

NEW PHYSICS SEARCHES AT KAON AND HYPERON FACTORIES

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GOALS FOR THE REVIEW/ COMMUNITY REPORT

- rare $s \rightarrow d + NP$ transitions
 - a large relatively unexplored set of signatures for light NP
- "New Physics Searches at Kaon and Hyperon Factories" community report
 - provide a set of interesting model benchmarks with accompanying experimental sensitivities
- the manuscript will be submitted
 - to peer review journal for publication
 - targeted deadline: Sept 1st 2021
 - to Snowmass as a contributed paper
 - exact deadline not known, can suspect late fall 2021
 - inputs to Topical Group Reports – Spring 2022

GOALS FOR TODAY

- quick presentations of relevant light NP models
 - what are the most important signatures for each model?
 - which of these are experimentally easiest, at all feasible, impossible?
 - are there signatures that the kaon and/or hyperon experiments should be covering but are not?
 - the benefits of having hyperon decays measure as well as kaon decays
- try to prioritize the sensitivity studies of different signatures

3	Experimental signatures in rare kaon decays	7
3.1	The $K \rightarrow \pi + \text{inv}$ decays	7
3.2	The $K \rightarrow 2\pi + \text{inv}$ decays	7
3.3	The $K \rightarrow \pi\gamma + \text{inv}$ decays	7
3.4	The $K \rightarrow 2\pi\gamma + \text{inv}$ decays	7
3.5	The $K \rightarrow \pi\gamma\gamma$ decays	7
3.6	The $K \rightarrow \pi l_\alpha^+ l_\alpha^-$ decays	7
3.7	The $K \rightarrow \pi l_\alpha^+ l_\alpha^- l_\beta^+ l_\beta^-$ decays	7
3.8	The $K_L \rightarrow \gamma\gamma + \text{inv}$ decay	8
3.9	The $K_L \rightarrow l^+ l^- + \text{inv}$ decay	8
3.10	The $K_L \rightarrow l^+ l^- \gamma\gamma$ decay	8
3.11	The $K^+ \rightarrow l_\alpha^+ + \text{inv}$ decay	8
3.12	The $K^+ \rightarrow l_\alpha^+ l_\beta^- l_\beta^+ + \text{inv}$ decay	8
3.13	The $K^+ \rightarrow l_\alpha^+ \gamma\gamma + \text{inv}$ decay	8
3.14	Lepton flavor violating decays	8
3.15	The $K^+ \rightarrow \pi^- l_\alpha^+ l_\beta^+$ decay	8
3.16	Dark showers	8
4	Experimental signatures in rare hyperon decays	9