



Contribution ID: 224

Type: **Poster**

**Jennifer Rittenhouse West (UCI): The Cosmological Fate of  $SU(3)_C \times U(1)_{EM}$  (based on <https://arxiv.org/abs/1711.04534>)**

*Wednesday 21 February 2018 18:50 (1 minute)*

An investigation into the signatures of breaking the symmetry of the current group structure of Nature in order to determine the fate of the strong and electromagnetic forces as the Universe expands and cools from 2.7 K to 0 K. A spontaneous symmetry breaking (SSB) is considered and constraints upon the scalar fields charged under  $SU(3)_C$  and  $U(1)_{EM}$  are discussed. For the usual Higgs mechanism,  $U(1)_{EM}$  is found to be a long range force for the rest of the lifetime of the Universe. The strong force is tested for complementarity but its fate is left open, although there are indications it will remain unbroken.

**Author:** WEST, Jennifer Rittenhouse

**Presenter:** WEST, Jennifer Rittenhouse

**Session Classification:** Poster Session