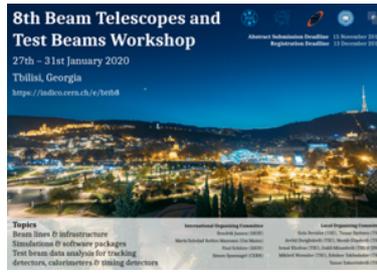


8th Beam Telescopes and Test Beams Workshop



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First results and future plans of the CHROMIE telescope

Wednesday, 29 January 2020 10:30 (20 minutes)

A high rate beam telescope for high-rate beam studies with CMS Phase-2 prototype modules was built and commissioned at CERN in 2018. This telescope was built with CMS standard technology and it was based on 16 Phase-1 Pixel modules. From the measurements performed during the commissioning it was found that the telescope has a $7 \mu\text{m}$ resolution in the horizontal, and a $10 \mu\text{m}$ resolution in the vertical direction. This CMS High Rate telescope MachInE (CHROMIE) was used for the first time with a CMS prototype in the SPS H6 beam line at the end of LHC Run 2. Now, during the Long Shutdown 2 of the LHC, preparations are ongoing to place the telescope permanently in the H6 beam line of the SPS. This talk will be focused both the design and first test beam results of CHROMIE. In addition, an overview will be given of the ongoing preparations that will make the telescope more user friendly during Run 3 of the LHC.

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