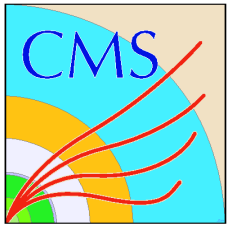



# CMS TAN Crane

D. Lazic

Boston University

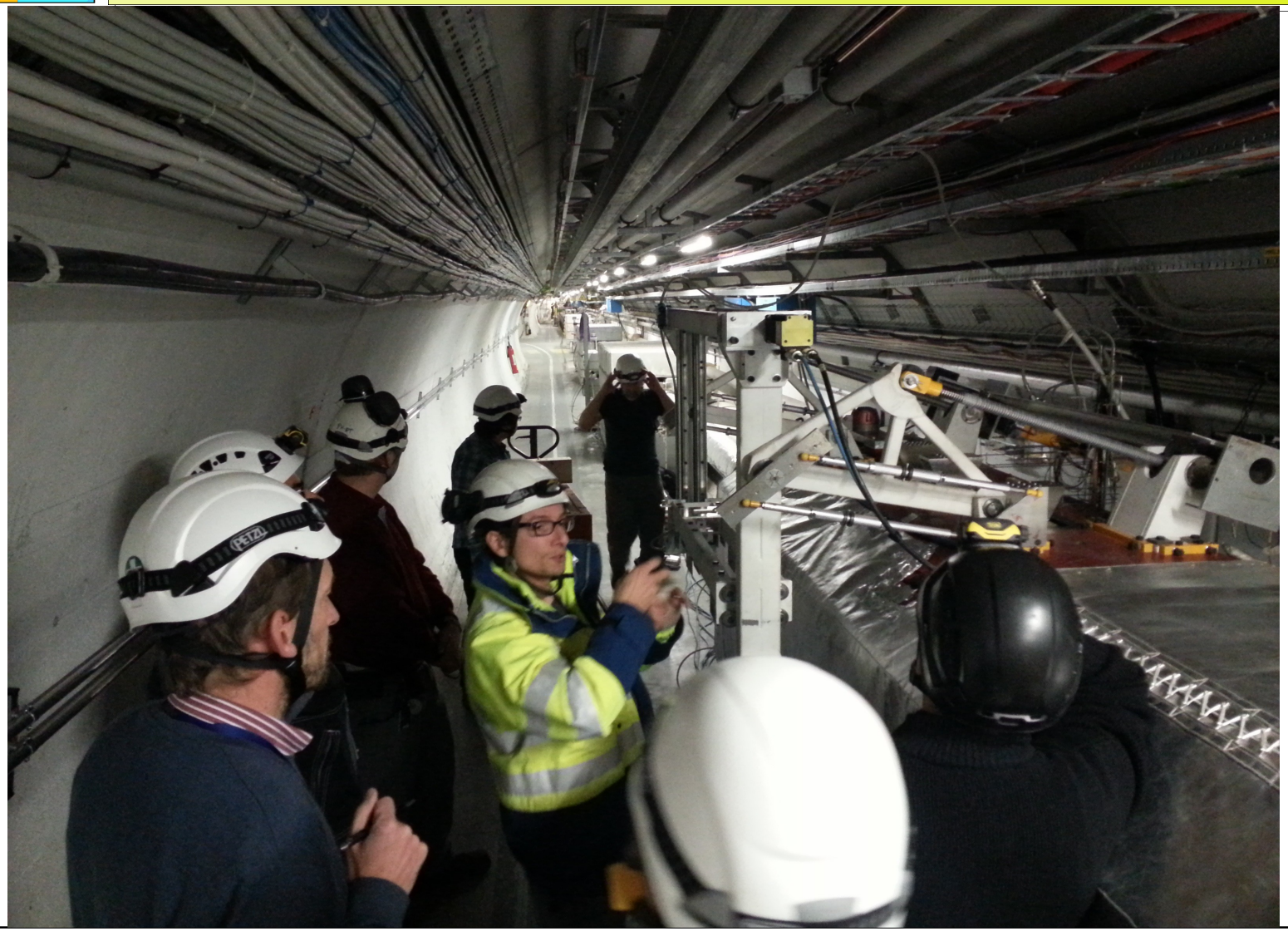
# ZDC and TAN Crane

CMS Zero Degree Calorimeter is a device installed in Target Absorber Neutrals where it captures neutrals produced in heavy ion collisions. Measure of their energy gives a valuable information about the centrality of the collision.

There are tow calorimeters, one on each side of the experiment. ZDCs are used only for heavy ion runs and they are kept in safe places (“bunkers”) in the tunnel during the high intensity proton runs.

ZDCs will with time become radioactive and as such it requires remotely operated system for its installation in the TAN and removal between runs. A custom made device has been built and installed

# Installation of BRANs



# Status

Both cranes are installed and fully operational. Only minor interventions remain to be made in the tunnel, such as making a more permanent trace where sarcophagi should be placed in order to be correctly aligned with the TAN.

More work is required on the documentation: with several iterations of hardware solutions, there are inconsistencies between the reality and the written word. Clear and complete documentation is absolutely necessary for Transport teams that are supposed to eventually operate the devices.

The key engineer was at CERN in the second half of 2014 and lots of progress was made, however due to family obligations he could not come back after CERN re-opened in January and his involvement has, at least for the time being, been reduced to an occasional advice.

# What remains to be done?

Documentation has to be completed: M. Murray and I. Schmidt offered to help either by writing or proofreading the texts. We would like to have it finished by the end of March 2015 so that the approval can take place in April.

Once the documentation is approved, the crane has to be inspected and operation approved by Safety. The most reasonable time to do it is during Technical Stop 1 in week 23. If approved, the crane will be used during TS3 to install the ZDCs for the heavy ion run.