

SIRIUS - A Radioactive Nuclear Beam Facility for ISIS, T.A. BROOME, RAL* - The design of a Radioactive Nuclear Beam Facility, based on the ISIS synchrotron, is described. The facility will use a new 0.1 mA proton beam, energy 800 MeV, directed into a heavy metal target. A surface ionisation source followed by mass separation will give beams of radioactive ions at 200 keV covering a mass range up to about 160 amu. Post acceleration to and energy of 10 MeV/u will be achieved using an RFQ and a superconducting linac.

* For the SIRIUS Collaboration.