Abstract Submitted for the DPP14 Meeting of The American Physical Society

Electrode Biasing Experiment In KMAX Tandem Mirror XUAN SUN, QING ZHANG, MING LIU, PEIYUN SHI, MUNAN LIN, University of Science and Technology of China — An electrode biasing system has been installed on KMAX (Keda Mirror with AXisymmetricity) tandem mirror machine to control the rotation speed. It consists of a metal disk-type and a concentric ring-shaped electrode. On each of them there are 12 embedded single probes distributed uniformly in the azimuthal direction plus a single probe on the center. An adjustable power supply provides the biasing voltage from -1kV to 1kV, and a SCR with rising time $\sim 10\mu s$ and maximum current up to 3000A is used to switch on the circuit. While most of applied voltages are lost on the sheath, the plasma potentials have been found to change substantially.

Xuan Sun University of Science and Technology of China

Date submitted: 10 Sep 2014 Electronic form version 1.4