

Abstract Submitted
for the TSS18 Meeting of
The American Physical Society

Design of an SFA Shock Tube Facility. CONNOR O'LEARY, Stephen F. Austin State University — A shock tube facility is being designed and constructed at Stephen F. Austin State University for use in gas dynamics and chemical kinetics research. It will be implemented in a newly-constructed Ed & Gwen Cole STEM building on campus. The concept was modeled and tested using computer aided design software and is intended to be modular to allow for modifications during future experiments. The apparatus is designed to withstand pressures of up to 100 atm behind the reflected shock region where experiments will occur. Test temperatures will be between 600 – 2500 K and the facility will be outfitted to test oxidation and pyrolysis of low vapor pressure fuels for next generation applications. A majority of the components will be constructed on site in the Department of Physics, Engineering, and Astronomy machine shop.

Connor O'Leary
Stephen F. Austin State University

Date submitted: 26 Feb 2018

Electronic form version 1.4