

Current and Pending Support: Amir Farbin

Support:	<input checked="checked" type="checkbox"/> Awarded	<input type="checkbox"/> Pending
Sponsor: NSF	Award Number: NSF PHY-1119200	
Title of the Funded Research Project: The U.S. ATLAS Research Program: Empowering U.S. Universities for Discoveries at the Energy Frontier		
Total Award Amount for the Entire Award Period (including indirect costs): \$1,611,368		
Award Period: 10/01/15 - 9/30/16		
Number of Person-months per year to be devoted to the project by the PI: 2.0		
Abstract: UTA is a sub-contractor of the NSF US ATLAS Operations program cooperative agreement managed by Columbia University. This cooperative agreement supports M&O, S&C and R&D activities on the ATLAS experiment at the LHC. Activities at UTA include the operation of the SouthWest Tier 2, PanDA software development, US Computing Operations, Analysis support and documentation, and TileCal detector operation and upgrade R&D. These support activities are critical to the success of the ATLAS physics program.		

Support:	<input checked="checked" type="checkbox"/> Awarded	<input type="checkbox"/> Pending
Sponsor: DOE	Award Number: DOE DE-SC0011686	
Title of the Funded Research Project: High Energy Physics Base Funding		
Total Award Amount for the Entire Award Period (including indirect costs): \$890,000		
Award Period: 05/01/16 - 04/31/17		
Number of Person-months per year to be devoted to the project by the PI: 2.0		
<p>Abstract: This proposal requests support for a program of research in experimental high energy physics at The University of Texas at Arlington. It includes studies of the recently discovered Higgs boson, searches for new particles, detector improvement, and large scale computing for the ATLAS Experiment at the European Center for Nuclear Research (CERN) in Geneva, Switzerland, and an initiative for a future experiment, the Silicon Detector Concept (SiD), at the proposed International Linear Collider. Together, the ATLAS Experiment and SiD, can provide a deep understanding of the nature of the combination of two of nature's fundamental forces: electromagnetism and the weak nuclear force, in addition to allowing discovery of associated new particles suggested by theory. In a new direction for the group, support is also requested for participation in the future Long Baseline Neutrino Experiment (LBNE) exploring the masses of the neutrinos that are involved in the weak nuclear interactions, and the ORKA Experiment that will search for signs of new physics in the rare decays of the K-meson, an elementary particle only produced in high energy collisions. Finally, we propose to carry out theoretical studies of the dark matter that exists in large quantities around and between galaxies, in terms of its interactions with astrophysical objects, and its possible creation in low energy high beam intensity experiments.</p>		