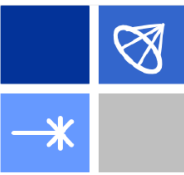


Joint Institute for Nuclear Astrophysics Center for the Evolution of Elements

Dr. Micha Kilburn
JINA-CEE Director of Outreach & Education

Who/Where?



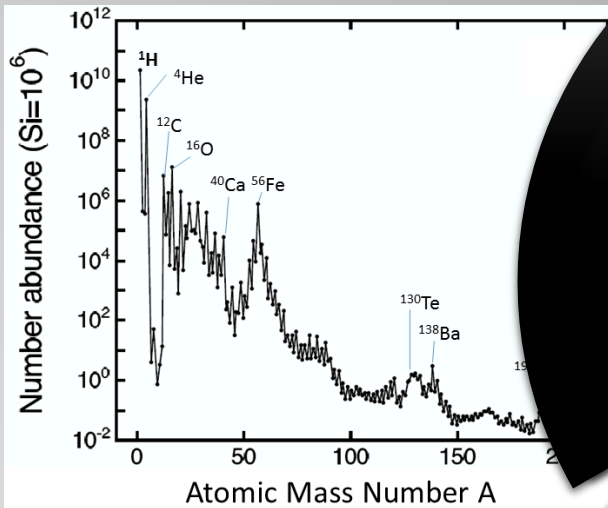
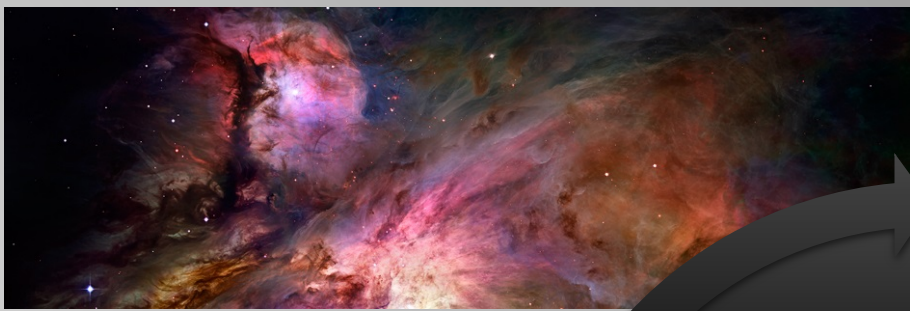
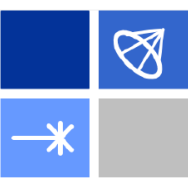
**Michigan State
University**

**University of
Notre Dame**

**Arizona State
University**

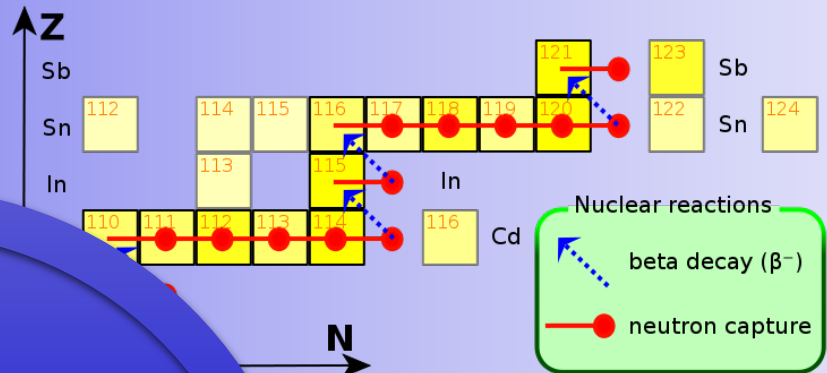
**University of
Washington**

That Great Nuclear Science Laboratory in the Sky

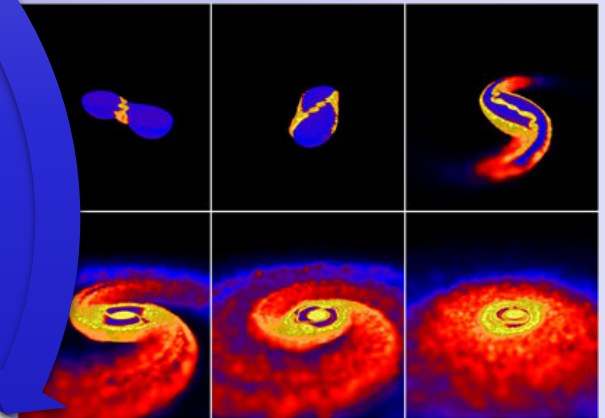


OBSERVATION

THEORY



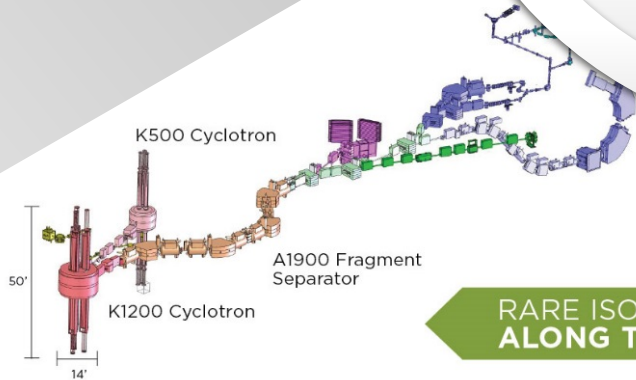
Nuclear reactions
 beta decay (β^-)
 neutron capture



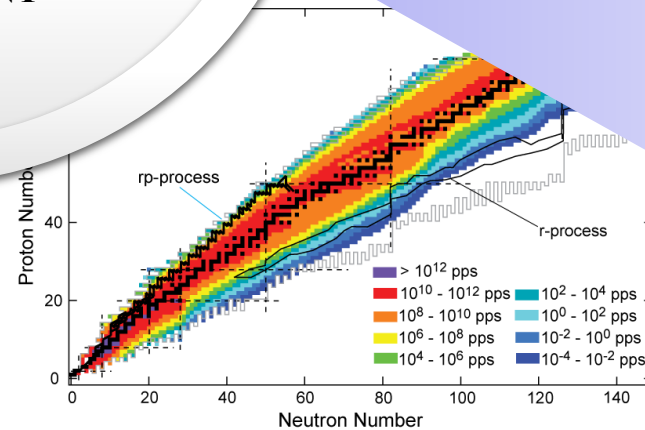
EXPERIMENT



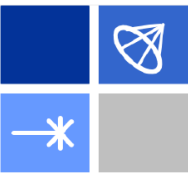
JINA-CEE



**RARE ISOTOPE SCIENCE
ALONG THE BEAMLINE**

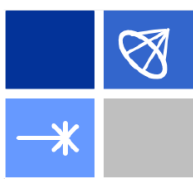


Why?



- Origin and fate of matter in our universe
 - “We are made of star stuff”
- Understanding the cosmos on the tera-scale while interpreting observations and events on the femto-scale
- Many open questions can now be answered
- Provide an intellectual center
- Collaborations, workshops, research programs, and educational initiatives

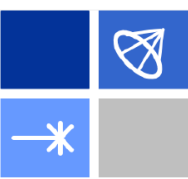
NSF Physics Frontier Center



A word about your sponsor and research funding
in the US

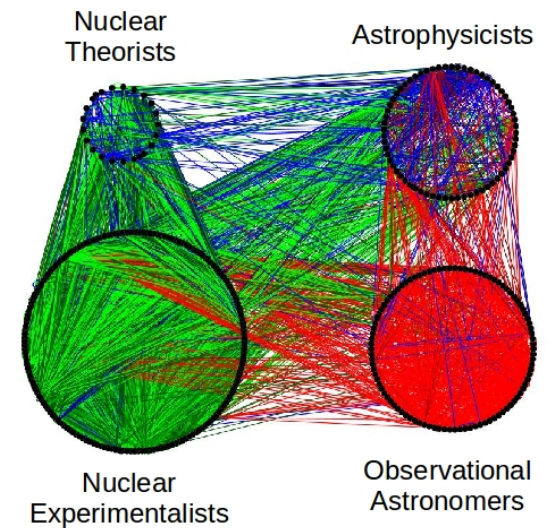
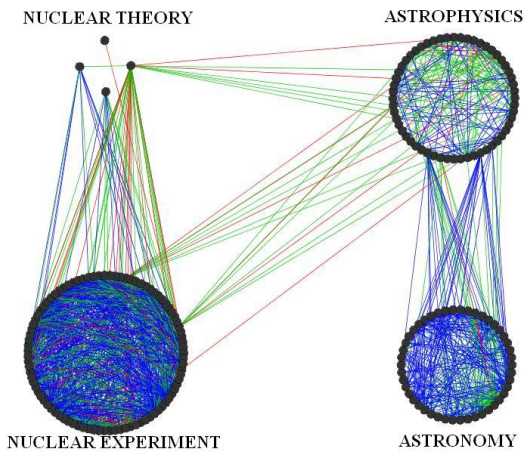


The JINA Web



Nuclear
Theory

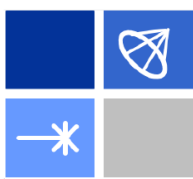
Astrophysics



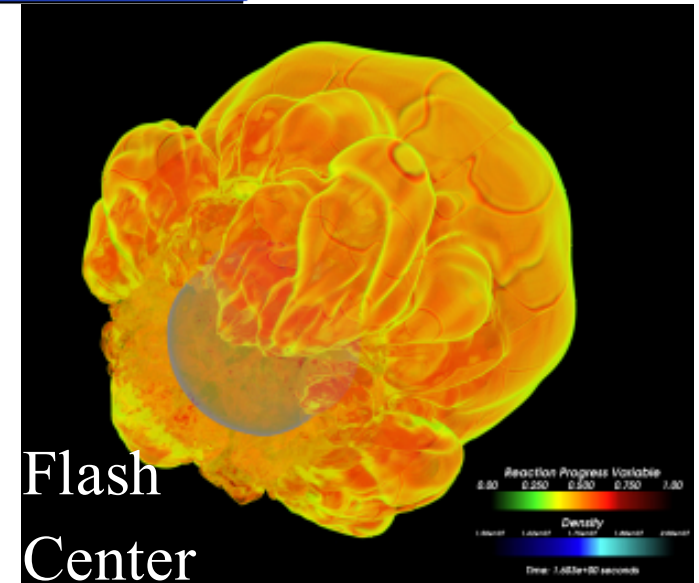
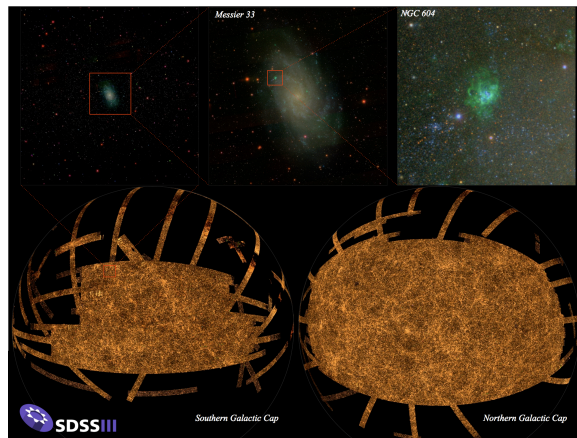
Nuclear
Experiment

Astronomy

How Currently?

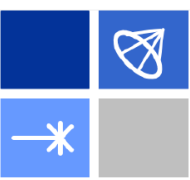


The Sloan Digital Sky Survey



St. George
Recoil
separator

How in the future?

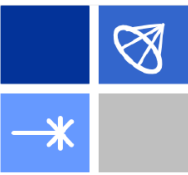


Compact Accelerator System Performing Astrophysical Research

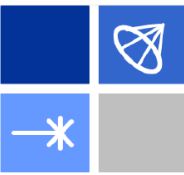
The CASPAR collaboration has been formed to design and build an underground accelerator laboratory, at the 4,850 feet mid-level campus in SURF. The low energy accelerator will support experiments that address long-standing questions in the field providing potentially transformational results about the inner structure and working of stars.



JINA -CEE Outreach



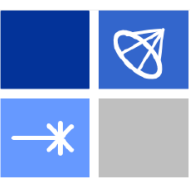
- In Person
 - Summer Camps
 - After school programs
 - Library and Park programs
 - Science Festivals
- Website
 - Isotopolis
 - Guided Tutorials
 - Marble Nuclei
 - CNO Card Game
- Digital
 - YouTube – seminars, music, videos, outreach examples
 - Twitter – aimed at scientific audience
 - FB and Pinterest – aimed at parents
 - Google Hangouts – For virtual talks



JINA-CEE Education Pipeline

- MST -> PAN
- PAN-> Scout Badge, HSHSP
- PAN -> Undergraduate research
 - Conference Experience for Undergraduates
 - Workshops, schools, conferences for Grad students
 - Connections to jobs at all JINA institutions

Want more?



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