

Starting Student Space Hardware Programs

Workshop Agenda

June 20 – 22, 2002
Boulder, Colorado

Thursday, June 20, 2002

- 7:30 Registration (Continues until 9:30)
- 8:00 Continental Breakfast (Provided)
- 8:30 Welcome and Introductions Bill H., Elaine, Chris
- 8:40 Overview of Student Space Hardware Philosophy Bob, Dave K., Chris, Mike D.
- Emphasis on “Starting”
- 8:55 Review of Workshop Agenda and Overview Goals Bill H.
- 9:10 Overview of Current, Simple Programs (5 Minutes Each)
- CricketSat Bob
- CanSat Bob and Helen
- BalloonSat Chris, Bill H.
- Ballooning Bill B.
- 9:30 In-Depth Presentation on CricketSat Program Bob
- Very detailed hand-outs and presentation
- 10:00 Break
- 10:15 Hands-on Activity “Build a CricketSat” [Groups of 3] (1 hour)
- 11:15 Demonstration of Workshop CricketSats Groups
(More detail to come)
- 12:00 Working Lunch (Provided) Bob and Helen
In-Depth Presentation of CanSat Program
- Very detailed hand-outs and presentation
- 1:00 Demonstration of CanSat Bob
- 1:15 Hands-on Activity “Build a CanSat” [Groups of 3] (4.0 Hours)
- 2:30 Break
- 2:45 Hands-on Activity “Build a CanSat” Continues Groups
- 5:15 Demonstration of Workshop CanSats Groups
- 5:30 Recap of Day 1 and Adjourn Bill H. and Chris

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Friday, June 21, 2002

- 8:00 Continental Breakfast (Provided)
- 8:30 Introduction to Ballooning Bill H. and Bill B.
- 8:45 FAA regulations & communications, weather & flight planning Bill H. and Bill B.
- 9:30 Launch & Recovery systems Bill H. and Bill B.
- balloons, He, plumbing, procedures, parachutes, building the 'stack', launch tower (handouts, discussion, & hands-on equipment).
- 10:15 Break
- 10:30 Tracking & Communications Bill H. and Bill B.
- GPS, HT's, APRS, mobile ground stations, tracking software, DF'ing, procedures (handouts, discussion, & hands-on equipment).
- 11:15 BalloonSat Experiment Ideas Chris
- Review of Previous BalloonSats
- 11:45 Tie-in to CubeSat (Advanced Program) Chris, Bob
- 12:00 Working Lunch (Provided)
- Teams Discuss Design of BalloonSat
- 12:30 Move To Labs
- 12:45 Begin Construction of BalloonSat (3 Hours)
- 2:30 Break
- 2:45 Continue BalloonSat Construction Groups
- 4:45 Demonstration of Workshop BalloonSats and weigh in
- 5:00 Presentation on Launch Procedures and Recovery Operations Chris, Bill H., Bill B.
- 5:30 Recap of Day 2, Workshop Effectiveness Survey, and Adjourn Bill H. and Chris
- Group Photo

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Saturday, June 22, 2002

- 6:30 Leave Boulder for Launch Site
- 7:30 Arrive at Launch Site
 - Continental Breakfast
 - Tour of Launch Operations
 - Assignment of Launch Tasks
- 8:00 Attach BalloonSats to Flight String
- 8:40 Fill Balloon
- 8:55 Launch Test Balloon
- 9:00 Release BalloonSat Balloon
- 9:05 Begin Recovery and Tracking Operations
 - Assemble recovery teams
 - Distribution of Radios, Maps, and GPS Units
 - Review Predicted landing site and rendezvous points
- 9:15 Depart
- 9:30 Leave Gas Station fully fueled
- ~12:30 Arrive at Landing site
 - Hike begins
- 2:00 Recovery Complete
Data Retrieval
- 2:30 Return to Boulder or Informal Late lunch and celebrations