Summary of Level 2 Requirements:

1. <u>Protocol requirements:</u> store downlinked data & display data on mission control dashboard
2. <u>Link budget/margin requirements:</u> define link budget with link margin of 10 dB
3. <u>Capability requirements:</u> comply with radio license agreements, transmit/receive 1 kb/s & 10 kb/s (subject to change), operate on UHF band, ensure data integrity, have redundancy mechanisms to enable basic communication in the case of primary system failure
4. <u>Operator requirements:</u> operators shall have proper licenses, shall develop operations manual

GNC

- Transfer heartbeat containing telematics to GNC
- Ensure antennae do not block sensor line-of-site.
- GNC to attempt to maintain optimal attitude for communication

Mechanical

- Deployment, positioning, and spaceclaim of antenna + GPS
- Avoiding noise and interference from other hardware
- Transceiver thermal consideration
- Damper for communication equipment
- Deployment timings after detaching from the launcher pod
- Volume and mass allocation

Vision

- Image compression or processing technique to ease down the 10 images downlinked.
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Avionics

- Interfacing of the communication module with their PCB
- Getting the adequate voltage/power requirement to the communication module.
- Type of data/amount of data being sent and received
- What telemetry information is needed