

^{14}O Q_{EC} -value measurement with LEBIT



Why a direct ^{14}O Q_{EC} -value measurement?

- Test the CVC hypothesis
- Test the CKM matrix unitarity
- Set limits on the existence of scalar currents

- ^{14}O produced by projectile fragmentation at NSCL
- Thermalized in linear gas cell
- Measured with LEBIT Penning trap
- 10x more precise Q_{EC} -value
- Increased Ft -value (consistent with ^{10}C)
- Could indicate presence of scalar currents

Strong experimental incentive to measure ^{10}C branching ratio and improve theoretical corrections.

