Results from Betatron Phase Measurements in RHIC during the Sextant Test*, R. CONNOLY, W. FISCHER, J. KEWISCH, W. MACKAY, V. MANE, S. PEGGS. F. PILAT, T. SATOGATA, S. TEPIKIAN, P. THOMPSON, D. TRBOJEVIC, BNL - The sextant test of the Relativistic Heavy Ion Collider (RHIC) was an important step towards its completion. One sixth of the two RHIC accelerators was fully commissioned. Gold ion beam was injected and transported through one sextant of one of the two rings. The betatron phase advance per cell was measured by recording differences in the horizontal and vertical positions of the beam at the end of the sextant due to the corresponding correction dipole kicks along the beam line. Measurement results showed excellent agreement with predicted values. The test showed that bench measurements of the integral function of dipoles and quadrupoles provided are very accurate, and the polarity of all elements (correction dipoles, quadrupoles, dipoles etc.) was correct.

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