



Contribution ID: 32

Type: Oral presentation using Zoom

## Photon collider based on the EU XFEL linac as a prototype of the PLC at the ILC

*Thursday, 28 October 2021 16:10 (20 minutes)*

We consider a gamma-gamma collider with  $W < 12$  GeV based on 17 GeV linac of the EU XFEL. High-energy photons will be obtained by Compton scattering of  $0.5 \mu\text{m}$  laser photons on the existing 17.5 GeV electron beams. Such a collider would be an excellent place for the development and application of modern technologies needed for the PLC: powerful lasers, optical cavities and low-emittance electron sources. The physics program would include spectroscopy of  $C^{++}$  resonances in various  $J^P$  states. Variable circular and linear polarizations will help in the determination of quantum numbers. It is shown that two-photon resonances in the 10 GeV region can be well observed in the presence of a large multi-hadron background.

### 1st preferred time slot for your oral presentation

15:30-17:30 JST (8:30-10:30 CEST, 2:30-4:30 EDT, 23:30-1:30 PDT)

### 2nd preferred time slot for your oral presentation

13:00-15:00 JST (6:00-8:00 CEST, 0:00-2:00 EDT, 21:00-23:00 PDT)

**Primary author:** Prof. TELNOV, Valery (Budker INP and Novosibirsk State Univ.)

**Presenter:** Prof. TELNOV, Valery (Budker INP and Novosibirsk State Univ.)

**Session Classification:** V: Alternative collider modes

**Track Classification:** Parallel sessions: Alternative: Session V: Alternative collider modes