

Improved determination of $|V_{us}|$ with tau decays

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We present improved determinations of $|V_{us}|$ with tau decays relying on the HFLAV tau branching fractions global fit results. Precision improvements come from using recent results from BaBar and recent evaluations with lattice of the electromagnetic (e.m.) and strong isospin-breaking corrections to the $\pi^+ \rightarrow \mu^+ \nu [\gamma]$ and $K^+ \rightarrow \mu^+ \nu [\gamma]$ leptonic decay rates. A third determination of $|V_{us}|$ has been added to the two ones that are included in the HFLAV 2017 report. The last HFLAV report is available as a preprint and is being submitted for publication at the beginning of 2020.

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06

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