

G_M^n

Neutron Magnetic form factor

$$\frac{\left(\frac{d\sigma}{d\Omega}\right)_{d(e,e'n)}}{\left(\frac{d\sigma}{d\Omega}\right)_{d(e,e'p)}} \rightarrow \frac{\left(G_M^n\right)^2}{\left(\frac{d\sigma}{d\Omega}\right)_{p(e,e'p)}}$$

Q^2 (GeV ²)	E (GeV)	θ_e	θ_N	E' (GeV)	P_N (GeV/c)
3.5	4.4	32.5	31.1	2.5	2.6
4.5	4.4	41.9	24.7	2.0	3.2
6	4.4	64.3	15.6	1.2	4.0
8.5	6.6	46.5	16.2	2.1	5.4
10	8.8	33.3	17.9	3.5	6.2
12	8.8	44.2	13.3	2.4	7.3
13.5	11.	33.0	14.9	3.8	8.1

Needs:

SBS Standard equipment

48D48, GEMs, BigBite (reconfigured)

+ HCal-J

+ 10cm LD₂ target

Simple (BigBite+Hcal) trigger

44 μA

11 GeV

Includes commissioning and calibration
time

Could run as an early SBS experiment

