



# Eclipse Activity Report (EAR)

## Nationwide Eclipse Ballooning Project

Issue #4  
9/15/2016

<http://eclipse.montana.edu>

## EAR Issue 4 Summary

### General Updates

**Participants Page** – Page updates!

**Student Participation** – We want to make sure that we keep the energy and ideas flowing from all the students.

**Technical Assistance**– Give and receive feedback!

**Eclipse Related Lesson Plans** – Undergraduate pre-service educator created lesson plans for the 2017 eclipse!

**Eclipse Ballooning Supplies Shipped** – Details on shipment.

**Team blogs and Website** – Spread the word about what your team is up to.

**Team Recourses** – New team resources available

### Technical Activity

Check project Proboards forum for new discussions and feedback

### Team Activity

Knox County Ohio Solar Eclipse Space Balloon Team

Colorado Space Grant

### New FAQs

### Communication

Next Telecom 10/6/2016 at 11AM MDT. We will spend about 10 minutes on updates then open the floor for questions.

- Call toll free 855-797-9485
- Pass code 921-692-445# then # again

### Action Items

- **Send Shane student emails and group photo by 9/23/16**
- **Send Shane your team website or blog to be added to the eclipse ballooning page**
- **Next Telecom 10/6/2016 at 11AM MDT!**

# General Updates

## Participants Page

The point of contact for teams can be found just below the launch location map on the Participant Page <http://eclipse.montana.edu/participants/>.

Eclipse related activities and their locations which could host balloon launches will be displayed on the map with a green star. If you have suggestions/comments, please let us know by contacting Shane.

## Student Participation

We want to make sure that we keep the energy and ideas flowing from all the students. In this vein, we ask that each team send Shane an Excel sheet with: student team names and email address and a group picture. This info will be used to invite the students to a Google Group so then can share ideas with one another as well as to build up information for the public website. We will not put email addresses online nor associate names with faces in online photos. **Send by 9/23/16.**

## Technical Assistance Available

As teams are practicing and tinkering with their payloads (hurray!) more and more questions will be coming in to our small technical assistance team. We're here for you! In order to be able to get to everyone, we ask that you first check:

- The instruction slides (on the website; let us know if you find a mistake/typo as a few teams are building up payloads)
- The FAQ (on the website)
- ProBoards (see below)

## Eclipse Related Lesson Plans

Eclipse related lesson plans were created by undergraduate pre-service educators through the Pre-Service Educator Eclipse Competition project (PSEEC project). Here pre-service education students created lesson plans to highlight total solar eclipses and the

Earth-Sun-Moon relationship geared towards **seventh and/or ninth grade earth science/physical science classes**. These lesson plans and activities are the culmination of a semester's worth of work from undergraduate education students with their mentors, project coordinators and educational experts and grad students. These lesson plans can be found by visiting <http://eclipse.montana.edu/eclipse-education/>. Please share!

## Ballooning Supplies Shipped

**Update:** The ballooning supplies have been shipped and should be received, at the latest, by 9/19/2016. You should have received:

- Another 2,000 gram balloon
- Ballooning parachute
- Regulator ~~and regulator wrench\*~~
- Balloon filling hardware
- Tarp and sheets for balloon fill
- Ballooning tape (i.e. duct tape)
- Rigging and cutdown line
- White gloves for balloon handling (8 pairs)
- Plastic tub for carrying supplies
- Metal ground station base plate and sand paper\*\*

\* Our shipment of regulator wrenches was lost in transit. You will need a 1-1/8 inch wrench to attach the regulator to the helium tank. See FAQ for details.

\*\* For Teams who did NOT receive a metal base plate during the July workshop. Please contact Shane if you are still in need of the metal base plate and did not receive on with your supplies.

## Team Blogs and Websites

We encourage you to create a blog or website that will record your activities. We'll share this on the website which will help us build info for the public page. Here's Nebraska's blog: <http://nearspace-science.com/testing-great-american-eclipse/>

## Team Resources

The following resources can be found at <http://eclipse.montana.edu/workshop-resources/> :

- .STL files for 3D printed components
- Editable (.docx) Pre-Flight Checklist: Eclipse Payload Power Up and Testing
- Functional Block Diagrams

The specifications/drawings for payload housing will be added soon.

## Technical Activity

### ProBoards

<http://eclipsedesign.proboards.com/>

Keep posting questions and any feedback you have to current posts.

### GitHub

<https://github.com/MSU-BOREALIS>

Students – get involved in tinkering with the software!

### Tracking Website

The address for the tracking website will change once we shift to the new servers and will be shared when completed.

## Team Activity

### Knox County Ohio Solar Eclipse Space Balloon Team:



"We are launching from the 10th hole on Pennyriple Golf Course ([http://parks.ky.gov/golf/18\\_hole/pennyriple-forest.aspx](http://parks.ky.gov/golf/18_hole/pennyriple-forest.aspx)) on 8/21/2017. We are confirmed, approved, and have our campsite reservations made. The golf course management is opening up the 18th hole for spectators and our team is scheduled to give a community presentation on Sunday, 8/20/17. We are launching two balloons on eclipse day, one with our NASA equipment, one with our own equipment (360 camera, flight computers, APRS tracking, etc.).

Our next test launch is Saturday, Nov. 12th. We are launching from a local middle school and will launch both balloons and payloads. We fly at 10:00EST and plan on testing the YouTube live streaming function."



## Colorado Space Grant



“Since the workshops, many teams have been conducting flight tests with the hardware, including CO two weeks ago. We live streamed our video and had a connection for about 25 miles.”

## New FAQs

See answers at <http://eclipse.montana.edu/faq/>

- How do I import tracking information into Google Earth?
- What kind of streaming range can I get from the video system?
- What if our team broke/lost an important component of our system?
- Where can I get the .STL files for 3D printed components?
- When will we receive the metal ground station base plate and what is included with the ballooning supplies?
- How do I live stream my video on the internet?
- What is the password to the ground station laptop? GSLaptop

## Communication

- Points of Contact for eclipse path state hosts can be found from the FAQ page.
- The next group **telecom** will be Thursday October 6<sup>th</sup> at 11 AM Mountain daylight time. At the

telecoms, we will spend about 10 minutes on updates then open the floor for questions.

- Call toll free 855-797-9485
- Pass code 921-692-445# then # again
- We’re putting together a **social media** team. Anyone interested in helping, please contact Shane or Angela.
- There will be eclipse ballooning sessions at the Southeast and Western **Space Grant regional meetings** at the end of September. We invite you to share your progress if you’ll be at one of these meetings.
- Facebook page: <https://www.facebook.com/EclipseHighAltitudeBallooning/>
- Twitter: [https://twitter.com/Eclipse\\_HAB](https://twitter.com/Eclipse_HAB)

## Action items

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- Send Shane your team website or blog to be added to the eclipse ballooning page
- Telecom 10/6/16, 11 AM Mountain Daylight Time