Contribution ID: **17** Type: **not specified**

Infrared transparent detectors

Monday 10 November 2008 16:20 (20 minutes)

In large systems, as ATLAS, the detectors are aligned using mechanical systems and laser beams. Another option, implemented in CMS, is to use the signal generated by the laser beam in the detector to measure its position. Unfortunately, standard detectors present a high light absorption, and therefore it is almost impossible to generate signal in many detector layers using one single laser beam. In collaboration with Institute of Physics in Cantabria, Spain (IFCA) we are developing detectors optimized to present infrared transmission coefficient over 50%, in this way it will possible to detect signal in 5 detectors simultaneously.

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Session Classification: New developments and Non-LHC applications