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The Core

Instrument Validation Thursday April 17, 2008

Measure the pressure vs. height using a helium balloon. We will record the data every one hundred feet the balloon increases. We will continue to do this until we reach the height of one thousand feet.

Method

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Purpose: The purpose of this experiment is to test the one way valve to see if it can hold pressure for at least 30 seconds.

Method:

1. Set up LabPro and connect it to the barometer
2. Let it run for one minute
3. Test pressure to make sure the LabPro is working
4. Press start to begin recording
5. Write down the pressure every 3 minutes 10 times.

Data

Pressure (KPA)	Time (minutes)
100.5 (Starting Pressure)	0
96.31	3
96.32	6
96.34	9
96.36	12
96.37	15
96.38	18
96.39	21
96.41	24
96.43	27
96.45	30

Analysis- The data we got makes our barometer valid because it maintained a pressure of around 96 KPA. The data proves that the equipment is functioning properly, and that there are no leaks.

Conclusion- So the experiment we made showed that valve does leak but only a tiny bit. However, it wasn't that much, but we have to improve it so that it doesn't leak. If we continue to improve it we will be able to make it almost perfect. If we keep it like this we will be able to the project with pretty close numbers. A problem that we could have would be if the valve leaked a lot more than expected or if the plastic had a hole or tear in it.