



ASTROMATERIALS RESEARCH AND EXPLORATION SCIENCE DIVISION (XI)



ASTROMATERIALS ACQUISITION & CURATION OFFICE (X12)

Astromaterials Curation Collections

Apollo, Meteorite, Stardust, Cosmic Dust, Genesis, Hayabusa, Microparticle Impacts, Education Samples, Data Center & Security, White Sands Remote Storage

Emerging Curation Collections

Hayabusa 2, OSIRIS-REx, Mars 2020 CK, Artemis, MMX

Advanced Curation

Planetary Ices & Volatiles, Medical Geology, Curation Microbiology, Infometrics, Curation CT Lab, Raman Lab

ASTROMATERIALS RESEARCH OFFICE (X13)

Research Analysis of Astromaterials

cosmochemistry, geochronology, organic geochemistry, element and isotope mapping

Planetary Process Simulation

Experimental Impacts, Experimental Petrology

Planetary Mission Surface Science

Surface Science Operations

Site selection and sample collection, traverse planning, instrument development and calibration

Measurement "Ground Truth"

analog standards, flight-like instruments & measurement interpretation

Analytical Capability Support for Community

EXPLORATION SCIENCE OFFICE (X14)

Earth Science & Remote Sensing

ISS Earth Science Payload Operations & Crew Training, Planetary GIS & Remote Sensing, Machine Learning & Informatics, AR/VR

Image Science & Analysis

Imagery acquisition planning, ops integration, enhancement, inspection, and derivation of 3D static/dynamic engineering data

Artemis Science Integration

Scientific Leadership & Strategic Analysis (SMEs, support requirement definition for HLS, lunar and surface environment analyses, architecture studies, utilization studies)

Science Support to hardware development (requirements & testing)

Science Training and Ops Integration (dust mitigation, science support to training, simulations, and operations)

HYPERVELOCITY IMPACT AND ORBITAL DEBRIS OFFICE (X15)

Orbital Debris Program Office (ODPO)

Mission safety (compliance, re-entry); Debris Measurements (radar, optical, in-situ, laboratory); Modeling (engineering, environment, breakup); Mission Support; Policy

Hypervelocity Impact Technology (HVIT)

Hypervelocity Testing of Spacecraft Materials; Meteoroid and Orbital Debris Risk Assessments; Mission Support (shielding, requirements)

50 civil servants
173 contractors
12 Post-Docs