$^{21}$Na and $^{29}$P $Q_{EC}$-value measurements

Why a $Q_{EC}$-value measurements on $^{21}$Na and $^{29}$P?
There are mirror transition which will allow to:
- Test the CVC hypothesis
- Independent way to extract $V_{ud}$
- Test same theoretical corrections as Pure Fermi.

- Produced by projectile fragmentation
- Thermalized in linear gas cell
- Measured with LEBIT Penning trap
- 3x more precise $Q_{EC}$-values.
- $V_{ud}$ from mirror transitions is $1.3\sigma$ lower than pure Fermi.

Experimental incentive to measure more precisely the mixing ratio, for a more accurate determination of $V_{ud}$.

M. Eibach, G. Bollen, M. Brodeur et al., PRC 92 045502 (2015)