April 3, 2009

To the Search Committee:

I find the opportunities for scientific and technical leadership presented by the opening for Hall D Group Leader very attractive and wish to apply for the position. I believe that my long participation in forefront physics, broad technical capabilities, experience with project management and leadership in collaborations of all sizes at various laboratories has given me the tools to successfully guide Hall D through construction and the physics program that enables.

Paramount in the selection of the physics I have chosen to do over my career has been my interest and participation in the development of the physics ideas advancing the research. In addition, I have often brought the technical capabilities and leadership to get the experiments on the floor and completed. During the operation of IUCF I was co-spokesman on many A rated experiments. One that particularly illustrates my capabilities was CE-25, an early IUCF Cooler experiment to study the spin structure of 3He by scattering polarized protons from polarized 3He. After conceiving the experiment I attracted new users, Jo van den Brand and Richard Milner, to IUCF to collaborate on the experiment. In addition to leading the collaboration, I oversaw the installation of the experiment on the floor including one of the first internal polarized targets in a storage ring. The experiment was very successful, leading to 3 Phys. Rev. Letters, and was an early verification for using polarized 3He as a neutron target.

During my career I have gained experience with most of the techniques of intermediate energy nuclear physics, including polarized ion sources, cryogenic polarized and liquid hydrogen targets, polarized gaseous targets, polarimeters, magnets, vacuum systems, scintillators, calorimeters, multi-wire chambers, and trigger and DAQ electronics. I am also familiar with the standard programming languages and packages used for data analysis. In addition I have participated in collaborations of all sizes, from 10's of collaborators to 100's, and worked at a number of different laboratories, both as a user and as a member of the local lab team. Two students have earned their Ph.D.s under my guidance and I have supervised a number of post-docs. I have participated in

and led the development of funding proposals and construction proposals as well as experimental proposals for beam time.

My most intensive management experience has been during the construction of the $7M Endcap Electromagnetic Calorimeter for the STAR detector at RHIC. I was responsible for the design, construction and installation of the structure and active elements of the calorimeter proper. As part of my responsibilities I developed budgets and project plans for the work under my control. I led a team of 3 mechanical engineers to produce the design, prepared bid requests and dealt directly with vendors and manufacturers. I managed a production line utilizing a 5 man team to manufacture the scintillators for the calorimeter. The line operated for over a year. In addition I supervised another 3 man team that assembled the mechanical structure while coordinating delivery schedules of components and raw materials for both teams. I was also responsible for developing the critical lift plans for the two 10 ton modules of the calorimeter to DOE lifting standards and guiding these through the many reviews that entailed at BNL. Finally, I was the installation coordinator at BNL working with BNL staff and collaborators to get the device operational.

Over the past few years I have had a number of leadership roles within the STAR collaboration. I have just finished my term as chair of the STAR Talks Committee. This committee is charged with equitably distributing invited talks among members of the collaboration. In addition, I have been the Spin Physics Working Group Co-Convenor for the past two years. In this position I have been responsible for coordinating members' work on data taking runs, data production, data analysis and making sure that the analyses, presentations and papers are vetted by the group. I have been directly involved in preparing the physics cases for our last 2 Beam Use Requests and priority decisions during the running periods. Last year I was co-editor of the gluon polarization sections of the RHIC Spin Plan update prepared for DOE.

I have now been involved in QCD physics for almost 15 years, beginning with my sabbatical during the assembly and first run of Hermes and continuing with my work in the STAR collaboration spin program. Prior to that, most of the physics I worked on involved few nucleon systems and included precision symmetry tests. I have always felt that connecting QCD back from the perturbative regime to the non-perturbative regime is one of the central

questions in nuclear physics. Thus, I view the physics program at Hall D and JLab to be a natural extension of my previous work and of strong interest to me. I would look forward to developing my own ideas within the exciting environment presented by the lab, Hall D and 12 GeV upgrade.

I hope that you find my mix of talents and experience suitable for your Hall D Group Leader opening. I look forward to an opportunity to visit and explore the nature of the job and my fit to it in more detail.

Sincerely,

James Sowinski

6499 Viking Ridge Rd.
Bloomington IN 47408
812-855-5472
sowinski@indiana.edu