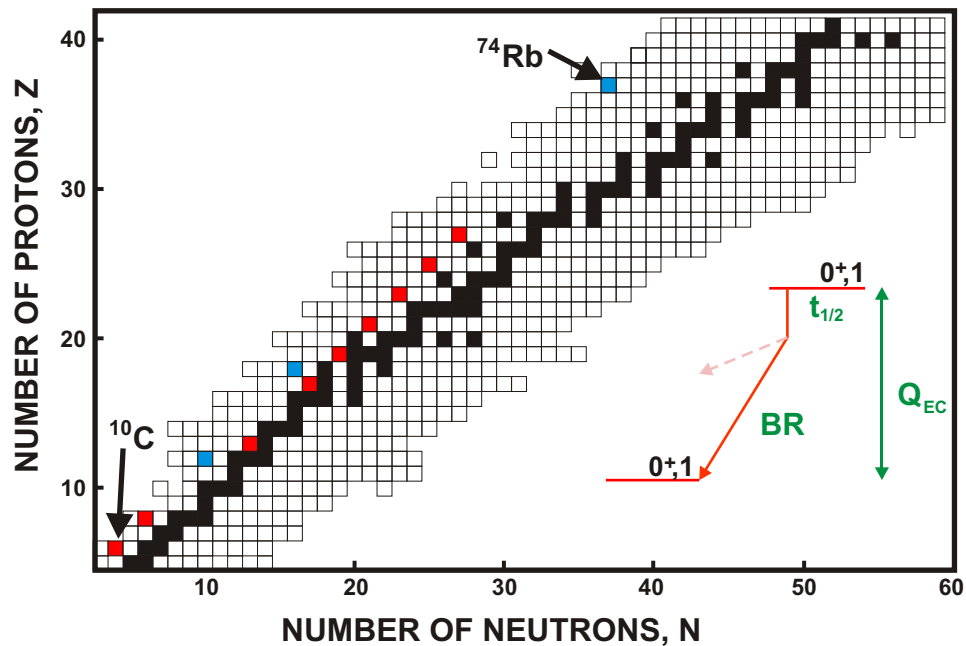


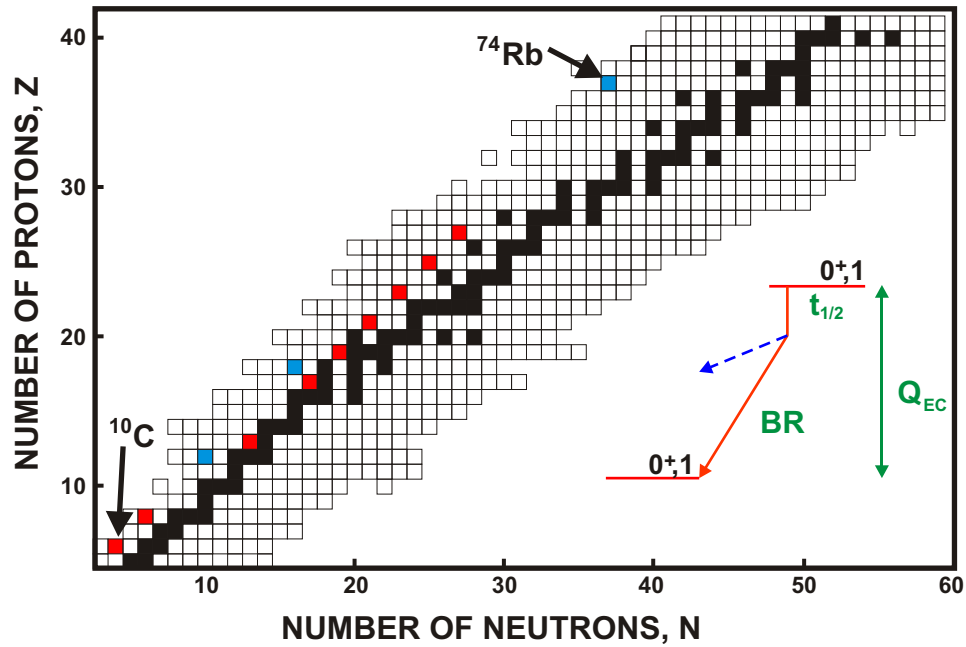
WORLD DATA FOR $0^+ \rightarrow 0^+$ DECAY, 2005



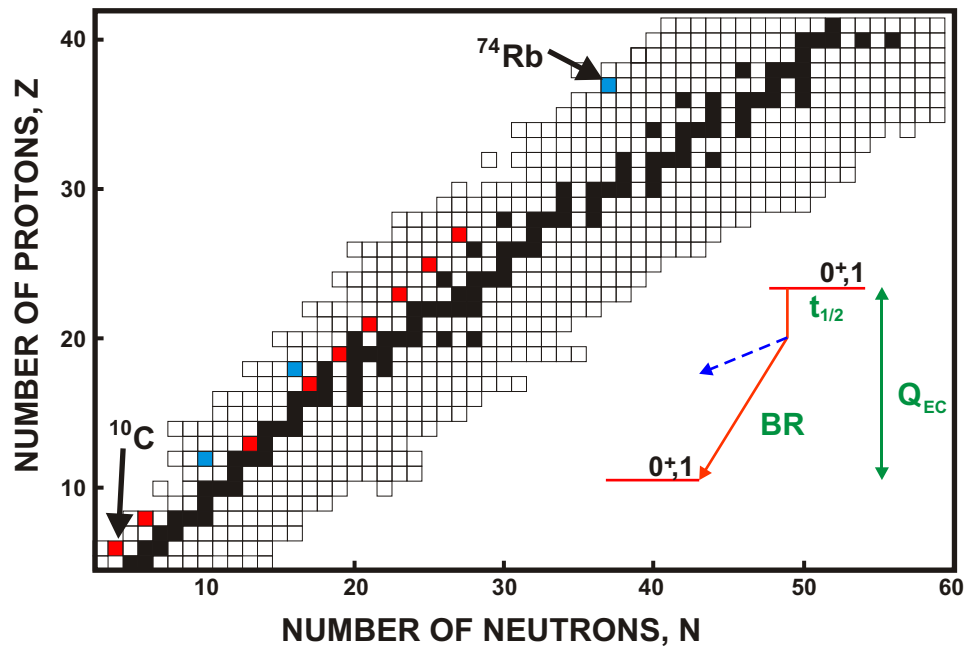
- 9 cases with ft -values measured to **~0.1% precision**; 3 more cases with **<0.4% precision**.
- ~125 individual measurements with compatible precision

$$\overline{ft} = ft \left(1 + \frac{R}{R'} \right) \left[1 - \left(\frac{C}{C'} - \frac{NS}{NS'} \right) \right] = \frac{K}{2G_V^2 \left(1 + \frac{R}{R'} \right)}$$

FUNDAMENTAL TESTS FROM $0^+ \rightarrow 0^+$ DECAY

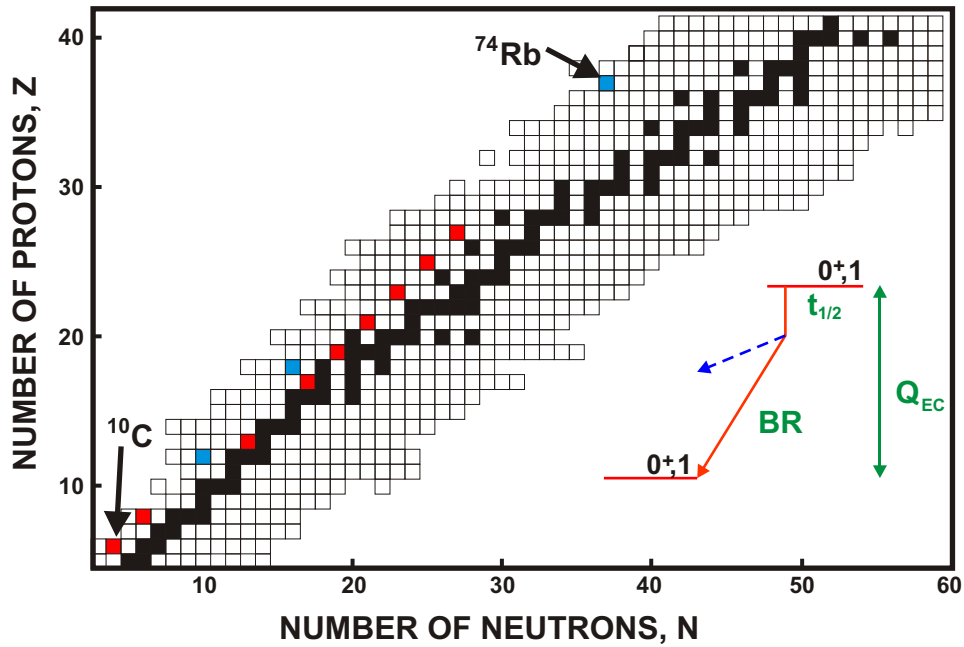


FUNDAMENTAL TESTS FROM $0^+ \rightarrow 0^+$ DECAY



CVC:

FUNDAMENTAL TESTS FROM $0^+ \rightarrow 0^+$ DECAY

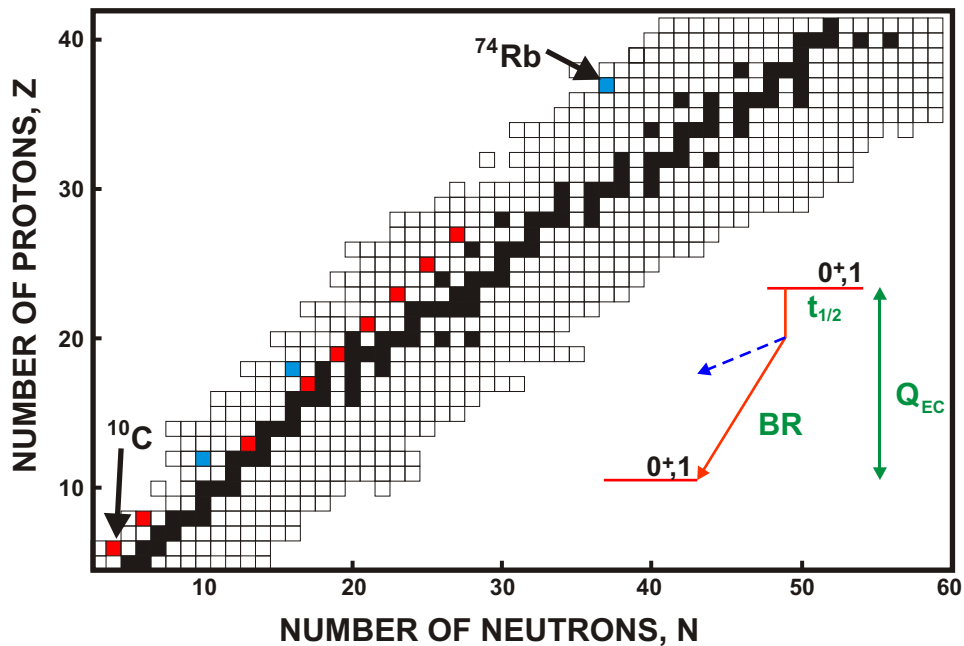


CVC:

1) G_V constant

$$\tau t = \frac{K}{2G_V^2 (1 + R)}$$

FUNDAMENTAL TESTS FROM $0^+ \rightarrow 0^+$ DECAY



CVC:

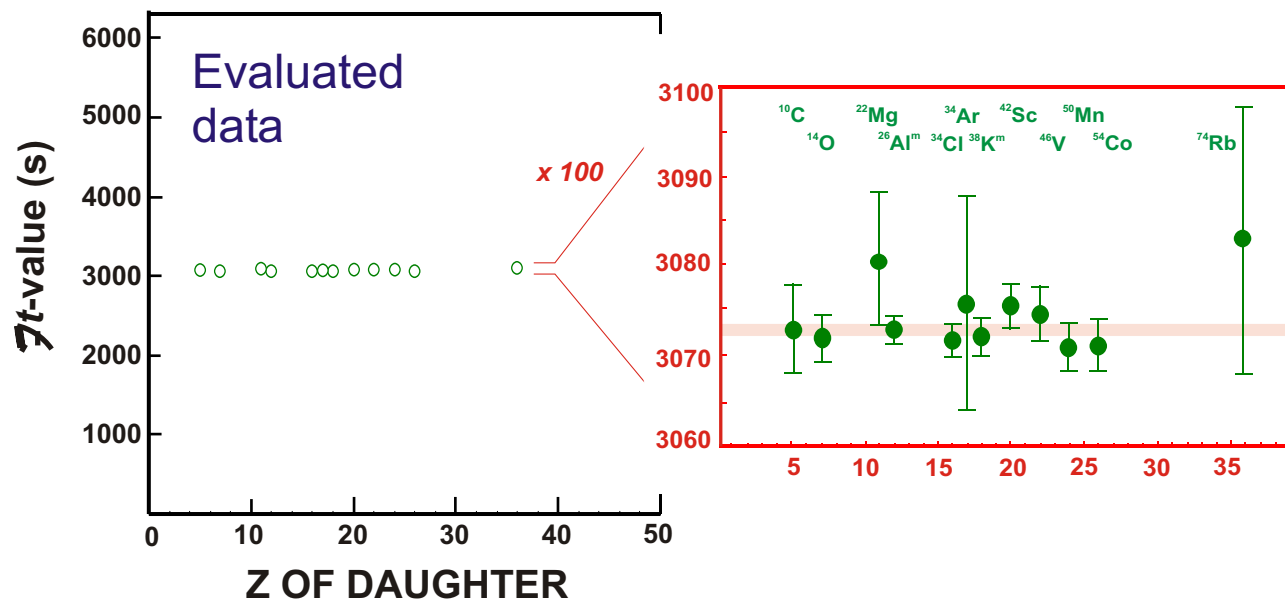
1) G_V constant

$$\overline{t} = \frac{K}{2G_V^2 (1 + R)}$$

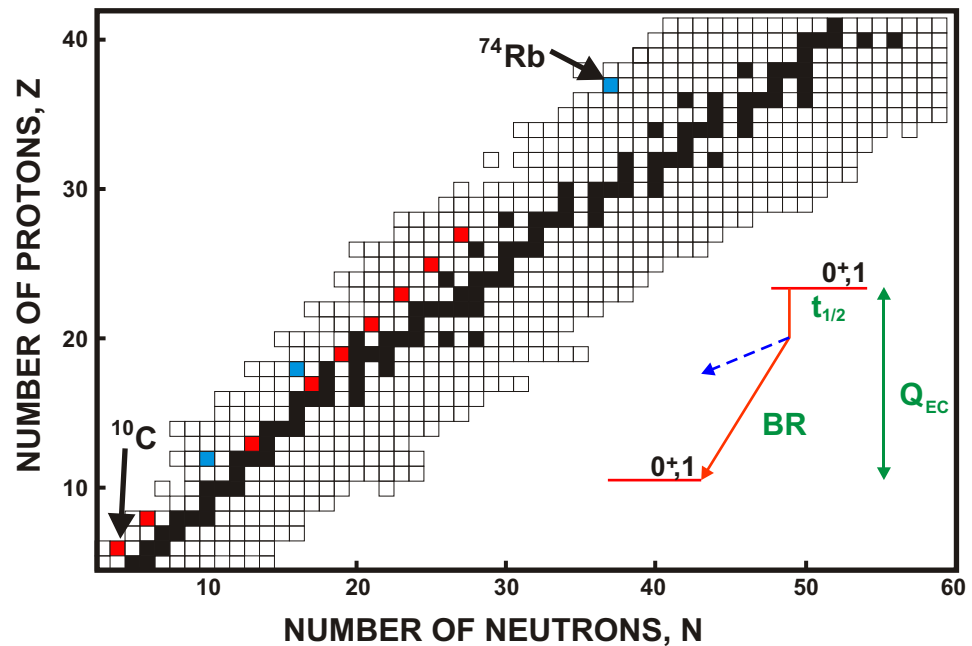
$$\overline{t} = 3072.7(8)$$

$$\frac{G_V'}{(hc)^3} = 1.14950(15) \times 10^{-5} \text{ GeV}^{-2}$$

$$R = 0.4$$



FUNDAMENTAL TESTS FROM $0^+ \rightarrow 0^+$ DECAY



CVC:

1) G_V constant

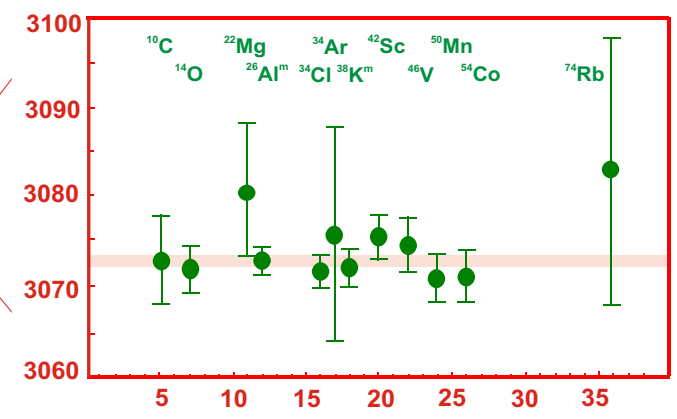
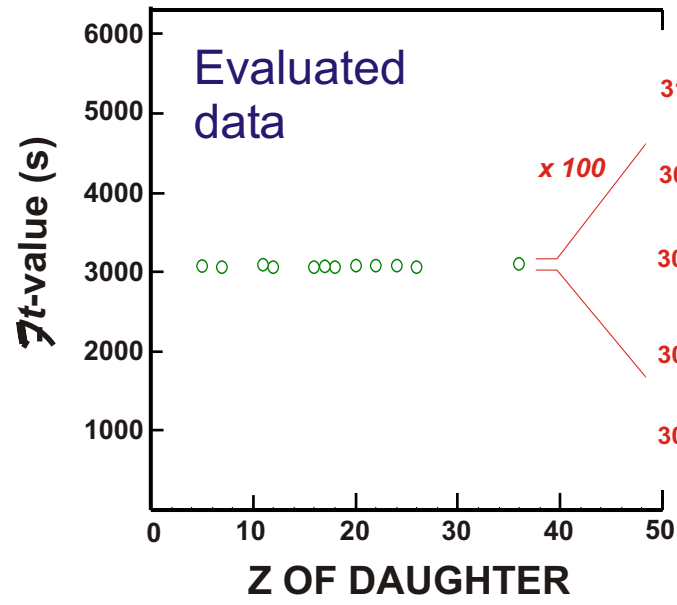
$$\overline{ft} = \frac{K}{2G_V^2 (1 + R)}$$

✓ verified to $\pm 0.026\%$

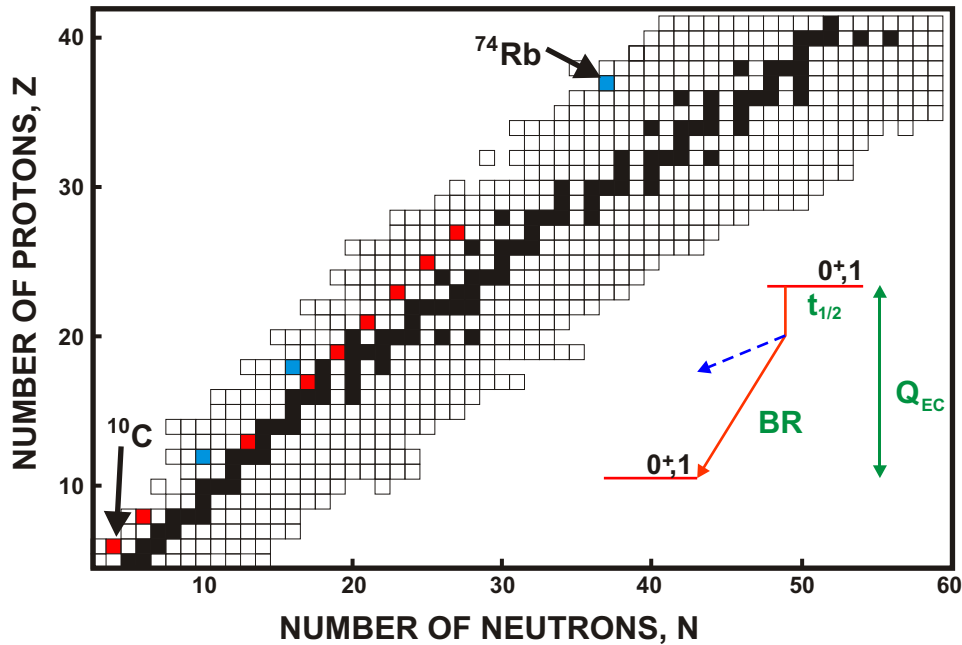
$$\overline{ft} = 3072.7(8)$$

$$G_V^2 / (hc)^3 = 1.14950(15) \times 10^{-5} \text{ GeV}^{-2}$$

$$R^2 = 0.4$$



FUNDAMENTAL TESTS FROM $0^+ \rightarrow 0^+$ DECAY



CVC:

1) G_V constant

$$\tau t = \frac{K}{2G_V^2 (1 + R)}$$

✓ verified to $\pm 0.026\%$

2) Induced scalar current zero