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## Alignment Procedures for the CMS Silicon Tracker

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The CMS all-silicon tracker consists of 16588 modules. Therefore its alignment procedures require sophisticated algorithms. Advanced tools of computing, tracking and data analysis have been deployed for reaching the targeted performance. Ultimate local precision is now achieved by the determination of sensor curvatures, challenging the algorithms to determine about 200k parameters simultaneously. Systematic biases in the geometry are controlled by adding further information into the alignment workflow, e.g. the mass of decaying resonances. The orientation of the tracker with respect to the magnetic field of CMS is determined with a stand-alone chi-square minimization procedure. The geometries are finally carefully validated. The monitored quantities include the basic track quantities for tracks from both collisions and cosmic muons and physics observables.

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