

Superconducting Magnets for Use Inside the HERA ep Interaction Regions, M. ANERELLA, J. ESCALLIER, A. GHOSH, A. JAIN, A. MARONE, J. MURATORE, B. PARKER, A. PRODELL, R. THOMAS, P. THOMPSON, BNL; H. BRUECK, F. WILLEKE, S. WOLFF, DESY - For the HERA luminosity upgrade, superconducting magnets are to be inserted inside the experimental detectors to provide earlier beam separation and additional IR focusing. Design and production of such magnets is challenging due to detector space limitations, magnet overlap with solenoidal fields, large apertures for passing synchrotron radiation, stringent field quality requirements and tight delivery schedule. We plan to direct wind 1 mm diameter superconducting cable, in multiple layers, arranged into horizontal dipole, quadrupole, vertical dipole and skew quadrupole circuits. Measurements from short prototypes, pertinent design details and production plans are reported.