Abstract

The radioactive nuclide 44Ti is believed to be produced in -γ-rich freezeout preceding supernova explosions. The αthe -γlines from its decay have been observed in space-based observatories for the Cassiopeia A supernova remnant. The rates of the nuclear reactions governing the production and destruction of 44Ti should therefore be known with ,p)47V cross section has so far beenαprecision. studied only in inverse kinematics, with radioactive 44Ti beams. These data do not reach the astrophysically relevant energies. A feasibility study is currently underway to determine whether the reaction can also be studied in direct particle beam and αkinematics, using a 44Ti target, an particle detectors. Preliminary results and an outlook will be given.