

# Starting Student Space Hardware Programs IV: Workshop Agenda

July 14 - 16, 2005  
Boulder, Colorado

## Thursday, July 14, 2005

7:00	(60)	Registration (Continues until 9:00) Breakfast (Provided)	Atrium Atrium
8:00	(30)	Welcome and Introductions – <i>Bill Hiscock &amp; Chris Koehler</i>	DLC 1B-70
8:30	(20)	Overview of Goals and Review of Workshop Agenda – <i>Bill &amp; Chris</i>	DLC 1B-70
8:50	(20)	Overview of BalloonSats and Ballooning – <i>Chris &amp; Bill</i>	DLC 1B-70
9:10	(15)	Introduction to Hands-On Activities & Team Forming	DLC 1B-70
9:25	(35)	Hands-on Activity: “Light to Pluto”	DLC 1B-70
9:50	(20)	Hands-on Activity: “Let them Fly”	Courtyard
10:10	(15)	Break	Atrium / Courtyard
10:25	(45)	Hands-on Activity: “Soldering 101”	DLC 1B-70
11:10	(50)	Hands-on Activity: “Timing Circuit, Power, and Camera Integration” – Part I	DLC 1B-70
12:00	(40)	Lunch	Atrium / Courtyard
12:40	(50)	Hands-on Activity: “Timing Circuit, Power, and Camera Integration” – Part II	DLC 1B-70
1:30	(20)	Previous Workshop Participant Presentation #1 <i>Richard Hackney</i>	DLC 1B-70
1:50	(15)	Introduction of Environments at 100,000 feet – <i>Chris</i>	DLC 1B-70
2:05	(45)	Hands-on Activity: “Heater Circuit”	DLC 1B-70
2:50	(20)	Break (Snacks Provided)	Atrium / Courtyard
3:10	(20)	Previous Workshop Participant Presentation #2 <i>Michael Fortney</i>	DLC 1B-70
3:30	(15)	Introduction to HOB0 Computers – <i>Chris</i>	DLC 1B-70
3:45	(45)	Hands-on Activity: “Temperature Experiment and Solar Experiment”	DLC 1B-70
4:30	(15)	Introduction to Construction – <i>Chris</i>	DLC 1B-70
4:45	(20)	Hands-on Activity: “BalloonSat Construction, Switches, Integration, & Test” – Part I Submission of Team information Too	DLC 1B-70
5:05	(20)	Previous Workshop Participant Presentation #3 <i>Oscar Resto</i>	DLC 1B-70
5:25	(05)	Recap of Day 1 and Adjourn – <i>Bill &amp; Chris</i>	DLC 1B-70
5:30		Dinner on your own	

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## ***Friday, July 15, 2005***

7:00	(30)	Breakfast (Provided)	Atrium
7:30	(30)	Overview of Today's Tasks <b>PLUS Van Assignments</b> – <i>Bill &amp; Chris</i>	DLC 1B-70
8:00	(90)	<b>Hands-on Activity: “BalloonSat Construction, Switches, Integration, &amp; Test” – Part II</b>	DLC 1B-70
9:30	(15)	Break	Atrium / Courtyard
9:45	(75)	<b>Hands-on Activity: “BalloonSat Construction, Switches, Integration, &amp; Test” – Part III</b>	DLC 1B-70
11:00	(10)	<b>Hands-on Activity: HOBO Activation</b>	DLC 1B-70
11:10	(30)	<b>Hands-on Activity: BalloonSat Weigh-in and team photo</b>	DLC 1B-70
11:40	(30)	Lunch (Provided)	Atrium
12:10	(30)	Integration of StudentSat Programs into Curriculum – <i>Chris</i>	DLC 1B-70
12:40	(20)	Starting a Ballooning Program: The Montana Example – <i>Bill</i>	DLC 1B-70
1:00	(10)	FAA Regulations – <i>Bill</i>	DLC 1B-70
1:10	(25)	Preflight planning – <i>Jackie Allen</i>	DLC 1B-70
1:35	(20)	Introduction to HAM Radio – <i>Kim Cochran</i>	DLC 1B-70
1:55	(20)	Balloon Tracking System – <i>Brittany Hunt</i>	DLC 1B-70
2:15	(10)	Mobile Ground Stations – <i>Chris</i>	DLC 1B-70
2:25	(30)	<b>Hands-on Activity: Mobile Ground Station</b> - <i>Chris</i>	Atrium
2:55	(15)	Break (Snacks Provided)	Atrium
3:10	(15)	Balloon Vehicle – <i>Thomas Regan</i>	DLC 1B-70
3:25	(20)	Payload Hardware – <i>Mike Lenander</i>	DLC 1B-70
3:45	(60)	<b>Hands-on Activity: Balloon Inflation (Weather Permitting)</b> – <i>Team BOREALIS</i>	Atrium
4:45	(10)	Group Picture	Courtyard
4:55	(25)	Launch Logistics – <i>Chris</i> Procedures, Meeting Location, Transportation, Van Assignments, Launch Day Procedures, Chase and Recovery, and Miscellaneous	DLC 1B-70
5:20	(10)	Recap of Day 2 and Adjourn – <i>Bill &amp; Chris</i>	DLC 1B-70
5:30		Dinner (on your own)	
5:40	(20)	<b>Navigator Training for those who have volunteered</b>	Atrium
5:40	(20)	<b>Flight String Attachment for those who have volunteered</b>	DLC 1B-70

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## *Saturday, July 16, 2005*

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- 5:15 Leave Boulder for Launch Site (Deer Trail, CO which is 76 Miles SE of Boulder)
- 6:30 Arrive at Launch Site  
- Continental Breakfast and Coffee  
- Tour of Launch Operations  
- Assignment of Launch Tasks  
- Set up of van tracking stations
- 6:35 Final Checkout of BalloonSats
- 7:10 Fill EOSS Balloon #1
- 7:29 Launch Test Balloon
- 7:30 Release EOSS Balloon #1
- 7:55 Fill Montana Balloon #2 (Estimate)
- 8:14 Launch Test Balloon
- 8:15 Release Montana Balloon #2
- 8:20 Begin Recovery and Tracking Operations  
- Assemble recovery teams  
- Distribution of Radios, Maps, and GPS Units  
- Review Predicted landing site and rendezvous points
- 8:25 Depart (Each van will have drinks and box lunches)
- ~10:30 Arrive at Landing site  
- Hike begins
- ~12:00 Recovery Complete  
Data Retrieval
- 1:30 Arrive in Boulder  
- Please leave film at student table in parking lot
- 1:30 Rest
- 6:30 Pizza Banquet and presentation of results at the Discovery Learning Center
- 8:30 Conclusion and Workshop Closure – *Bill & Chris*