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Quadrupole Stability in CLIC-Linac

Work on time-dependent effects launched for the linac within a small team

Stability Request ~ 2nm $\Delta L/L < 10\%$

Three main area of activities

- Direct Tests of vibration attenuation / amplification for CLIC linac quads
  - in CTF with existing installation
  - possibly on a test bench with a controled excitation and seismometers

  Measure the response of the system

  Try something like STACIS : Active Vibration Isolation System

  SLAC G. Bowden
  ESRF L. Zhang

- Simulations and Modeling

  Needs of some realistic model for predictions

  Clarify some critical points

  Meas^{ts} in LEP (M. Mayoud) over distances of the order of β-tron wavelength

  Meas^{ts} in various locations :

  in sandstone
  under the Jura
  in quiet place

  SLAC Ground-motion Model A. Seryi
  ESRF L. Zhang

- Stabilization with feedback

  Non invasive continuous corrections :
  (between the static corrections)
  - one to one
  - lining-up with beam , small quad, strength wobbling

  Model needed , cross-talk between feedbacks

  SLAC Feedback model L. Hendrickson
  "Strategy"