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## Accelerating Structure Alignment with laboratory radiofrequency methods

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To reach a high accelerating gradient of 100 MV/m, the CLIC project under study at CERN uses a 23 cm long tapered normal-conducting travelling wave Accelerating Structure (AS) operating at 12 GHz. To preserve beam emittance at the 1 nm vertical-size collision point, 7  $\mu\text{m}$  accuracy is required in the pre-alignment of the AS wrt the supporting girder. We have developed a dedicated test bench where a wire is used to materialize the electromagnetic axis in the AS and serves as a reference to fiducialise the structure in the accurate environment of a 3D Coordinate Measuring Machine (CMM). Our simulations have shown that a resolution of 1  $\mu\text{m}$  is possible using a calibrated VNA. The recent experimental results and improvements will be presented and discussed.

### Summary

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