

Collider data analysis for flavor physics

We offer multiple PhD projects centered on analysis of collision data collected by the Belle2 experiment at the KEK laboratory in Japan. Our measurements probe the weak interactions of quarks (flavor dynamics) to search indirectly for particles and interactions not described by the standard model. Current efforts focus on measurements of branching fractions and decay-rate angular distributions in semileptonic and hadronic bottom-meson decays that are especially sensitive to deviations from the standard-model predictions.

The Trieste flavor group counts two junior staff researchers, three postdocs, five PhD student and a steady stream of undergrads, who work in an informal and collegiate environment. Travels to Japan are encouraged.

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Silicon carbide and diamond sensor development

We offer multiple PhD projects centered on development of innovative technological solutions for advanced particle-physics detectors for current and future experiments. Current efforts focus on development of novel sensors based on silicon carbide and synthetic diamond.

The group relies on state-of-the-art local laboratories and instrumentation, and counts three faculty and a steady stream of undergrads, who all work in an informal and collegiate environment.

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