INTRODUCTION

The sixth meeting of the RHIC Spin Collaboration (RSC) took place on October 1, 2001 at Brookhaven National Laboratory. RHIC is now in its second year of operation for physics production and the first polarized proton collision run at $\sqrt{s}$=200 GeV is expected to start in eight weeks. The RSC has developed a plan for this coming run through two previous meetings, RHIC Spin Physics III (August 3, 2000) and IV (October 13-14, 2000). We requested the following:

- two weeks of polarized proton studies in AGS
- three weeks of polarized collider commissioning, and
- five weeks of polarized proton physics run.

As a result, we have obtained all we asked and the above plans are implemented in the current opearation schedule.

The focus of the present meeting was to bring all involved in the RHIC Spin activities up-to-date on the progress of machine development, theory issues, and experimental issues. This meeting was right after the Program Advisory Committee (PAC) meeting and it started with the comments on the PAC discussion by Gerry Bunce, who was informed about the PAC deliberations by Tom Kirk. The PAC was fully supportive to complete the proposed spin program within the currently available budget for RHIC run 2 operations. Gerry further explained the expected luminosity to be $\int \mathcal{L}dt$ =0.5 pb^{-1} per week, reflecting the current machine status. The introductory session also had a talk from Werner Vogelsang that reviewed the progress in perturbative QCD theory focused on spin effects.

Following the introduction, the meeting had three sessions to present and discuss the detailed status of the acceleration complex required for the spin program, the polarimeters that will be used to measure the beam polarization, and the experiments that will make measurements to obtain physics results from the first polarized proton collisions. All of the talks were extremely stimulating and indicated a good state of readiness for the upcoming collision program with polarized protons. Because the information content was so high, this volume contains complete copies of the transparencies from all of the talks.

There were many highlights from the meeting. This summary selects only a few that are particularly encouraging.

- The optically pumped polarized ion source is achieving its goals of delivering 200 μA of polarized beam with polarization in excess of 75%.

- The AC dipole for RHIC, that will be used to induce rapid polarization reversal of the beam stored in RHIC, is ready for installation. A plan for completing its installation and its commissioning was presented. When completed, the AC dipole will allow independent polarization reversal of the RHIC beams, thereby playing a pivotal role in controlling systematic errors in spin asymmetry measurements.

- Polarimeters are in place in both the Blue and Yellow rings. The polarimeters will measure recoil carbon ions from proton+carbon elastic scattering at very small $|t|$ in the vicinity of the Coulomb-nuclear interference (CNI) maximum in the analyzing power.

These encouraging developments suggest that the goals of the first polarized proton run can be accomplished.

Several issues regarding the longer term goals of the RHIC spin collaboration remain to be resolved. A primary concern is the calibration of the CNI polarimeters, to achieve accurate measurements of the beam polarization magnitude. At the end of the meeting, it was discussed that a one day meeting of the RSC will be organized for a date in November to discuss methods of calibrating the RHIC beam polarization. Furthermore, bi-weekly meetings of the RSC will be held to review progress and to discuss outstanding issues in the remaining time before the start of the first polarized proton run.

We are grateful to Ms. Tammy Heinz and Ms. Pam Esposito for their extremely efficient help throughout the meeting, and in preparation of these proceedings. Without their help it would not have been possible to hold this meeting, especially because both of us were taking shift during most of the preparation time. We thank RIKEN BNL Research Center for generous support for this meeting and Department of Energy for the supporting facility.

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8 October 2001

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