ERL Paper Status and Next Steps

Max Klein, Andrew Hutton

114 pages by today noon, work in progress despite IPAC and duties all have – many thanks!

Paper Status

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Make sure your active colleagues appear here

Institutes

- ¹ Berlin HBZ
- ² BINP, Novosibirsk
- ³ Brookhaven National Lab
- ⁴ CERN
- ⁵ Cornell University
- ⁶ Daresbury (STFC)
- ⁷ TU Darmstadt
- ⁸ INFN Frascati
- ⁹ University Liverpool
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ORAFIT

← And your institute name is right, please

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The paper is indeed converging very well, it needs two more intense weeks and cross reading to have a reliable base for 4.6.

4. June - Symposium on ERLs

Present the ERL development to the community at large. At this stage: mainly present the White Paper, and look for comments.

Agenda for ERL Symposium (tbc today)

13:00	
Opening	10' Dave N
Introduction	10' Max K
Facilities	20' Andrew H
High Intensity Sources	20' Boris M
SCRF Developments	20' Bob R
short break 10'	
	20' Oliver B
Low Energy Physics with ERL	20' Jan B
Industrial Applications	20' Peter W
Energy Recovery and Sustainability	20' Erk J
16:00	

Discussion

chair Max or Andrew

Webster's New Encyclopedic Dictionary

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sym·po·si·um \sim-'pō-zē-əm also -zhē-əm, -zhəm\n, pl·sia \-zē-ə, -zhē-ə, -zhə\ or -si·ums | : a formal meeting at which several speakers deliver short addresses on a topic or on related topics 2 a: a collection of opinions on a subject b: Discussion 2 [latin, "drinking party after a banquet", from Greek symposion, from sympinein "to drink together", from sympinein "to drink together", from sympinein "to drink together", from sympinein "to drink"]
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Date: Friday 4. June 13-17 o'clock CEST

Invitation via several mailing lists

- ERL Atoosa Meseck
- rECFA Max [national contacts]
- EP CERN (Manfred Krammer)
- Any other?

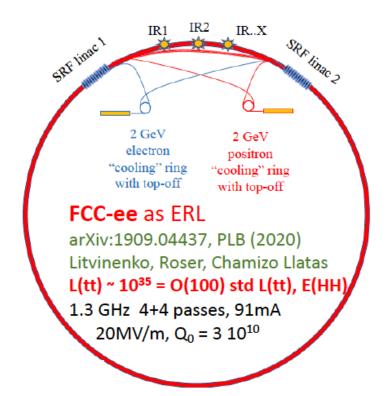
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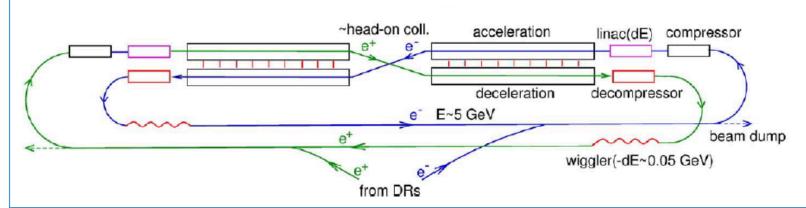
The e⁺e⁻ SubPanel

Have two ERL proposals with major impact on future e+e- collider(s). LDG re-emphasised the expectation that our report was reliable evaluation regarding their promises/prospects and required R+D

We thus agreed with David Newbold (following our meeting 6.5.) To establish a sub-panel on these recent proposals, not on ep as this has been scrutinised and developed over a decade now.

This is NOT about any decision or preference but a technical evaluation.





ILC as ERL

V. Telnov at LCWS 3/2021 in preparation L(ERL) ~ 10^{36} = O(100) std L(ILC) This yields O(10^7) HZ events in 3 years. 1+1 passes, I = 160m f=750 MHz, 20MV/m, Q₀ > 10^{10} Goal: Evaluate two new proposals for high energy e⁺e⁻ Colliders: Vladimir Litvinenko et al),

https://doi.org/10.1016/j.physletb.2020.135394; and Valery Telnov,

https://indico.cern.ch/event/995633/contributions/4275159/attachments/2208757/3755756/telnov-lcws21.pdf

The sub-Panel should evaluate the technical and financial implications of the two proposals compared to the FCC-ee and ILC projects.

What are the technical advances, specifically in luminosity?

What are the technical obstacles requiring R&D?

What is the rough cost implication (to about 10%)?

Sub-Panel members

Reinhard Brinkmann (DESY)

Oliver Brüning (CERN)

Alex Chao (SLAC),

Andrew Hutton (Jefferson Lab) - Chairperson

Sergei Nagaitsev (Fermilab)

Max Klein (Liverpool)

Peter Williams (STFC) in confidence

Akira Yamamoto (KEK)

Frank Zimmerman (CERN)

The e⁺e⁻ SubPanel

Dates for the sub-Panel:

Kick-off meeting mid-June 2021 Completion by September 3, 2021

Deliverable:

A short report (`20 pages) detailing the conclusions of the evaluation, which should be agreed and supported by the entire sub-Panel and published as an Appendix to the full Panel report.

Methodology: being worked out

Sessions open to ERL panel members
Procedure and Chair agreed with
Dave Newbold (LDG) and the proponents
Valeri Telnov, Vladimir Litvinenko et al

Further

Further steps: post Symposium and long write-up:

common workshop (LDG) – June, no date yet

EPS conference

Preparation of genuine roadmap (needs new interaction with LDG, but draft 30-40p we have to have by summer)