Timeline for Proposal and Construction of the ILC Detectors

virtual

AWLC 2020

Americas Workshop on Linear Colliders

Zoom Conference, October 19-22

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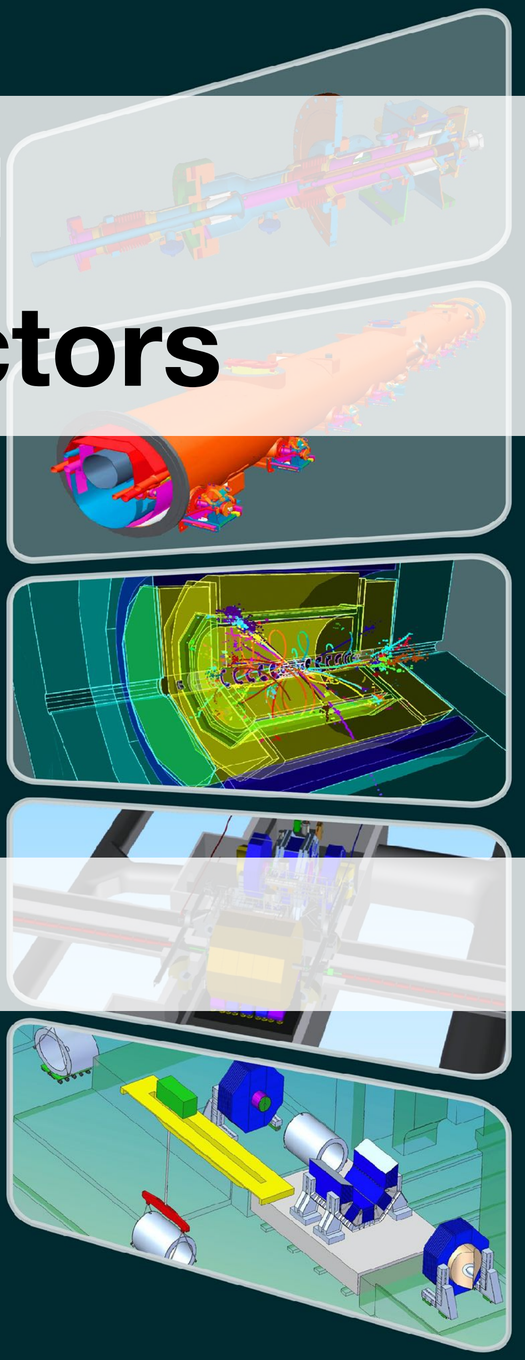

Initial Remarks

And a disclaimer

- The ideas outlined in this discussion represent the views of individuals - With the establishment of the pre-Lab, the formal process and the schedule will be defined by the pre-Lab management
- The questions touched upon here are multi-facetted - and the format of this “discussion” does not allow to fully explore all angles. We will
  - start with an introduction of a possible sequence of steps towards detector construction
  - hear views on selected topics
  - have the opportunity to briefly touch on questions from the audience coming in via the google Q&A form

The Path Towards Detector Construction

For the Collider Detectors

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		Plausible duration
Community engagement	Sessions at LC workshops, dedicated “**community engagement workshop**” to bring together people and ideas	
	Expressions **o**f **I**nterest	1 year
Collection of ideas, consolidation	Review and consolidation Formation of “concept groups”	
	Letters **o**f **I**ntent	1 - 2 years
Downselect and collaboration forming	Review and consolidation Invitation for TDRs, collaboration forming	1 year
Technical design, preparation of construction	Technical Proposals / Framework TDRs Full detector & subsystem TDRs	3+ years

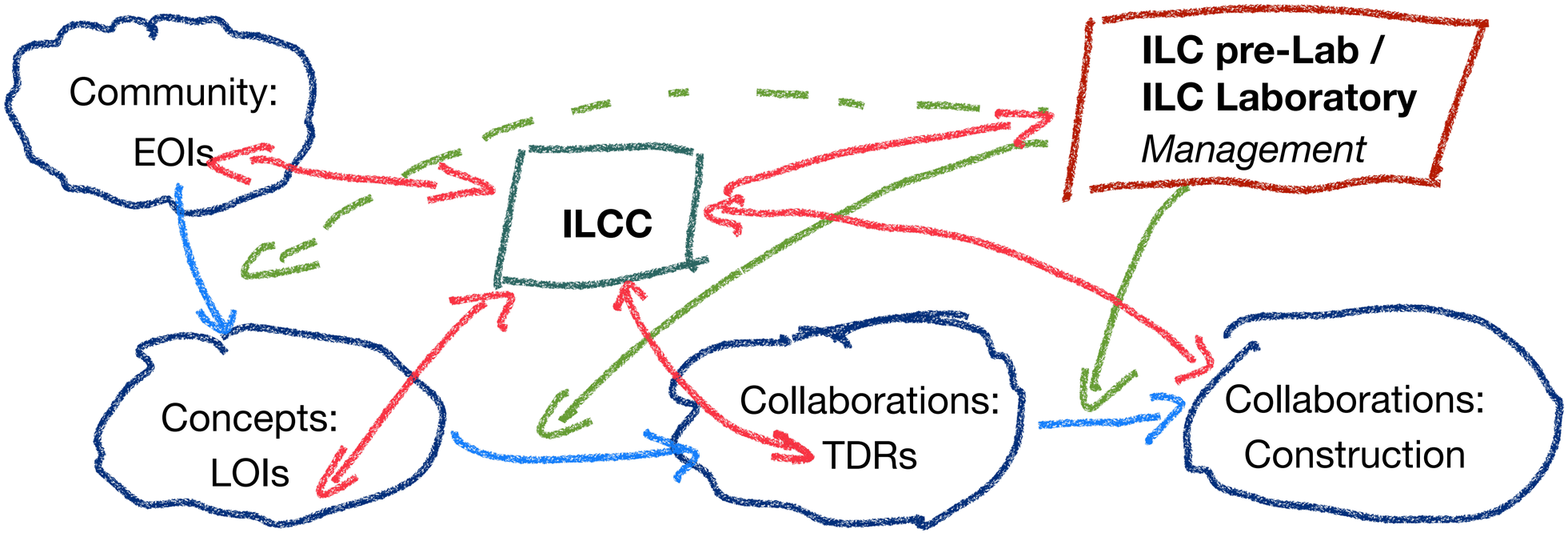
The ILC Committee ILCC

The Review Body for the Experiments

- The primary scientific committee for the review of
  - ILC Collider Experiments
  - ILC Non-Collider Experiments
  - R&D Collaborations focused on ILC detectors

Depending on number / complexity additional committees may need to be formed

- Hosted by the ILC pre-Lab / ILC Laboratory; if established prior to pre-Lab initially hosted by KEK



Community Questions & Comments I

Graham Wilson

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- There seems to me to be a lot of schedule/time-line tension among the goals of
  1. engaging as large a detector community as possible.
  2. incorporating the latest and greatest detector ideas that will also necessitate further R&D, but leading to potentially improved overall detector performance.
  3. having an open and welcoming process for the whole global community.
  4. the expeditious start-up of the physics exploitation given that detectors especially the large structures need a substantial lead time.

- There is also the issue of the number of detectors which has pros and cons on both sides and may be better to address not too late in the process (eg. at the LoI initiation stage). This is also something that is not a zero-sum game and likely is viewed differently by different funding agencies. Is it really necessary to wait until the post pre-Lab for the ultimate decisions on detectors? It would seem necessary to have tacit detector approval if not formal approval prior to TDR work and it would seem unwise to delay such steps to the ILC approval phase.

Discussion Topics

- The first steps: Pre-Lab funding, EOIs [Hitoshi]
- The time it takes: SiD as example [Marty]
- Additional questions to answer along the way [Andy]

Community Questions & Comments II

Not only on the timeline: Jinlong Zhang, Roman Pöschl

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- Two main detector concepts have been developed for a long time. Will the ILC detectors be mainly based on these two, or are also major changes/improvements with recent R&D progress allowed?
  - Will EoI, LoI be based mainly on the ILD/SiD relevant technologies/components, and/or be organized in the ILD/SiD frame?
  - The TDR will need baseline detector concept(s). How will such a baseline be reached (if not mainly based on ILD/SiD)?

- On the detector development, which role do you consider for the R&D Collaborations in the different phases (Now -> LoI, LoI -> TDR) of the process?
  - Note that the R&D Collaborations assemble already today the knowhow and provide the management structures for an efficient and timely conduction of the necessary developments towards a project. A tight communication between the R&D Collaborations and the emerging projects may be organised by the IDT.