

# Conference Program

<b>Sunday May 13th</b>					
	<i>Code</i>	<i>Presenter</i>	<i>min</i>	<i>Type</i>	<i>Title</i>
08:45-09:00		P. McPherson MSU	President,		Welcome to the Cyclotrons 2001 Conference
09:00-11:00	Opening Session Presiding: C. K. Gelbke				
	A-1	I. Tanihata	40	Invited	Role of Cyclotrons in Recent Nuclear Physics
	A-2	T. Stambach	30	Invited	The PSI 2mA Beam and future applications
	A-3	P. Schmor	30	Invited	The ISAC Facility at TRIUMF
	A-4	D. Clark	15	Contrib	Departed Cyclotron Pioneers
11:30-13:00	Newly Operating Cyclotrons Presiding: G. Dutto				
	B-1	M. Lieuvin	30	Invited	Commissioning of the SPIRAL radioactive beam facility
	B-2	F. Marti	30	Invited	Commissioning of the Coupled Cyclotron Facility at NSCL
	B-3	R. C. York	15	Contrib	MSU Rare Isotope Accelerator (RIA) Plan
14:30-16:30	Facilities under construction and Status I Presiding: H. Schweikert				
	C-1	Y. Yano	30	Invited	RI beam factory project at RIKEN
	C-2	L Calabretta	30	Invited	Status and future plans at LNS Catania
	C-3	W. Zhan	30	Invited	HIRFL-CSR Project
	C-4	R. Bhandari	20	Invited	Status of the Calcutta K500 Superconducting Cyclotron Project
16:30-18:00	Poster session P1				
18:30-20:00	Reception at the Michigan Historical Museum				

<b>Monday May 14th</b>					
<i>Times</i>	<i>Code</i>	<i>Presenter</i>	<i>min</i>	<i>Type</i>	<i>Title</i>
09:00-11:00	<b>FFAG I</b> Presiding: M. Craddock				
	D-1	F. Mills	30	Invited	Early FFAG accelerator development
	D-2	Y. Mori	40	Invited	Recent Progress on FFAGs - towards a neutrino factory
	D-3	S. Machida	20	Invited	Beam optics and dynamics of FFAG accelerators- A modern approach
	D-4	H. Takahashi	15	Contrib	Induction FFAGs
11:30-13:00	<b>FFAG II and Status II</b> Presiding: F. Mills				
	E-1	S. Martin	30	Invited	Studies of FFAG machines in Europe
	E-2	C. Johnstone	30	Invited	Recent FFAG Studies in the USA
	E-3	P. Heikkinen	20	Invited	Cyclotron Development Program at Jyväskylä
14:30-16:30	<b>Applications and Status III</b> Presiding: H. Homeyer				
	F-1	E. Balanzat	30	Invited	New Applications for Cyclotrons
	F-2	H. Clark	20	Invited	Application of Cyclotrons in Study of Single Event Chip Failures
	F-3	S. Ninomiya	30	Invited	RCNP Techniques for producing ultra-precise beams
	F-4	S. Brandenburg	15	Contrib	AGOR status report
	F-5	H. Blosser	15	Contrib	Report on Commercial Manufacturing of Cyclotrons since 1998 Conference
16:30-18:00	Poster session P2				
18:30-	NSCL Tour and Reception				

<b>Tuesday May 15th</b>					
<i>Times</i>	<i>Code</i>	<i>Presenter</i>	<i>min</i>	<i>Type</i>	<i>Title</i>
09:00-11:00	Ion Sources Presiding: Y. Jongen				
	G-1	C. Lyneis	20	Invited	VENUS: The Next Generation ECR Ion Source
	G-2	S. Gammino	20	Invited	Operations of the SERSE superconducting ECR ion source at 28 GHz
	G-3	P. Sortais	20	Invited	Recent Developments in ECR Ion Sources
	G-4	T. Nakagawa	15	Contrib	Production of intense beams of highly charged heavy ions from RIKEN 18 GHz ECRIS and liquid He free superconducting ECR ion source
	G-5	H. Zhao	15	Contrib	ECR ions sources at HIRFL
	G-6	T. Kuo	15	Contrib	H- Source Development for Jyvaskyla Cyclotron
11:30-13:00	Medical Applications Presiding: B. Lundstrom				
	H-1	Y. Hirao	30	Invited	Results from HIMAC and other Therapy Facilities in Japan
	H-2	J. Forman	30	Invited	Cancer therapy with the Detroit superconducting cyclotron
	H-3	E. Pedroni	20	Invited	Novel gantry for cancer therapy at the PSI
14:30-16:00	Poster session P3				
16:30-	Pig Roast				

## Wednesday May 16th

<i>Times</i>	<i>Code</i>	<i>Presenter</i>	<i>min</i>	<i>Type</i>	<i>Title</i>
09:00-11:00	Magnet Design and Status IV Presiding: Y. Yano				
	I-1	A. Goto	20	Invited	Progress on the Sector Magnets for the RIKEN SRC
	I-2	A. Zeller	20	Invited	Const. and Commissioning of the NSCL's A1900 Fragment Separator
	I-3	J. Kim	15	Contrib	Design study of a compact superconducting cyclotron for heavy ion therapy
	I-4	M. H. Moscatello	15	Contrib	GANIL status report
	I-5	R. Maughan	15	Contrib	Status report for the Harper Hospital Superconducting Cyclotron Neutron Therapy Facility
11:30-13:00	RF and Status V Presiding: S. Brandenburg				
	J-1	A. Schempp	30	Invited	Variable Frequency RFQ's as Cyclotron Injectors
	J-2	G. Dutto	20	Invited	Impact of the Cyclotron RF Booster on the 500 MeV Proton Beam Production
	J-3	J. Vincent	15	Contrib	RF Modeling and analysis Techniques with Application to a Proposed Medical Cyclotron
	J-4	H. Homeyer	15	Contrib	Status of ISL Berlin
14:30-16:30	Beam Diagnostics and Dynamics Presiding: E. Liukkonen				
	K-1	B. Laune	30	Invited	Diagnostics for Radioactive Beams
	K-2	L. Roobol	15	Contrib	Vertical Perturbation of High Energy Proton Beams in the AGOR Cyclotron
	K-3	P. Bertrand	15	Contrib	Specific cyclotron correlations under space charge effects in the case of a spherical beam
	K-4	S. Adam	15	Contrib	Steps to enhance the knowledge on space charge effects
	K-5	B. Gikal	15	Contrib	Developments at the U-400 / U-400M facility
	K-6	D. Anicic	15	Contrib	Requirements and Solutions for Accelerator Control Systems
16:30-18:00	Poster session P4				
18:30-	Banquet (Kellogg Big 10 A Room) Speaker: M. Craddock				

## Thursday May 17th

<i>Times</i>	<i>Code</i>	<i>Presenter</i>	<i>min</i>	<i>Type</i>	<i>Title</i>
09:00-11:00	High Intensity Presiding: L. Calabretta				
	L-1	Y. Jongen	20	Invited	The self-extracting cyclotron
	L-2	E. Baron	15	Contrib	High intensity heavy ion beams for exotic nuclei production at GANIL
	L-3	D. Vandeplassche	15	Contrib	The MYRRHA project
	L-4	Y. Alenitskiy	15	Contrib	The high current cyclotron complex for an electronuclear way of manufacture of energy
	L-5	P. McIntyre	15	Contrib	A superconducting isochronous proton cyclotron stack as a driver for a thorium-cycle power reactor.
	L-6	D. Wutte	15	Contrib	High Intensity Ion Beam Injection into the 88-Inch Cyclotron
11:30-13:00	Radioactive Beams Presiding: C. Lyneis				
	M-1	P. Bricault	20	Invited	The production target at ISAC
	M-2	G. Gulbekian	30	Invited	The JINR radioactive beam project (DRIBs)
	Conference Summary				
	M-3	E. Baron	40	Invited	Conference Summary



## Poster Program

<b>ID</b>	<b>Presenter</b>	<b>Paper Title</b>
P1-01	S. Brandenburg	Acceleration of Low-Intensity Triton Beams with the AGOR Cyclotron
P1-02	V. Maidikov	Nuclear-Induced Autoionization of RIB Particles
P1-03	V. Maidikov	Energy-loss Spectrometer for Precise RIB Experiments at the FLNR, JINR U-400 Cyclotron
P1-04	H. Okuno	Design and Construction of the Superconducting Bending Magnet for the Injection System of the RIKEN SRC
P1-05	M. Olivo	A Radiation Hard ECR Source for ISAC
P1-07	B. Mukherjee	Radiation Safety Benchmarking of the Hospital-Based Medical Cyclotron
P1-08	B. Mukherjee	Cost Benefit Analysis of the Radiological Shielding of Medical Cyclotrons Using a Genetic Algorithm
P1-09	X. Yang	Electron Coolers of the HIRFL-CSR
P1-10	S. Zeisler	Turn-key, Solid Target Irradiation System
P1-11	M. Fukuda	Design Studies of the K900 JAERI Superconducting AVF Cyclotron for the Research in Biotechnology and Materials Science
P1-13	S. Fujishima	Design of the Injection and Extraction Systems for the RIKEN SRC
P1-14	I. Ivanenko	The Experimental Investigation of the Beam Transportation Efficiency Through the Axial Injection System of the U400 Cyclotron
P1-15	V. S. Pandit	Modification of a Double Drift Beam Bunching System to get the Efficiency of a Six Harmonic Buncher
P1-16	J. Tang	Matching Modes Between HIRFL and CSR
P1-17	T. Wakasa	High Resolution WS Beam Line at RCNP
P1-18	M. Zeitlin	Multiscale Representation for Vlasov-Maxwell Dynamics for Intense Beam Propagation
P1-19	B. Gikal	Reconstruction of the Cyclic Implantator IC-100.
P1-20	T. Mitsumoto	Construction of the RIKEN IRC
P1-21	W. Zhan	CSR Power Supply System
P1-22	Jong-Seo Chai	Present status of KCCH cyclotron facility : operation and development
P1-23	M. L. Bonardi	Review of Cyclotron Production and Quality Control of High Specific Activity Radionuclides for Biomedical, Biological, Industrial and Environmental Applications at INFN-LASA
P1-24	B. Constantinescu	Medical Radioisotopes Production at the Bucharest Cyclotron - The Case of Gallium-67

P1-25	S. Klein	The Midwest Proton Radiation Institute Project at the Indiana University Cyclotron Facility
P1-26	B. Mukherjee	Further Evaluation of the Neutron Skyshine Dose from the K1200 Superconducting Heavy Ion Cyclotron of the NSCL Using Bubble Dosimeters
P1-27	S. Okumura	Temperature Control of a Cyclotron Magnet for Stabilization of the JAERI AVF Cyclotron Beam
P1-28	A. Papash	Phase Space Simulations for 9 MeV Deuteron Cyclotron
P1-29	B. S. Prakash	Study of Pre-Equilibrium Emission in Alpha Induced Reactions at Cyclotron Energies
P1-30	W. Zhan	The CSRe Internal Target
P2-01	A. Arzumanov	Status and Development of the Kazakhstan Isochronous Cyclotron
P2-02	R. K. Bhandari	Heavy Ion Acceleration Using 224 CM Cyclotron at Calcutta
P2-03	S. Bogomolov	Production and Acceleration of Tritium Ion Beam at the U400M cyclotron
P2-04	J. Bonofiglio	Stripper Foil Mechanism for the K1200 Superconducting Cyclotron
P2-05	L. Conradie	New Priorities and Developments at NAC
P2-06	R. Gebel	Extraction of D-minus Beams from the Cyclotron JULIC for Injection into the Cooler Synchrotron COSY
P2-07	T. Honma	Improvements and Applications of NIRS Cyclotron Facility
P2-08	M. Kase	Present Status of RIKEN Ring Cyclotron
P2-09	Y. Nakamura	Status Report on JAERI-AVF Cyclotron System
P2-10	D. Poe	Electrostatic Septum for Kilowatt Heavy Ion Beams
P2-11	R. Risler	Status Report of the Clinical Cyclotron Facility in Seattle
P2-12	P. A. Schmelzbach	Beam Intensity Modulation at the PSI Philips Cyclotron
P2-13	R. Strangis	The Cyclotron Radioisotopes Production Facility of the Argentinean Atomic Energy Commission (CNEA)
P2-14	J. Tang	Operation Status and Upgrading of HIRFL
P2-15	A. Tatum	The Oak Ridge Isochronous Cyclotron: Enhancements to the Holifield Radioactive Ion Beam Facility Driver Accelerator
P2-16	A. Chaudhri	Charged Particle Activation Analysis with Cyclotrons
P2-18	G. Laguzzi	Outdoor Corrosion of Zinc Coated Carbon Steel, Determined by Thin Layer Activation
P2-19	J. A. Osso, Junior	Production of Co-57, with Proton Beams and Natural Nickel Targets, at the Cyclotron CV-28 of IPEN-CNEN/SP.
P2-21	A. Arzumanov	Production of Plutonium, Yttrium and Strontium Tracers for Use in Environmental Research



P2-22	M. Re	Breakdown Mechanisms on High Voltage Electrodes for Superconducting Cyclotron Beam Extraction
P2-23	P. Bertrand	Spiral Facility: Beam Dynamics and Experimental Tests with Stable Ions
P2-25	W. Zhan	The Design and Structure of the Ultra-high Vacuum System of HIRFL-CSR
P2-26	Y. Wang	New Vacuum System for SFC
P2-30	J. Miszczak	The Warsaw K=160 Cyclotron
P3-02	H. Koivisto	Status Report of JYFL ECR Ion Sources
P3-04	H. Rashid	Design and Field Configuration for a 14.4 GHz ECR Ion Source in Calcutta
P3-05	H. Rashid	Profile of Loss Cone on Plasma Surface of the 14.4 GHz ECR Ion Source in Calcutta
P3-06	V. Dudnikov	Optimization of Surface Plasma Sources for Efficient Production of Negative Ions with High Emission Current Density
P3-07	M. Schillo	Compact Superconducting 250 MeV Proton Cyclotron for the PSI PROSCAN Proton Therapy Project
P3-08	A. Efremov	Ion Sources for the First Stage of the DRIBs Project
P3-09	S. Bogomolov	Results of the ECR Ion Sources Operation at the FLNR(JINR) Cyclotrons
P3-10	J. Schubert	The Effect of RF Grounding in an Internal Ion Source on Axial Oscillations of the Beam in a Cyclotron
P3-11	E. Forringer	Emittance Measurements of a Cold Cathode Internal Ion Source for Cyclotrons
P3-12	J. Flanz	A new proton irradiation facility at the Northeast Proton Therapy Center
P3-13	R. Maughan	A Multileaf Collimator for Neutron Radiation Therapy
P3-14	M. Yudelev	Hospital Based Superconducting Cyclotron for Neutron Therapy: Medical Physicists Perspective
P3-15	F. Becchetti	Magnetic Confinement of Radiotherapy Ion and Photon Beam Dose Distributions
P3-16	A. Chaudhri	C-13(p,n) Reaction as a New Source of Fast Neutrons, Especially for Therapy
P3-17	A. Chaudhri	Production and Potential Dangers of Neutrons from Patients During Hadron Therapy
P3-18	M. Bonardi	Cyclotron Production of "Very High Specific Activity" Platinum Radiotracers in No Carrier Added Form
P3-19	S. Khujaev	Production of Carrier-Free Germanium-68 by Alpha-Particle Bombardment of a Zinc Cyclotron Target
P3-20	Z. Wei	Application of Cyclotron in Life Sciences
P3-21	S. Zeisler	Parallel Beam Co-extraction

P3-22	M. Zeitlin	RMS Envelope Dynamics for High-Brightness Beams
P3-23	P. R. Sarma	A New Code for Designing the Pole Profile of Quadrupole Magnets for Obtaining High Field Quality
P3-24	P. R. Sarma	A Method of Designing Magnetic Channels of Improved Field Quality for Superconducting Cyclotrons
P3-25	X. Wu	Design of the Injection Channel Magnets for the K1200 Cyclotron
P3-26	J. W. Kim	Optimized Magnet for a 250 MeV Proton Radiotherapy Cyclotron
P3-27	W. Kleeven	Magnetic Field Calculation and Shimming of the Self-Extraction Cyclotron
P3-28	J. Ohnishi	Magnetic Field Measurement of the Sector Magnets for the RIKEN IRC
P3-29	W. Zhan	A C type Dipole with Imbedded Windings to Improve the Field Distribution
P4-01	A. Tikhomirov	Simulation of the Transmission Efficiency of the DRIBs Transport Lines
P4-02	A. Tikhomirov	Numerical Simulation of the $^{48}\text{Ca}^{5+}$ Ions Transport Along the U-400 Cyclotron's Injection Line
P4-03	O. Borisov	Heavy Ions Extraction by Stripping
P4-04	L. Onischenko	External Injection into Phasotron - Influence of Scattering by the Foil on the Capture Efficiency
P4-05	J. Xia	Lattice of the CSR
P4-06	J. Xia	Design of Beam Injection and Extraction for HIRFL-CSR Project
P4-07	A. Goto	Space Charge Effects in RIKEN Cyclotrons
P4-08	J. W. Kim	Effects of Vertical Misalignment of Superconducting Coils in Cyclotrons
P4-10	L. Roobol	Vertical Perturbation of High Energy Proton Beams in the AGOR Cyclotron
P4-11	E. Pozdeyev	A Fast Code for Simulation of the Longitudinal Space Charge Effect in Isochronous Cyclotrons
P4-12	D. Gorelov	NORTIC -- A New Code for Cyclotron Analysis
P4-13	A. Fedorova	Particle Motion in Multipolar Fields: Modelling Via Localization
P4-14	Dr. Oleg Tarasov	The Program LISE: A Simulation of Fragment Separators
P4-15	S. G. Araujo	Automation of Irradiation Systems in Cyclotron
P4-16	J. Bailey	Internal Current Measurement Errors in High Energy Proton Cyclotrons - Simulation, Correction, Design and Measurement
P4-17	B. Laune	Radioactive Beam Diagnostics Status and Development at the SPIRAL Facility

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P4-18	M. Leitner	Electrostatic-Deflection-Plate Emittance Scanner System for Fast On-Line Emittance Measurements
P4-20	A. Caruso	The Radiofrequency Pulsing System at INFN-LNS
P4-21	H. Fitze	Upgrade Concepts of the PSI Accelerator RF Systems for a Projected 3mA Operation.
P4-22	S. Kurashima	Design of the Flat-Top Acceleration System for the JAERI AVF Cyclotron
P4-23	N. Sakamoto	Construction of the RF-Resonator for the RIKEN IRC
P4-25	J. Tang	New Bunchers for HIRFL-CSR
P4-26	W. Zhan	RF System at HIRFL-CSR Main Ring
P4-30	S. Brandenburg	Sub-harmonic bunching with the AGOR cyclotron

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