**Photocathode studied with Cornell University**

**Program**: DOE HEP FY2020 RESEARCH OPPORTUNITIES IN ACCELERATOR STEWARDSHIP

**Title**: Demonstrating improved lifetime in superlattice photocathodes with robust activating coatings for high current, highly spin-polarized beam production

**Period**: 9/25/20 – 9/24/21

**UITF Mode of Operation:** Installation, Gun Test Stand mode, no LHe required

**Pre-Installation jobs**: Sep 2020 – Jan 2021

* successfully making photocathodes at Cornell and/or TL-1137
* install a new DAQ in a rack on UITF mezannie
* build up a new dump girder w/ 200 keV Mott on it
* installed vertical Wien filter w/ new quad crosses
* (goal) ~10^5 reduction of intensity from gun to Mott by insertable slit

Then I imagine we need ~3 months of time as a UITF User, maybe like this...

* **~4 weeks install:** fix HV, modify PREP, install VWIEN, install MOTT and bake
* **~2 weeks commission**: make photocathode, HV conditiong gun, commission Mott and VWien
* **~6 weeks photocathode studies**: could be broken up into 2 or 3 run periods, to learn/improve

Schedule wise...

* Today - Dec 2020 : HDIce Runs 2 & 3
* Jan 2021 : Booster commissioning
* Feb 2021 : Earliest opportunity to rework any of gun or beam line
* The installation jobs are nominally completed latest Apr 1, 2021
* The beam jobs are nominally performed Apr 1 - Sep 25, 2021

