October 13, 2008

Invitation to KTH staff and students
SU staff and students at Alba Nova

Heavy Quarks and the Strong Potential

- Sally Seidel, Visiting Professor, Particle physics

Date: October 28, 2008
Time: 15.15-16.
A get-together will be held afterwards with refreshments
Place: FR4 (Oskar Klein auditorium), Alba Nova, Roslagstullsbacken 21

The strong force differs from the other three fundamental forces in exhibiting the property of confinement: it prevents quarks from existing in unbound states. Despite 30 years of theoretical effort, the basis of the confinement mechanism is still a matter of conjecture. One way that experimentalists can address this question is to map the shape of the strong potential over the broadest possible range. A variety of models, some QCD-inspired and some not, have been proposed to describe the strong potential. Families of bound states of unlike heavy quarks provide a unique laboratory for extracting the form of the strong potential. These states will be produced in significant numbers for the first time at the Large Hadron Collider. She will describe our preparations to use data from the ATLAS Experiment to measure masses of the excited B_c mesons; from these, the shape of the Strong Potential may then be inferred.

Welcome to apply latest October 24 to helenal@admin.kth.se

Best regards,

Gustav Amberg
Vice President of Faculty Development and Gender Equity

Enclosure
Bio Sketch, Sally Seidel

The project entitled Future Faculty was initiated in 2004 with the aim of developing and renewing KTH. Our vision is a KTH that is the most stimulating and attractive work and study place for competent women and men within the KTH operational fields. This project was the main thrust of strategic activities aimed at putting KTH on the map of the most attractive technical universities in Europe where excellence, diversity and gender equality are given.

Sally Seidel
Biographical Sketch

The subject of Sally Seidel's University of Michigan doctorate was a search for nucleon decay using the deep underground IMB water Cherenkov detector. As a post-doctoral fellow of the University of Toronto and member of the ARGUS Collaboration, she then participated in the construction of a unique vertex chamber optimized for B physics and published a study of charmed baryon decay. She joined the CDF Collaboration as a member of the University of New Mexico faculty and led the development of the silicon sensors for the CDF SVX II detector. Her CDF research group has subsequently authored publications on multi-jet events and the discovery, in 2006, of the Σ_b baryon family. Dr. Seidel joined the ATLAS Collaboration in 1996 and has served as co-leader of its pixel sensor development project. The activities of her five-member ATLAS group include investigation of the heavy quark content of jets, development of instrumentation for the pixel detector upgrade, and collaboration with Lund University on studies of the properties of the B_c meson family. She is also a member of the RD50 Collaboration for development of vertexing technology for extreme radiation environments. Dr. Seidel is the recipient of the National Science Foundation's Major Research Instrumentation Award and Career Advancement Award, the Department of Energy's Advanced Detector Research Award, a Fulbright Senior Fellowship, and a Marie Curie Incoming International Fellowship. She is a co-recipient of the American Astronomical Society's Bruno Rossi Prize. She holds teaching awards from the universities of Michigan and New Mexico. She co-directs the Los Alamos Summer School in Physics and presently serves on the DOE/NSF High Energy Physics Advisory Panel.