production of Oxygen Ions through the Laser Ablation of Alumina
Mo_14	*I.N. Ocampo*	Ar/O2 Plasma Treatment of Cotton Fabric via Atmospheric Pressure Plasma Jet
Mo_15	*G. Torrisi*	Non-conventional microwave coupling of RF power in ECRIS plasmas
Mo_16	*V. Skalyga*	Microwave emission from ECR plasmas under conditions of two-frequency heating induced by kinetic instabilities.
Mo_17	*J. Smith*	Towards better modelling of surface emission in caesiated materials
Mo_18	*A. Galata*	Status and perspectives of INFN simulation tools: from beam-plasma interaction to a self-consistent plasma-target modelling

Production of High Intensity Ion Beams:

Mo_19	*V. Dudnikov*	RF positive ion source with solenoidal magnetic field
Mo_20	*J. Cao*	The influence of Magnetic field on the ion beam current and beam oscillation of Calutron ion source
Mo_21	*D. Winklehner*	Commissioning results of the Multicusp Ion Source at MIT (MIST-1) for H2+
Mo_22	*D. Sivin*	Low Energy, High-Intensity Repetitively Pulsed Ion Beams Generation
Mo_23	*V. Skalyga*	Proton beam formation from an ECR discharge in a single coil field
Mo_24	*I. Izotov*	Study of plasma parameters in a CW gasdynamic ECRIS
Mo_25	*I. Draganic*	Hot Filament Performance Simulation in a Freeman Ion Source
Mo_26	*Sh. Ikeda*	Development of a laser ion source for a four-beam IH-RFQ linac
Mo_27	*Hu. Zhao*	Proton production by a laser ion source with hydride targets
Mo_28	*G. Yushkov*	Multiply Charged Ion Source Based on High Current Short Pulse Duration Vacuum Arc
Mo_29	*A. Shevelev*	Formation of highintensity, macroparticlefree aluminum ion beams
Mo_30	*R. Berezov*	High intensity proton injector for the FAIR P-LINAC
Mo_31	*Golubev*	Point-like neutron source based on a gasdynamic high-current ECRIS
Mo_32	*J. Hasegawa*	Control of a laser-produced dense plasma flow by a divergent magnetic field
Mo_33	*Y. Iwashita*	Compact H+ ECR Ion Source with Pulse Gas Valve
Mo_34	*M. Okamura*	Low charge state laser ion source driven by a sub nanosecond laser
Mo_35	*Kashiwagi*	Laser plasma generation system with controlled interpulse delay between two laser shots
Mo_36	*T. Wang*	Stability and lifetime of scandium deuteride film cathode in a vacuum arc ion source
Mo_37	*S. T. Stegemann*	Production of high intensity 11C beams for PET-aided hadron therapy
Mo_38	*A. Adonin*	Increasing of the operation duty cycle for heavy elements such as Au, Pb, Bi and U from high current ion sources
Mo_39	*S. Golubev*	Status of a new 28 GHz CW gasdynamic ECR ion source development at IAP RAS
Mo_40	*N. Kumar*	A compact 2.45 GHz microwave ion source and associated Wien filter based analyzing system for low energy ion beam facility
Mo_41	*M. Schmidt*	The LIPSION Upgrade: High Quality Ion Nano-Beams

Monday 16 October (2):

Production of Highly Charged Ion Beams:

Mo_42	*W. Lu*	Conceptual design of a quench protection system for a MARS magnet
Mo_43	*J. Zhang*	Preliminary Design of a Hybrid Ion Source for 7Li3+ Generation
Mo_44	*M. Breitenfeldt*	MEDeGUN commissioning results
Mo_45	*X. Jin*	The Hybrid Electromagnetic Simulation of Ionization Characteristics in ECR Ion Source
Mo_46	*T. Suzuki*	Development of a new compact ECR ion source with all permanent magnets for carbon 5+ production
Mo_47	*T. Kalvas*	Status of new 18 GHz ECRIS HIISI
Mo_49	*R. Thomae*	Production of high intensity Nickel-ion beams with high isotopic purity with the Metal Ion from Volatile Compound (MIVOC) method
Mo_50	*V. Toivanen*	Upgrade of the GTS Electron Cyclotron Resonance Ion Source at GANIL
Mo_51	*Y. Kim*	Low field experiments with 18GHz RF power of the RAON ECR ion source
Mo_52	*S. Lee*	Characterization of EBIS test bench at KOMAC
Mo_53	*M. Sakieldien*	Investigation into the gas mixing effect in ECRIS plasma using K diagnostics
Mo_54	*M. Sakieldien*	Studying the double-frequency heating mode in ECRIS plasma using K diagnostics
Mo_55	*D. Neben*	Plasma Response to Amplitude and Frequency Modulation of the Microwave Power on a 14 GHz Electron Cyclotron Resonance Ion Source
Mo_56	*T.K.T. Kovener*	Study of the Micro Oven for the Linac3 ECR Ion Source at CERN
Mo_57	*B. Lee*	The current status of 28GHz ECR ion source at KBSI
Mo_58	*R. Kronholm*	The effect of ECRIS tuning parameters on the intensity of the Ar9+ optical emission and ion beam current
Mo_59	*A. Losev*	Characteristics of a heavy ion injector Z/A1/3 based on laser-plasma ion source
Mo_60	*A. Eframov*	The preliminary tests of the high charge state all-permanent magnet ECR ion source DECRIS-PM
Mo_61	*A. Eframov*	Upgrading of the CAPRICE type ECR ion source
Mo_62	*H. Kremers*	Intense, pure and stable highly charged ion beams from the AECR ion source at KVI-CART.
Mo_63	*M. Lee*	A study on the dielectric design of high voltage platform for developing 28 GHz ECRIS at KBSI
Mo_64	*F. Maimone*	Operation of a double frequency heated ECRIS in cw and pulsed mode
Mo_66	*T. Thuillier*	Effect of the plasma chamber radius on the high charge state production in an ECR Ion Source
Mo_67	*P. Salou*	PKGANESA: an ECRIS for testing the axisymetric magnetic structure for the production of multicharged ion beams
Mo_68	*L. Sun*	Technical Approaches towards Intense High Charge State Ion Beam Production with Superconducting ECR Ion Sources
Mo_69	*T. Nakagawa*	Recent developemt of RIKEN 28 GHz SC-ECRIS
Mo_70	*G. Rodrigues*	The effect of frequency tuning in the 10 GHz NANOGAN ECR ion source
Mo_71	*G. Castro*	Commissioning of the AISHA Ion Source
Mo_72	*A. Boytsov*	Main Magnetic Focus Ion Source for ionization of L- and M-shell electrons of heavy elements
Mo_73	*M. Salahshoor*	2D Axisymmetric Simulation of an ECR Argon Plasma

Negative Ion Sources:

Mo_74	*V. Dudnikov*	Negative ion radio frequency surface plasma source with solenoidal magnetic field
Mo_75	*V. Dudnikov*	Efficient method for Cold Muonium Negative Ion Production
Mo_76	*M. Bacal*	Negative Ion Source Operation with Deuterium
Mo_77	*V. Dudnikov*	Carbon Film in Radio Frequency Surface Plasma Sources with cesiation
Mo_78	*M. Cavenago*	Extraction of many H- beamlets from uncesiated ion source NIO1
Mo_80	*P. Zhao*	Numerical simulation of electromagnetic fields and impedance of an RF based negative ion source at HUST
Mo_81	*Y. Shimabukuro*	Contribution of atomic hydrogen flux on H- ion beam extracted from a negative hydrogen ion source

Tuesday 17 October (1):

Negative Ion Sources:

Tu_01	*R. Friedl*	Work function of caesiated and Cs-free materials for enhanced H- surface production
Tu_02	*I. Draganic*	Recent Results in Modeling of LANSCE H- Surface Convertor Ion Source
Tu_03	*P. Veltri*	Langmuir probe characterization of the NIO1 ion source plasma
Tu_04	*K. Miyamoto*	Numerical analysis of negative hydrogen ion beam optics by using 3D3V PIC simulation
Tu_05	*M. Brombin*	System for voltage control and for data acquisition of Retarding Field Energy Analyzer
Tu_06	*K. Nishida*	Numerical Analysis of Ion Dynamics in RF ICP Discharge
Tu_07	*S. Masaki*	Diagnostics of Ta Deposited Plasma Electrode for Negative Hydrogen Ion Production with DC Laser Photodetachment Method
Tu_08	*S. Ishihara*	Development of cesium-free negative ion source by using high density sheet plasma
Tu_09	*S. Fujita*	The Effect of Transport and Extraction of Inhomogeneous Surface Produced H- in Large Multi-Aperture Negative Ion Sources
Tu_10	*S. Yamada*	Numerical Simulation of the EEDF and the Neutral Transport in the DC Arc-discharge Hydrogen Negative Ion Source for Medical Use
Tu_11	*K. Shinto*	Present status of the J-PARC cesiated rf-driven H- ion source
Tu_12	*W. Kobayashi*	Development of the Plasma Impedance Prediction Model in Radio Frequency Negative Ion Sources
Tu_13	*K. Yamada*	Development of an electron attachment type negative fullerene ion source
Tu_14	*A. Sanin*	Long-term performance of CW negative hydrogen ion source at BINP tandem accelerator
Tu_15	*S. Liu*	The improvement of CSNS ion source
Tu_16	*I. Morgal*	First experimental results of the helicon driver on Cybele
Tu_17	*T. Zhang*	Performance of PKU H- Source with Liners of Different Materials
Tu_18	*S. Lätti*	Parametric dependence of hydrogen plasma Lyman-band emission and H- ion beam intensity in LIISA ion source
Tu_19	*T. Matlocha*	Modification of a classical PIG ion source for sub-femtoampere beams at the U-120M cyclotron
Tu_20	*C. Baltador*	Effect of filter field and biased double-Bias Plate on volume process in negative ion sources
Tu_21	*W. Chen*	Construction of External Antenna RF H-minus Source in CSNS
Tu_23	*S. Averkin*	Global Model of a Negative Hydrogen Ion Source with Caesiated Plasma Grid
Tu_24	*B. Han*	Optimization of the Cesiation Process for the SNS H- Ion Sources
Tu_25	*M. Stockli*	Record Performance of the Spallation Neutron Source H- Injector
Tu_26	*H. Nakano*	Response of negative-ion beamlet by insulation tip in the vicinity of plasma grid
Tu_27	*D. Faircloth*	Scaled Penning Source Developments
Tu_29	*D. Steski*	Production of Ruthenium-96 Ions for RHIC*
Tu_30	*D. Kleinjan*	Diagnostics and Improvements for the LANSCE H- Ion Source
Tu_31	*S. Melanson*	Improvements to 13.56 MHz RF Powered H− Ion Source

Ion Sources for Fusion:

Tu_32	*M. Cavenago*	Advanced filter structures for NIO1 and other negative ion sources
Tu_33	*V. Variale*	Beam Energy Recovery for Fusion: Secondary Electrons Problem study and Experimental Tests
Tu_34	*Y. Xie*	R&D of radio frequency ion source for neutral beam injector in ASIPP
Tu_35	*Y. Xie*	Status of arc based high power ion source for EAST neutral beam injector
Tu_36	*M. Kisaki*	Effect of plasma grid bias on negative ion beam optics
Tu_37	*S. Popov*	Experimental realization of non-resonant photon neutralizer for negative ion beams. Concept of neutralizer for big NBI systems
Tu_38	*G. Fubiani*	Modelling of Negative Ion Extraction from a Magnetized Plasma Source
Tu_39	*R. Friedl*	Laboratory experiments for developments in view of DEMO NNBI
Tu_40	*V. Davydenko*	Development of helium ion source for NPA system in ITER
Tu_41	*B. Schunke*	Update on the Negative Ion Based Neutral Beam Injectors for ITER
Tu_42	*P. Jain*	Power transfer efficiency in inductively coupled radio-frequency ion source: case study for the NIO1
Tu_43	*T. Karino*	Plasma instability due to solenoid magnetic field
Tu_44	*P. Deichuli*	Upgrade of the low energy, high power neutral beam system
Tu_45	*C.J. Xie*	Experimental study of matching network with different frequency for RF ion source

Tuesday 17 October (2):

Ion Sources for Fusion:

Tu_46	*G. Chitarin*	Benchmark of 3D multi-beamlet numerical models for the optics design of negative ion accelerators
Tu_47	*A. Eshkevar Vakili*	Conceptual design of an ion source for the DAMAVAND Neutral Beam Injection
Tu_48	*M. Ichikawa*	High power and long pulse negative ion production by suppressing of arcing for JT-60SA
Tu_49	*J. Wei*	Design study of 200keV H- accelerator for CFETR neutral beam test facility
Tu_50	*J. Hiratsuka*	Experimental validation of grid heat loadings in the five-stage accelerator with the ITER-relevant gap lengths
Tu_51	*F. Bonomo*	Overview of the Beam Physics Investigation at the ELISE test facility
Tu_52	*J. Wei*	Commissioning and first results of the ASIPP RF-driven negative ion source
Tu_53	*J. Wei*	Distributions of primary-electron populations in different magnetic filter configurations
Tu_54	*G. Serianni*	Numerical investigation of the early operational phase of the negative ion test facility SPIDER: beam features and diagnostics
Tu_55	*K. Lee*	Development of High current density Helicon ion source for DNB in VEST
Tu_56	*M. Kisaki*	Study of isotope effects in hydrogen negative ion sources
Tu_57	*H. Nakano*	Comparison of beam to arc discharge current ratio between hydrogen and deuterium operations in LHD-NBI ion sources
Tu_58	*N. Ippolito*	Particle model of the Driver of the negative ion source for ITER neutral beam injection system
Tu_59	*A. Dunaevsky*	Neutral Beam Injection System for the C-2W Field Reversed Configuration Experiment
Tu_60	*M. Fadone*	Alternative New Concept of an Efficient Negative Ion Source for Neutral Beams

Radioactive Ion Beams, Charge Breeders and Polarized Beams:

Tu_61	*V. Mironov*	Simulation of charge-breeding processes in ECRIS
Tu_62	*B. Cui*	A prototype target-ion source for RIB production in a reactor
Tu_63	*R. Heinke*	Towards Direct High-Resolution Laser Spectroscopy on Exotic Isotopes at Hot Cavity Ion Sources: Crossed Laser - Atom Beam Interaction in the Laser Ion Source Trap LIST
Tu_64	*T. Karino*	Investigate the characteristics of oxide of ^{96}Zr
Tu_65	*J. Angot*	Recent improvements of the LPSC Charge Breeder
Tu_66	*O. Tarvainen*	The effect of plasma instabilities on the background impurities in charge breeder ECRIS
Tu_67	*L. Maunoury*	Charge breeding technique at GANIL: commissioning of the SPIRAL1 charge breeder and new 1+/n+ test bench
Tu_68	*K. Chrysalidis*	Laser Ion Source for High Resolution Doppler-Free Resonance Ionization Spectroscopy of Radioisotopes and Enhanced Isomer Selectivity
Tu_69	*Shu. Ikeda*	Electron and Ion Beam Simulations for the BNL Extended EBIS at Brookhaven National Laboratory
Tu_70	*N. K. N. Bidault*	Slow Extraction of charged ion pulses from the REX-EBIS
Tu_71	*F. Ames*	The CANREB Project for Charge State Breeding at TRIUMF
Tu_72	*Y. Liu*	Resonant Ionization of Atomic Te with Ti:Sapphire Lasers*
Tu_73	*C. Dickerson*	Effects of the CARIBU EBIS trap configuration on extracted ion beam characteristics
Tu_74	*J. Pitters*	Charge breeding of CO+ beams at REX-ISOLDE
Tu_75	*M. Segal*	Towards Ga+ and Au+ ion injection into ESIS: Mock-setup experiments and ion beam profiling.
Tu_76	*F. Papadakis*	Status and development of the MARA low-energy branch
Tu_77	*B. Tang*	The first radioactive ion beam at the Beijing Radioactive Ion-beam Facility
Tu_79	*J. Ballof*	Ion sources for new radioactive refractory element beams at CERN-ISOLDE
Tu_80	*D. Leimbach*	Development of an off-line negative ion source for the characterization of the photodetachment detector GANDALPH
Tu_81	*N. Lecesne*	REGLIS3 at S3 for the production of high purity refractory RIBs
Tu_84	*K. Rijpstra*	Ion Source Development for ISOL@MYRRHA

Beam extraction, transport & diagnostics:

Tu_82	*S. Kondrashev*	Isotope Separator for External Ion Injection into EBIS
Tu_83	*N. Mamedov*	Comparison of the ion beam profile measuring methods
Tu_85	*P. Creemers*	First Simulations of RIB extraction in the ISOL@MYRRHA target module

Wednesday 18 October (1):

Beam extraction, transport & diagnostics:

We_01	*H. J. You*	Downsizing study of SMASHI LEBT for higher beam transmission efficiency
We_02	*A. Goncharov*	Advances in development new generation plasma-optical systems
We_03	*Y. YANG*	Design of the beam extraction and transport system for FECR
We_04	*V. Mironov*	On optical properties of ion beams extracted from Electron Cyclotron Resonance Ion Source
We_05	*Q. WU*	Status of high intensity low energy injector for Jinping Underground Nuclear Astrophysics experiments
We_06	*H. Barminova*	CAMFT code for ion bunch dynamics simulation in external fields with parallel computing
We_07	*Y. Xu*	Design of a long pulse beam diagnostic calorimeter for the prototype RF-driven negative ion source for neutral beam injection application
We_09	*A. Kolmogorov*	Effective transportation of negative hydrogen ions in a synthesized hydrogen beam
We_10	*A. Deka*	Spectral Modelling of Neutral Beam for Doppler Shift Spectroscopy Diagnostics of INTF
We_11	*M. Barbisan*	Beam characterization by means of emission spectroscopy in the NIO1 experiment
We_12	*L. Bellan*	Self-consistent potential in high intensity deuteron beams simulations and measurements
We_13	*H. Sakakita*	Ion Velocity Components and Space Potential Measurements on a Spontaneous-Focusing State of High-Current-Density and Low-Energy Ion Beam by Using Double Electrostatic Probes
We_14	*L. Weissman*	Beam optics effects at the entrance to the SARAF RFQ
We_15	*Y. Ishii*	Development of a Prototype of PIG Ion Source with Electric Magnets for a Compact Ion Microbeam System
We_16	*K. Shinto*	Observation of beam current fluctuation extracted from an rf-driven H- ion source
We_17	*S. Nishioka*	Integrated modeling of the beam formation and extraction in the Linac4 hydrogen negative ion source
We_18	*K. Yoshioka*	Extraction of an Aluminum-Nitride Ion Beam from a Planar Magnetron Sputter type Ion Source
We_19	*Y. Imamura*	Development of a Carbon Cluster Ion Source with a Hollow Cathode
We_20	*S. Abe*	Analysis of the H- Extraction in the Linac4 Negative Ion Source by 2.5D Particle Simulation
We_21	*B. Cheymol*	Performance and first data analysis of the ESS emittance measurement unit
We_22	*A. G. Cuevas*	Ion beam and discharge characteristics of a multi-cusp ion source with various magnetic field configurations
We_23	*F. Maimone*	Particle dynamic simulations of the GSI test injector facility HOSTI
We_24	*O. Midttun*	Measurements and simulations of the beam extraction from the ESS proton source
We_25	*A. Pimazzoni*	Modeling of beam acceleration for the negative ion source NIO1
We_26	*Mc G. K. Ramos*	Simulation of Low-energy Ion Beam Trajectories from a Thin Wire Mesh Electrode Configuration
We_27	*M. Lee*	Design and fabrication of a beam dump at KBSI heavy ion facility
We_28	*P. Fedin*	Al and W ion beams from MEVVA ion source material radiation resistance
We_29	*G. Serianni*	Child-Langmuir-limited current in the negative ion source NIO1
We_30	*B. Lee*	The study of Wien filter for gas cluster ion source
We_31	*S. Andrianov*	MEVVA single aperture extraction system
We_32	*G. Rodrigues*	Longitudinal emittance and in-situ plasma potential measurements of ion beams from the High Temperature Superconducting ECR Ion Source, PKDELIS
We_33	*A. P. Tanquintic*	Two-Dimensional Spatial Distributions of Ion Flow produced from Laser-Induced Plasmas in Capillary Targets
We_34	*A. Pikin*	Low energy ion beam line for Twin EBIS
We_35	*X. Jia*	The Beam Injection Line Test of CYCIAE-100 Cycotron
We_36	*C. Lan*	Metal ion filtering of vacuum arc ion source through an inclined-aperture extraction grid
We_37	*D. Noll*	Linac4 source extraction and low energy beam transport study
We_38	*G. Machicoane*	Ion Source and Front End commissioning at the Facility for Rare Isotope Beams
We_39	*M. Salahshoor*	Effect of grids geometry on the space charge induced divergence of a multi-beamlet ion beam
We_40	*H. In-Seok*	Preliminary oxygen ion beam acceleration test for the RISP injector

Wednesday 18 October (2):

Applications & Related Technologies:

We_41	*E. Oks*	Generation of pure boron plasma for ion beam formation and surface modification
We_42	*N. Mamedov*	Study of energy and mass-charge spectra of ions emitted by a hydrogen Penning plasma source.
We_43	*E. Oks*	Generation of boron ion beams by vacuum arc ion source with lanthanum hexaboride and boron carbide cathodes
We_44	*E. Oks*	Magnetron discharge-based boron ion source
We_45	*E. Oks*	A pulsed vacuum arc ion source with a pure boron cathode
We_46	*M. Cutroneo*	Ion beam lithography, a promising technique for patterning of graphene oxide foil
We_47	*N. Kamiguchi*	Development of a compact internal PIG H+ ion source for idustrial use
We_48	*N. Takahashi*	Development of New Electromagnets for a Microwave Ion Source
We_49	*Q. Ji*	Acceleration of Ion Beams using a scalable microelectronmechanical-system-based RF structures
We_50	*G. Chen*	The construction of the inner ion source for SC200 compact superconducting cyclotron
We_51	*S. Xu*	The trajectory simulation and optimization of ion source chimney for SC200 cyclotron
We_52	*M. Muramatsu*	Improvement of microwave injection for heavy ion production at compact ECR ion source
We_53	*S. Konstantinov*	ECR-source of an intense beam of low-energy hydrogen ions
We_54	*Q. Ji*	Interaction of Intense Pulsed Ion Beams with Matter: Fluence and Dose Rate Dependent Energy-Loss
We_55	*R. Delogu*	Inverse Heat Flux evaluation of diagnostic calorimeter data by neural networks
We_56	*Y. Kato*	Production of Nitrogen-Fullerene Compound Ion Beams on Tandem-Type Electron Cyclotron Resonance Ion Source
We_57	*H. Koguchi*	Carbon pulsed evaporator for carbon plasma source
We_58	*A. Megia-Macias*	The Ion Source for the Commissioning of ELENA Ring
We_59	*K. Dockx*	A new control system for high resolution In-Gas Laser Ionization and Spectroscopy studies
We_60	*Y. Saito*	Production of Proton Beam with ZrH2 Pellet Target
We_61	*D. Satoh*	A photoconductive semiconductor switch driven ion beam injector for radiobiological experiments.
We_62	*D. Kim*	Development of 1 MV Electrostatic Accelerator with Compact RF Ion Source at KOMAC
We_63	*S. Gajjar*	Characterization of 1 MHz Solid State High Frequency Power Supply with Inductively Coupled Plasma
We_64	*T. Uchida*	On the formation mechanism of the formation of modified fullerenes in the two-chamber configuration of the Bio-Nano ECRIS
We_65	*M. Lee*	The first test of the ion implantation beamline at VIBA
We_66	*J. Heo*	Analysis on the Superconducting Magnet Performance for RAON 28 GHz ECR Ion Source
We_67	*M. Vasquez*	Electron Beam-Mediated Reduction of Silver Ions Impregnated in a Natural Zeolite Framework
We_68	*N. Hayashizaki*	Development of 2.45 GHz ECR proton source for compact accelerator-driven neutron source system
We_69	*T. Watanabe*	Wireless telegram microwave ECRIS
We_70	*Y. Tsuda*	Producing and Identifying Multiply Charged Fullerene Ion Beams and Their Compounds.
We_71	*T. Yorita*	3He beam development of 18GHz SCECR-IS for proton generator at RCNP
We_72	*B. Lee*	The development of proton ECRIS for boron neutron capture therapy
We_73	*M. Celik*	Ferromagnetic Enhanced Inductively Coupled Plasma Cathode for Thruster Ion Neutralization
We_74	*K. Rittenhouse*	Electron Cyclotron Resonance Ion Sources for Solar and Semiconductor Applications
We_75	*X. Bin*	The optimization of evaporative cooling magnet for LECR4 ion source
We_76	*C. Lihua*	Design of a 400kV high intensity accelerator facility for Jinping Underground for Nuclear Astrophysics
We_77	*X. Jia*	Design and Experiment Study of an Internal Cold-cathode Ion Source for the 230MeV SC Cyclotron
We_78	*D. Scarpa*	New calibrated evaporation oven for Time of Flight Mass Spectrometer in offline SPES laser laboratory
We_79	*S. Momota*	Fabrication of swelling structure on SiC surface by using multi-charged Ar beam
We_80	*S. Rothe*	A test stand for the development of ion sources at CERN-ISOLDE
We_81	*M. Tanaka*	Development of a large RF bucket ion source for large area ion beam milling processes to fabricate micro-structures
We_82	*V. Gadelshin*	MELISSA: the MEDICIS Laser Ion Source Setup At CERN
We_83	*J. Pitters*	Source Commissioning for Carbon Ion Treatment Beams at MedAustron
We_84	*M. Schmidt*	EBIS-Based HCI Micro-Beams

CONFERENCE OUTING

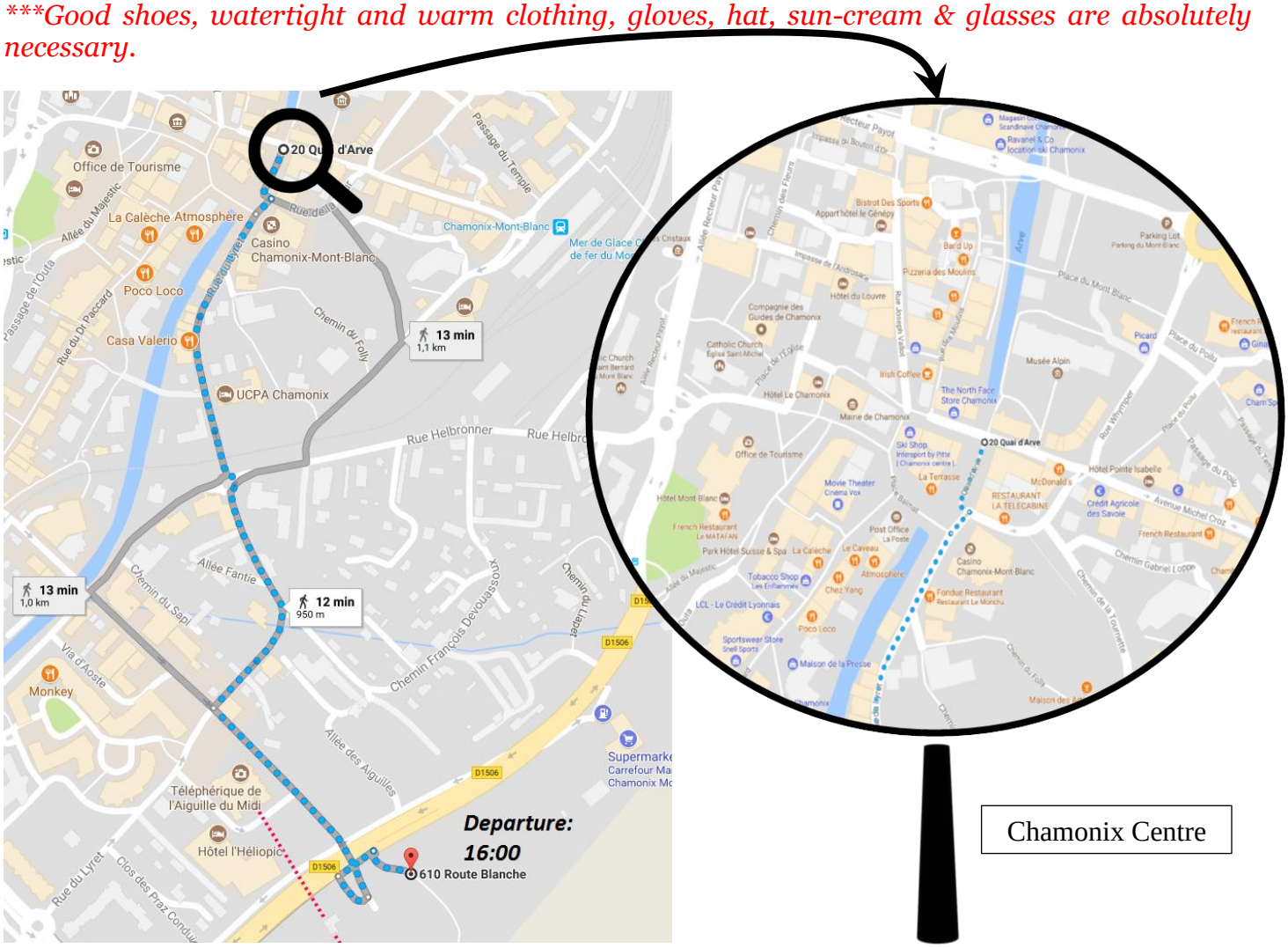
We propose Chamonix for the conference outing goal with three options:

- Visit the roots of **Swiss cheese making**; the medieval city of Gruyeres and its world-renowned cheese. You will visit the medieval castle (est. 1270) & enjoy a traditional cheese fondue. Later, a bus will transfer you to l'Etivaz, where you will taste the famous cheese -"rebibes"- of the Alps. You can expect a stunning view of vineyards and alpine roads.
  Departure for l'Etivaz: **15:10.**
  Departure for Banquet: **16:45.**

- Cable car trip to the **Aiguille du Midi** at 3842m, with spectacular views from the rooftop of the Alps. A local guide will provide detailed information. Very strong winds may temporarily interrupt cable car operation, while the rapid climb to high altitude means there is no time to acclimatize to the altitude, which may induce headaches or mild altitude sickness. We recommend this option for participants in good physical health and not susceptible to a fear of heights or claustrophobia.
  Departure for Banquet: **16:00,** from **cable car parking.**

- Walking tour through the village of **Chamonix** is synonym of very relaxing sightseeing within a vast variety of souvenirs in countless shops, or in its unique alpine museum.
  Departure for Banquet: **16:00,** from **cable car parking.**

****Good shoes, watertight and warm clothing, gloves, hat, sun-cream & glasses are absolutely necessary.*



BANQUET

The banquet will be held in the medieval castle of Chillon, at 18:00.
The arranged buses for the outing will transfer participants to the castle.
Once through the invitation control in the entrance, the participants can expect:

1. A cloak room to be available, to switch from excursion clothing to Banquet dress code.
2. A self-guided tour to the castle rooms and exhibitions. (18:00-19:00)
3. Followed by a welcoming aperitif, under traditional Swiss folk music. (19:00-19:50)
4. Then a conference picture. (19:50-20:00)
5. And finally dinner will be served in the Chatelain's and Aula Magna rooms. (20:00-22:00)

The menu aims to please all participants, including those with special dietary requirements -which were communicated during the registration process.

CERN VISIT

Itineraries:

The CERN visit is planned to start right after the conference closure, on Friday afternoon, October 20th, and will last approximately three hours. Conference buses will take the participants to points of general interest in the accelerator complex. Due to access restrictions, participants will be divided into groups and will follow different visit itineraries. Please note that while we will try to satisfy demands, the group/itinerary assignment will depend on availability, based on a ***first-come/first-serve*** basis.
Participants will be able to sign up for a visit group/itinerary:

- On Sunday afternoon registration - welcome reception.
- On Monday morning, during registration.

A few buses will be made available at the end of the tours (leaving at 17h10) to take participants to the airport.

The different itineraries participant can sign up for, are the following:

Route 1	**Route 2**	**Route 3**
Linac3 / LEIR	*Microcosm*	*Atlas Visitor Center*
Linac4	*SM 18*	*Microcosm*
AD	*CCC*	*LHCb*
ISOLDE	*AMS*	*CAST*

If necessary, a map of CERN can be found at:
maps.cern.ch (webpage)
smb-dep.web.cern.ch/en/content/gis_mobile (app)

SM18:

The SM18 facility is a world leading magnet test facility for testing magnets and instrumentation at low temperature (1.9 K up to 80 K) and up to high currents (20 kA). Due to its wide infrastructure and long expertise it is has unique capabilities to carry out tests for instrumentation and superconducting magnets in vertical or horizontal test benches, and magnetic measurements of all types on accelerator magnets.

LHCb:

The Large Hadron Collider Beauty experiment, LHCb has been set up to study the slight asymmetries between matter and antimatter using particles known as beauty quarks. Located in a vast cavern 100 m below the ground, every layer of LHCb is designed to identify and measure a different aspect of the particles flying out from the collision. Rather than spraying out in all directions, the beauty quarks formed by the colliding proton beams stay close to the line of the beam pipe. This is reflected in the design of the detector - LHCb stretches for 20 m, with its sub-detectors stacked behind each other like books on a shelf.

ATLAS:

The ATLAS Experiment at CERN is one of the largest most complex scientific instruments ever constructed. It is designed to explore the inner universe, advancing our understanding of the basic building blocks and fundamental forces of nature. Five thousand physicists from about 180 institutions in 38 countries around the world participate in ATLAS. When the LHC is in operation, up to 600 million protons collide every second inside the detector. ATLAS Virtual Visits gives the public a unique opportunity to be part of this great scientific adventure. Using web-based video conferencing tools, participants talk with an ATLAS physicist, receive a tour of the control room, and get answers to their questions.

CCC:

The CERN Control Centre, where particle beams from the whole accelerator complex are controlled 24/7.

AD:

The Antiproton Decelerator is a unique machine providing low-energy antiprotons for studies of antimatter, in particular for creating anti-atoms. Previously, ‘antiparticle factories’ at CERN or elsewhere consisted of a chain of accelerators, each performing one of the steps needed to provide antiparticles for experiments. Now the AD performs all the tasks alone, from producing the antiprotons to delivering them to the experiments.

Linac3/LEIR:

CERN’s heavy ions injector complex.

Linac4:

CERN’s 160 MeV H− linear accelerator which will replaceLinac2 as main injector of the CERN proton accelerator complex. Currently being commissioned and undergoing a reliability run, it will be connected to the PSB ring by 2020.

ISOLDE:

The on-line isotope mass separator ISOLDE is a facility dedicated to the production of a large variety of radioactive ion beams for many different experiments in the fields of nuclear and atomic physics, solid-state physics, materials science and life sciences.

CAST:

CERN Axion Solar Telescope is looking for a particle called axion, which should be coming from the Sun. Axions are hypothetical particles, neutral, practically stable, with very low mass and very weak interaction (similar to neutrino). They were introduced to solve the strong CP problem and they are candidates for the Dark Matter in the Universe. A de-commissioned LHC test magnet on a moving platform for solar tracking.

AMS:

AMS is a large acceptance and high precision magnetic spectrometer on the ISS (international space station). It is the only experiment in space using a superconducting magnet, allowing an unprecedented sensitive search for antimatter, dark matter and cosmic rays studies.

MICROCOSM:

Microcosm's exhibitions take visitors on a journey through CERN's key installations. Follow the path of the particles from a bottle of Hydrogen, through the network of accelerators, on to collision inside vast experiments.

CERN Visit Rules:

A detailed list of rules is available on the ICIS 2017 website (***icis2017.web.cern.ch/content/visit-rules***), but what it boils down to, are the following basic instructions:

1. **Closed, flat or block-heeled shoes** are required for all site visits; helmets will be provided when necessary.
2. Cryogenic, Gas, Cooling, High Voltage, High Magnetic fields, Radioactivity, Fall, Trip, Slip, Damage of delicate equipment… A few hazards that can be avoided by:
    - **Following the instructions** of your guide at all times.
    - **Staying** in the **areas** marked for **visitor** access.
    - **NOT touching** the equipment.
3. In case of **alarm**, follow the **instructions** given by your **guide**, to the nearest **emergency exit**.

Please note that by taking part in the CERN visit, you agree to stick to the fore-mentioned rules. Entry may be refused by a guide, in case of compromise of safety. **Visitors enter at their own risk** and are responsible for the safety of their equipment. We hope that you will enjoy your visit and shall be happy answer any questions you may have.

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We would like to thank our sponsors & exhibitors, for helping ICIS 2017 take place:

IN CASE OF EMERGENCIES

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- Fire Brigade: 118 (CH) – 18 (FR)
- Ambulance: 144 (CH) – 15 (FR)
- Anti-poison: 117 (CH) - 04 72 11 69 11 (FR)
- CERN emergency: (00 41 22 76) 74 444
- European Emergency call center: 112
- Richard Scrivens: +41 75 411 4203
- Jacques Lettry: +41 75 411 0990
- Bruce Marsh: +41 22 76 68813