

Status report after exp. S393/S306 (25 Aug-17 Sep 2010)

Expert team (20.09.10)

25 Aug-10 Sep 2010 (S393)

Beam: $^{40}\text{Ar}^{11+}$ @490 MeV/u (Brho=13.0121 Tm), $i_{\text{max}} = 3 \cdot 10^{10}$ /spill, spill length =0.5 sec.

TA-Matter: SIS-window Ti 5 μm
 SEETRAM (as stripper)
 Target Be 4011 mg/cm²
 TS2ET2:pos. 36

S2-Matter: SC21 Sci BC400 0.325 cm
 TS3ESA_S: 250 mm
 Sci BC400 0.097 cm
 TS3ESA_S: 360 mm
 Nb stripper 113 μm
 TS3ET7US: -406.0 mm

S8-Matter: SC81 Sci BC400 0.3 cm
 TH4DI5 : 234 mm

Beam aligned at all focal planes using MWPC and CG.

Detector	HV setting
MW11A	2650 V
MW21A	-
MW22A	2900 V
MW31A	2800 V
MW51A	3400 V
MW71A	3400 V
MW81A	3500 V
MW82A	3500 V

All MWPC worked except MW21 that did not move in. Only CG81 was connected and worked.

Detector	HV setting
SC01	1700 V
SC21L	2850 V
SC21R	2700 V
SC81L	2850 V
SC81R	2200 V

During the run it was noticed that the Hall probe reading for S1 (TS3MU1) drifted up slowly. Possibly Hall probe is radiation damaged. The SC21 (3mm) maybe was also damaged at the end of the run due the high particle rate.

Optics used is called FRSTOR3B-TA2-LARGERSPOT.SET.
TAC range S2-S8 : 70 ns .

Primary beam (minimum matter)

Tr S2-S8: % (% predicted by Mocadi)
Tr S8-CC: % (% predicted by Mocadi)
Tr S2-CC: % (% predicted by Mocadi)

Fragments beam

$i=10^{10}/\text{spill}$

Tr S2-S8: % (% predicted by Mocadi)
Tr S8-CC: % (% predicted by Mocadi)

Experimental rates:	24O	(/spill predicted by Mocadi, /spill predicted by LISE)
	23O	“
	15O	“
	14O	“

11-16 Sep 2010 (S306)

Beam: $^{40}\text{Ar}^{11+}$ @531 MeV/u, spill length 0.5-4sec for calibration, $i_{\text{max}} = 3 \cdot 10^{10} / \text{spill}$ on Seetram.

TA-Matter:	SIS-window	Ti	5 μm
	SEETRAM		(as stripper)
	Target	Be	8047 mg/cm ²
			TS2ET2:pos. 38
S2-Matter:	SC21	Sci BC400	0.097 cm
			TS3ESA_S: 360 mm
		Al disk	
		angle :	87 steps
		Nb stripper	113 μm
			TS3ET7US: -406.0 mm
S8-Matter:	SC81	Sci BC400	0.3 cm
			TH4DI5 = 124 mm

Fragments beam

Tr S2-S8: % (% predicted by Mocadi)
Tr S8-CC: % (% predicted by Mocadi)

i=10¹⁰/spill

Experimental rates:	32Mg	(/spill predicted by Mocadi, /spill predicted by LISE)
	33Mg	(predicted by Mocadi, predicted by LISE)
	34Al	(predicted by Mocadi, predicted by LISE)
	27Ne	(predicted by Mocadi, predicted by LISE)