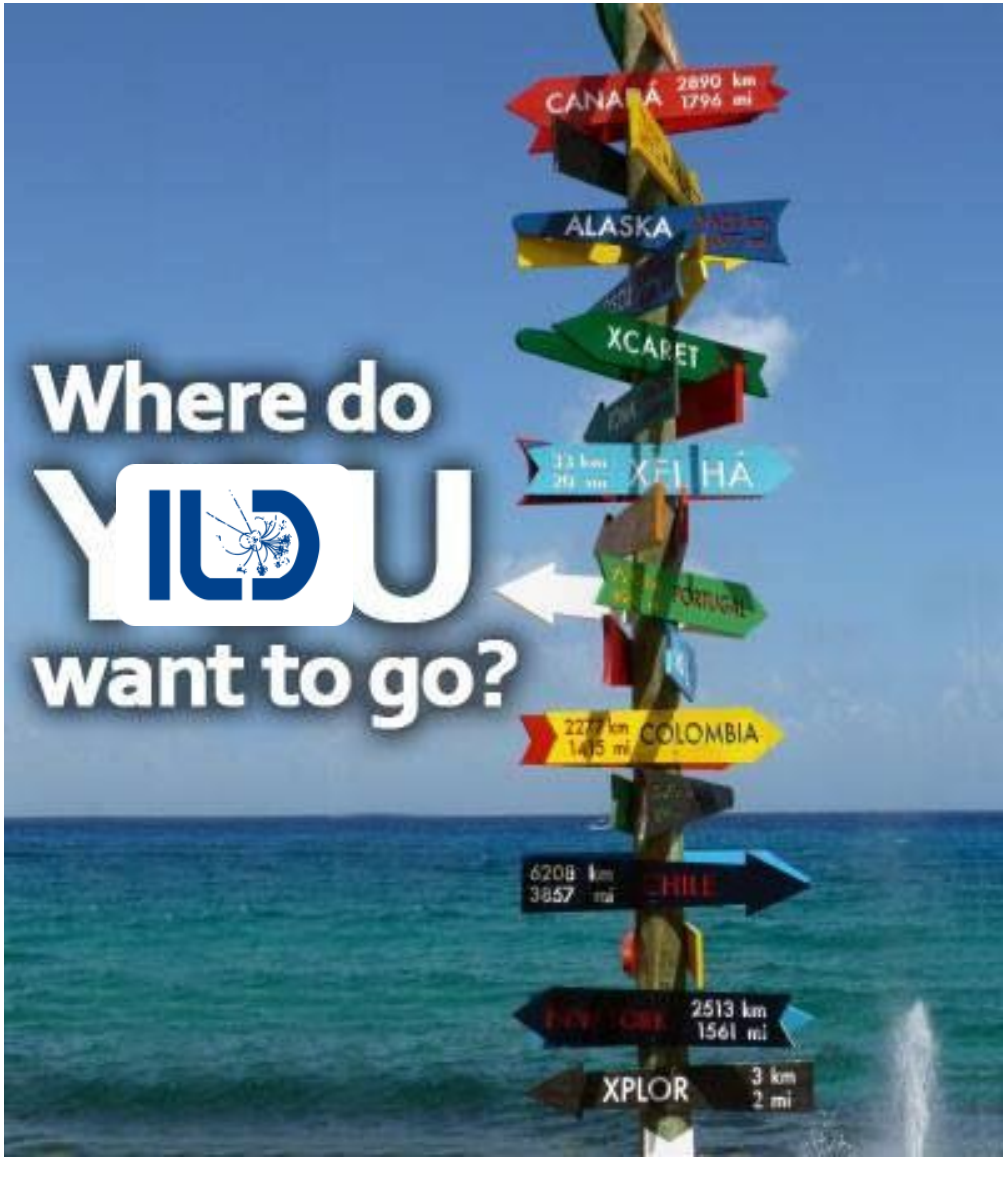

Where do
YOU
want to go?
ALASKA
XCARET
COLOMBIA
2513 km
1561 mi
XPLOR
3 km
2 mi

ILD future directions

- Major point: “finish” our work on ILD@FCC-ee
  - Converge on a ILD@FCC design
  - Make tracking to work, study the performance
  - Will there be one of two ILD designs? (low energy – high energy?)

  - Need to update the material budget
    - Cooling systems to be included in the estimate

  - TPC@ILDFCC:
    - Main issue is correction for distortions:
      - Need to define a strategy
      - How good is good enough
      - What is really the role of the TPC in ILD?
    - Do we want to define a new baseline technology for the TPC?

ILD future activities

- Forward calorimeter system
  - Far forward photon detector?
  - Optimise the interface between LCAL and forward CALO Ring
- Magnet issues
  - Make the case for higher fields at FCC-ee
  - Update of the technologies for the coil: our current baseline will probably not be possible to produce at the moment
- Overall integration design
  - Future of push-pull operation?
  - Does the ILC integration work for the FCC-ee?

Future Challenges

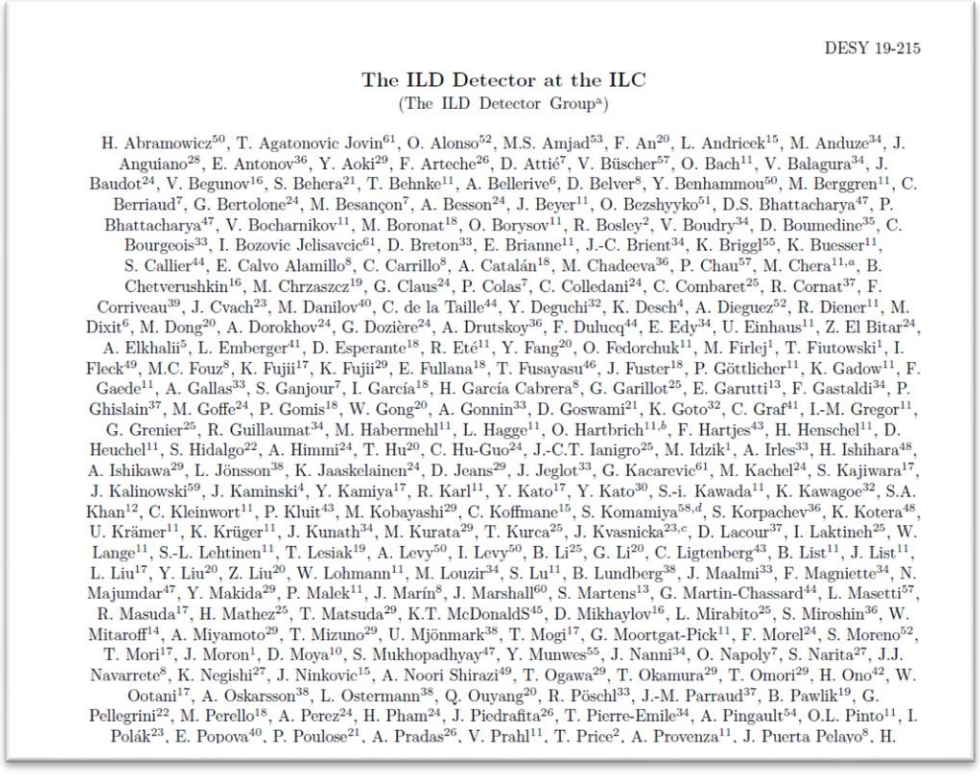
- Funding of future collider activities focused on concepts are difficult to fund at the moment
- Need to strongly connect to the DRD collaborations to ensure tight integration of R&D into concept work
- Funding of the software and methods work is essential – and gets more and more difficult to ensure
- Move our reconstruction tools to modern methods: machine learning, etc

EPPSU report

Ties Behnke

8.10.2024

ILD meeting Paris



DESY 19-215

The ILD Detector at the ILC

(The ILD Detector Group[a])

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ILD EPPSU submission 2019

Goal of the document

ILD

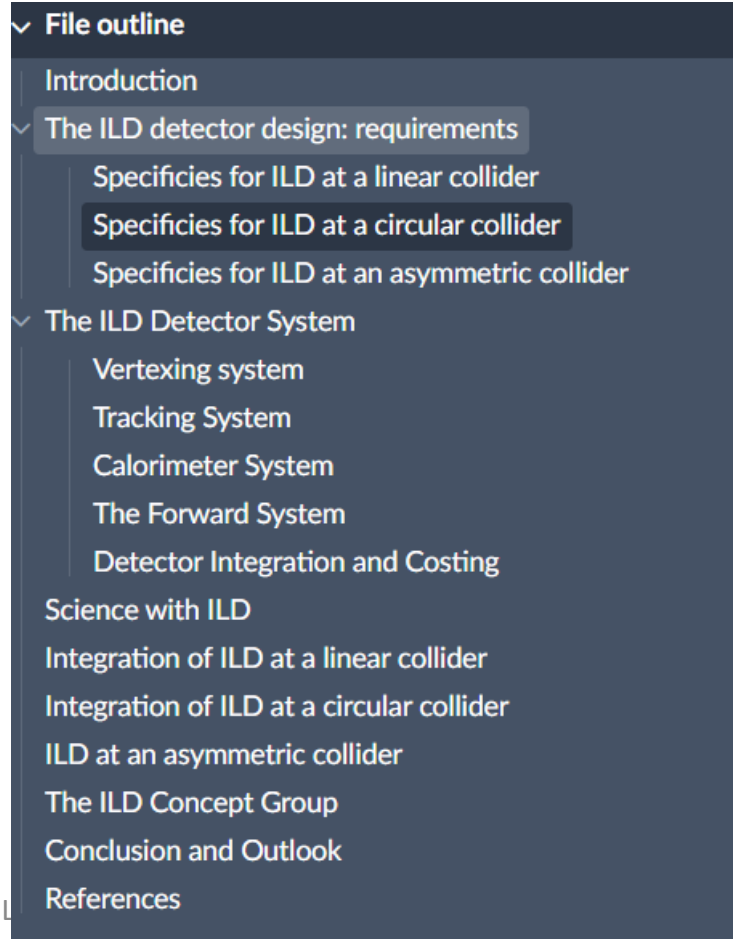
- Position ILD in the current EPPSU discussion
- Demonstrate the current state of the ILD collaboration and its ambitions
- Update the state of the ILD detector concept
- Update the ILD concept at a circular Higgs/ EW factory

On a more political level:

- “we are still there”
- Demonstrate the importance of “options” in a FCC-ee dominated discussion
- Demonstrate the impact options have on the detector (energy reach, etc)

Proposed Structure

- Less focus on ILC
- More focus on broad application
- Focus on the changes needed to adopt to different options



1. Introduction

2. The Concept of the ILD detector design
    1. Specificies for ILD at a linear collider
    2. Specificies for ILD at a circular collider
    3. Specificies for ILD at an asymmetric collider

3. The ILD Detector System
    1. Vertexing system
    2. Tracking System
    3. Calorimeter System
    4. The Forward System

4. Detector Integration and Costing
    1. Integration of ILD at a linear collider
    2. Integration of ILD at a circular collider
    3. Integration of ILD at an asymmetric collider

5. Science with ILD
    1. Tools to do science with ILD
    2. ILD performance at main key measurements

6. The ILD Concept Group

7. Conclusion and Outlook

8. References

The Document

- Written in latex
- Use overleaf as tex interface
  - Currently using collabtex platform (accessible from https://collabtex.helmholtz.cloud/project/66903f49e349fa443428dfce
  - Login possible with your local account
  - Maybe need to move to more fully featured site, if restrictions on collaborative editing are too severe
- Timeline
  - First draft by Christmas
  - Iteration with the collaboration until March
  - Submission end of March (?)
  - Submission of the document to archive (publish?)

Editing team

- Main editor: Kiyotomo and myself
- Supporting editors: ILD ET
- Need additional volunteers to work on specific sections
- Document drafts will be submitted to the usual ILD review process through the ILD PSB