SPACE CYBER RESILIENCY

SERIES

Noon – 2pm MST

zoom: https://shorturl.at/EO1Xd
ID: 943 7853 6974 Passcode: SCR2Meet

This series will familiarize the audience with the aspects of the space domain, space systems, and cyber as it applies to space systems, including criticality of space, unique vulnerabilities, tools, how to conduct vulnerability assessments, and consequent research.
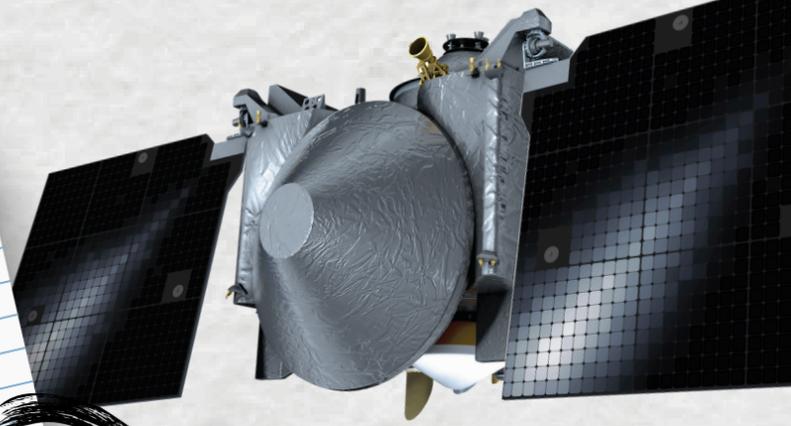
9-20
INTRO TO SPACE DOMAIN & SPACE SYSTEMS

Brian Engberg

- IIntro to the Space Domain: physics, orbits & the environment
- Space Missions & Mission Design: Communications, Navigation, Sensing, Experiments
- Satellite Design: Subsystems, Systems Engineering Principles
- Operations: Ground Systems, Telemetry, Command & Control
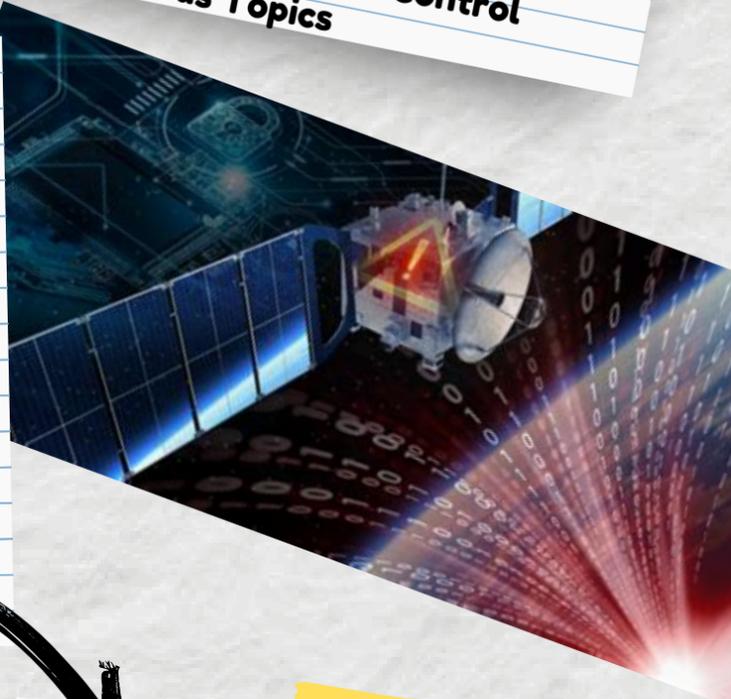- Miscellaneous Topics

10-4
SPACE CYBER

Dan Trujillo

- The Future of Space Cyber
- How is Space Cyber different than Ground Cyber
- Next-Generation Space Vehicles
- Security vs Resilience
- Cyber Vulnerability of Space Vehicles
- Secure & Resilient Architectures: Cyber-Hardening, Detection, Protection, Recovery, and Adaptability

10-18
SPACE VEHICLE CONSTELLATIONS CYBER

Austin Crabtree

- What is a constellation?
- What is the importance of networked cooperative space vehicles?
- How do these networks relate and differ to terrestrial networks?
- What attack surfaces could be present in constellations?
- How can you protect constellations?

11-8
CYBERSECURITY FOR AUTONOMOUS SPACE VEHICLE

Sherry Neher

- Why do we want/need autonomy for space vehicles and constellations?
- What lessons can we learn from autonomous terrestrial systems?
- What do we want/need to make autonomous on a space vehicle?
- Autonomy is coming, we need to prepare, what challenges do we face in the future?
- What are the attack surface and susceptibilities?
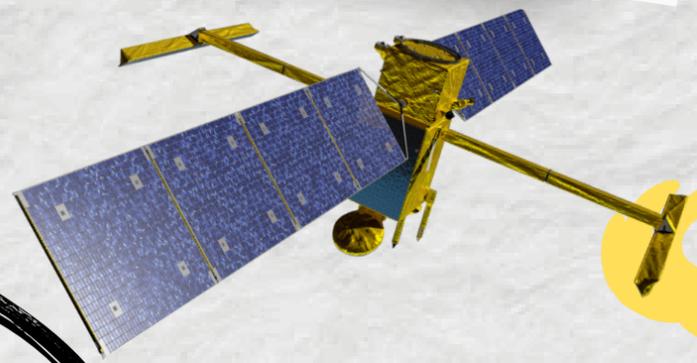
12-6
LABS, TESTBEDS, AND TOOLS FOR SPACE CYBER

Austin Crabtree

- What exists vs what we need
- Cutting edge cyber tech and integration with space systems
- Platforms: Digital, PIL, Flat-Sats
- MITRE Attack and SPARTA frameworks
- M&S role: CVA during steps in systems engineering process; culminate in trip to RVSW