

## ABSTRACT

TITLE: AN ASSESSMENT OF ELECTRIC PROPULSION  
RESEARCH, DEVELOPMENT, AND APPLICATION IN THE UNITED  
STATES

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This paper will discuss the development of Electric Propulsion technology in the U.S. from the 1960's to the present. It will summarize the various activities relating to arcjets, resistojets, pulsed plasma thrusters, magneto-plasma-dynamic thrusters, ion engines, and more recently, the evaluation of Hall effect thrusters of the SPT or Anode Layer type developed in Russia.

Also, demonstration test flight and actual mission applications will be summarized. Finally the future application of electric propulsion to near-term commercial communication satellites and planetary missions will be projected.

This history has been rich in diversity, and has involved a succession of types of thrusters, propellants, and electric power sources. With the recent use of arcjets on commercial communication satellites and the flight tests of ion engines for this application, it appears that electric propulsion is finally on the verge of wide spread application.

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