Flamelet Radiation Modeling JEFFREY DOOM, Minnesota State University, KRISHNAN MAHESH, University of Minnesota — A flamelet model is proposed that couples soot and radiation. The soot model from Carbonell et al. (*Combust. Flame.* 2009) is used. The radiation model is the P_1 gray and non–grey model from Modest (*Academic Press.* 2003) which are cast into the flamelet equations. A sooty ethylene flame is studied and a series of canonical calculations are performed. Results associated with the soot and radiation will be shown and compared to experiment.

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