**TITLE**: The Early Eocene and PETM: Challenging our Understanding of High-CO2 Worlds, Evaluating Climate Models, and Assessing Implications for our Future Climate

**DESCRIPTION**: The early Eocene and PETM provide natural experiments that challenge our understanding of how our planet operates under conditions of high concentrations of atmospheric CO2.  They also provide an opportunity to evaluate climate models that are used to make future climate projections, because the CO2 concentrations at these times were similar to those expected for the end of this century.  As such, investigations of this time period have relevance for society and the IPCC, as well as for understanding the behaviour of our planet.  In this session we will bring together the paleoclimate data and modelling communities, welcoming submissions that focus on reconstructing, simulating, and understanding the climate, biogeochemistry and environment of the early Eocene and PETM.  In particular, we welcome model-model, model-data, and data-data intercomparisons that rigorously evaluate our models and climate proxy reconstructions under these high-CO2 time periods, and assess the implications for future climate projections.