Conducting a launch

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PRE-FLIGHT

Flight Qualification
  • Checkout of experiment
    • Will it survive post burst
  • Tether lines built
  • POD’s prepped for launch
    • All batteries new or charged
    • Interface checkout live test
PRE-FLIGHT

Launch Prep
• Balloons
  • Correct size and spare
  • Insert spacer
  • Wire ties
  • Tether lines
• Helium
  • Full tank
  • Fill system
• Parachute
  • Separator hoop

• Ground Station check out
  • Power up live test
  • Check PC

• Command POD check out
  • Power up live test
  • Fully Charged battery
LAUNCH DAY

- Run prediction
  - Go – No go
  - Primary or Secondary site

- Prep launch site
  - Tarp laid out
  - Helium tank with valve system
  - Fish scale
  - Cutters
  - Wire ties
  - Launch gloves

- Final payload Prep
  - Weigh Pods
  - Calculate nozzle lift
Ground support equipment

• Ground station
  • Setup ground station
  • Power up equipment
  • Power up PC
  • Data and tracking software running
• Chase vehicle
  • Setup chase antenna
  • Power up PC
  • Data and tracking software running
  • Recovery equipment in vehicle
Recovery equipment list

GPS Receiver
  •Spare batteries
•Flash lights
  •Spare batteries
•Tennis ball launcher
  •Tennis balls
•Lead weights
•Pull lines
•Sliding pole with hook
Balloon Prep

- Insert placed in balloon neck
- Tether line attached and secured with three wire ties
- Safety line attached between balloon and tank
- Fish scale attached between balloon and tank
- Parachute attached
Launch Time

• Verify safety line connections are secure
• Connect command pod tethers to parachute
• Power up command
• Tether all pods to command
• Power up all pods
• Verify ground and chase are receiving data and position
• Check pods
• Verify that all tether clips are LOCKED
Fill and Launch

• Launch glove

• Lay Balloon out on trap

• Fill balloon
  • Check nozzle lift
  • Tie OFF nozzle three wire ties

• Verify command and pods are powered up

• Remove safety line

• Walk up payloads

• Check sky for planes

• Verify down wind clear.

• Launch count down

• Release balloon