

Energy Calibration at LEP using Nuclear Magnetic Resonance Probes, E. BRAVIN, B. DEHNING, G. MUGNAI, CERN - The accurate standard model investigations carried out at LEP require the knowledge of the beam energies in the order of a few 10⁻⁵. The resonant depolarisation method, used for absolute calibration in dedicated experiments, cannot be used to monitor continuously the beam energy during the physics runs. Moreover appreciable polarisation of the beams has not been measured above energies of 55 GeV. A method for continuous energy monitoring based on Nuclear Magnetic Resonance (NMR) probes has been in use at LEP since '96. The average field of the dipole magnets is sampled via 16 NMR probes mounted in the gap of the C-shaped yokes on top of the vacuum chamber. The probes are distributed over the 27 kilometres of the accelerator. The NMR system and the problems related to the high synchrotron radiation environment will be described. Results obtained during 1996 and 1997 will also be given.