

Field Calculations and Measurements of a Full-Length Snake Magnet for RHIC, T. KATAYAMA, T. KAWAGUCHI, M. OKAMURA, T. TOMINAKA, RIKEN; A. JAIN, G. MORGAN, J. MURATORE, R. THOMAS, E. WILLEN, BNL - We have studied superconducting helical dipole magnets which will be used as main devices of 'Siberian Snakes' and 'Spin Rotators' in RHIC. The dipole field in these magnets rotates 360 degrees and is required to reach a magnetic field strength of approximately 4.0 T. The bore radius of the coils and the magnetic length of the magnets are 50 mm and 2400 mm, respectively. A half-length model had already been fabricated and tested successfully, and the first full-length magnet is now being constructed. At the conference, the results of the field calculation and the field measurements of the full-length helical magnet will be presented.