

Operational Performance of the Local Vertical Servo System on the Daresbury SRS,
J.B. FITZGERALD, B.G. MARTLEW and P.D. QUINN, CLRC Daresbury Laboratory, Warrington WA4 4AD, UK - Following the commissioning of new high-precision tungsten vane monitors, it has become possible to apply rapid response local feedback correction to stabilise the vertical position and angle of the delivered photon beam at the user sample. A compensated 3-magnet bump is automatically applied to give efficient local correction at the relevant source point while minimising residual ripple at all other points around the stored electron beam orbit. The system has been in regular operational use at many of the user beamlines and offers a dramatic improvement in observed beam stability. The slow large amplitude drifts, associated with thermal variations in the machine over a user fill, are effectively suppressed, and short term fluctuations in beam position are corrected within seconds. Techniques used to optimise the system, including minimisation of residual ripple and interference effects between multiple servo modules, will be presented and operational performance assessed.