1-Sep-2015

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Memo on 2015 fall runs

- Standard detectors
  - upstream vacuum
  - upstream detector stand
    - SBT
    - ICB & BDC1, BDC2
  - FDC1
  - FDC2
  - ICF
  - TED

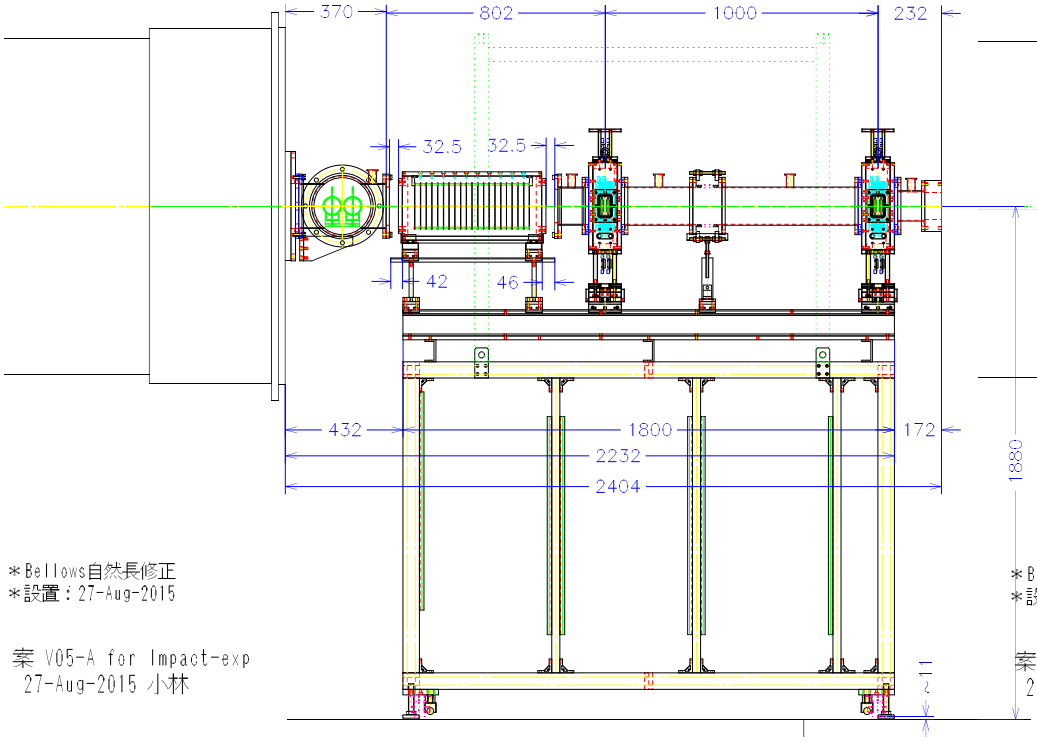
SBT

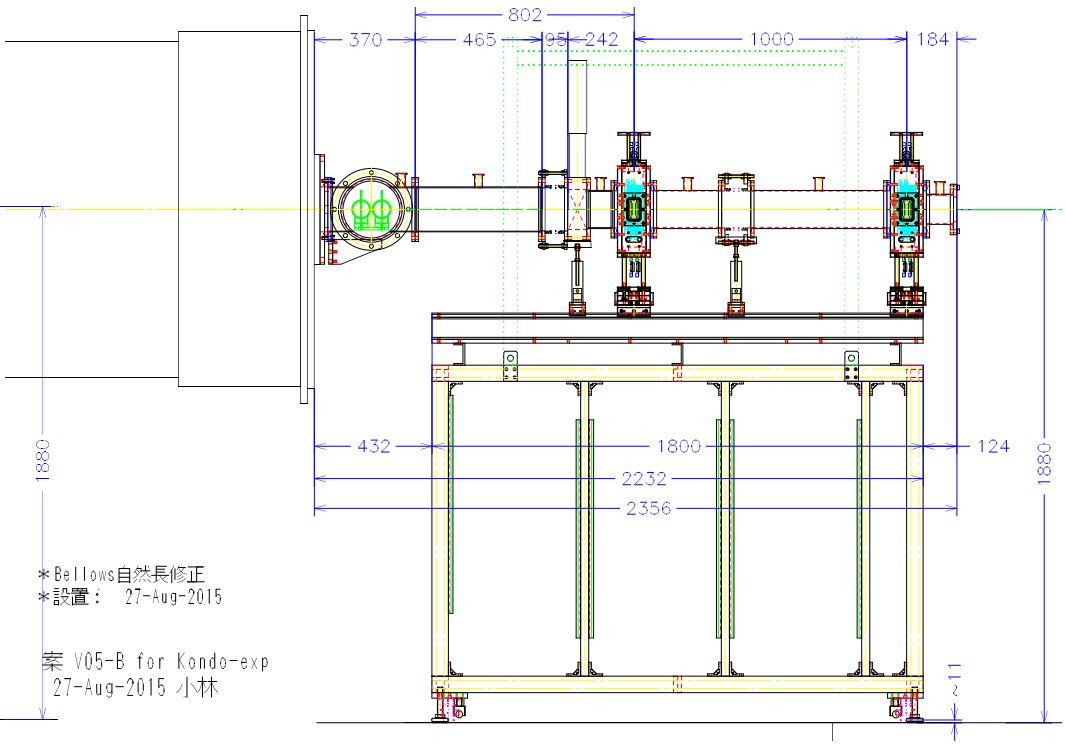
- Upstream vacuum
  - previous: F12 to STQ25, continuous → separate STQ25 vacuum, mainly for SBT
  - configuration after radiation shutter
  - VF250-VG250 (L750, to be ordered, ordered?), VF250-VG250 bellows (L200), VF250-VF300 (L250), STQ25:
  - rotary pump & vacuum gauge connected to upstream part

- SBT
  - T-pipe installed on STQ25
    - vacuum ~ 5×10^{-3} torr after 12 hours
    - connector flanges, HV, booster, signal cables connected
  - SBT
    - 2 SBT's assembled on the platform after slight modification
    - 0.2mm-t plastic scintillators delivered, to be set
    - not yet in T-pipe
  - to be done
    - HV, signal cables in T-pipe : ordered
    - booster cables in T-pipe: to be made
    - 2 vacuum windows on VF250-VF250 flanges : 125 um-thick Kapton
    - signal test in vacuum
      - source?

Upstream Detector Stand -1 : ICB & BDC1, 2

- Upstream stand configuration
  - easy configuration change between Impact & Kondo exp.

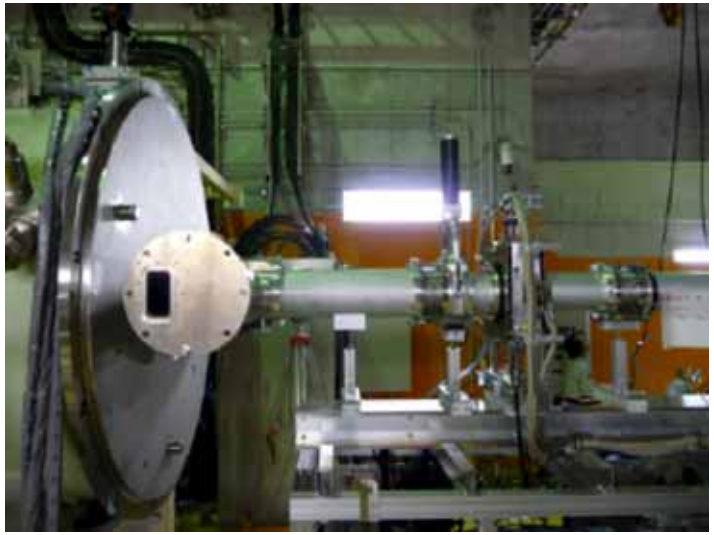




- Upstream floor
  - additional channels inserted for less deformation (by Otsu & Chiga)

Upstream Detector Stand -2

- Upstream stand
  - distance (STQ25-Stand) = 432mm
  - configuration for Kondo exp. were checked
    using VF150-VG150 (L465)
  - H & V centers of BDC's were aligned to laser markers
    within 0.25mm
  - ICB: installed, P10 gas being flowed.
  - CAEN HV crate changed to small one, for more space
  - add 2nd NIM bin
  - gas panel for ICB
- works left
  - remote HV control
  - remote ICB SA control
  - (rotary pumps for BDC's → mechanical pumps)



FDC1

- set back to standard condition
  - AC power, signal, HV cables connected
  - ACC for DAQ + Lupo
- works left
  - (rotary pump → mechanical pump)
  - DAQ program + pulser test with new DAQ

FDC2

- modifications
  - 2 NIM bins → 2 high-power NIM bins (Wiener)
- gas replacement
  - purge using N_2 gas (standard grade) : 8-Aug-2015 ~ 29-Aug-2015 (19 days)
    - flow rate ~ 0.28 L/min
    - V~ 8600 L ↔ 5 exchanges (>99.33% exchanged, ~0.7% left)
  - purge using N_2 gas (G3 grade) : 29-Aug-2015 ~
- works left
  - When FDC2 can be set back to the original position ?
    - need to check noise after connecting all signal & HV cables
    - effect of high-power NIM bins ?
  - Position of FDC2 ?
    - related to cabling to patch panel
  - DAQ program + Pulser test using new DAQ
  - flow He+60%CH_4

ICF

- gas replacement
  - purge using N2 gas (standard grade) : 8-Aug-2015 ~ 29-Aug-2015 (19 days)
    - flow rate ~ 0.12 L/min
    - V ~ 3700 L ↔ 10 exchange (>99.99% exchanged, ~0.01% left)
- works left
  - ICF position ?
    - guide rail necessary for different beam energy ?
  - need to connect 3 17-pair TW cables to MADC32 (x2)
    - location : ADC's in FDC2 VME crates or in HODS VME crates
    - cable length enough ?
  - remote SA control
  - DAQ program + pulser / pedestal check using DAQ
  - flow He+60% CH_4 :
    - 1.5 worse resolution expected compared to P10. really OK?

TED

- necessary ?
- TED position ?
  - position change between 2 beam energy ?
  - guide rail necessary ?
- 32ch Q-ADC location ?
- camac discriminators installed
  - trigger (or) available
  - TDC information necessary ?
    - 32ch logic delays (>500nsec), 32ch TDC's location, cables