

# $^{11}\text{C}$ $Q_{\text{EC}}$ -value measurement with LEBIT



Why a direct  $^{11}\text{C}$   $Q_{\text{EC}}$ -value measurement?

Mirror transition which will allow to:

- Test the CVC hypothesis
- Test the CKM matrix unitarity
- Set limits on the existence of scalar currents
- $^{11}\text{C}$  produced by projectile fragmentation at NSCL
- Thermalized in linear gas cell
- Measured with LEBIT Penning trap

- 16x more precise  $Q_{\text{EC}}$ -value
- Ft-value uncertainty no longer dominated by  $Q_{\text{EC}}$ -value

Strong experimental incentive to measure the missing mixing ratio, which will allow the CVC hypothesis to be tested.

