



Contribution ID: 53

Type: not specified

Vcb from $B \rightarrow D^* l \nu$ on the lattice

Monday 8 September 2014 17:50 (20 minutes)

I will discuss the recent results for the $B \rightarrow D l \nu$ and $B \rightarrow D^* l \nu$ semileptonic form factors and the determination of $|V_{cb}|$ from the Fermilab/MILC collaborations. These lattice calculations use an improved staggered action for the light quarks and the Fermilab action for the charm and bottom quarks; the calculation uses the MILC (asqtad) ensembles with three flavors of sea quarks and five lattice spacings. The zero-recoil $B \rightarrow D^* l \nu$ calculation is an update of their 2008 result, with higher statistics, finer lattice spacings, and lighter light quark masses. The error is now commensurate with the experimental error. The $B \rightarrow D^* l \nu$ calculation determines the form factors at non-zero recoil and a combined fit with the experimental data over the full kinematic range is performed to determine $|V_{cb}|$. Preliminary results for this channel will be presented.

Presenter: DU, Daping (University of Illinois, Urbana-Champaign)

Session Classification: WG2