First ECFA WORKSHOP. on e⁺e⁻ Higgs / Electroweak / Top Factories 5-7 October 2022, DESY, Hamburg

ECFA Higgs/Top/EW Factory WG 1 - Physics Potential



5-7 October 2022



Chris Hays



Karsten Köneke



Fabio Maltoni

ECFA-WHF-WG1-HTE-conveners@cern.ch

Working Group 1 - Physics Potential: How do we fit in?

WG 1 activities (indico) and organization (twiki):

Subgroups:

- WG1-PREC (Precision in theory & experiment):
 - Conveners: Ayres Freitas (Pittsburgh), Paolo Azzurri (Pisa), Adrian Irles (Valencia), Andreas Meyer (DESY) ecfa-whf-wg1-prec-conveners @cern.ch
- WG1-GLOB (Global interpretations in (SM)EFT and UV complete models):
 - Conveners: Sven Heinemeyer (IFCA/IFT), Alexander Grohsjean (DESY), Junping Tian (Tokyo), Marcel Vos (Valencia), Jorge de Blas (Granada) ecfa-whf-wg1-glob-conveners @cern.ch
- WG1-HTE (HIGGS-TOP-EW and connection with (HL-)LHC):
 - Conveners: Chris Hays (Oxford), Karsten Koeneke (Freiburg), Fabio Maltoni (Louvain) ecfa-whf-wg1-hte-conveners @cern.ch
- WG1-FLAV (Heavy Flavours):
 - Conveners: David Marzocca (Trieste), Stephane Monteil (Clermont Ferrand), Pablo Goldenzweig (KIT) ecfa-whf-wg1-flav-conveners @cern.ch
- WG1-SRCH (Feebly interacting particles, direct low mass searches):
 - Conveners: Roberto Franceschini (Rome III), Rebeca Gonzalez (Uppsala), Filip Zarnecki (Warsaw) ecfa-whf-wg1-srch-conveners @cern.ch
- WG1 Seminar series, workshops, etc, see this indico category

Higgs-Top-EW and connection with (HL-)LHC subgroup (HTE)

Organization:

- Group meetings: WG1-HTE
- egroup mailing list
 - You can also subscribe to the egroups; just search for "ECFA-WHF-WG1" in egroups list .
- Conveners: Chris Hays (Oxford), Karsten Köneke (Freiburg), Fabio Maltoni (Louvain)
- Conveners' email: <u>ecfa-whf-wg1-hte-conveners@cern.ch</u>
 - \circ $\hfill Please don't hesitate to talk to us for any ideas, suggestions, questions!$

Mandate:

- Identify measurements that the (HL-)LHC can perform in order to increase the physics potential of a future Higgs/Top/EW Factory.
 - High-precision inclusive measurements
 - $\circ \qquad \text{Differential measurements, e.g., at high } p_{T}$

o ...

• The physics potential of an e⁺e⁻ HTE factory will also be compared to the potential of other future colliders.

You can find all our events, meetings, and workshops in our indico category.

Our activities

First kickoff workshop: April 20-22 2022 (hybrid CERN/zoom)

- https://indico.cern.ch/event/1132480/
- Overview of activities, including reports from Snowmass

Plan series of mini-workshops (3-4h) going up in e⁺e⁻ cms energy [zoom-only]:

- First mini-workshop: September 23 2022
 - https://indico.cern.ch/event/1196494/
 - Z-pole physics
- Next mini-workshop on WW threshold physics (date TBC)

() Mattermost

We will use mattermost for online and offline discussions.

Created new ECFA-WHF-WG1 team. Invitation link

 Use your CERN login, your own institute login, or social media login.

After registration to the team, join our public **HiggsTopEW channel** with <u>this link</u> (or search for the channel in the team)



When answering/commenting on a specific post, please use the "**reply to**" option that appears on the top right of the post after hovering with the mouse.