

International Particle Physics Outreach Group

WG on Explaining Particle Physics to Lay Audience

(Report from WG meeting 6 May 2022)

<https://indico.cern.ch/event/1155233/>

Thomas Naumann & Barbora Bruant Gulejova

Alberto Ruiz, Jonivar Skullerud, Farid Ould-Saada, Ivan Melo



How to explain the need for a new e^+e^- collider to the public

WG on Explaining PP to Lay audience

Friday 6 May 2022, 10:00 → 11:00 Europe/Zurich

Description ZOOM link:

<https://cern.zoom.us/j/2117103259?pwd=RVNGVURZbUx0YzRKNHFuREEWQWRSQT09>

Meeting ID: 211 710 3259

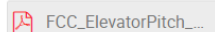
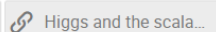
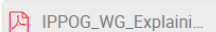
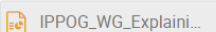
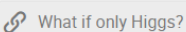
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Contact ✉ barbora.gulejova@cern.ch
✉ thomas.naumann@desy.de

10:00 → 10:15 Welcome by conveners

🕒 15m

Speakers: Barbora Bruant Gulejova (Universitaet Bern (CH)), Thomas Naumann (Deutsches Elektronen-Synchrotron (DE))

10:15 → 11:00 Discussion: How to explain the need of new e^+e^- colliders to society?

🕒 45m

We aim to:

- draft a text explaining the need for new e^+e^- colliders to the public
- revisit the IPPOG Wisdom collection structure draft document (https://docs.google.com/document/d/1XG_QaKNUJKnL9qOYbPixrgoNMsw40jygu5cjHJCPURQ/edit)
- find useful resources for the planned publication on explaining the need of new machines

Speaker: WG members

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Explain the need for a new e^+e^- collider to the public

- **Explain** the outstanding physics issues to the general public, lay persons and decision makers
- **Cosmic connection:**
Macrocosm: Dark energy, Dark matter
Microcosm: scalar fields, BSM, neutrinos, ...
- What is the role of scalar fields in the Universe?
- Continue to investigate the SM with focus on the Higgs.
- How can new **e^+e^- colliders** (circular and linear) address this?
- Higgs **factory**: precision + statistics vs energy

Action plan

- Write short popular document for the public, lay persons and decision makers
<https://docs.google.com/document/d/19VcUDd1we-PIKVG0A9pdQZVgvfZwT7ya83vVnnWGt0s/edit>
- list of:
 - open physics questions
 - how future machines could answer them
 - potential of new discoveries
- implemented Albertos, Jonivars etc. comments
- simplified language