

Snowmass 2021 – RF05 CLFV

Tau Decays and Transitions

Sacha Davidson (Montpellier), Bertrand Echenard (Caltech)

July 23, 2020

The CLFV group is organizing a series of $\sim 1/2$ day workshops during the summer to discuss various CLFV processes and explore synergies with other frontiers.

Upcoming workshops – Thursdays at 10h00am Central Time (each 3 weeks)

- July 2: Muon transitions and decays, muonium-antimuonium
- *July 23: Tau decays, electron-tau transitions*
- August 13: *Meson and baryon decays (with RF01)*
- September 3: *Heavy states decays (with EF02 / EF09)*
- September 24: *CLFV with high intensity muon factory*

Update: The Snowmass Community Planning Meeting will take place during the *week of October 5*, virtually.

RF05 – CLFV TWIKI page: <https://snowmass21.org/rare/clfv>

Slack channel: rpf-05-clfv

Mailing list: SNOWMASS-RPF-05-CLFV@FNAL.GOV

Letters of Interest (submission : April 1, 2020 – August 31, 2020)

- Help conveners to organize activities and encourage the community to study these ideas
- Should contain a brief description and cite the relevant papers to study
- Submission at <https://snowmass21.org/loi>

Contributed Papers (submission : April 1, 2020 – July 31, 2021)

- Part of the Snowmass proceedings and permanent record of Snowmass 2021
- May include white papers on specific scientific areas, technical articles presenting new results on relevant physics topics, and reasoned expressions of physics priorities, including those related to community involvement.
- Submission instructions: <https://snowmass21.org/submissions/>

Expression of Interest

- Informal message to conveners to aid us in probing the interest of the community at large, organize future meetings and facilitate connections between people interested in similar studies. Please fill this [google form](#). **Also available on our webpage**
- Feel free to contact us with ideas or for volunteering to show your work or your ideas

Please help us to reach out to the community and encourage participation!

CLFV - Tau Decays and Transitions

10:00 AM	→ 10:10 AM	Introduction Speakers: Bertrand Echenard (Caltech), Sacha Davidson (IN2P3)	🕒 10m
10:10 AM	→ 10:40 AM	Theory overview: CLFV at tau scale Speaker: Vincenzo Cirigliano (Los Alamos National Laboratory)	🕒 30m
10:40 AM	→ 11:00 AM	Tau LFV decays: BES III and Super Tau Charm Factory Speaker: Dr Xiaorong Zhou (USTC)	🕒 20m
11:00 AM	→ 11:20 AM	Tau LFV decays: FCC-ee perspectives Speaker: Mogens Dam (Niels Bohr Institute, Copenhagen University)	🕒 20m
11:20 AM	→ 11:50 AM	Mono tau production at LHC Speaker: Dr Greljo Admir (CERN)	🕒 30m
11:50 AM	→ 12:10 PM	Break	🕒 20m
12:10 PM	→ 12:30 PM	TauFV: a fixed-target experiment to search for LFV tau decays Speaker: Prof. Guy Wilkinson (University of Oxford)	🕒 20m
12:30 PM	→ 12:50 PM	Tau LFV decays: LHC experiments Speaker: Dr Jian Wang (University of Florida)	🕒 20m
12:50 PM	→ 1:20 PM	Tau LFV decays: Belle II Speaker: Swagato Banerjee (University of Louisville)	🕒 30m
1:20 PM	→ 1:40 PM	Electron-to-tau transition at EIC Speaker: Dr Jinlong Zhang (Stony Brook)	🕒 20m
1:40 PM	→ 2:00 PM	Discussion	🕒 20m

The meeting will be recorded, and it seems that the file size depends on how many people share their video. We would appreciate if everybody but the speaker could turn off the video feed to limit file size.

Please raise hands to ask questions, we have allotted some time for discussion at the end of each talk.

Feel free to use the chat to communicate in the meantime, and repost important questions / comments to our slack channel.

Enjoy the workshop