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$|V_{cb}|$ from $\bar{B}^0 \rightarrow D^{*+} \ell^- \bar{\nu}$ zero-recoil form factor using 2+1+1 flavour HISQ and NRQCD

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We present our recent calculation of the zero-recoil form factor for the semileptonic decay $\bar{B}^0 \rightarrow D^{*+} \ell^- \bar{\nu}$ using lattice QCD with 2+1+1 flavours of highly improved staggered quarks in the sea (the MILC HISQ configurations) and using non-relativistic QCD for the bottom quark. We obtain $\mathcal{F}(1)$ and combine this with the latest HFAG average of $\eta_{EW} \mathcal{F}(1) |V_{cb}|$ to get a value for $|V_{cb}|$.

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