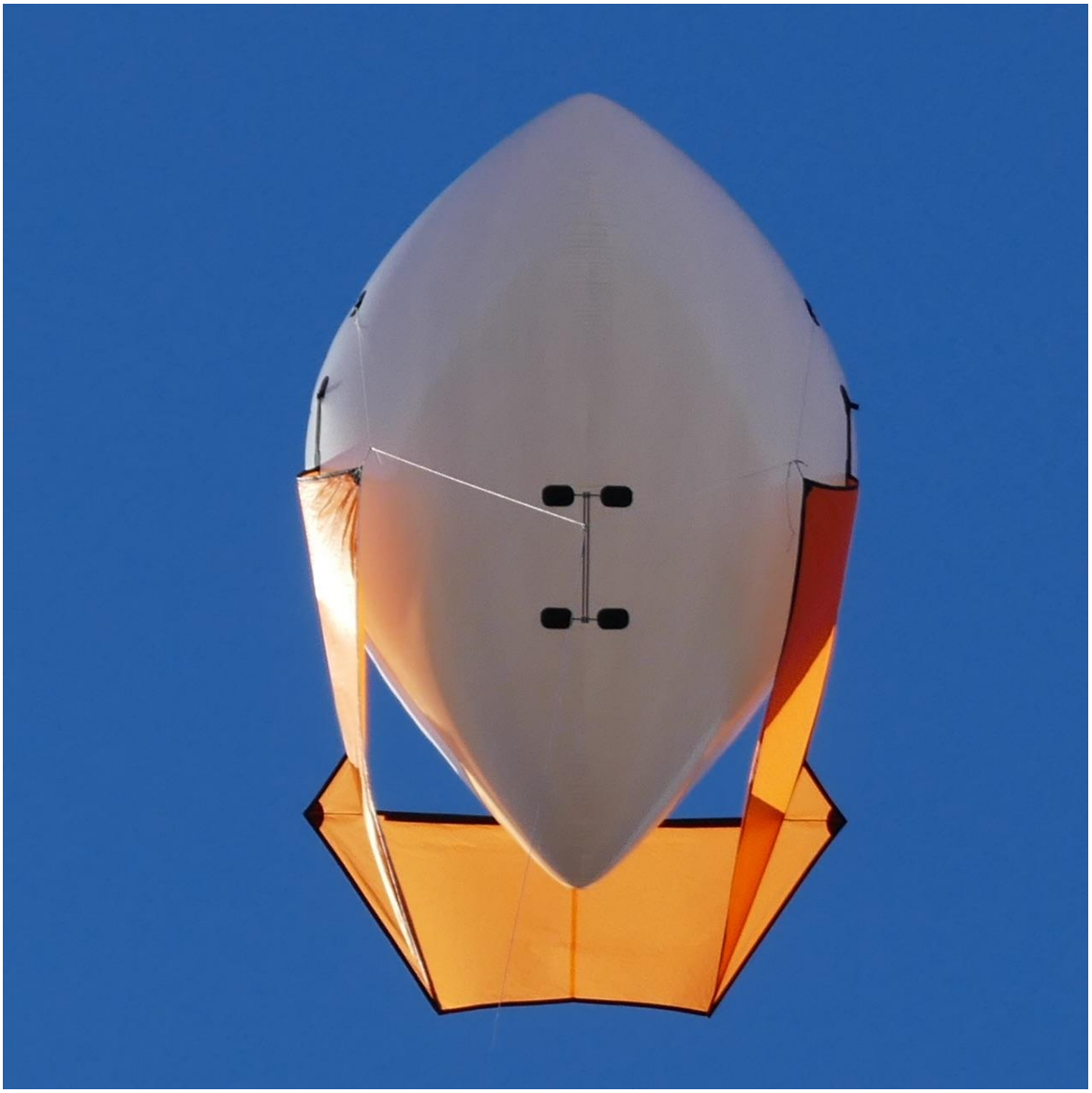
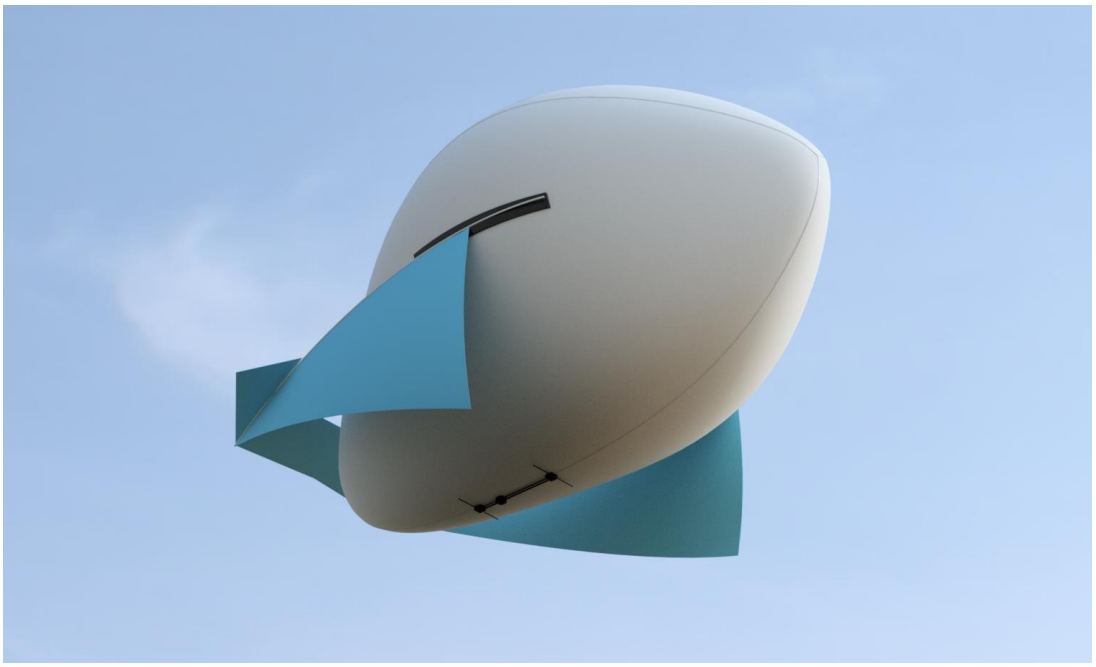
the Airpup kite balloon



This repository contains the 2D patterns for constructing Airpup as well as a corresponding 3D model. 2D patterns are made with QCAD, the 3D model was made in Audodesk's Fusion 360.

See more of my kite and balloon projects at headfullofair.com.

files



- /rails, *belly mounting rails and STLs*
- BOM.ods, *Bill of Materials*
- V3-FIN.DXF, *panel diagram of the fin/wing structure and attachment*
- V3-ENVELOPE.DXF, *flat pattern of the balloon envelope*
- 72in-Airpup-model-v3.f3z/step/iges, *full-size 3D Airpup- Envelope is accurate in size, volume, and seam locations, fins are illustrative.*

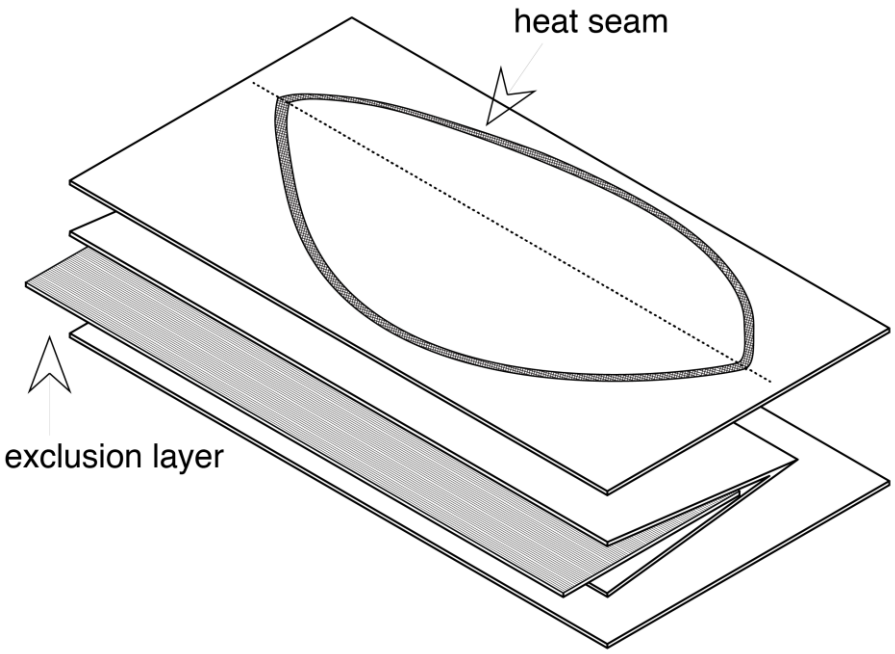
Fin and envelope flat patterns have a series of rounded-rectanges that correspond to the glued interconnections joining the sewn fins and envelope.

sewing assembly

airpup-assembly.md contains instructions on sewing Airpup.

envelope construction

The envelope is a 3-gore pattern seamed in a single run:



envelope volume and flat patterns

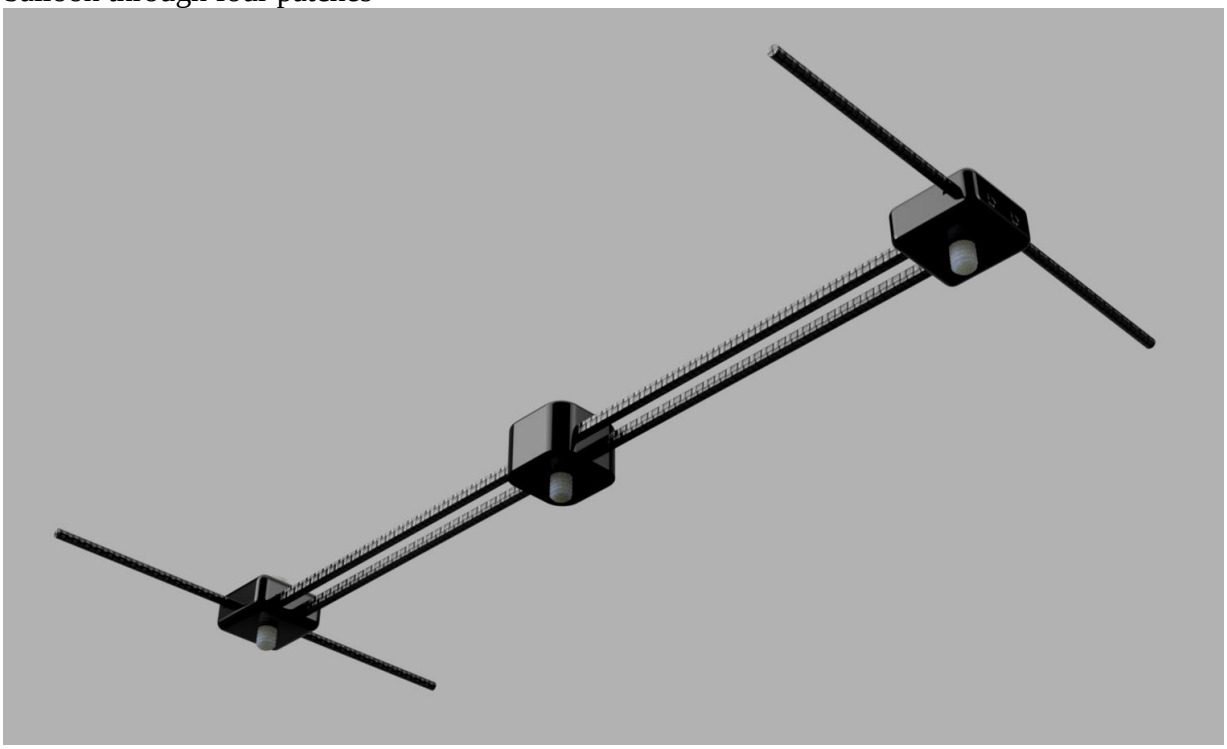
Airpup's envelope volume is roughly equivalent to a sphere whose radius is 1/3 the length of an inflated Airpup.

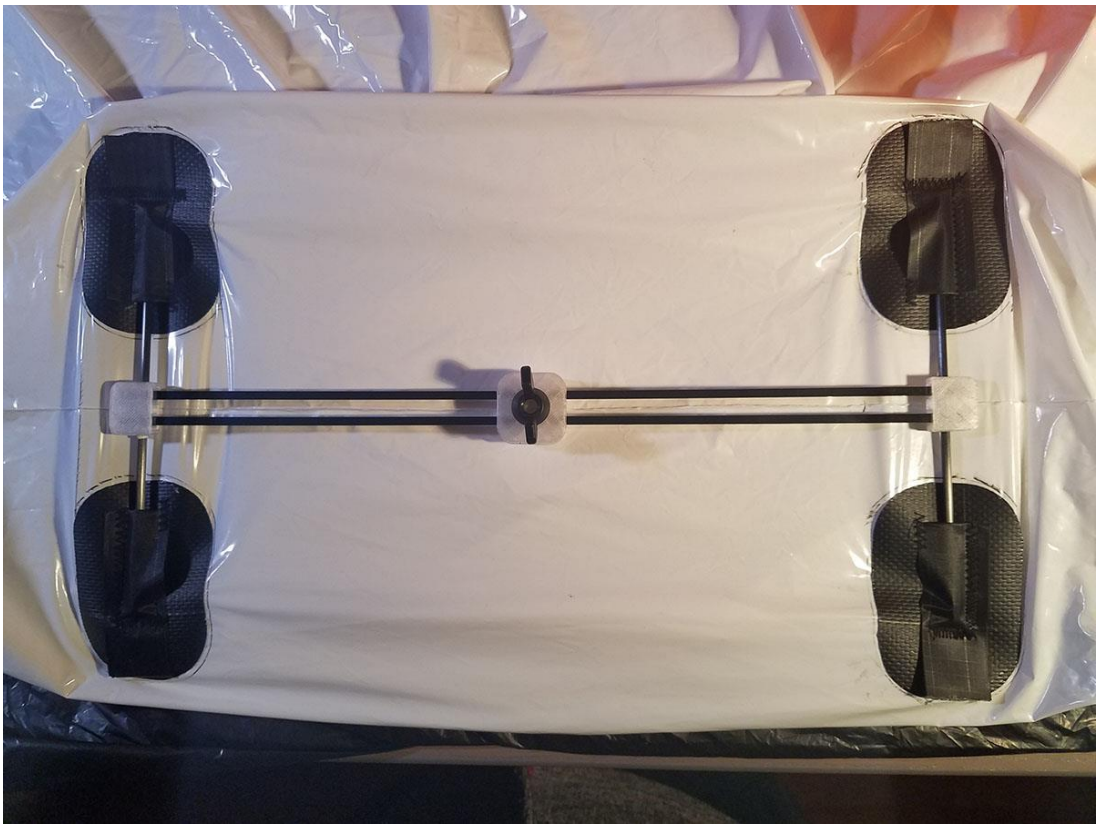
Airpup's flat envelope pattern is 1.147 times the length of an inflated Airpup.

mounting rails

The folder /rails contains CAD files and STLs for end caps and two-part slide mount. This mount allows easy weight adjustment and also can be removed from the belly of the

balloon through four patches





contribute

- Use the 3D models to plan your payload attachement. Please reach out and share.
- Fork this repository and improve the design or documentation.
- Add or comment on issues in this repository.
- show me kite and balloon stuff.

All contributors are asked to abide by the code of conduct.