

Information Exchange

Remark

- We need to double each alignment, tuning or feedback study with at least one pair of independent code
- But we need to integrate all components into one study
 - Requires interfaces and standards

Basic Standards

- Beam standard
 - Not really discussed at Snowmass
 - Assume our one-line one particle standard
- Lattice standard
 - Stick to XSIF for now
 - PT promised to send parser
 - Use XML later

Problems

- We need to perform integrated studies which not only track through all sub-systems but also take into account the different correction, tuning and feedback procedures
- Not everyone wants to study the specific contribution of each sub-system
 - Should also try to standardise these procedures
 - Or find some other solution

Solutions

- Could just use few codes and implement everything in them
- Could use different codes for the different regions/effects and a beam plus imperfections standard interface
- Could use standard correction, tuning and feedback procedures via interface

More Standards?

- Can we standardise the correction, tuning and feedback?
 - Seems difficult but could probably define interfaces
 - Can significantly impact efficiency
 - Could one use octave/matlab or fortran/C/C++?
 - Most codes have interfaces but they are not common

Alternative Approach

- Try to find simplified models for the different sub-systems
 - E.g. introduce a bunch length and phase jitter as a function of bunch charge to approximate bunch compressor for BDs studies