

# CLFV – white paper discussion

S. Davidson (LUPM), B. Echenard (Caltech)

# Welcome to the first CLFV white paper meeting

## Today's meeting goal

- Provide the audience an overview of the white paper planned for the CLFV group
- Provide a short description of the white paper content and timeline, and solicit input from the audience
- Identify potential synergies we might have missed, or additional collaborators that would be interested in contributing to a WP
- Answer any question about the Snowmass process

**What I heard a few years ago:** “A well written 20 page WP expressing a clear vision with logic and some punch is very useful”

**Next meeting:** planned for early February to review progress and issues

## White paper summary

Topic	Editor	Comment
Current muon-to-electron conversion	S. Middleton (+ Y. Kuno / M. Aoki)	Mu2e, COMET and DeeMe, with theory ( $\mu^- \rightarrow e^+$ , $\mu^- \rightarrow e^- \alpha$ )
Current $\mu \rightarrow 3e$	A. Schoening	Mu3e expt
Current $\mu \rightarrow$ electron gamma	A. Papa	MEG-II, with theory projections (axion-like particle)
New concepts for $\mu \rightarrow$ electron gamma	G. Tassielli	Next gen expts
Mu2e-II	F. Porter	Incl. theory perspectives ( $\mu^- \rightarrow e^+$ , $\mu^- \rightarrow e^- X$ , ...)
Muonium-antimuonium	A. Petrov	Theory + MACE
Tau	S. Banerjee (+ V. Cirigliano)	Theory + all expts sensitive to tau CLFV
New facility at FNAL	B. Echenard	Next gen expts with mu storage ring
Heavy state decays	M. Dam	With EF02/09 and theorists

While it was easier to embed theory into the different WP than writing a single overview, we need a big picture summary in the topical group report, and each theory section should be written with the objective to contribute to this summary.

We plan to post this list to the CLFV wiki page to advertise the different WP (with LOIs) and provide contact information to people who might want to contribute