## **BPM Absolute Scale Error**

Accuracy with which BPM can measure position.

Implementation :

1. Generated 241 random nos. (total no. of BPMs) within ±BPM scale error.

2. After putting the misalignments, during both 1:1 and DFS, we added the above generated errors to each of the 241 BPMs readings (which we get after tracking). So the new readings at the BPMs would be
Yb\_new = Yb \* (1 + error)
where Yb : BPM readings after tracking

3. error remains fixed for one particular seed i.e., for a given seed, same BPM scale error is applied to a given BPM throughout in tracking.

ILC BCD STRAIGHT Linac, 10 seeds, after DFS, nominal misalignments

- 5.9 ± 0.9 nm

250

200

10.9 ±

200

1.8 nm

250



ILC BCD CURVED Linac, 10 seeds, after DFS, nominal misalignments







