

# Very Forward Muon Trigger and Data Acquisition Electronics for CMS: Design and Radiation Testing

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With the forthcoming High Luminosity LHC accelerator upgrade, the CMS Endcap Muon system will require new electronics to handle the increased data rate while maintaining high data collection efficiency. Maintaining trigger efficiency for pseudorapidity above 2.1 requires deployment of higher performance electronics already in 2013. With the increased luminosity, the new electronics will be exposed to substantial radiation levels requiring higher tolerance of the components to radiation. We report on the progress in developing and building the new system and the results of radiation tolerance testing of the commercial components used in the system.

## Summary

I will briefly discuss the components used in the new CMS Endcap Muon electronics, then focus on radiation tolerance testing of these devices as well as SEU sensitivity measurements. I will talk about mitigation methods used, how it performs in our beam tests, and how this is implemented in the detector system.

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