

# The HIE Isolde Alignment and Monitoring System software and test mock-up

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For the HIE Isolde project a superconducting linac will be built at CERN in the Isolde facility area. The linac will be based on the construction and installation of 4 high- $\beta$  cryomodules each containing 5 high- $\beta$  superconducting cavities and 1 superconducting solenoid and 2 low- $\beta$  cryomodules, each containing 6 low- $\beta$  superconducting cavities and 2 superconducting solenoids. An alignment and monitoring system of the RF cavities and solenoids located inside the cryomodules is needed to reach the optimum linac working conditions. The alignment system is based on opto-electronics, optics and precise mechanical instrumentation. The geometrical frame configuration, the data acquisition and the 3D adjustment will be managed using a dedicated software application. In parallel to the software development an alignment system test mock-up has been built for software validation and dimensional tests. This paper will present the software concept and the development status, and then will describe the test mock-up and the results obtained.

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