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Modeling of composition changes in Titan atmospheric entry plasma NYA LAMPKIN, JAEL STANTON, DERETH DRAKE, Valdosta State University — The Huygens mission to Titan showed us a great deal of interesting things about the atmosphere of Titan. During the atmospheric entry phase for the lander, most of the kinetic energy of the probe was lost in the form of thermal ionization of the atmosphere, i.e. a plasma is formed around the probe during entry. In this presentation we will describe the chemical composition, temperature, and pressures of the atmosphere at different altitudes. We will then show a basic gas kinetic model to determine how the composition changes during the thermal ionization process.

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