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Induced fission studies of Z<82 at the JAEA tandem facility JAMES SMALLCOMBE, K. HIROSE, K. NISHIO, R. LEGUILLON, H. MAKII, I. NISHINAKA, R. ORLANDI, Japan Atomic Energy Agency, A. ANDREYEV, University of York, S. GOTO, N. TAMURA, Niigata University, T. OHTSUKI, Kyoto University, I. TSEKHANOVICH, University of Bordeaux — Recent betadelayed fission studies of proton rich ¹⁸⁰Hg showed the fission to be dominated by asymmetric fragment masses, in contrast to initial predictions. Models of the potential-energy surface for the path toward scission showed a lower fission barrier for an asymmetrically deformed ¹⁸⁰Hg volume. As a probe of this theoretical interpretation, fission of ¹⁸⁰Hg was induced through the symmetric reaction ⁹⁰Z+⁹⁰Z. Mass and energy distributions of fragments for a series of bombarding energies were recorded using 2 MWPCs. As a continuation of Z < 82 fission studies, fission induced in the ⁷Li+^{182,184,186}W reactions were measured. Near A∼190 a new region of asymmetric fission is predicted to emerge as one moves towards neutron rich nuclei. In preliminary investigations mass asymmetry was observed in fragments of the ⁷Li+¹⁸⁶W reaction. However, fragment kinematics were inconsistent with fission of ¹⁹³Ir formed by fusion. A follow up experiment was conducted in an attempt to confirm the first observation of fission induced by the ⁷Li breakup-fusion reaction ¹⁸⁶W(⁷Li, ⁴He)¹⁸⁹Re. Experimental details and initial results will be presented.

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