Status of the FRS (exp. S358)

H. Weick, 9 May 2011

Detectors:

MWPCs: MW11 tested is perfect, MW21+22 drive offline, MW81+82 work but low efficiency for Ne worse for C.
Sc81 : worked well
current grids: CG01, 02, 11, 21, 31, 51, worked but CG81 no signal, CG82 (not FRS type) was fine
IC at target: tested, no signal, maybe wrong polarity.
Seetram: worked, but 15mV noise at 150Hz and 10mV at ~10kHz range (two frequencies)

Targets:

5.5 mm offset in CG vs. Leuchttarget. CG01 and CG02 consistent for assumed very parallel beam.
Leuchttarget Chromolux (pos #1) worked well with 10^7 Ne,
but ZrO2 no light visible for $5x10^9$ Ne/4sec. May require fast extraction + triggered camera.
Camera for Leuchttarget has many bad pixels but still alive (but already strong degradation).

Magnets:

1st dipole had temperature sensor failure was repaired. Others are fine.

Intensity of secondary beam:

Very good agreement to prediction (LISE+MOCADI), even with transmission to Cave-C. use ABRABLA07 cross sections.

Separation with S8 slits:

Worked as predicted but He background is broader in position and hard to remove. However, only problem for Be setting.

Focus in Cace-C:

Very well adjusted thanks to measurement with Russian MWPCs.

Physics:

Elastic scattering in active H-target (IKAR chamber)
Measured were ^{12}C, $^{13-17}$C and ^{8}B, ^{7}Be settings, always for 1-2 days with ~5000 ions/s.