

## U.S. CMS Communications Plan

The position of the U.S. CMS collaboration is that, given that the bulk of its research goals are publicly funded, it is the duty of the collaboration and the individual members to communicate with the general public the collaboration's goals and accomplishments. The audiences with which we intend to connect are: the media, decision makers, the general public and children.

### 1. U.S. CMS Goal #1 [Media]

The most effective mechanism for broad dissemination of the research goals and successes of a scientific group is via the media. The central office from which all U.S. CMS media contact is made is the Fermilab Office of Communication (FOoC). FOoC is in contact with the CERN Press Office, which coordinates all CMS-related press releases. The decision to post a press release is made in consultation with the CERN directorate and the senior members of the CMS collaboration. Once that decision is taken, the press release is formulated and then released to the offices of communication for the U.S. national labs that are involved in the LHC research program.

When a draft of the CERN press release is made available to the FOoC, the FOoC begins to write its own press release. The FOoC tells the same message as the CERN one but focuses more on the U.S. contribution to the physics result. The U.S. CMS management will vet this press release. When approved, the FOoC sends the final draft to the press offices at the U.S. CMS institutions. Finally, the FOoC releases the U.S.-specific press release simultaneously with the CERN one.

The FOoC is the single point of contact for media inquiries. After an inquiry is evaluated, the FOoC contacts the appropriate physicist or collaboration leader for comment.

The FOoC also organizes tours for interested parties who wish to see the Fermilab facilities that are used to support the mission of CMS.

U.S. CMS has retained a science communicator who is resident at Fermilab. This person is responsible for attending CERN media meetings and arranging site visits by media organizations. When there is a large media event at CERN, this person interfaces with the CERN press office and FOoC, providing timely and on-site action as necessary.

### 2. U.S. CMS Goal #2 [Decision Makers]

The U.S. CMS collaboration strives to maintain a constructive and congenial relationship with decision makers, including funding agencies, members of the U.S. government, state officials and other individuals or organizations who have an oversight or fiduciary role in U.S. CMS operations. The principal investigators at individual institutions also communicate effectively with university management.

The principal component of this goal is to keep decision makers apprised of the progress and successes of the U.S. CMS collaboration in the execution of their research. This communication proceeds through email, phone calls and personal visits.

The CERN-resident U.S. CMS science communicator arranges for visits at CERN from U.S. decision makers such as members of Congress, congressional staffers, or personnel from the DOE or NSF.

### **3. U.S. CMS Goal #3 [The General Public]**

While the general public has no direct connection to the U.S. CMS research program, their role as taxpayers gives them certain expectations to be kept apprised of the progress and successes of the U.S. CMS collaboration.

The U.S. CMS collaboration elects a scientist member of the collaboration who is tasked with representing the collaboration in the public arena. The U.S. CMS Education and Outreach coordinator (EOC) receives a small annual budget from the Operations Program to fund these efforts. The program consists of a broad range of activities, examples of which are given below.

In collaboration with the Fermilab Visual Media Services department, the EOC has developed around forty videos of 5-8' duration that describes various topics of interest related to CMS. These have included the Higgs program, Supersymmetry, extra dimensions, the standard model, detector principles, the LHC accelerator, etc. In aggregate, these videos have had over two million views. This successful program is envisaged to continue.

The EOC has also published hundreds of articles in Fermilab Today that explain a CMS research publication to a non-scientific audience. These articles highlight the work of U.S. CMS collaborators and have become an essential venue to showcase the work of junior researchers. Other articles have been published in Scientific American, The Physics Teacher, LiveScience, Huffington Post and CNN. (These are articles like op-eds, not news pieces.)

These media contacts will be nurtured further and to further leverage the outreach efforts of the U.S. CMS collaboration.

Finally, the U.S. CMS collaboration has joined with the U.S. ATLAS collaboration to jointly publish – under the name U.S. LHC – their accomplishments on social media, in particular Facebook and Twitter.

### **4. U.S. CMS Goal #4 [Children]**

Children represent our future, both as a pool of technical talent and as an electorate. Accordingly, the U.S. CMS collaboration strongly believes that we should engage the young people of the country. A very effective way to reach school children is to support their participation in the Quarknet program and the LHC Masterclasses.

In Quarknet, individual researchers adopt about a dozen teachers and bring them to the university a few times a year to teach them something about modern particle physics. In turn, the teachers each return to about 120 students/year. In this way, a single researcher can help educate over a thousand students a year. Over several years, this is a significant contribution to the education of our youth.

In contrast, Masterclasses bring students to the university for a day to analyze real CMS data and present it to other Masterclass sites via video conferencing. The students look at the dilepton spectrum to see resonances such as the  $J/\psi$ ,  $\psi$ ,  $\psi'$ ,  $Z$  boson, etc. This very popular hands-on program gives students a feeling for what real research can be like.

Approximately 50% of U.S. CMS institutions participate in Quarknet and Masterclasses, with some overlap (meaning some institutions do both).

## 5. Summary

Because the U.S. CMS collaboration values education and outreach, they elect a member physicist for two-year terms to serve as the U.S. CMS Education and Outreach Coordinator. In addition, U.S. CMS contributes to the support of a CERN-resident professional communicator and has a term appointment Fermilab-resident professional communicator. Through an active outreach effort, the collaboration has made a strong impact on particle physics communication with such diverse audiences as the media, decision makers, the general public and students.

## 6. References

[1] L. Taylor et al, CMS Communications Plan:

<https://cms-docdb.cern.ch/cgi-bin/PublicDocDB/ShowDocument?docid=2519>

[2] L. Taylor, CMS Public Communications - Website Strategy and Actions

<https://cms-docdb.cern.ch/cgi-bin/PublicDocDB/ShowDocument?docid=5625>

[3] L. Taylor, Observation of a new boson -- CMS Communications Group report On the 4th July 2012 seminar at CERN

<https://cms-docdb.cern.ch/cgi-bin/PublicDocDB/RetrieveFile?docid=6469&filename=Communications-Report-2012-July-4th-seminar.pdf>

<https://cms-docdb.cern.ch/cgi-bin/PublicDocDB/ShowDocument?docid=6469>

## 7. Document Change Log

V-0.99 2014-09-10 Don Lincoln First draft document created.

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