

# Plan for Today's Snowmass Agora Session

- Four introductory talks
  - 15:10-15:25 – *Tao Han*, Physics at the Linear Colliders
  - 15:25-15:40 – *Hasan Padamsee*, International Linear Collider (ILC)
  - 15:40-15:55 – *Steinar Stapnes*, Compact Linear Collider (CLIC)
  - 15:55-16:10 – *Emilio Nanni*, Cool Copper Collider (C<sup>3</sup>)
- About 25 minutes for answers by the speakers on a subset of questions asked in the distributed Google Doc
  - The rest of the questions are expected to be answered after the meeting today in the Google Doc
- About 25 minutes for live questions and answers by the speakers
  - Raise your hand in Zoom and we will call the name of the person to ask next question
  - Google Doc is the place to ask questions, if no time at the meeting today
- Keep your microphone muted, unless speaking. Keep your camera off but turn it on when speaking/asking questions
- We finish as planned at 5:00pm
  - Discussions will certainly continue at the future events

# Selected questions from Google Doc (1)

## Physics

- **Quite a lot of time has passed since the original ILC physics case, and the previous Snowmass, and an enormous amount of data from the LHC has poured in. Are there new efforts to have metrics to fairly compare the physics potential of 250 GeV machines to the LHC/HL-LHC and what do they look like? – Patrick Meade, Stony Brook –**
  - Tao

## Upgrades

- **From Higgs to “few TeV”: Will the full “few TeV” IR length need to be built during the earlier Higgs factory era to save later relocation costs? – John Seeman, SLAC –**
  - Steinar, Hasan, Emilio

## MDI

- **At the ATF2 at KEK in Tsukuba the necessary diagnostics were shown to achieve the appropriately scaled IP beam sizes but relatively few upstream elements were involved. How will the diagnostic systems have to be scaled physically, and in their tuning time, to achieve the very small collider IP spot sizes (and with two beams) with far larger number of upstream elements requiring tuning? – John Seeman, SLAC –**
  - Hasan, Steinar, Emilio

# Selected questions from Google Doc (2)

## *Positrons*

- **How important/beneficial will be to have polarized positrons and what minimal degree of polarization would be required to get these advantages?** – *John Seeman , SLAC* –
  - Tao
- **What would be the cost savings for the machine design without beam polarization...?** – *Vladimir Shiltsev, Fermilab* –
- **Positron production for all machines is expected to exceed previously achieved rates by a significant (1-2 orders of magnitude) factor - what makes the proponents hopeful?** – *Vladimir Shiltsev, Fermilab* –
  - Steinar, Hasan

## *Machine alignment*

- **Could you please comment on alignment and jitter requirements and tolerances and how we can demonstrate that such alignments are achievable in real operating conditions.** – *Sergo Jindariani, Fermilab* –
- **Alignment, jitter and BPM resolution are critical to attain design luminosity - what are the main experimental studies and evidences that they can be realistically achieved?** – *Vladimir Shiltsev, Fermilab* –
  - Steinar, Hasan, Emilio

# Selected questions from Google Doc (3)

## *Safety*

- Re C<sup>3</sup>: **With large quantities of LN in the tunnel, how will the personnel safety (ODH) need to be handled to allow for maintenance as nitrogen doesn't act (i.e., rise) like He? – *John Seeman, SLAC***
  - Emilio