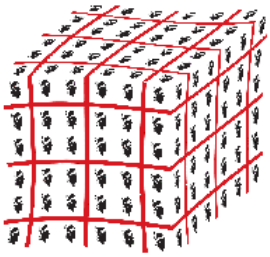

Contribution ID: **11** Type: **not specified**

$\Delta I = 3/2$, $K \to \pi\pi$ Matrix Elements with Nearly Physical Pion Masses

Tuesday, 15 June 2010 09:10 (20 minutes)

$\Delta I = 3/2$ channel $K \to \pi\pi$ matrix elements are calculated with a variety of kaon masses, pion masses, and pion momenta on quenched $24^3 \times 64$, $L_s = 16$ lattices using the DBW2 action and domain wall fermions. After an interpolation in pion momentum to energy conserving kinematics is performed, the dependence of the matrix elements on m_π and m_K is studied. The lightest pion mass in the study is 165 MeV, corresponding to $m_\pi L \approx 3$. Preliminary results are also presented from a calculation on RBC/UKQCD $32^3 \times 64$, $L_s = 32$ lattices with 2+1 flavors of dynamical quarks using the Iwasaki+DSDR gauge action and domain wall fermions. This second calculation is done with a single pion mass ($m_\pi = 146$ MeV, partially quenched) and kaon mass that are nearly physical, and with nearly energy conserving kinematics. The two calculations are compared with each other and with experiment, and the systematic errors are estimated.

Please, insert your presentation type (talk, poster)

Talk

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Session Classification: Parallel 17: Weak decays and matrix elements

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