NRC requirements

Mission / Payload requirements

* Aim = 2500feet not above 3500 feet
* Motor 2- grain AlPerchlorate motor 29mm G class impulse under 130 cesaroni/aerotech
* Order motor from nrc
* Rideshare payload 100g
* **Customer payload 75g(dimensions provided in Mission requirements document the actual physical payload will be given to us on the day of competition we don’t need to make this )** (7.5W 3.3-5v supply voltage should run for 45 min via xt30 connectors ) should interface with rocket using **adapter(design is given but we have to make it).**
* **Dimensions of CPD(cylindrical r=20mm h=53mm connector access from top and bottom )**
* **CPD requires our rocket to have holes to turn it on from outside the rocket**
* **Rideshare Payload (100g atleast, custom circuit board with team logo printed on it measure altitude using barometer, produce altitude time plot in feet within 10 min after recovery find , should also provide apogee value, record at least another type of data and present within 10 min should run for 15 min after powered on)**
* **Rocket must be powered on within 5 min before launch**
* **Use a double core wire for electricals and Kevlar cord**
* **RF OF 433/868 MHz**
* **Landing speed of less than 15m/s**
* **Motor ejection charge time has to be provided.**
* **Velocity off rod 20 m/s**

**Process**

**Watch how a rocket is designed**

**Define the requirements of the rocket Payload**

**Look at options available for the rocket motors**

**Make a basic design in open rocket with approximate mass for payload adapter , Cp, Rp(at the same time make basic cad model starting from the nose cone while thinking about how it will be assembled.)**

**Rideshare payload (N20 12+3g Pico 3.5 +1g pcb 10g sensors 10g 2x18350 - 50g 3 wheels 50g)**