

Status report after exp. S323/S410 (15 Aug-3 Oct 2011)

Expert team (05.10.11)

12 Aug-15 Aug 2011 (S323 test)

Beam: $^{209}\text{Bi}^{68+}$ @800 MeV/u (Brho=17.3455 Tm), $i_{\text{max}} = 1.5 \cdot 10^7$ /spill, spill length =2-5s.

TA-Matter: SIS-window Ti
SEETRAM
Target (as stripper) Cu 90 mg/cm2
TS2ET2:pos. 48

S2-Matter: SC21
Sci BC400 0.097 cm
TS3ESA_S: 360 mm
TPC23/24
Ti stripper 200 μm

S4-Matter: TPC and TUM Music + Old Music before degrader, TUM Music after.
SC41 Sci BC400 0.1 cm
SC43 (ITAG) Sci BC400 0.5 cm

Beam aligned at the TA2 with CG01/02. The TA position was shifted by -6 mm in horizontal direction.

Detector	HV setting
TPC23A	710V
TPC23	2400V
TPC24A	2900V
TPC24	690V
TPC41A	680V
TPC41	2400V
TPC42A	680V
TPC42	2400V

Detector	HV setting (high)
SC01	V
SC21L	2200V
SC21R	1800V
SC41L	1400V (4 V !)
SC41R	1450V (4 V !)

SC43L	1150 V
SC43R	1100 V

Detector	HV setting (P10 gas)
MUSIC41C	-4000V
MUSIC42C	-4000V
MUSIC43C	-4200V
MUSIC43A	+650

Measured matter to be used in the next experiments.

S2 Al wedge : 3 g/cm² calc. -153.8 mm, real 142.5 (2853.9 mg/cm²)
6 g/cm² -376.0 (+ 9.3 mm offset)

S4 Al degrader : 146.1 (+ 10 mm offset) , 4158 mg/cm²

Tested data acquisition (SIMBA + BELEN).

Optics used: standard with the last triplet adjusted.

TAC range S2-S4 : 70 ns .

23-29 Sep 2011 (S410)

Beam: ²³⁸⁰U⁷³⁺ @900 MeV/u, spill length 1.5-2 s, i_max = 2 10⁹ /spill on Seetram.

TA-Matter: SIS-window Ti
SEETRAM
Target Be/Nb 1.6 g/cm² (Nb : 223 mg/cm²)
TS2ET2:pos. 26

S1-Matter: Al degrader (+ pocket) 2.5 g/cm²

S2-Matter: SC21 Sci BC400 0.097 cm
TS3ESA_S: 360 mm
Al wedge(+disk) : 3 g/cm²
TPC23/24
Ti 200 μm

S4-Matter: window
TPC and 2 TUM Musics before degrader, Old Music after.
SC41 Sci BC400 0.1 cm

SC43 (ITAG) Sci BC400 0.5 cm

Detector	HV setting
SC01	V
SC21L	2150V
SC21R	2350V
SC41L	1400V (<3 V)
SC41R	1450V (< 3V)
SC43L	1150 V
SC43R	1100 V

Fragments settings : 215Tl ?, 205Bi, 135Sb,

29 Sep- 2 Oct 2011 (S323)

Beam: $^{2380}\text{U}^{73+}$ @1000 MeV/u, spill length 1-1.3 s, $i_{\text{max}} = 2 \cdot 10^9$ /spill on Seetram.

TA-Matter: SIS-window
SEETRAM
Collimator

Target Be 2.5 g/cm²
 TS2ET2:pos. 35

S2-Matter: SC21 Sci BC400 0.097 cm
 TS3ESA_S: 360 mm
 Al wedge(+disk) : 6 g/cm²

TPC23/24
 Ti 200 μm

S4-Matter: window
 TPC and Musics (as in S410)
 SC41 Sci BC400 0.1 cm
 SC43 (ITAG) Sci BC400 0.5 cm

Al plate (45 ° tilted) : 1145 mg/cm² in beam direction

Detector	HV setting
SC01	V
SC21L	2150V
SC21R	2350V
SC41L	1325V
SC41R	1375V
SC43L	1150 V
SC43R	1100 V

Fragments settings : ^{135}Sb , ^{126}Pd , ^{127}Pd