

FY17-FY19 Student/Postdoc Fellows Projects

| LANL PI | LANL Org | Title | University |
|-------------------|----------|---|----------------|
| ASTRO | | | |
| Patrick Harding | P-23 | Searching For Dark Matter in the Galactic Center with HAWC | Mich State |
| Kirk Flippo | P-24 | Creating an Astrophysically Relevant Magnetic Dynamo in the Laboratory | Univ of Mich |
| Mark Paris | T-2 | Quantum Effects on Cosmological Observables as a Probe of BSM & Nuclear Physics | UCSD |
| CLIMATE | | | |
| Carmela Veneziani | T-3 | High-Resolution Earth System Model (ESM) Simulation | Texas A&M |
| SPACE | | | |
| Herb Funsten | ISR-1 | Enabling Heliospheric Radiography: Proof of Concept for a Transformation Cosmic Ray Imager | Internal |
| William Daughton | XTD-PRI | Kinetic Electron Dynamics of Asymmetric Reconnection | U Wisc Madison |
| GEO | | | |
| Youzuo Lin | EES-17 | Next Generation Microseismic Event Detection | Univ Rochester |
| Satish Karra | EES-16 | Enabling Kilometer-Scale Simulations of Thermo-Hydro-Mechano-Chemical (THMC) Coupled Processes in Fractured Rock Masses | CU Boulder |

FY17-FY18 University Student Subcontracts and Internal Projects

| LANL PI/ Univ PI | LANL Org | Title | University |
|--------------------------|----------|---|---------------|
| ASTRO | | | |
| Hui Li/Shengtai Li | | Planet Formation in the ALMA Era: When, Where, and How | Rice Univ |
| J Smidt/ A Cooray | XTD-IDA | Primordial Explosions and Black Holes: Direct and indirect Signatures in deep Sky Image (gave only what was requested) | UC Irvin |
| CLIMATE | | | |
| Dubey/Riemer | EES-14 | Scaling Missing State to Predict Properties of Carbonaceous aerosols: From Laboratory to field to Climate Models | U of Ill |
| Chonggang Xu / B. Aukema | EES-14 | Vegetation-insect Dynamics under global Warming (internal no longer Univ will be starting in March the \$ amount may change). | Internal |
| Elliott/Wingenter | CCS-2 | Aspects of the Ocean-Ice-Aerosol System | NMTech |
| Ben McMahon | T-6 | Global Biosurveillance: Global health signatures using Peregrine Falcons | Internal |
| SPACE | | | |
| Y.Chen | ISR-1 | Listen to the Canary: Understanding and Utilizing a Storm Precursor in Low-Earth-Orbit | Internal |
| Delzanno/B. Gilchrist | T-5 | Laboratory Validation of Electron Beam Emission Mediated by a Plasma Contractor | U Mich |
| Reeves/Harteringer | ISR-1 | The Effect of ULF Wave Azimuthal Structure on the outer Radiation Belt | Virginia Tech |
| GEO | | | |
| S. Karrar/Archer | | Modeling Induced Seismicity | U of Auck |
| P. Johnson/C. Marone | EES-17 | Probing the Critical Stress State in Earth's Crust via Induced Seismicity and fluid Injection | Penn State |
| C. Rowe/E. Guardincerri | EES-127 | 3-D Mapping of Shallow Targets Using Microgravity and Cosmic Ray Muons | UNM |

FY17 Emerging Ideas R&D projects

| LANL PI/ Univ PI | LANL Org | Title | |
|--------------------------|----------|---|--|
| ASTRO | | | |
| Chengkun Huang | T-5 | Understanding Relativistic Astrophysical Particle Acceleration with an Improved Particle-in Cell Method | |
| CLIMATE | | | |
| Wilbert Weijer | CCS-2 | Fast spin-up of passive tracers in a mildly-turbulent ocean | |
| Sanna Sevanto | EES-14 | 3D in situ nondestructive imaging of tree root structure with RF signals | |
| SPACE | | | |
| Andrew Walker | ISR-1 | DREAM Capability Demonstration Utilizing Van Allen Probe Space Environment Data | |
| Herb Funsten, A. Guthrie | ISR-1 | IMAP-Hi The High Energy Neutral Atom Imager for the Interstellar Mapping and Acceleration Probe (IMAP) | |
| GEO | | | |
| Artaches Migdissov | EES-14 | Towards Resolving the Rare Earth Crisis: Acquiring Thermodynamic data required for Modelling of the Formation of the TH-bearing monazites | |
| Ting Chen | EES-17 | Physics-based rupture modeling induced seismicity | |

FY17 Chick Keller Postdoc Fellows

| LANL PostDoc | LANL Org | Title | University |
|-----------------|----------|--|-------------------|
| CLIMATE | | | |
| Danielle Marias | B-11 | Impacts of root associates on plant drought tolerance and carbon sequestration | Oregon State Univ |
| GEO | | | |
| Maruti Mudunuru | EES-16 | Reduced-Order Models for Subsurface Sensing using Internet of Things (IoT) Devices | Internal |