



Contribution ID: 637

Type: **Plenary presentation**

## **Direct CP violation and the $\Delta I=1/2$ rule in $K \rightarrow \pi\pi$ decay from the Standard Model**

*Tuesday 27 July 2021 09:00 (20 minutes)*

I will discuss the RBC & UKQCD collaboration's recent lattice calculation of  $\epsilon'$ , the measure of direct CP-violation in kaon decays. This result significantly improves on our previous 2015 calculation, with nearly 4x the statistics and more reliable systematic error estimates. I will also discuss how our results demonstrate the Standard Model origin of the  $\Delta I = 1/2$  rule, and will present our plans for future calculations.

**Primary author:** KELLY, Christopher (Columbia University)

**Presenters:** KELLY, Christopher (Columbia University); KELLY, Christopher (Brookhaven National Laboratory)

**Session Classification:** Plenary

**Track Classification:** Invited plenary