# Education and Outreach

In the fall of 2014, we received reports from the summer 2014 US CMS E&O mini-grants. They were:

* Iowa: Supporting HS teachers to do HCAL research
* Rochester: Supporting girls HS physics summer classes
* Brown: Develop materials and supplies to staff the Waterfire festival (a Providence-wide, fall-long event with high traffic).
* Brown: Develop algorithm and coding to run Tier 3 CMS analysis on the Grid
* Boston: Develop a mini CMS Center, suitable for Quarknet and Masterclasses
* Iowa: Design and build models of CMS using 3D printing technology.

Most grants achieved their goals completely. Two achieved significant progress, but fell short of their final goal. The Brown grant to staff the Waterfire festival managed to do all preparations, but was not selected to participate in the festival. Instead, the presentations occurred on the Brown campus. The PI intends to apply again for the festival in 2015. In addition the Iowa proposal to build models of CMS was successful, however their stretch goal, which was to instrument these models with cosmic ray detection instrumentation has not yet completed. However, the group has been able to make models of the CMS detector using 3D printing technology. We are exploring the costs required to make models of the detector to be sent to all participating U.S. CMS institutions.

The U.S. CMS video program is going strong. During the fall, we made videos on The Big Bang theory, Quantum Foam, Cosmic Inflation and Superstrings. In addition, we made a parody of the hugely successful video “#Hashtag” by Jimmy Fallon and Justin Timberlake..

Our “Got a Minute?” video series is going well. These videos are one or two minutes in duration and use young physicists. The goal of this program is multifold. We train the young physicists to appear more natural on camera. The videos are suitable for Quarknet and Masterclasses, as well as being useful for reporters who need a short explanation of a physics topic. Finally, these videos are useful for physics faculty to show their department and are also suitable for department web pages.

In anticipation of the resumption of operations of the LHC, I contacted the alumni magazines of all U.S. CMS institutions and pitched stories that would highlight the impact of the respective university’s faculty. Caltech has requested a story and the University of California, Santa Barbara is interested.

We continue to try to place stories in visible national magazines about the LHC. We have been in contact with NBC, Newsweek, Scientific American and NOVA about the LHC reboot. Projects with all of these media outlets are ongoing, although it may be that not all are successful. NOVA will be showing an episode that highlights the LHC.