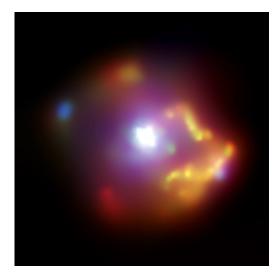
Nuclear Astrophysics Working Group - Science

Stellar Explosions & Stellar Evolution

experimental and theoretical efforts

needed





126 Stable nuclei Known nuclei Fission 50 Protons rp-proces Terra Incognita ► (n,γ) 28 Neutrons (B⁺ v, EC) 20

Related Structure & Reactions of Unstable Nuclei

2nd China-US RIB Meeting

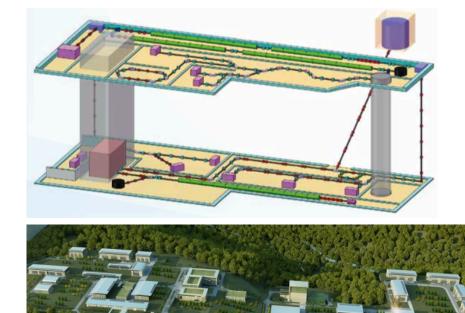
Michael Smith ORNL

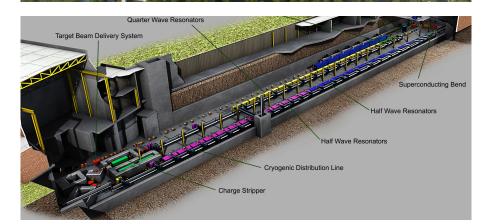
Nuclear Astrophysics Working Group - Opportunities

Beijing ISOL: reactor/linac driver to generate high-intensities of very n-rich nuclei for r-process studies

HIRFL/HIAF: charge-exchange reactions, high resolution spectrometer, active targets, astrophysical simulation capabilities, nuclear data for astrophysics

NSCL/ReA3/FRIB: participation in planned experiments, proposing new experiments





Michael Smith ORNL

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Nuclear Astrophysics Working Group - Recommendations

• Recommendation 1: In order to facilitate collaborative research projects in the physics of unstable nuclei, we suggest the establishment of a FRIB-CSC program for Scholars to embed Chinese Scientists and Faculty in research groups in the U.S. This program would mirror the FRIB-CSC Fellow program but be targeted at established researchers in China rather than at senior graduate students and new postdocs.

• Recommendation 2: In order to improve communication between US and China research efforts in the physics of unstable nuclei, we suggest the creation of an additional set of web pages within the uschina-rib.org website that lists the capabilities, plans, manpower and resource requests, and contact information of research groups in both the US and China.