

**Preliminary Design of SRRC Elliptically Polarizing Undulator**, C.H. CHANG, L.H. CHANG, H.H. CHEN, T.C. FAN, J.Y. HSU, C.S. HWANG, M.C. LIN, CH. WANG, SRRC, Hsinchu, Taiwan - A 4 metre long Sasaki type elliptically polarizing undulator (EPU) is under design to generate helical magnetic field for emission of horizontal/vertical linear polarized as well as right/left circular polarized light for the SRRC 1.3 GeV storage ring. The magnetic circuit is optimized with considerations on the on-axis effective magnetic field strengths, forces between magnetic arrays, integrated multipole behaviours, etc. The gap dependent effects on the deviations of circular polarization degree as well as merit of figure for the undulator spectral harmonics are study. The magnetic circuit, support structure and drive mechanism are designed under a considerable magnetic force. The design features and considerations are presented.