

Skew Sextupoles at 7 TeV

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- Main source of a_3 is main dipoles
- MD in 2012 showed very good agreement between model & beam based measurement
- New correction algorithm requires lower skew sextupole strengths (kss) than previous arc-by-arc corrections
- **RSS 34B1 HV test failed at 375 V (specifications 550 V)**

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There is about a factor 10 safety margin in specifications compared to model predicted corrections

+ more if we use new algorithm

- circuit 81 was unavailable already for beam 1 in 2012

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Arc-by-arc correction

RSS12	RSS23	RSS34	RSS45	RSS56	RSS67	RSS78	RSS81
-14.5	-8.78	-7.52	-7.45	-0.64	-0.45	-10.3	-4.16

- Calculated strengths using FiDeL 7 TeV collision table, beam 1, in % of max.
- About 3 % strength expected to be sufficient with beam-based method
- Need to compensate for missing 81
- Request 20 % strength available for 34 (10% for 81?)