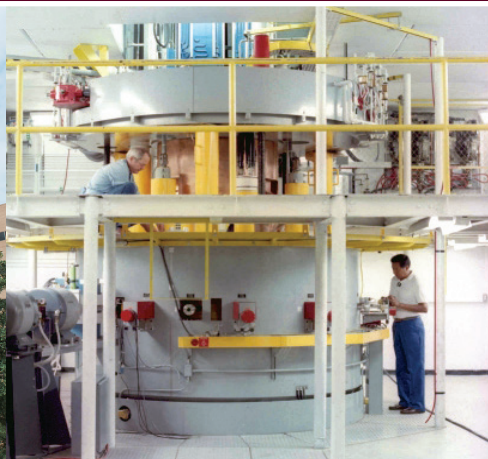




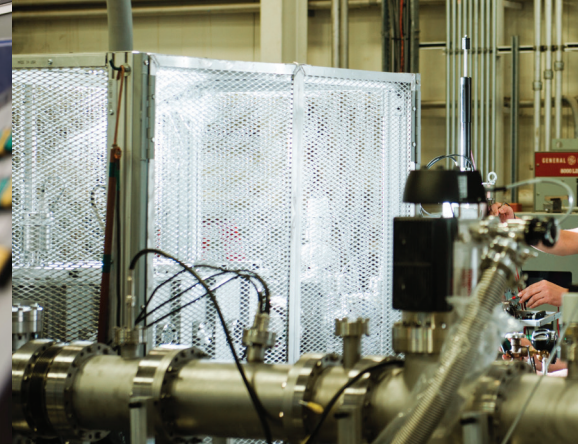
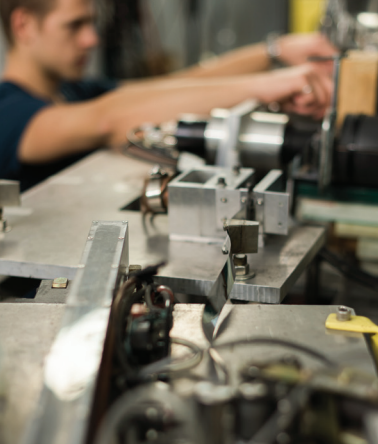
TEXAS A&M UNIVERSITY

Cyclotron Institute

*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.*



cyclotron.tamu.edu



WORLDWIDE RESEARCH

Research programs at the Cyclotron Institute are funded primarily by the U.S. Department of Energy, the National Science Foundation and the National Nuclear Security Agency.

Internationally recognized for its research, the institute provides the primary infrastructure support for Texas A&M'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. Our programs involve more than 100 Institute members — scientists, engineers, technicians, support staff, graduate students and undergraduate students.

Institute staff constructed and currently operate a K150 cyclotron, a K500 superconducting cyclotron and associated advanced ECR (electron cyclotron resonance) 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

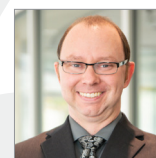
Graduate faculty members with Cyclotron Institute-based research programs are listed. To conduct dissertation research at the Cyclotron Institute, students may work with any faculty member but must be formally enrolled in the graduate program within the Department of Physics and Astronomy, the Department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



Phillip Adsley
Experimental nuclear physics and astrophysics
• *Claude Leon Fellowship*



Aldo Bonasera
Theoretical nuclear physics
• *Visiting dist. scientist, JAERI-Japan*
• *Honorary professor, Three Gorges University-China and the Chinese Academy of Sciences*
• *Full professor, Italy*



Cody Folden
Chemistry, physics and nuclear forensics of the heaviest elements
• *DOE Early Career Award*



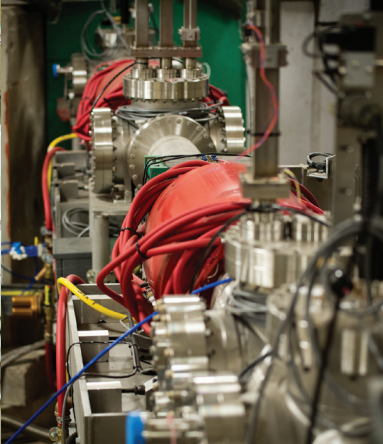
Rainer Fries
Theory of nuclear collisions, quark gluon plasma and hadrons
• *NSF Career Award*
• *IUPAP Young Scientist Prize*



Carl A. Gagliardi
QCD, fundamental interactions and nuclear astrophysics
• *Fellow, American Physical Society*
• *Distinguished Achievement Award in Teaching, AFS/Texas A&M*

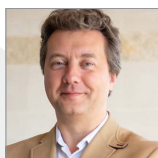


John C. Hardy*
Fundamental symmetries and weak interactions
• *Fellow, Royal Society of Canada*
• *Fellow, American Physical Society*
• *2006 Bonner Prize, APS*



Jeremy Holt
Theoretical nuclear physics
and astrophysics

- NSF CAREER Award



Grigory Rogachev
Nuclear structure, nuclear
reactions and nuclear
astrophysics

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



Dan Melconian
Fundamental interactions
using trapped ion and atoms

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



Shalom Shlomo
Theoretical nuclear physics

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



Che Ming Ko
Theoretical nuclear physics

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



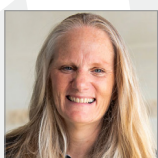
Robert E. Tribble*
Fundamental interactions
and nuclear astrophysics

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



Saskia Mioduszewski
Experimental, high-energy
nuclear physics

- Presidential Early Career Award for
Scientists and Engineers
- Alfred P. Sloan Foundation Fellowship
- Maria Goeppert Mayer Award
- Fellow, American Physical Society



Sherry J. Yennello
Heavy-ion reactions and
production of medical isotopes

- NSF National Young Investigator
- ACS Garvin-Olin Award
- ACS Glen T. Seaborg Award in Nuclear
Chemistry
- Fellow, APS, ACS and AAAS



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

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



Akram Zhanov
Theoretical nuclear
astrophysics and nuclear
reaction theory



Ralf Rapp
Theoretical nuclear physics

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

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 Jeremy Holt
Cyclotron Institute
Texas A&M University
College Station, TX 77843-3366
PH: (979) 845-1411
EMAIL: holt@physics.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
institute also provides important
technological capabilities for
applications of nuclear techniques in
other areas.

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 applications including
isotope production for cancer
therapy and radiation effects on
satellite electronics.

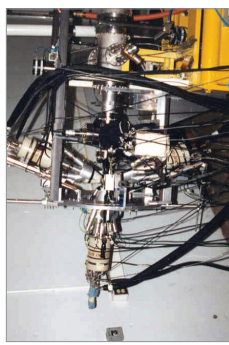
Potential users of the facility are
encouraged to contact:

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

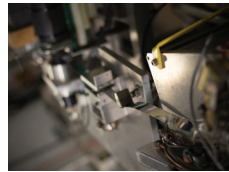
* Not accepting new students at this time

FACILITY SCHEMATIC

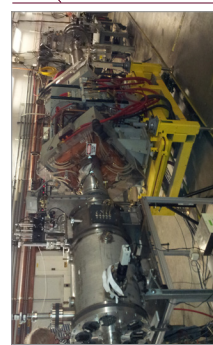
The Cyclotron Institute has expanded steadily since commissioning its original cyclotron in 1967 and continually upgrades as needed. The diagram below shows the variety of sophisticated detectors and spectrometers that enhance the institute's capacity for nuclear research.



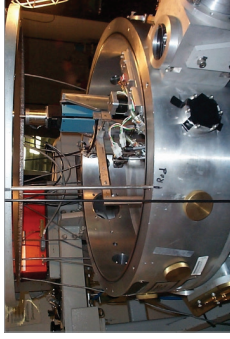
MARS RECOIL SPECTROMETER (1992)
Spectrometer for production and separation of radioactive ions.



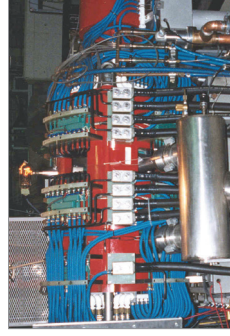
TAPE TRANSPORT & PRECISION ON-LINE γ DECAY FACILITY (1999)
Fast tape-transport system isolates pure samples of short-lived isotopes for high-precision decay measurements with specialized detectors.



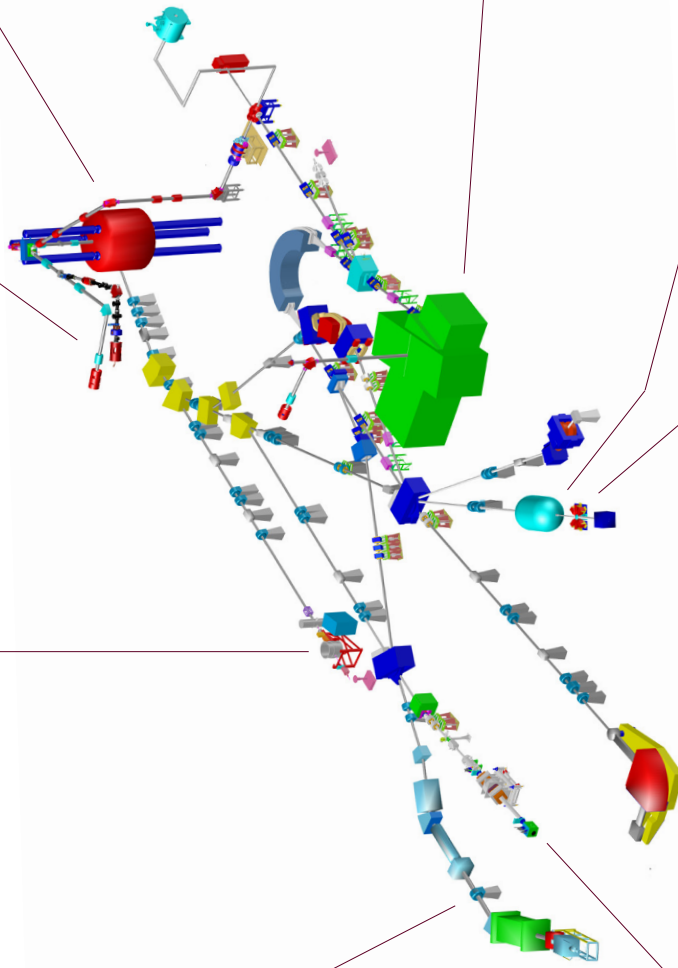
FORWARD ARRAY USING SILICON TECHNOLOGY - QUADRUPOLE TRIPLET (FAUST-QT) (2013)
Detection of light charged particles and intermediate mass fragments in the FAUST multi-detector array, while simultaneously collecting the heaviest fragment in the QT.



RADIATION EFFECTS FACILITY (1994, 2000, 2005)
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.



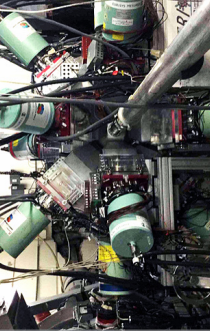
ELECTRON CYCLOTRON RESONANCE (ECR) ION SOURCES (2002 - 2022)
Four ECR sources inject beam into the K150 and K500 Cyclotrons. One also acts as a charge breeder for radioactive beams.



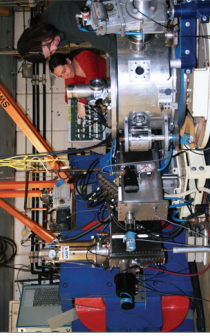
TAMUTRAP (2016) Purifies and confines short-lived ions for precision decay experiments and as a general decay station.



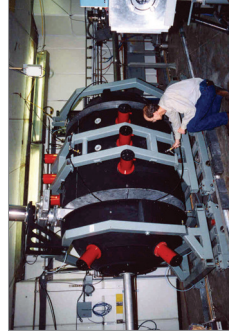
K150 CYCLOTRON (1967, 2008)
After 20 years offline, this resource once again is operational as an integral part of the facility upgrade to make the Cyclotron Institute a dual-cyclotron facility providing accelerated secondary beams.



HYPERION ARRAY (2015)
Capable of detecting gamma rays and ranks as the largest gamma ray detector array in the National Nuclear Security Administration arsenal.



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



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



K500 SUPERCONDUCTING CYCLOTRON (1987)
The Cyclotron Institute at Texas A&M University operates one of the world's five largest superconducting cyclotrons, a K500.