Chromaticity correction of a non-periodic lattice

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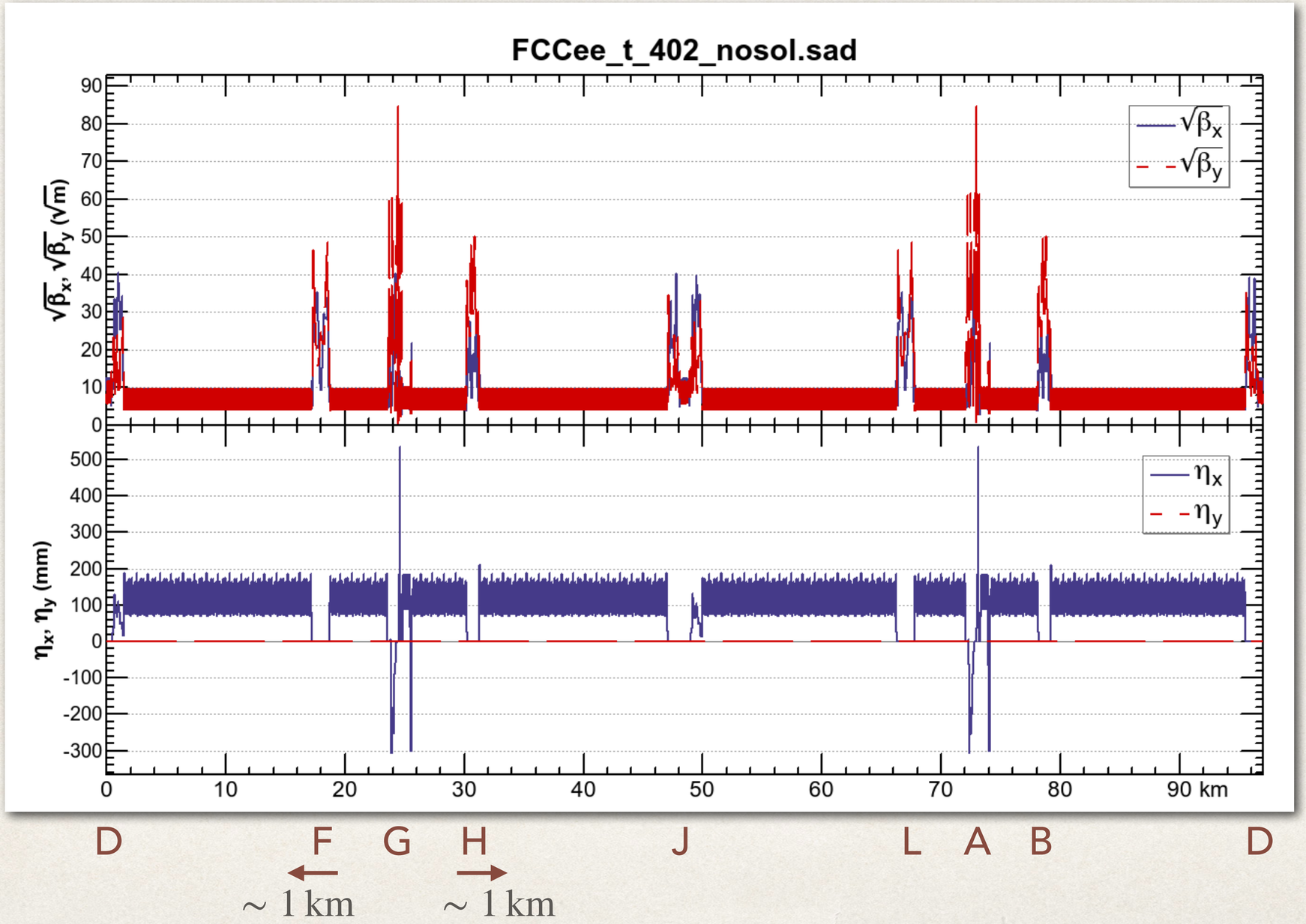
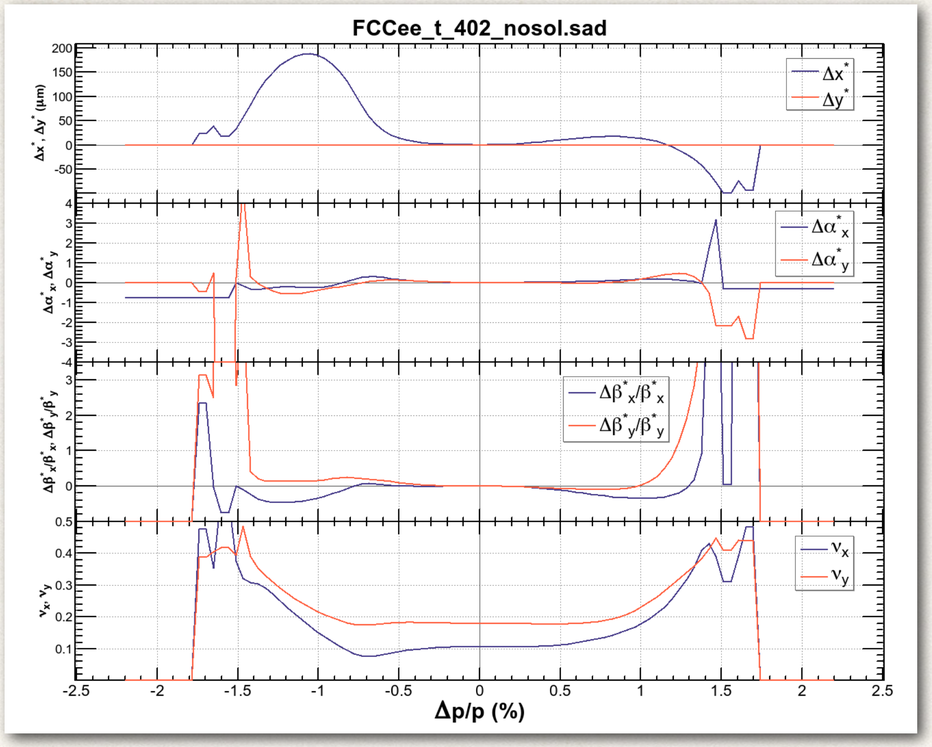
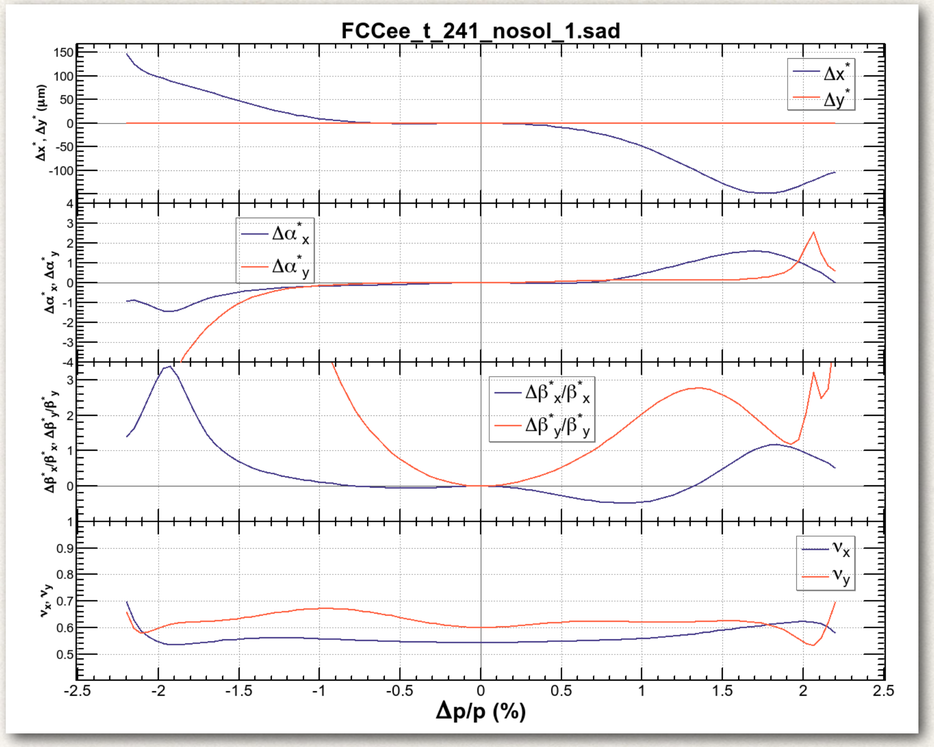
The test lattice $(t\bar{t})$:



- This is just a test lattice to see the effect on chromaticity correction.
- Layout does not exactly match the suggested conditions. (Even the ring does not close, by about 1 degree.)
- Additional 48 sextupole families are placed in the G-A arc.

A quick look at chromaticity correction a non-periodic lattice





- Tried a non periodic lattice for $t\bar{t}$ by shifting the straight sections F & H by about 1 km.
- As a result, the chromaticity correction has become very tough. Only up to ±1.5% has been possible (left).
- More than ±2.2% is easily done for a CDR-like periodic lattice (right).
- A periodic lattice, even losing symmetries seems favorable in this aspect, e.g. by shifting H and B by the same amount.