Weekly Progress Report

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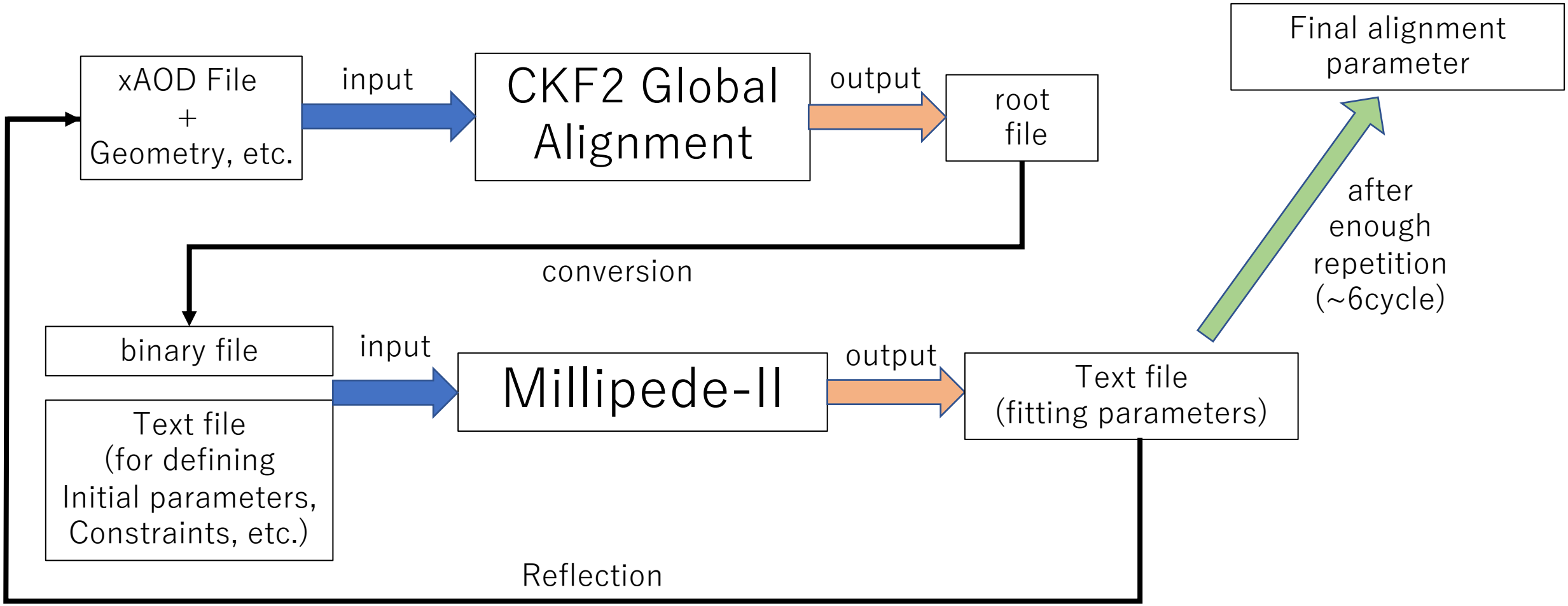
CKF2GlobalAlignment

In this 9 weeks of the Summer Student Program,
I am going to work with Tracker Global Alignment

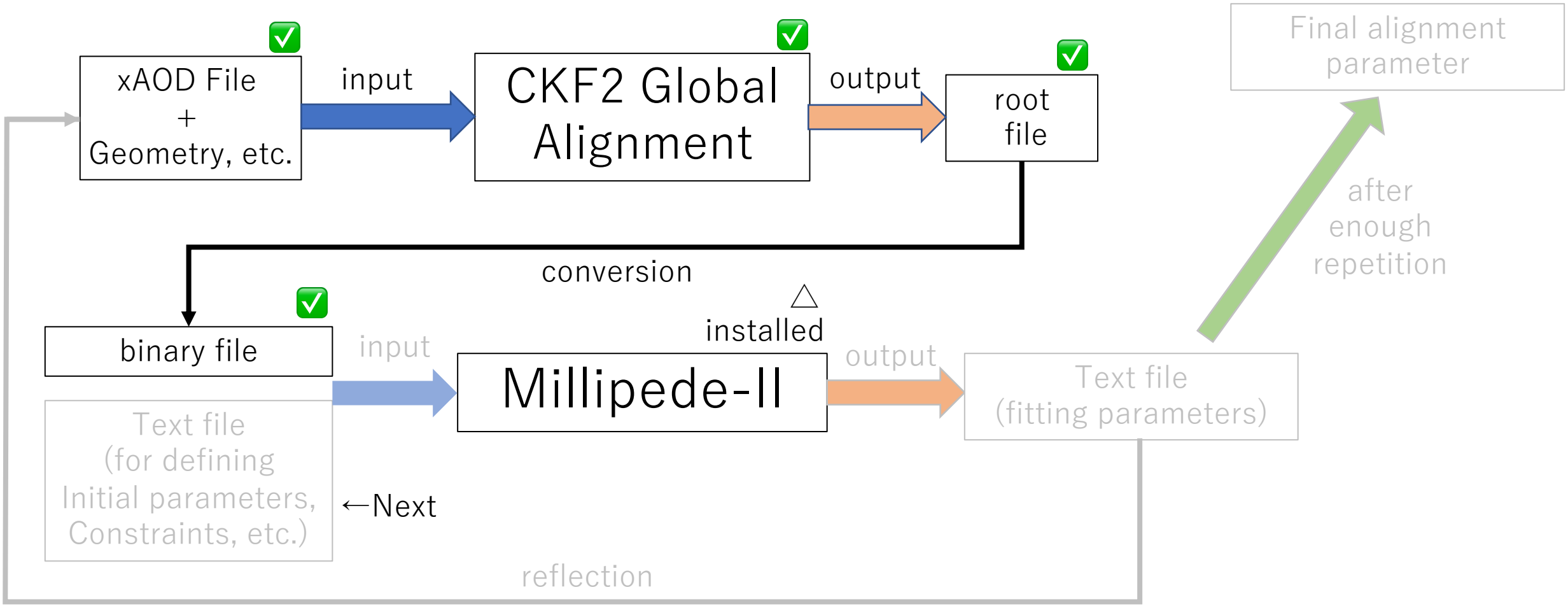
First, I have to compile and run CKF2GlobalAlignment



CKF2GlobalAlignment

✅ : get or run successfully

By now,



CKF2GlobalAlignment

CKF2 Global Alignment

Input

```
# Configure
ConfigFlags.Input.Files = [
   '/eos/experiment/faser/rec/2023/p0010/010738/Faser-Physics-010738-00000-p0010-xAOD.root'
   ,'/eos/experiment/faser/rec/2023/p0010/010738/Faser-Physics-010738-00001-p0010-xAOD.root'
   ,'/eos/experiment/faser/rec/2023/p0010/010738/Faser-Physics-010738-00002-p0010-xAOD.root'
   ,'/eos/experiment/faser/rec/2023/p0010/010738/Faser-Physics-010738-00003-p0010-xAOD.root'
   ,'/eos/experiment/faser/rec/2023/p0010/010738/Faser-Physics-010738-00004-p0010-xAOD.root'
   ,'/eos/experiment/faser/rec/2023/p0010/010738/Faser-Physics-010738-00005-p0010-xAOD.root'
]
ConfigFlags.IOVDb.GlobalTag = "OFLCOND-FASER-03"
ConfigFlags.GeoModel.FaserVersion     = "FASERNU-03"           # FASER cosmic ray geometry (station 2 only)
```

Output

```
import ROOT

file = ROOT.TFile.Open("kfalignment_010738_0.root")
```

```
tree = file.Get("trackParam")
tree.GetEntries()
```

```
199
```

```
tree.Scan("")
```

```
*************************************************************************************************************
*    Row   * evtId.evt * fitParam_ * fitParam_ * fitParam_ * fitParam_ * fitParam_ * fitParam_ * fitParam_ *
*************************************************************************************************************
*        0 *    260067 * 5.8145559 *        -1 * 24.708451 *      3.47 * 0.2531300 * 0.4649065 * 121.31695 *
```

Conversion

```
root [0]
Processing convert2mille_v2.C...
```

```
[tarai@lxplus789 0]$ ls
kfalignment_010737_0.root  kfalignment_010738_0.root  log  mp2input.bin
```

Calibration Display

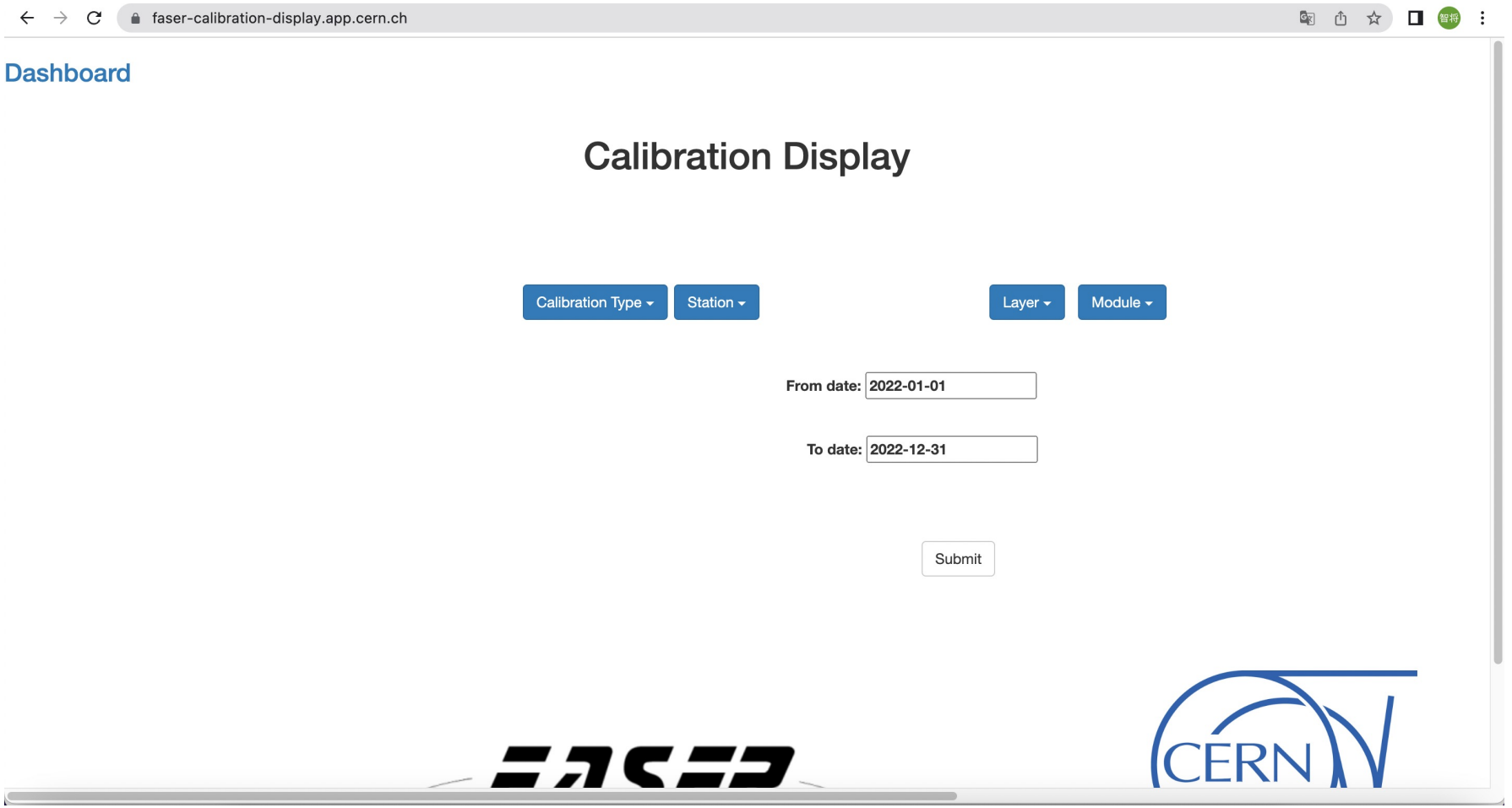
On the other hand, I am updating Calibration Display

- Adjust the layout of display
- Enable to display the results per module
  (currently, only per chip)
- Update the Dashboard

Calibration Display

- Adjust the layout of display

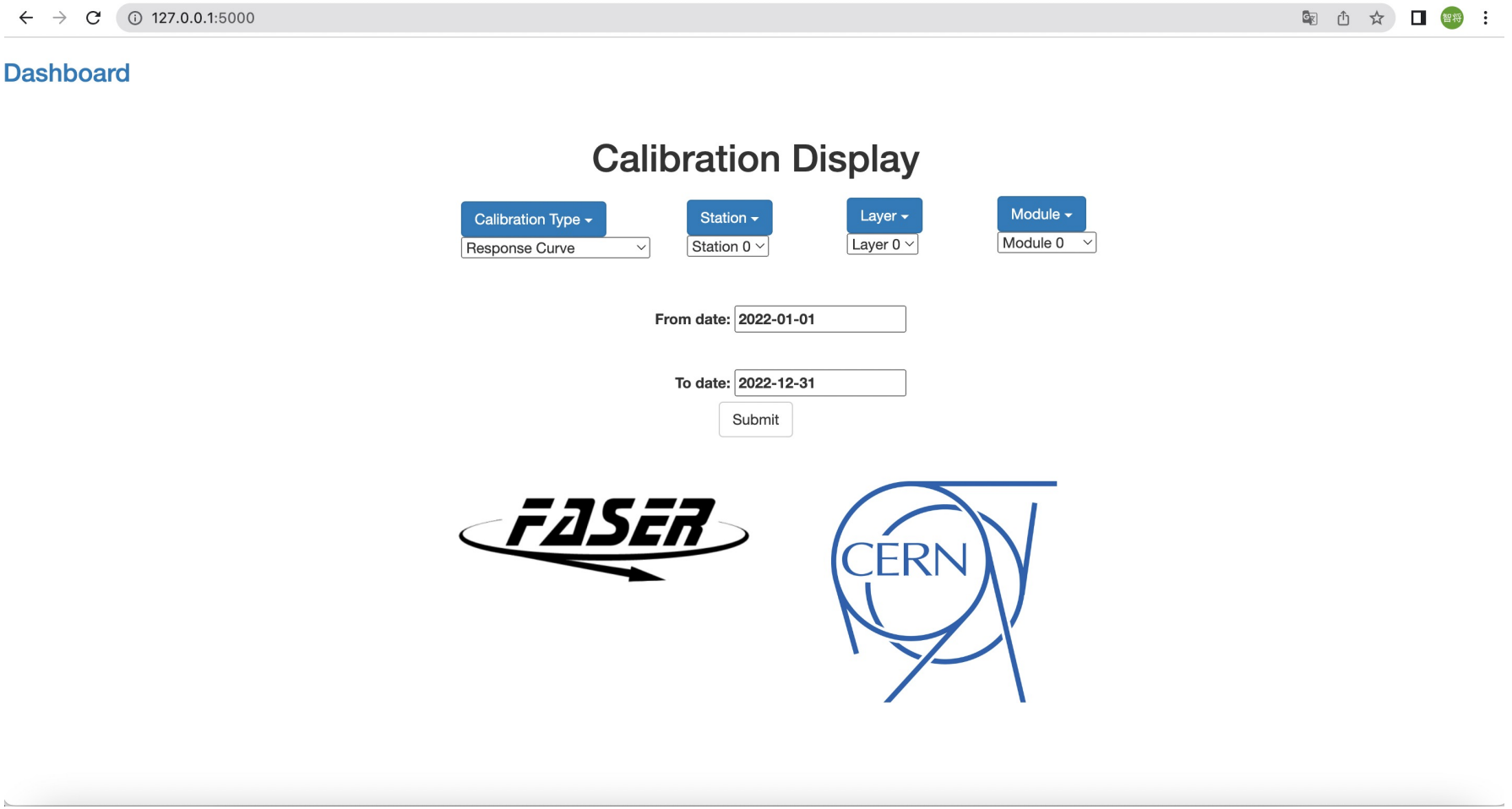
Home (currently)



Calibration Display

- Adjust the layout of display

Home (Updated)



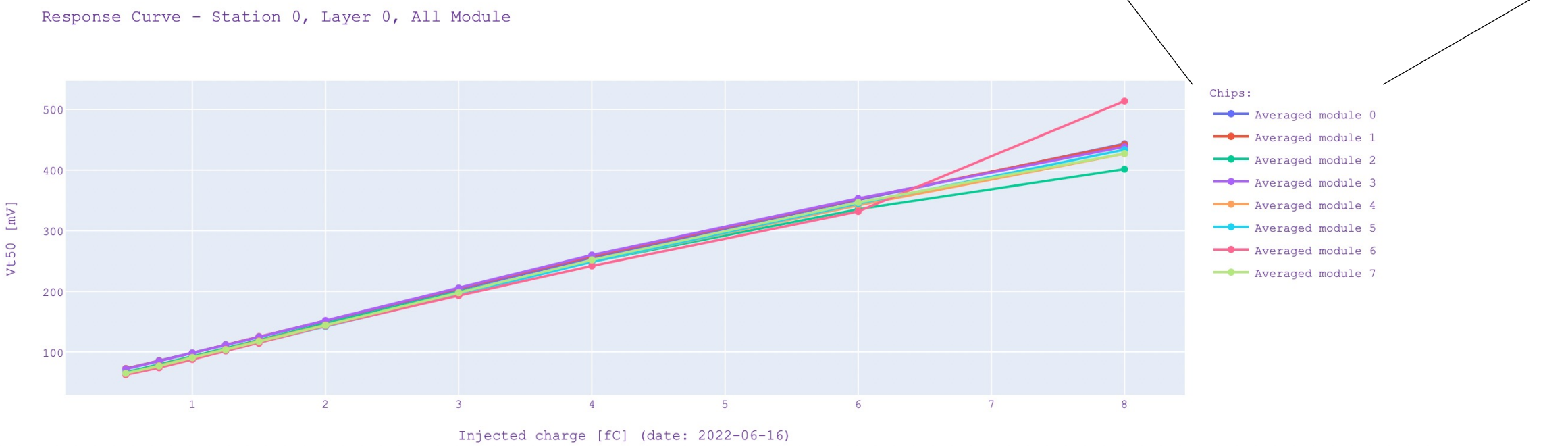
Calibration Display

- Enable to display the results per module

ResponseCurve

Return to main page

Return to previous selection



Calibration Display

Progress

- Adjust the layout of display
  →done for /home, may change for other pages

- Enable to display the results per module
  →Changing one by one, over half done

  (see right figure)

- Update the Dashboard
  →done nothing yet, will change in one or two weeks

✅ : done

× : yet