

**Real-time Monitoring of Beam-beam Modes at LEP**, O. BERRIG, D. LOHMANN, G. MORPURGO, H. SCHMICKLER, CERN - By slightly exciting one of two colliding bunches in LEP, it is possible to enhance the eigen frequencies of the resonant system of the two bunches coupled by the space charge force. The LEP Qmeter has been adapted to detect, among these excited frequencies, the so called "sigma" and "pi" modes, whose distance is proportional to the luminosity. A real time display of these quantities provides the Operators with an effective way of finely optimizing the luminosity .