

# ELOISE – Reliable Background Simulation at sub-keV Energies

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- Experiments like CRESST and NUCLEUS that are searching for rare events use  $\text{CaWO}_4$  and  $\text{Al}_2\text{O}_3$  targets at  $O(10 \text{ eV})$  energy regime
- A reliable background simulation is crucial
- Simulation codes like Geant4 are not validated for these materials & energies
- No experimental reference data are available
- Over four years ELOISE will validate and, if needed, develop improved physics models for  $\text{CaWO}_4$  and  $\text{Al}_2\text{O}_3$  at sub-keV energies



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