

A Candidate Low Emittance Lattice for LEP at its Highest Energies, D. BRANDT, W. HERR, J.M. JOWETT, M. LAMONT, M. MEDDAHI, A. VERDIER, CERN - Several low emittance lattices have been proposed for LEP at its highest energies in order to reduce the horizontal beam size and to reach the beam-beam limit. Optics with large phase advance per cell tend to have strong tune dependence on amplitude that can limit the dynamic aperture and beam life time. This may limit the maximum beam energy or create operational difficulties. Recently a lattice with a phase advance of $17\pi/30$ in the horizontal and $\pi/2$ in the vertical plane was developed yielding a significantly smaller detuning with amplitude. The results of experiments on this optics are compared with expectations and the first operational experience with this lattice is presented. Finally, the potential performance is discussed.