

**Power Converters for the LLS Synchrotron Accelerator Magnet System,** D. BELTRAN, J.A. PERLAS, IFAE-LLS, Bellaterra - This paper describes the design of the power converters for the magnet system of the proposed Synchrotron Light Source at Barcelona (LLS). The power converter system is not fully commercially available, therefore our strategy has been to provide manufacturers with specifications and follow a tendering process, collaborating with them in the design and testing stages. These converters can be classified in three groups according to their operational requirements: DC supplies (used mainly in the storage ring), the AC supplies (used in the booster ring) and the pulsed power supplies (used during the injection process). In order to achieve the specified values for the beam dispersion and emittance, the bending and quadrupole supplies have stringent precision and stability requirements. These are discussed in this paper. According to the strategy presented above, a prototype power supply has already been built by a Spanish company and careful precision tests have been done, which are also presented.