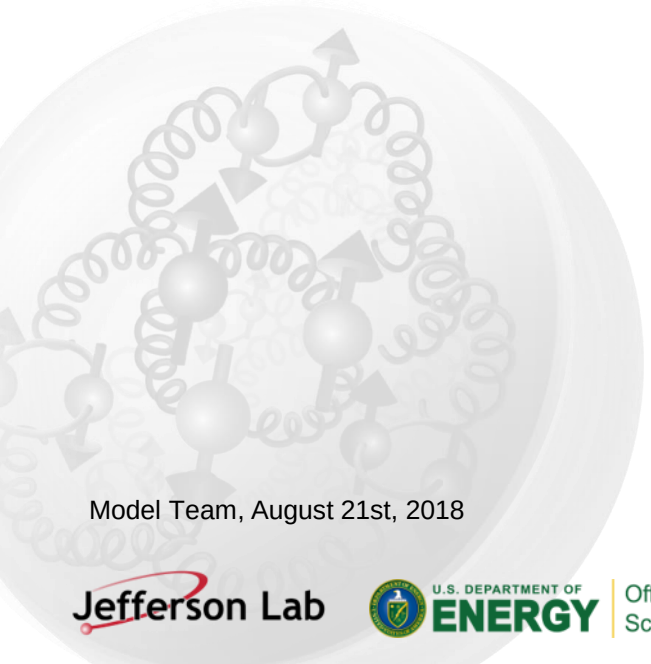
FFB othorgonality in HALLA/HALLC

Y. Roblin



Model Team, August 21st, 2018

Jefferson Lab U.S. DEPARTMENT OF ENERGY Office of Science JSA

Goals

1) Assess orthogonality of FFB orbits for a given optics setup

2) Compare measured from FFB with model

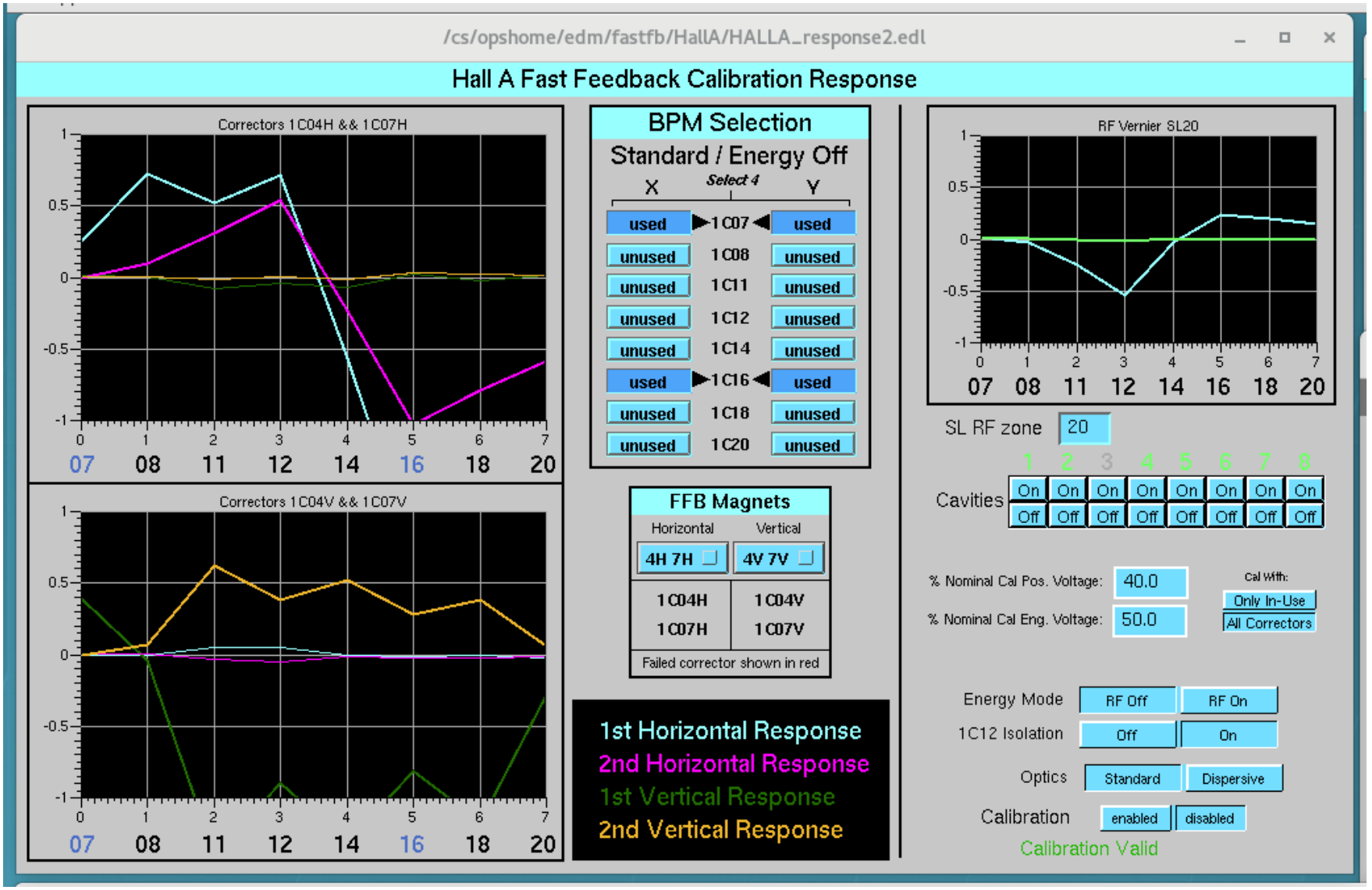
Assessing orthogonality

1. For both planes, we have three combinations of correctors one can select

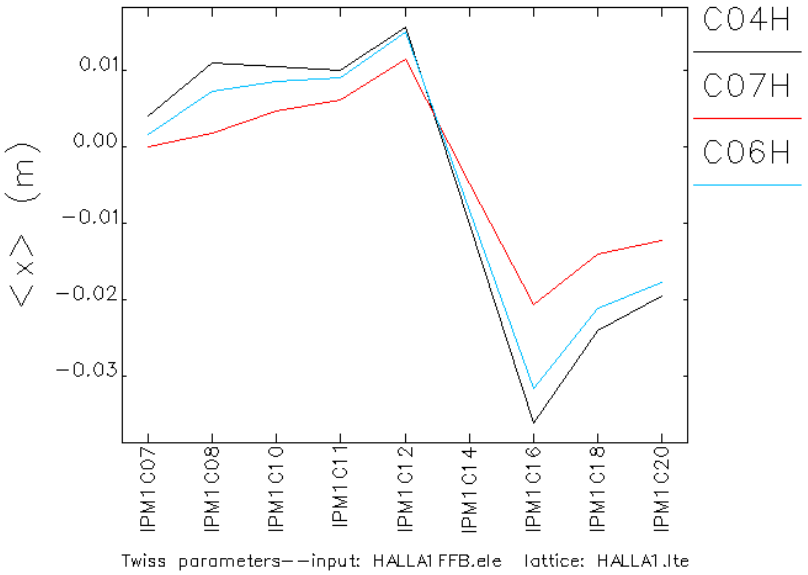
2. We can select 2 bpms per plane , goal is to select them such that a given bpm is mainly sensitive to one orbit (orthogonal to the other).

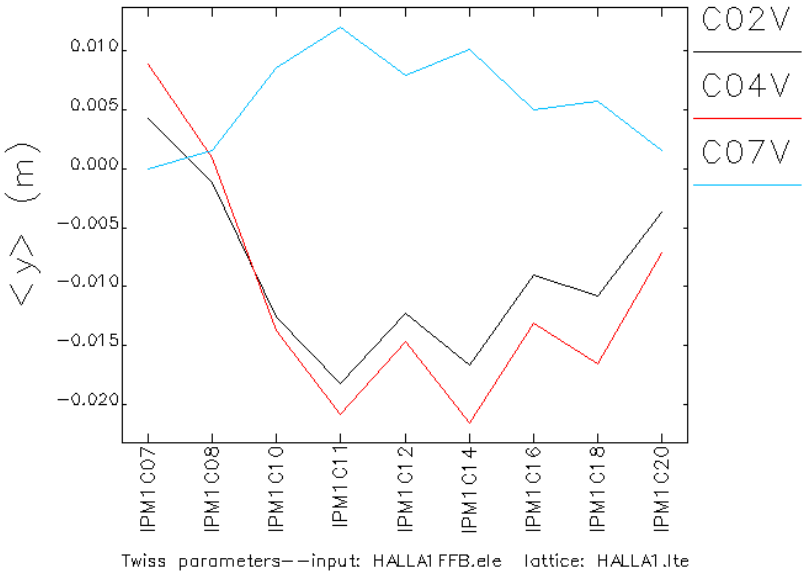
3. The FFB system has a calibration mode which measures the transport between the coils and BPMS.

HALLA calibration response as measured.



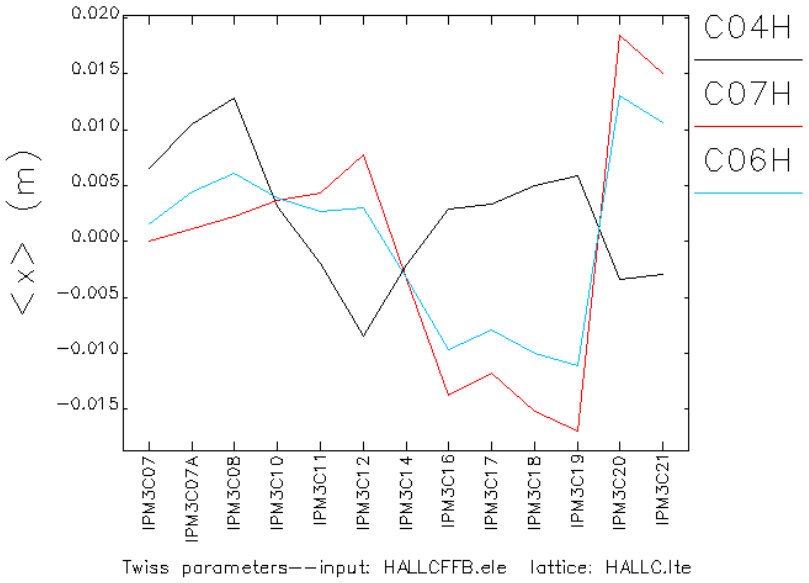
HALLA cal response from model

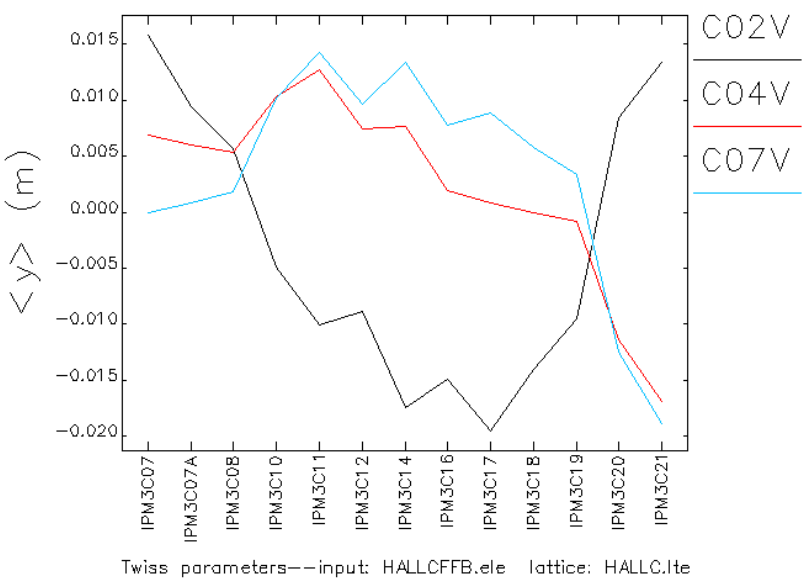




Response driven from settings of matching quads. In this case, there is a node at C08 for all orbits so response is suboptimal. Works for FFB but not for Feedforward.

HALLC cal response from model





Response driven from settings of matching quads. In this case, orbits are distinct and It is possible to find a good combination. C04H/C07H with bpms C07/C17 for example.