

# Memo for exp\_samurai\_2017spring

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- necessary information for preparing SAMURAI standard detectors for exp\_samurai\_2017spring
  - S09 (catana)
  - S38/39 (seaster)
  - S19 :  ${}^8\text{He}(p,pa)4n$
  - S37 :  ${}^8\text{He}$  Coulomb breakup
  - S34 :  ${}^8\text{He}(p,2p)t4n$
- please send necessary information, hopefully well in advance.

- ?'s
  - BDC stand position needs to be changed between S09 & S38/39?
    - If necessary, position ?
  - For S19/37/34: BDC stand position information is necessary to connect beam pipes between STQ/SBT & BDC2, hopefully well in advance.
    - Or, air gap allowed between SBT & BDC2?

exp.	BDC position (STQ-BDC2box downstream side) [mm]	SBT thickness [mm]	ICB	SBT-BDC2
S09	2631	0.2	use	air gap (ICB)
S38/39	? [need change after S09?]	0.2(?)	use(?)	air gap (ICB)?
S19	?	2(?)	remove (?)	direct connection or air gap?
S37	?	2(?)	remove (?)	direct connection or air gap?
S34	?	2(?)	remove (?)	direct connection or air gap?

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- necessary in
    - S09
    - S38/S39
    - S37 (?)
      - beam intensity ?
  - probably not necessary in
    - S19 (?) : because of DSSD
    - S34 (?)
      - beam intensity ?
      - It is not possible to detect  $z=1$  particles together with high intensity  $^8\text{He}$  beams, due to large energy difference of 4.
  - ASD will be replaced to ASD with shorter shaping time.

- Detector gas
  - S09, S38/39
    - He+CH<sub>4</sub> (60%)+iso-propanol : ordered.
    - gas exchange : end of Feb ~ end of Mar.
  - S19, S37, S34 after S38/S39 (mid May)
    - P20: Ar+CH<sub>4</sub>(20%) ← He+CH<sub>4</sub> (60%)
      - will be ordered
    - gas exchange : mid May ~ mid June
- FDC2 position ? necessary for preparation. please send information well in advance
  - S09, S38/39, S19, S37, S34
- memo
  - FDC2 can not be used to detect z=1 particles with high efficiency, because of 40umφ anode wires.
  - S37
    - <sup>8</sup>He beam will not hit FDC2
    - <sup>4</sup>He & <sup>6</sup>He is detected, not <sup>3</sup>H.
  - S19
    - only for <sup>4</sup>He with lower energy
  - S34
    - Beam will not hit FDC2
    - <sup>3</sup>H can not be detected by FDC2 with high efficiency.

- S09
  - prepared only for backup
  - space between FDC2 & HODF24 reserved
    - with guide rail for ICF
- S38/39
  - no need ?
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