Electron Losses and Fields Investigation

Mission Critical Design Review
PPOD Integration and Launch Vehicle

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Poly Picosatellite Orbital Deployer
- Cal Poly SLO-Mk. III Rev. E
- Fits up to a single 3U+ CubeSat
- Access panels on both sides (+/-X) and bottom (Y) panels
- Spring provides 2m/s ΔV from
- Door opens to minimum of 110 degrees
Requirements to protect primary payload
- Cannot deploy or transmit for 30-120 minutes

475x475x94°
- Science would prefer a high orbit, but it will work
- Orbit lifetime of only 19 months

Integration with P-POD
- No later than 3 months before launch (July 2017 delivery)
- Tyvak Integrator
- Kick off meeting late 2016
- Vandenberg
- Delta II
  - ICESat-2 (October 2017 launch)
  - 3 P-PODs-no swarm
  - Capable of attaching to +X or −Y panels
  - Requires 8 10-32 bolts
  - Attached to final stage
- Proprietary information
  - Load information not currently known
- Thermal
  - 60C/6hrs
- Vibe 3 hasn’t happened
  - Don’t want to change profile too much
  - Using GEVS profile for DM3
- Shock Testing for EM1
TEST POD PROCEDURES

- Personale
  - Ryan Caron
- RBF Pin
- CubeSat Acceptance Checklist
- P-POD User Manual
NASA DAS 2.0
- EPD uses Tantalum
- meets requirement for re-entry
- 4.3-1 Debris Passing Through LEO-Pass
- 4.3-2 Debris Passing Near GEO-Pass
- 4.4-3 Planned Breakups-Pass
- 4.5-1 Limiting Debris Generated by Collisions with Large Objects-Pass
- 4.5-2 Probability of Damage from Small Debris-Pass
- 4.6-1,2,3 Post Mission Disposal of Space Structures-Pass
- 4.6-4 Post Mission Disposal Reliability-Pass
- 4.7-1 Casualty Risk from Uncontrolled Re-entry-In Progress
- 4.8-1 Mitigate the Collision Hazard of Space Tethers-Pa