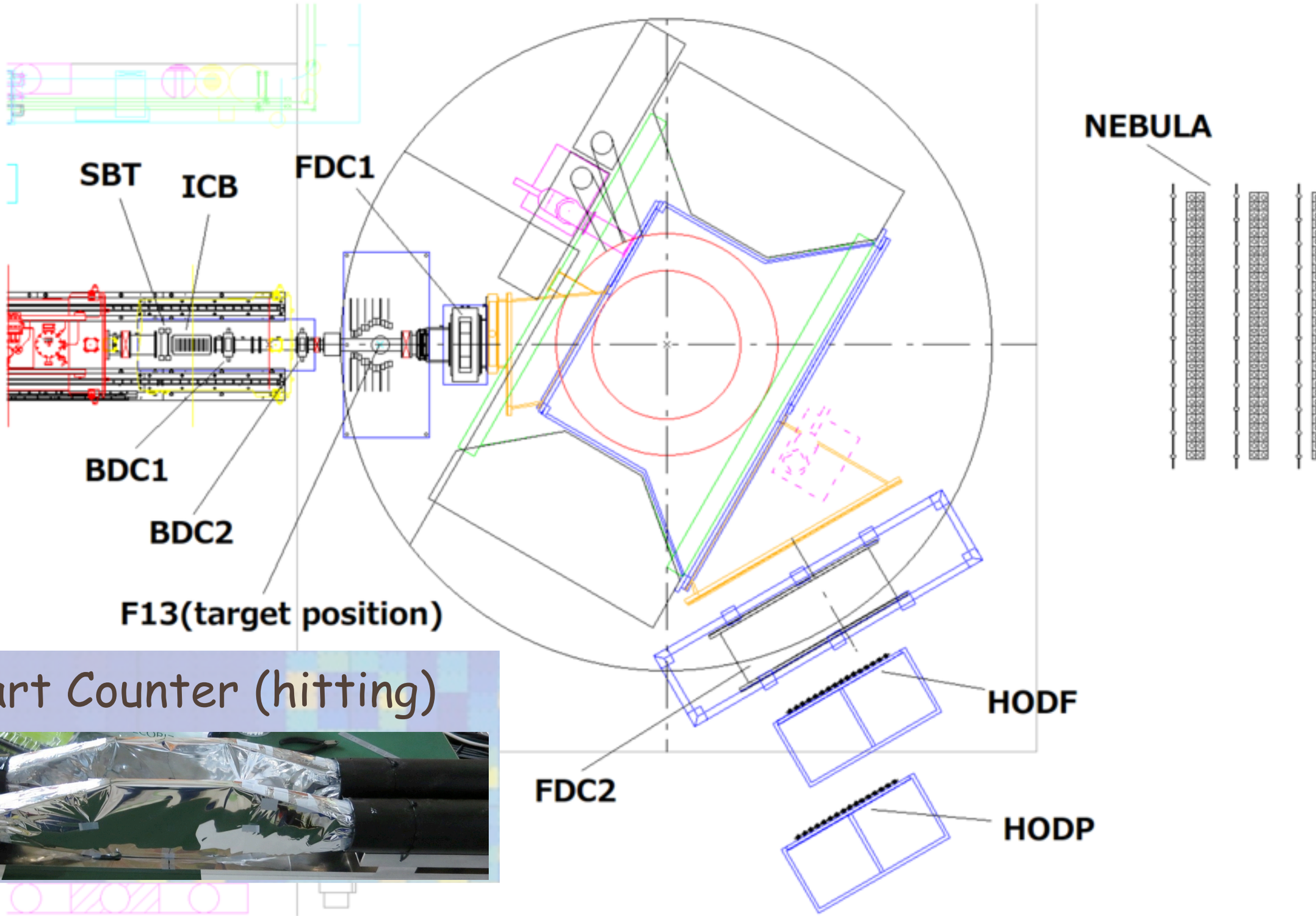
SBT at SAMURAI



SBT:Start Counter (hitting)

Two trigger scintillators, SBT's, are used as a start detector for trigger and also for measuring the charge of the incident beam.

What to be considered

- **To define the scintillate species & geometry, what to be considered**
  - **Beam energy loss**
  - **Beam current**
  - **Trigger rate**
  - **Dead time**
  - **Background rate**
  - **Timing resolution**

SAMURAI Detectors

- Position measurement
  - Beam Proportional Chamber (BPC): beam rigidity tagging at F5
  - Beam Drift Chamber 1, 2 (BDC1,BDC2) : beam phase space Detector-BDC.pdf
  - Forward Drift Chamber 1 (FDC1) : scattering angle of fragments Detector-FDC1.pdf
  - Forward Drift Chamber 2 (FDC2) : rigidity analysis for fragments Detector-FDC2.pdf
  - Proton Drift Chamber 1,2 (PDC1,2) : momentum analysis for protons Detector-PDC.pdf
  - NINJA
- Note on DC analysis : DC_information.pdf

- Charge measurement
  - Ion Chamber for Beam (ICB) : beam charge Detector-ICB.pdf
  - Ion Chamber for Fragments (ICF) : fragment charge Detector-ICF.pdf

- Velocity (& charge) measurement
  - Hodoscope for Fragment (HODF) : velocity & charge for fragments Detector-HOD.pdf
    Now the wide coverage Hodoscope with 24 scintillators is available. 1.5 times wider than before.
  - Hodoscope for Protons (HODP) : velocity & charge for protons Detector-HOD.pdf
  - Total Internal Reflection Cherenkov (TIRC) : velocity for fragments Detector-TIRC.pdf

- Total energy measurement
  - Total Energy Detector (TED) : total energy Detector-TED.pdf