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## **K- $\rightarrow$ pi-pi decay, $\epsilon'$ and the RBC-UKQCD kaon physics program**

*Wednesday 11 September 2019 11:10 (30 minutes)*

An overview of the kaon physics program of the RBC and UKQCD collaborations will be presented with a focus on the lattice calculation of K- $\rightarrow$ pi-pi decay and the direct CP violation parameter  $\epsilon'$ . We will describe substantial improvements to our earlier 2015 K- $\rightarrow$ pi-pi calculation, including the use of three independent pi-pi interpolating operators and the results we obtain for I=0 pi-pi scattering for energies at and below the kaon mass. While a new result for  $\epsilon'$  is not yet complete, the enhanced statistics and improved analysis that underlies our expanded calculation will be presented.

**Presenter:** CHRIST, Norman (Columbia University)

**Session Classification:** Epsilon'/Epsilon