

Stable Beam Run Oct 3-8 /02

1. $E_{\text{prague}} \approx 1.059 \times E_{\text{MD1}}$

2. $^{21}\text{Ne}(p,\gamma)$ $E_{\text{thr}} = 521 \text{ keV/u}$
- confirm $E_{\text{MD1}} \approx 516 \text{ keV/u}$
- smooth Yield curve

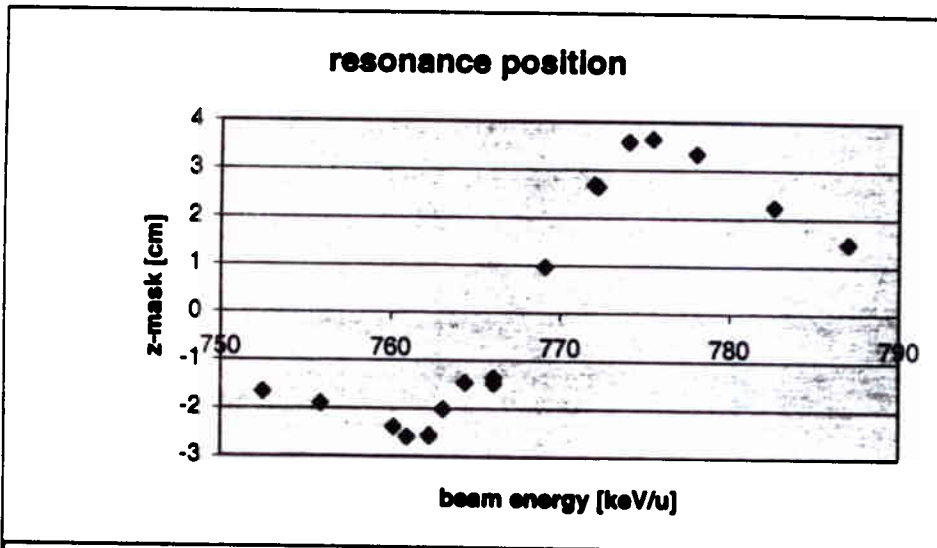
3. $^{21}\text{Ne}(p,\gamma)$ $E_{\text{thr}} = 763 \text{ keV/u}$
- confirm E_{thr} to 1-2 keV/u
- Yields smooth on top,
ragged on flanks,
drop 40x @ $\Delta = 18 \text{ keV/u}$

4. $^{14}\text{N}(\alpha,\gamma)$ 382 keV/u

5. CCD camera + lens

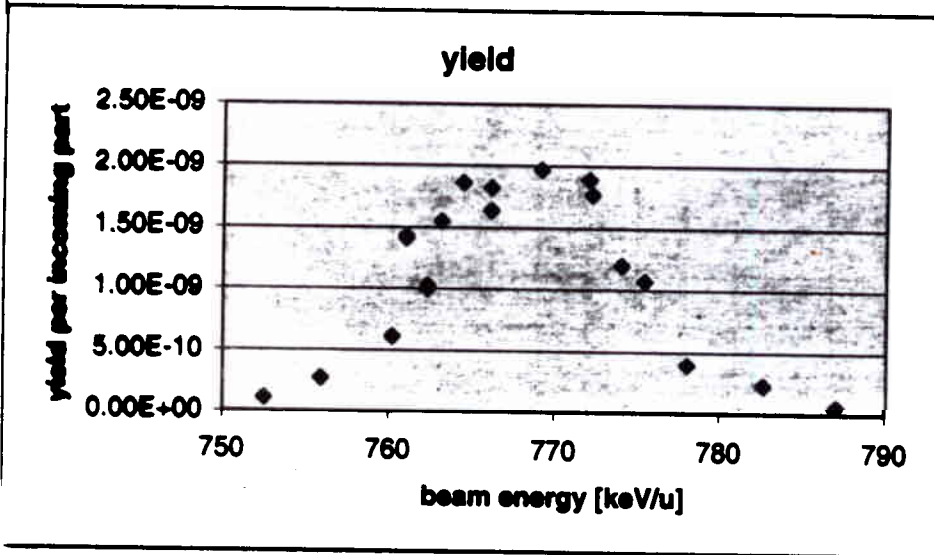
Test

Shift Summary



Charge state probability
 $P^+ = 60\%$

DSSSD survived



$^{21}\text{Ne}(p,\gamma)$
 $E_{cm} = 733 \text{ keV}$
 $w_\gamma \approx 4 \text{ eV}$
 $\Gamma \approx 4 \text{ keV}$

nessed & Understood by me.	Date	Invented by	Date	To Page No. _____
		Recorded by		

$E_H = "521" \text{ keV/u}$ ($E_{min} = "501"$)

4/10/02 Project No. _____
Book No. _____

TITLE ^{21}Ne "552" (Prague)

10:00

Bob L. has beam for demo to H.S. Teachers.

Summary of Runs

Expect 18×10^{-10} into all Charge States (p.3)

Run	E (Prague)	E(MDI) (no gas)	PC4 anA (5 μ)	Time (sec)	counts total 6 $^+$ singles	6 $^+$ yield	cZ (g $^{\circ}$) (1017)
6896	548	516.5	1.35	1895	781	3.3×10^{-10}	-3.75
6897	546	514.4	1.5	2230	21	5.0×10^{-12}	-1.5 6 counts
6898	550	516.7	1.4	2975	1581	3.0×10^{-10}	-2.23
6899	552	521.3	1.3	1145	791	4.3×10^{-10}	+0.36
6900	554	523.6	1.45	1821	1520	4.6×10^{-10}	+2.96
6901	556	525.3	1.34	1472	889	3.63×10^{-10}	4.2
6902	556	525.3	1.45	1324 1013	175 singles 1013	4.24×10^{-10} (7 $^+$)	
6903	556	525.3	1.45	970	210	1.517×10^{-10} (8 $^+$)	
6905	558	526.8	~1.00 1.05	1795	340	1.52×10^{-10} (6 $^+$)	~5
6906	560	527.8	1.3	2258	903	1.10×10^{-10} (6 $^+$)	+3.99 (m)
6907	547.5	516.0	1.08 <small>but only diff on PULS</small>	6362	637	10$^{-11}$ 8.9 10^{-11} 6 $^+$	-4.33
6908	557	525.0	1.00	2581	1138	4.23×10^{-10}	
690	557	525.0 525.0	1.00	3426	532 (5 $^+$)	12.4×10^{-10} (5 $^+$)	

"50%-max" = 516.2 keV/u