



$$\frac{E}{A} = C \left(\frac{qB}{A} \right)^2 \quad - \text{rel. corr'n} \sim \frac{E(\text{MeV})}{1863 A} \cdot \frac{E}{A} < 10^{-3} (E/A)$$

Optics design

$$48.24^c \text{ (MeV/T}^2\text{)}$$

$$2^1 \text{ Ne (p, } \gamma) \quad 269.4$$

$$48.09 \pm 0.57$$

$$2^0 \text{ Ne (p, } \gamma) \quad 1159.8$$

$$48.21 \pm 0.024$$

$$2^3 \text{ Na (p, } \gamma) \quad 508.1$$

$$48.25 \pm 0.016$$

(preliminary)

± 0.05
syst

7500

7420

90

$$E_p = 5121 \text{ MeV}$$

$$= 0.50814 \text{ MeV/u}$$

$$E = c \left(\frac{Z}{A} \right)^2$$

$$\left(\frac{.33765 \times 7}{22.9906} \right)^2$$

$$M(A)(^{23}\text{Na } 7+) = 22.994466 \text{ u} \times 931$$
$$= 7 \times 5.11 / 931.4$$
$$= 22.9906$$

$$-\frac{1}{54} \left(\frac{E}{A} \right)^2 = \frac{1}{1863000} (508^2) = -\frac{.138}{508} = -\frac{.02527}{48/u}$$

$$C \approx 48.25$$