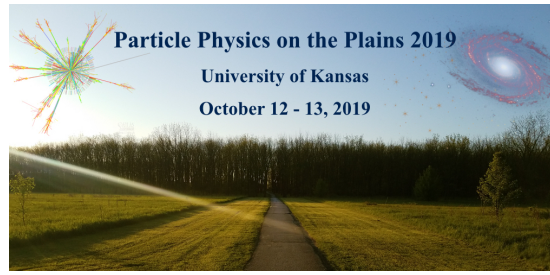


## Particle Physics on the Plains 2019



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# Higgs Troika for Baryon Asymmetry

*Saturday 12 October 2019 15:00 (20 minutes)*

In order to explain the baryon asymmetry of the Universe, we extend the Standard Model with two additional Higgs doublets with small vacuum expectation values and masses around the TeV scale. These additional Higgs fields introduce new sources of CP violation through complex Yukawa couplings with Standard Model fermions. We propose a flavor model where Yukawa couplings are  $\mathcal{O}(1)$  or less for quarks and charged leptons. This model leads to high energy signals such as observable deviations in the 125 GeV Higgs decay into muons and taus and production of heavy scalars as well as low energy signals such as the electron EDM or  $\mu \rightarrow e\gamma$ .

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