

BF-P
Centuria

Purpose

We are going to send up a balloon carrying a jar covered in tin foil with a one-way valve and a barometer attached to it. Sending it up, we will test the pressure decrease associated with the steady increase in altitude.

Equipment

- Balloon
- Barometer
- Helium
- 1000 ft. of cord
- Tape
- Ring
- Gondola with data acquiring equipment
- Data Log
- LogPro
- Laptop

Payload

- 1000 ft. of cord
- Gondola with data acquiring equipment
- Balloon weight with ring

Weight

Setup

1. Attach jar firmly to gondola
2. Screw cap off helium cylinder
3. Screw regulator onto cylinder
4. Slowly fill up balloon with helium
5. Tie up balloon and tie ring onto balloon using tape
6. Tie string and gondola onto ring
7. Have out Data Log

Flight Process

1. Slowly send up balloon 100 ft. at a time
2. When at 1000 ft. leave it there for about 5 minutes
3. Slowly bring it down 100 ft. at a time

Data Analysis

1. Hook up barometer to LogPro
2. Hook up LogPro to computer
3. Find the minimum air pressure inside jar
4. Find air pressure outside the jar

5. Subtract the two air pressures
6. Divide the difference by 1000
7. Show the answer in difference psi/ft

Presentation

1. Type up data
2. Show a line graph of the difference in pressure
3. Present data in a PowerPoint
4. Show presentation to peers