

Dipole and Quadrupole Magnet Designs for DIAMOND, N. BLISS, J.A. CLARKE, N. MARKS, CLRC Daresbury Laboratory, Warrington WA4 4AD, UK; M.R. HAROLD, CLRC Rutherford Laboratory, Didcot OX11 0QX, UK - The paper will be concerned with the preliminary designs of the dipole and quadrupole magnets for the storage ring of the proposed 3 GeV UK synchrotron light source DIAMOND. The dipole bending magnets will be required to operate at 1.4 T and a pole profile that generates this induction, with only small non-linear effects, has been defined. Three different quadrupole cross-section configurations have been developed to meet the needs of the twelve quadrupole families in the accelerator. Details of the designs will be presented and features of a number of technical difficulties encountered during the work will be discussed.