



# Project CSDI

Cube Sat Deployment from  
ISS



# *Why do we want to do this?*

- ◆ Many CubeSats have been deployed successfully from various Launchers
- ◆ Most recent deployments were done using Russian launchers
- ◆ The Russian launchers all go into a long lasting orbit
- ◆ These launches are very expensive and have very long wait times and **require ITAR export licenses.**



# *Safety requirements*

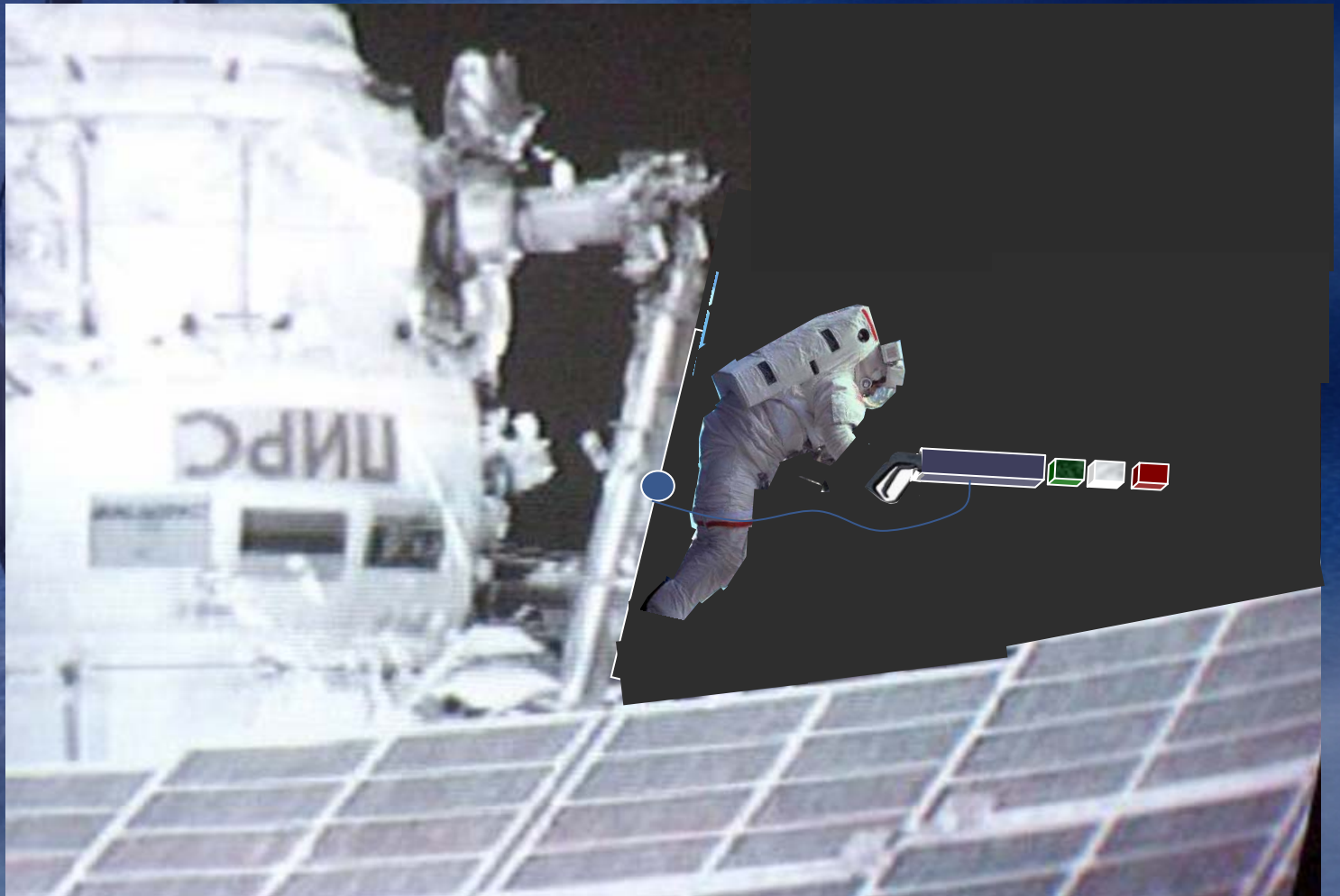
- ◆ The safety requirements are not significantly different from those that would be required for ISS.
  - ◆ No RF or power prior to launch
  - ◆ Multiple inhibits (Velcro straps)
  - ◆ No electronics in release - manual release mechanism



*We already have a launcher tube*

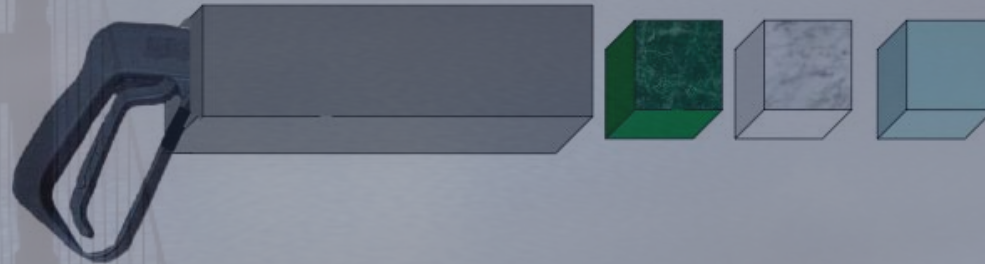
- ◆ A launcher tube has already been developed for these launches that could be adapted for hand launches during an EVA.
- ◆ Multiple inhibits could easily be implemented.

# *Astronaut CubeSat Deployment*



# *Launcher Concept*

**Clifford Buttschardt  
ISS CubeSat Deployer**



# *Crew Deploying CubeSats*

QuickTime™ and a  
TIFF (LZW) decompressor  
are needed to see this picture.









# *Build on previous experience*

- ◆ Previous items have been successfully launched by ISS and MIR Crew.
- ◆ This deployment can be better calibrated than just tossing the satellites as in the past.
- ◆ The orbit would be self cleaning.
- ◆ This would go a long way towards reducing current concerns of orbital debris.