Abstract Submitted
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Spectral Characterization of Hall Effect Thruster Exhaust.[1] OLEG BATISHCHEV, ALEXANDER HYDE, Northeastern University, JAMES SZABO, Busek Corp — Extreme-UV spectra of a Hall Effect Thruster operating on Xe gas are collected and emission lines of various ions, neutrals and possible impurities are identified. Next, FUV-MUV spectra are examined for notorious boron nitride lining erosion products, and compared to previous results [1,2]. Finally, a recently developed UV-VIS high-resolution system [3] is applied to measure the axial velocity of Xe+ ions in the plasma plume at different spatial locations. Different operational regimes are compared. [1] William A. Hargus, Jr. Joshua Strafaccia, AIAA-2005-3529 Joint Propulsion Conference, Tucson, AZ. [2] M. Celik, O. Batishchev, M.Martinez-Sanchez, Vacuum 84(9), April 2010, 1085-1091. [3] A. Hyde, O. Batishchev, Review of Sci. Instr. 91(063502), June 2020.

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