





## ECFA Focus topic: LLPs- roundtable Detectors/Generators requirements



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## Introduction

- Its nice to (re-)meet you all (virtually)- I look forward to an engaging/productive next ~6-18 months (and beyond).
- LLPs provide unique opportunities at e+e- machines but come with correspondingly unique challenges on the detector/generator side that must be overcome to make robust projections and design choices.
  - Reflected in dedicated LLP contributions at the second ECFA topical meetings on <u>reconstruction</u> and <u>generators</u> in Summer 2023 and the (large) number of talks in the second half of this meeting that overlap with this topic (for this reason I'll keep my talk short).
  - (Coherent) use of functionality in Key4Hep will be key and community contributions to the effort- for recent updates see presentations at the October <u>workshop</u> in Paestum.

## Looking towards the Paris workshop

- A (non-exhaustive) list of priorities:
  - Full-sim studies on benchmark LLP studies.
  - Use of tracking algorithms for dE/dx studies, displaced tracks and displaced vertices.
  - Benefits of timing information.
  - Studies of instrumental backgrounds
  - Implementation of filtered MC samples for high-statistics backgrounds (i.e. Z-pole runs): work ongoing in Key4Hep but more to come.

Can we work together to boost output/collaboration? If sufficient interest could have a "topical focus-topic" meeting in July to understand status/plans?