# Vacuum cable evaluation for endcap feedthroughs

Ten prototype vacuum cables were received in November from FCI/Berg for testing and evaluation

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# Line impedances all within specifications



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4 out of 10 cables passed as calibration quality in resistance test (specs called for 2 out of 30)



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## Calculated line attenuation from measured resistance and impedance



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## Crosstalk from interconnecting cables is subtracted



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#### **Corrected crosstalk for all ten cables**



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## Asymmetric orientation of cable knees



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## Cold flange rotation:

## clockwise

## counterclockwise



# Approximately 3 cm gained in flange-to-flange spacing

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## **Insertion model is completed**





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# Endcap feedthrough production database

- QC data sheets have already been developed for this project. A database has just recently been written, but not yet implemented.
- Inventory of parts will be tracked, as well as test results (simple dimensions, vacuum tests, electrical tests, etc) for each part, subassembly, and full assembly.
  Which parts end up in each assembly is also tracked. All information is kept both in QC data sheets as well as in the database.

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- Information will be entered by the technician or physicist responsible for the particular task in question (receiving parts, testing parts, etc.). For the database, forms are made to reflect each of the relevant tasks, eg, a `pincarrier leaktest' form will exist for the particular task of leaktesting each pincarrier upon arrival from the manufacturer.
- Whenever possible, serial and batch numbers will be used if provided by the manufacturer. For those types of parts that do not arrive with serial numbers, we will provide our own.

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