## PANIC2021 Conference



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## Searching for New Physics with $B_s^0 \rightarrow D_s^{\pm} K^{\mp}$ Decays (17+3)

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Particularly interesting processes to test the Standard Model are non-leptonic  $B_s^0 \to D_s^{\pm} K^{\mp}$  transitions. As these decays occur via pure tree diagrams, they allow a theoretically clean determination of the angle  $\gamma$  of the unitarity triangle. Considering recent LHCb results, an intriguing picture arises, showing tension with the Standard Model. Utilising the available experimental data, we perform a theoretical analysis in order to shed more light on these puzzling patterns. Do these puzzles actually indicate footprints of New Physics?

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