

Future Colliders Forum: Interests from University of Bonn

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16.04.21

Interests

► Background:

- We share a long history in TESLA/ILC/CLIC/LHC-ILC-Report/... studies, with an emphasis on fleshing out the physics potential, the potential complementarity between machines, and the ability to understand features of potential New Physics, and discrimination between models
- Current work on ATLAS, Belle-II, CAST/IAXO, Pheno and Detector R&D

► Analysis/Pheno interests:

- Complementary study of models consistent with B-anomalies, $(g - 2)_\mu$; e.g. U_1 vector leptoquarks (with or without CPV)
- Grand idea: Phenomenological studies towards a “B-anomaly no-loose-theorem”, including creative freedom on which accelerator R&D goals we should aim for

► In parallel: Ongoing R&D with relevance for future colliders

- ultra-low material pixel detectors
- fast pixel detectors
- TPCs with ultra high spacial resolution readout