

MAGIC

2012-03-06

The recent update about our Leg0, the voyage on the *Horizon Spirit* from Los Angeles to Hawaii and back, elicited several comments that I will address in this one.

Several questioned my description of the trip as a “cruise,” thinking no doubt about the luxury cruises and assuming that it was not one of those. True, there weren’t mints on our pillows when we checked into our cabins, but I enjoyed the trip tremendously and it was more fun and adventurous (for me) than what one of the “luxury” cruises would have been. Accommodations were quite comfortable and the living conditions more than sufficient to meet my needs. I gained weight on the trip, a testimony to the abundance and quality of the food.



My cozy cabin, which I shared with Mike Reynolds

Our attempts at weather balloon launches were a source of amusement for the crew (and for us), but were nevertheless important, as launches will be made four times daily during the MAGIC deployment. Nearly 1000 sites around the world routinely launch two weather balloons daily to collect data used for weather forecasts. These balloons are filled with helium to a diameter of about one meter (a meter is 10% longer than a yard), and “sondes” are attached with string below the balloons. These sondes contain sensors to measure pressure (P), temperature (T), and relative humidity (RH); a GPS to determine position; and a small radio transmitter to relay this information back to a computer at the launch site. From T and P the height can be determined; thus a detailed profile of atmospheric structure (i.e., T, RH as a function of height) can be obtained. As our goal for Leg0 was to explore the feasibility of launches from various locations around the ship, we weren’t

set up to record data, and as we didn't want to risk sending sondes into the ocean (they cost money), we used vegetables instead. As one of our colleagues pointed out, we were vegan for this cruise. We did learn that squash (of any variety) were the worst performers, so if you want to launch a vegetable with a weather balloon, don't use one of those. Captain Kelleher of the Horizon *Reliance* (sister ship to the *Spirit*) emailed me that they saw one of our balloons when we passed going the opposite direction halfway between Los Angeles and Hawaii (but he didn't say what vegetable was attached).



Remember, the balloon is supposed to be spherical! (this is what 45 mph winds will do)

The MAGIC webpage at <http://www.ecd.bnl.gov/MAGIC.html> has been recently updated and I will post some pictures from the cruise soon. There was an article on MAGIC in the Brookhaven Bulletin, the newsletter of my laboratory, that appeared while I was gone (actually, my picture appeared in two articles on the front page!); this is also on the webpage. I am preparing Leg0 results for presentation to the rest of the MAGIC science team at a session on MAGIC at a conference in Arlington, VA next week, so this will probably be the last update until after that.

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2012-03-06

Please address any questions or comments to elewis@bnl.gov.

All updates and other MAGIC information can be found at <http://www.ecd.bnl.gov/MAGIC.html>.