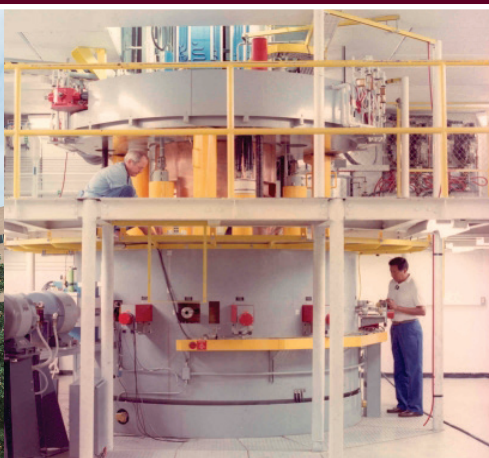


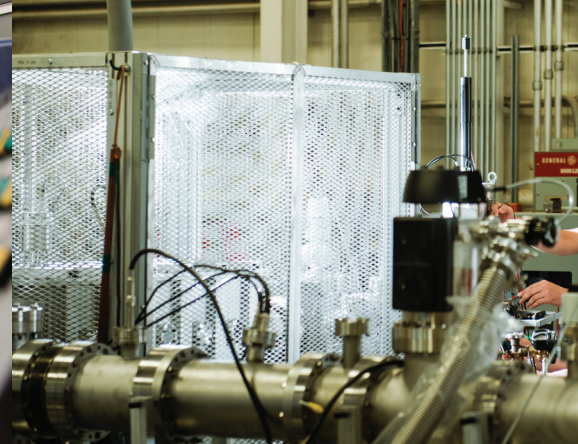


CYCLOTRON INSTITUTE

TEXAS A&M UNIVERSITY

*The Texas A&M University Cyclotron Institute,
a Department of Energy University Facility,
is jointly supported by DOE and the State of
Texas and is a major technical and educational
resource for the State and the Nation.*





WORLD-WIDE RESEARCH

Research programs at the Cyclotron Institute are funded by the U.S. Department of Energy, the National Science Foundation and the Robert A. Welch Foundation.

Internationally recognized for its research, the Institute provides the primary infrastructure support for the University's graduate programs in nuclear chemistry and nuclear physics.

At the Institute we focus on conducting basic research, educating students in accelerator-based science and technology, and providing technical capabilities for a wide variety of applications in space science, materials science, analytical procedures and nuclear medicine. This involves over 100 Institute members – scientists, engineers, technicians, support staff, graduate students and undergraduate students.

Institute staff constructed, and now operate, a K150 cyclotron, a K500 superconducting cyclotron and associated advanced ECR sources. Together, these provide a powerful arsenal of intermediate-energy ion beams for use in both fundamental and applied studies. A large complement of sophisticated state-of-the-art detectors and spectrometers provides the instrumentation necessary for modern research in nuclear structure, weak interactions, exotic nuclei, nuclear astrophysics, intermediate-energy reaction dynamics, nuclear thermodynamics, the nuclear equation of state, atomic physics and applied nuclear science.

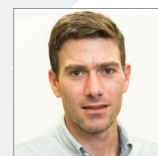
In addition to housing the locally based program, the Institute also serves as a technical support base for collaborative research programs at other major national and international accelerator facilities. Institute scientists publish more than 100 papers per year in leading scientific journals.

GRADUATE FACULTY

Graduate faculty members with Cyclotron Institute-based research programs are listed. To conduct dissertation research at the Cyclotron Institute, students may work with any faculty member but must be formally enrolled in the graduate program of either the Department of Physics and Astronomy or the Department of Chemistry.



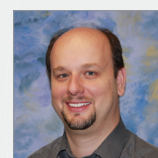
Aldo Bonasera
PHYSICS
Theoretical Nuclear Physics
• Visiting dist. scientist JAERI-Japan
• Honorary professor Three Gorges University-China
• Full professor - Italy



Greg Christian
PHYSICS
Nuclear structure and astrophysics, transfer reactions, neutron detection.



Cody Folden
CHEMISTRY
Chemistry, Physics and Nuclear Forensics of the heaviest elements
• DOE Early Career Award



Rainer Fries
PHYSICS
Theory of nuclear collisions, quark gluon plasma and hadrons
• NSF Career Award
• IUPAP Young Scientist Prize



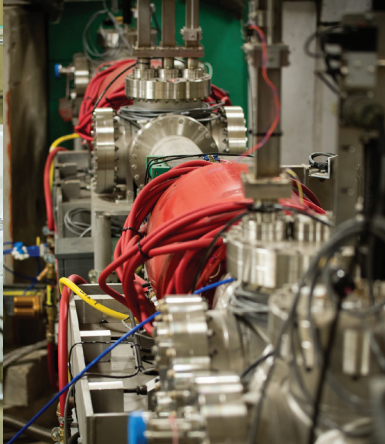
Carl A. Gagliardi
PHYSICS
Fundamental interactions and nuclear astrophysics
• Fellow, American Physical Society
• Distinguished Achievement Award in Teaching, AFS, - Texas



John C. Hardy
PHYSICS
Fundamental interactions and exotic nuclei
• Fellow, Royal Society of Canada
• Fellow, American Physical Society
• 2006 Bonner Prize, Nuclear Physics



Jeremy Holt
PHYSICS
Theoretical nuclear physics and astrophysics



Dan Melconian
PHYSICS
Fundamental interactions
using trapped ion and atoms

- Canadian Division of Nuclear Physics PhD thesis award
- DOE Early Career Award



Che Ming Ko
PHYSICS
Theoretical nuclear physics

- Fellow, American Physical Society
- Humboldt Research Award
- Distinguished Achievement, Research AFS, - Texas A&M



Ania Kwiatkowski
PHYSICS
Low-energy, experimental
nuclear physics with ion
traps



Saskia Mioduszewski
PHYSICS
Experimental, high-energy
nuclear physics

- Presidential Early Career Award for Scientists and Engineers
- Alfred P. Sloan Foundation Fellowship
- Maria Goeppert Mayer Award



Joseph B. Natowitz
CHEMISTRY
Heavy-ion reaction dynamics
and thermodynamics

- ACS Award in Nuclear Chemistry
- Fellow, American Physical Society
- Fellow, American Chemical Society



Ralf Rapp
PHYSICS
Theoretical Nuclear Physics

- Humboldt Bessel Research Award
- NSF CAREER & Texas APS Hyer Awards
- Fellow, American Physical Society



Grigory Rogachev
PHYSICS
Nuclear Structure, nuclear
reactions and nuclear
astrophysics

- 1998 Kurchatov Prize
- Russian Research Center Fellowship for Young Researchers



Shalom Shlomo
PHYSICS
Theoretical Nuclear Physics

- RIKEN Eminent Scientist Award
- Fellow, Institute of Physics
- Fellow, American Physical Society



Robert E. Tribble
PHYSICS
Fundamental interactions
and nuclear astrophysics

- Alfred P. Sloan Foundation Fellowship
- Fellow, American Physical Society
- Distinguished Achievement, Research AFS, - Texas A&M



Sherry J. Yennello
CHEMISTRY
Heavy-ion reactions and
isospin studies

- NSF National Young Investigator
- ACS Garvin-Olin award
- Fellow, APS, ACS and AAAS



Dave H. Youngblood
PHYSICS
Giant resonances and
nuclear matter

- Fellow, American Physical Society
- Distinguished Achievement Award in Research, AFS - Texas A&M



Akram Zhanov
PHYSICS
Theoretical nuclear
astrophysics and nuclear
reaction theory

INTERESTED IN WORKING WITH THE CYCLOTRON INSTITUTE?

FOR GRADUATE STUDENT APPLICATION INFORMATION:

Application information regarding enrollment in the graduate program may be obtained by writing the graduate advisor of your department or by contacting:

Professor Che Ming Ko, Cyclotron
Institute, Texas A&M University,
College Station, TX 77843-3366
PH: (979) 845-1411
E-MAIL: ko@comp.tamu.edu

FOR COLLABORATION AND/OR RESEARCH INFORMATION:

As an important national resource for accelerator-based science and technology, the Cyclotron Institute welcomes appropriate use of its facilities. In addition to its primary role, that of research and education in nuclear science, the Texas A&M Cyclotron Institute also provides important technological capabilities for applications of nuclear techniques in other areas.

Institute facilities have been used for cancer therapy, radiation dosimetry, studies of plant physiology, precise analytical determinations, development of mass-spectrometric techniques, studies of "high T" superconductors, evaluation of nuclear waste transmutation techniques and simulation of cosmic-radiation-induced effects on microelectronic circuits.

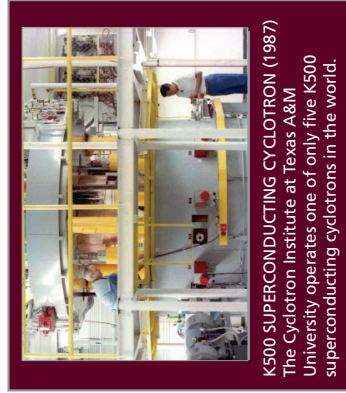
Potential users of the facility are encouraged to contact:

Professor Sherry Yennello (Director),
Cyclotron Institute, Texas A&M
University, College Station, TX
77843-3366
PH: (979) 845-1411
FX: (979) 845-1899
E-MAIL: yennello@comp.tamu.edu

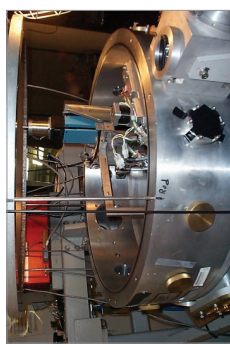
cyclotron.tamu.edu

FACILITY SCHEMATIC

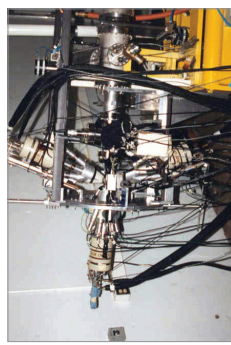
The Cyclotron Institute has expanded steadily since commissioning its original cyclotron in 1967 and is currently upgrading again. The diagram below shows the variety of sophisticated detectors and spectrometers that enhance the Institute's capacity for nuclear research.



K500 SUPERCONDUCTING CYCLOTRON (1987)
The Cyclotron Institute at Texas A&M University operates one of only five K500 superconducting cyclotrons in the world.



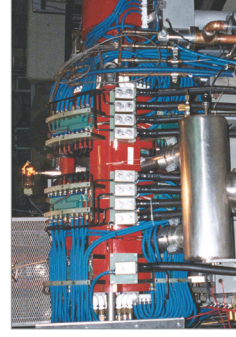
RADIATION EFFECT FACILITY (1994, 2000)
Available for commercial, governmental and educational use, the testing facility is installed on a dedicated beam line with complete diagnostic equipment and controls. With the modern K500 superconducting cyclotron and the advanced ECR ion source, a diverse range of particle beams and energies is available for radiation-effects testing.



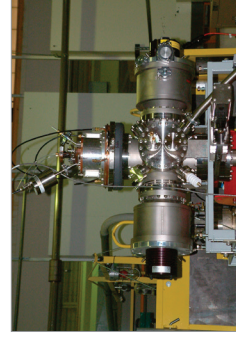
MARS RECOIL SPECTROMETER (1992)
Spectrometer for production and separation of radioactive ions



TAMUTRAP (2016) Purifies and confines short-lived ions for precision decay experiments and as a general decay station.



ELECTRON CYCLOTRON RESONANCE (ECR) ION SOURCES (2002 - 2010)
Two ECR sources inject beam into the K150 and K500 Cyclotrons. A third acts as a charge breeder for radioactive beams.



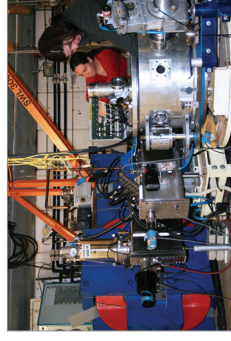
H-SOURCE (2010)
For the production of high intensity proton and deuteron beams from the K150 Cyclotron.



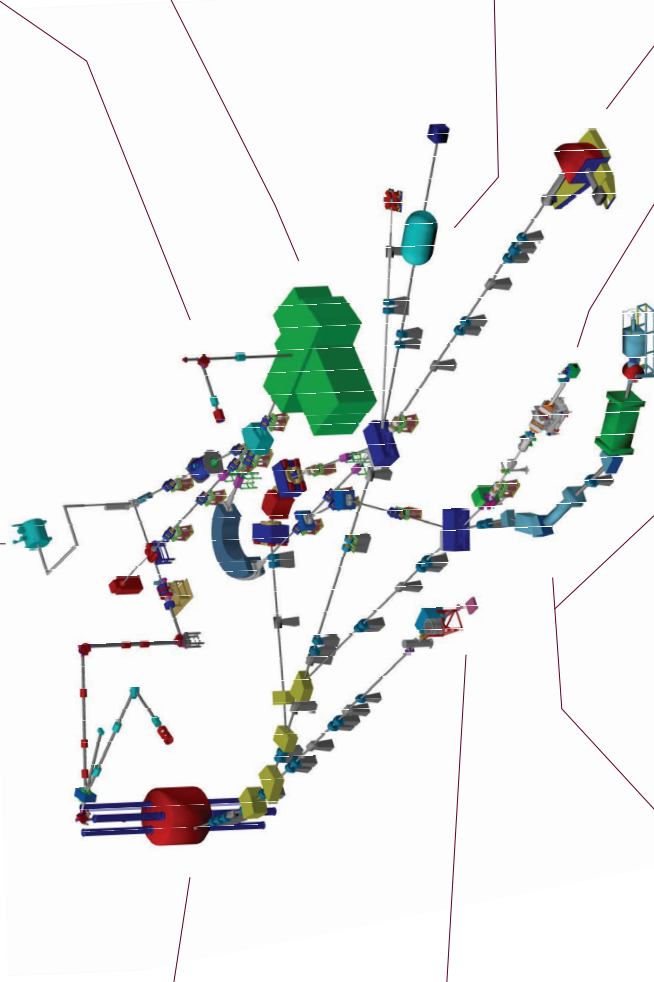
K150 CYCLOTRON(1967)
Following 20 years off line this facility is now operational and is an integral part of the facility upgrade to make the Cyclotron Institute a dual-cyclotron facility providing accelerated secondary beams.



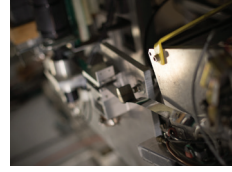
NIMROD (1999)
High efficiency detection of both neutrons and charged particles.



MDM SPECTROMETER (1993, 2000)
High-resolution, broad-range spectrometer. Beam analysis system provides beams for the MDM Spectrometer.



FORWARD ARRAY USING SILICON TECHNOLOGY – QUADRUPOLE TRIPLET (FAUST-QT) (2013)
Detection of light charged particles and intermediate mass fragments in the FAUST multi-detector array, while simultaneously collecting the heaviest fragment in the QT.



TAPE TRANSPORT & PRECISION ON-LINE γ DECAY FACILITY (1999)
Fast tape-transport system isolates pure samples of short-lived isotopes for high-precision decay measurements with specialized detectors.