

A Safe Flight Path

Note: The balloon launch site is around the area of Mount Barker. The proposed launch site is at a farmer's property in Wistow. Pictures of the launch site are at: http://pipe2.darklomax.org/pics/2012-10-07_Horus_29/ and the location is: <https://www.google.com.au/maps/place/35%C2%B007'39.2%22S+138%C2%B050'51.4%22E/@-35.1279687,138.847769,388m/data=!3m1!1e3!4m2!3m1!1s0x0:0x0>. The proposed launch is scheduled for the third week in September.

Description of problem

A number of factors need to be taken into account to ensure the safe and successful launch and completion of the mission. To ensure that the balloon does not provide a flight hazard to other aircraft, the position and flight times of aircraft need to be established, and a suitable launch time and safe flight path for the balloon determined.

Launch site

The actual launch site needs to be a large flat area in the Mount Barker area. Even though there is a provisional site, an alternative site should be selected as well if there are problems with the selected site. You can use google maps, google earth or the atlas of South Australia to look at the area. What are potential sites that you could recommend? Check if it is on private property. If it is you would need to seek permission.

Google Maps: <https://www.google.com.au/maps/preview?hl=en>

Google Earth: download the application

Atlas of South Australia: <http://www.atlas.sa.gov.au/>. Select physical geography from the natural environments toolbar.

Flight Path

There are a number of tools that can be used to plot the flight paths of airplanes. The two most useful are flight radar (<http://www.flightradar24.com/>) and plane finder (<http://planefinder.net/>)



Investigate the flight paths of aircraft over the course of a day over the proposed launch site. As well as flights from Adelaide, flights to Perth and international flights need to be tracked. Flight Radar in particular has a very good historical data section. Allow for 2 hour time segments for the balloon flights. Plot these paths on a map of southern South Australia over the day (you could use different colors or different maps).

Report

Prepare a report which:

- Describes the goals of your task
- The investigation you undertook
- Report on the best position and time of launch