Flight Director Checklist

NS- 53

Launch Location = *Clear Spring Elementary, MD*

Launch Date = *Sunday April 24, 2016*

Attempt Number = *1*

Payloads:

Command + (SNORE)		2.79 &3.0 lb	
Link	1300g	2.87 lb	→ 2.4 lb
Bach's Box		2.25 lb	→ 2.5 lb
EM cut down	½	1.46 lb	
BADASS/Hbskd	1620g	~ 3.28 lb	
Ctu "Magnelo"		.5 lb	

Comments: *Let's use BLT this time, maybe.*

ONE MONTH IN ADVANCE:

- [x] Vehicle Rental
- [x] Helium & Balloons Ordered
- [x] HAM Radio Club notified about using UMD's call sign

LAUNCH WEEK:

Pre-Flight Planning Checklist:
- [x] Send the Launch Announcement email
- [x] Create Zello station
- [x] Print waivers
- [x] Preliminary Weather Check
- [x] Preliminary Ground Track Check
- [x] Know which payloads will fly
- [x] Vehicles identified and configured for tracking

Pre-Flight Packing Checklist:
- [x] BLT Bucket (check Inventory)
- [x] Inflation Bucket (check Inventory) (ready)
- [x] Recovery Bucket (check Inventory) (ready)
- [x] Balloon
- [x] Backup Balloon
- [x] Batteries (check if charged)
- [x] Bow Saw
- [ ] Clean Up Bucket (Broom, Dust Pan, Garbage)
- [ ] Cameras
- [ ] Cardboard Tubes
- [x] Extension Pole
- [x] Functioning Radios & GPS
- [x] Helium
- [x] Launch Kit
- [ ] Machete
- [x] Multimeter
- [x] Parachute and Ring + Assembled Command Module okit
- [ ] Payload String + Tubing
- [x] Phone Chargers (Reminder to Navigators)
- [x] Power Inverter
- [x] Wifi hotspot (check for data)
- [ ] Dessicant

☑ Scythe
☑ Sling Shot
___ Spring Scale + digital scale (check batteries)
☑ Tarp (Big and Small)
☑ Tracking Antennas
☑ Van Keys
☑ Walkie-Talkies 2/3

FAA Notification Checklist
___ ~~Notify Secret Service / Air Security Program (ASP@usss.)~~
___ File NOTAM (6 hours prior) via fax: **703-777-8807**
___ Call NOTAM desk (**866-225-7410 ext 9**) to verify that fax came through
    and get assigned NOTAM number:
    NOTAM # _____
___ Call Washington Center (2 hours prior): **703-771-3470**
___ Call HGR Tower at 7am: **301-797-2039**

Radios + Callsigns List
Command Module: _____
Main tracking van: _____
Second tracking van:

_____

Specific payloads: _____

_____

_____

Others:

_____

PRE-LAUNCH MEETING / PRE-LAUNCH DAY

✓ Launch Confirmation/Postponement Email
___ Print Contact Information Sheet (Payload Comm, Comm Officer, etc.)

Assignments:
- Flight Director
    - o Assistant FD _____
- Launch Director _____
    - o Assistant LD Bianca Fattori _____
- Still Photographer: Ji Chang _____
    - o Additional: _____
- Payload Commanders
- Clean Up Crew

Reminders:
- Everyone needs to decide right now if they will chase or go home
- Chase Vehicles will need to leave semi-immediately (so go potty now and be ready to leave right after release)
- Those who are not chasing should stick around long enough to clean up and secure everything

Final Checks:
✓ Waiver Check
✓ Weather Check
✓ Ground Track Check

LAUNCH DAY

On the Launch Pad:

- [x] Parachute to Balloon lanyard configured
- [x] Parachute and Ring assembled
- [x] Command Module in place
- [x] Payload string lined up and assembled
- [x] "Harmless" tags on payloads
- [ ] Payload string weighed: Necessary Free Lift = _____
- [x] Antennas clear
- [x] No sharp edges, no weak links

Pre-Inflation Checklist

- [x] Helium Tanks uncovered and regulator hooked up
- [x] **Hook lanyard from chute around balloon neck before connecting to inflation tube!**
- [x] Instructions and Gloves to BLT anchors
- [x] Full payload string laid out and ready to go
- [ ] Get lift measuring setup in place and measure total lift as needed

Inflation

Start inflating at max flow rate

Inflation Complete: Measure Total Free Lift = _____

Pre-Release Checklist

- Clear to Launch (Range Safety)
- Payloads Ready (Payload Commander)
- Tracking Good (CapComm)

Countdown & Release

- [x] All Payloads Switches On
- [x] Raise Stack above pad in full flight configuration
- [x] Telemetry and Downlink good
- [x] Photographers ready
- [x] Countdown from 10
- [x] Release: Time Mark = 8.43
                  Initial Heading of Flight = _____

Recover Balloon Neck

Cell tracker in decimal
1. did not work at all site
3 tanks of helium + 2 balloons
print final payload forms / or mass
                              sticker

Launch Kit:
SMA stuff ✔   Small screwdriver
Hot glue gun / sticks ✔   ~~lighter~~
~~zip ties ✔~~
~~little ties~~   Desiccant
wire cutters / strippers ✔
tweezers ✔
hookup wire ✔
~~breadboard~~
sharpie ✔
~~soldering tools~~
Xacto knife ✔
SD cards ✔
pliers ✔
scissors ✔
heat shrink
Multimeter

tower +10

Call Washington Center
    @ 60,000, Burst, landing

Inflation

⭐ More duct tape? (some in lab, separate for bucket?)

✴ check if harmless payload tags are correct. ✓

BLT

Ready   ✓ Plastic Sheet
              ✓ Velcro strip

Recovery

Ready

Add To Pre-Flight Systems checklist

   -2 columns (1 ready, 2nd packed)

   - BLT on list

✴ Change UMD dept. of Aerospace to Maryland Space grant contract.