STRATO FLIGHTS

The weather balloon checklist

Step by step to your own stratosphere flight

Planning and organization
6 weeks before the start

- [ ] Finding your team
- [ ] Research, tutorials
- [ ] Discussion of goals; Altitude record? Experiments?

https://www.stratoflights.com/en/tutorial/planning-organization/

Optimal equipment & construction of the probe
4 weeks before the start

- [ ] Order material and technology
- [ ] Construction of the probe
- [ ] Charge your GPS-Tracker with credit and run tests
- [ ] Watch the tutorial for designing the probe
- [ ] Test data records of the datalogger
- [ ] Read through the extensive manual of the Weather Balloon Kit in peace

https://www.stratoflights.com/en/tutorial/optimal-equipment/

Start preparations
3 weeks before the start

- [ ] *Select starting point (at least 5km as the crow flies from airports, the more rural, the easier it is to register with the aviation authority, but launchs are usually no problem at all)*
- [ ] Set start date and start time
- [ ] Possibly. Define alternative dates and periods if the weather does not play along
- [ ] Apply for a Launch permit with the aviation authority with weather balloon Request for registration
- [ ] Complete aviation owner liability insurance (eg AMU 300/06 Allianz)
  ** In any case, seek the advice of an insurance expert. Stratoflights is not liable for the accuracy or completeness of this information.*

https://www.stratoflights.com/en/tutorial/start-preparations/

Start preparations
24h before the start

- [ ] **Check weather forecast**
- [ ] **Predict flight route**
- [ ] Determine the exact take-off weight of the probe incl. Technology
- [ ] **Calculate and note required amount of helium**
- [ ] Charge the battery of the Space Cam and check camera settings
- [ ] Charge batteries of the GPS tracker
- [ ] Format the SD card and insert it into the camera
- [ ] Attach contact data to the probe
- [ ] Charge your laptop
- [ ] Final final test of the entire technology

https://www.stratoflights.com/en/tutorial/start-preparations/

Weather balloon start

- [ ] Check if all required equipment is at the starting point
- [ ] Install pressure reducer on helium bottle
- [ ] Turn on the GPS Tracker and test it
- [ ] Bring special cords in appropriate lengths and knot with the parachute (about 5m special cord between weather balloon and parachute, about 10m special cord between parachute and probe)
- [ ] Fill the weather balloon with calculated amount of helium
- [ ] Close weather balloon and connect with special cord
  (see supplied filling instructions of your weather balloon)
- [ ] Switch on Space Cam, battery pack and datalogger
  insert in probe and secure with Tesa fabric tape
- [ ] Test the clear view of the camera lens
- [ ] Close the probe with Tesa fabric tape
- [ ] Possibly. Inform air traffic control by telephone about the actual start time
- [ ] Final check: everything knotted together?
  Camera lens not fitted when sealing the probe with Tesa tape overcast?
- [ ] Slowly and consistently release the weather balloon on the special cord and start directly

https://www.stratoflights.com/en/tutorial/weather-balloon-start/

Location & Recovery

- [ ] Pack the equipment and drive in the direction of the predicted landing site
- [ ] After a flight time of about 3 hours, the probe has landed
- [ ] Locate the probe through the GPS tracker
- [ ] Salvage of the probe
- [ ] Watch breathtaking videos on your laptop and be amazed!

https://www.stratoflights.com/en/tutorial/locating-recovery/

Material & Tools

- [ ] **Weather balloon**
- [ ] **Parachute**
- [ ] **Special cord (tear strength <230 N)**
- [ ] Helium bottle / balloon gas
- [ ] **Pressure reducer incl. Hose**
- [ ] **Tesa duct tape**
- [ ] **Gloves**
- [ ] **Space Cam with SD card and battery pack with power batteries**
- [ ] **External power supply for the camera**
- [ ] **GPS Tracker**
- [ ] **GPS Tracker as a backup system**
- [ ] **Datalogger for altitude recording**
- [ ] Cutter knife / scissors
- [ ] Wrench (for pressure reducer)

Further information, tips & tricks as well as useful tools for the

- **Registration of your weather balloon start**
- **Calculation of the required amount of helium**
- **Flight path prediction**

you will find on our website **www.stratoflights.com/en/tutorial**.