Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Large high quality crystals of the Topological Kondo Insulator, SmB_6 GEETHA BALAKRISHNAN, MONICA CIOMAGA HATNEAN, D.MCK. PAUL, M.R. LEES, Department of Physics, University of Warwick, Coventry CV4 7AL, UK — SmB_6 has been predicted to be a Topological Kondo Insulator, the first strongly correlated heavy fermion material to exhibit topological surface states. High quality crystals are necessary to investigate the topological properties of this material. Single crystal growth of the rare earth hexaboride, SmB_6, has been carried out by the floating zone technique using a high power xenon arc lamp image furnace. Large, high quality single-crystals are obtained by this technique. The crystals produced by the floating zone technique are free of contamination from flux materials and have been characterised by resistivity and magnetisation measurements. These crystals are ideally suited for the investigation of both the surface and bulk properties of SmB_6.

Geetha Balakrishnan
Department of Physics, University of Warwick, Coventry CV4 7AL, UK

Date submitted: 11 Nov 2013 Electronic form version 1.4