**98% CPU – 2Watts**

**Commands from Ground**

Restart IMU – “EC:restartIMU”

Restart sunsensor – “EC:restartSunsensor”

Restart GPS – “EC:restartGPS”

Restart motor controllers – “EC:restartDeployers”

Restart deployment Arduinos \*should this be a single case with the option above because they should be done at the same time? Implemented with above command

Override of numbers between deployment orbits – “GC:resetOrbitCount:\*\*”

Override attitude vectors – “AC:ADCvector:???”

Override vector of nodes in the network – “RC:radioNetwork:\*\*\*\*\*\*\*\*\*”

Override thread variables

Override GPS sampling rate

Automatic deployment – “EC:deployState”

Request current vector of nodes in the network – “RC:requestNetwork”

Request current health status – “HC:requestHealth”

Request current thread variables

Request attitude vector burst data – “AC:burstVector” \*This will be a file transfer

Enter low power mode – “EC:lowPowerMode”

Sensor Node commands (requires a specific node number to route message to)

Restart magnetometer

Restart SD card

Restart power communication

Restart gyroscope

Restart GPS

Restart temperature sensor

Restart Arduino

Override latitude for data collection (used on the mule data collection too?)

##Reduce rate of data samplings being reported

Override threshold values for low power mode

**Commands to Ground**

Data file transfer (relay information/data from the sensor nodes and Mule)

Node number

Orbit number

Part number (as each file will be only a part of the data from a single orbit):

GPS data

Magnetometer data

Gyroscope data

Solar intensity data (current supplied by solar panels)

Temperature sensor

Initialization Status of Sensor nodes

GPS status

Magnetometer status

Gyroscope status

SD card status

Temperature sensor status

Power levels

Solar intensity

Science Mode status update of Sensor Nodes

Transfer Mode status update of Sensor Nodes

Initialization status of Mule

Globalstar status

EPS status

RFM22B status

Sunsensor status

GPS status

Temperature sensor status

Motor controller statuses

Deployment Arduino’s status

Torque coils status

Power levels

Network status

Nodes in network vector

Health status updates

Define current thread variables