

SPACE PROPULSION SYMPOSIUM (C4)  
Propulsion System (2) (2)

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SOLID ROCKET MOTOR TECHNOLOGY DEVELOPMENT FOR THE TOROGOZ SOUNDING  
ROCKET PROGRAM**Abstract**

The Torogoz Sounding Rocket Program is a joint effort that involves academic institutions, industry professionals integrated as the El Salvador Aerospace Institute (ESAI), Salvadoran government agencies and private enterprises into developing a solid propellant sounding rocket capable of lofting a 15 kg scientific payload to 121 Km. This papers presents a summary of the research and development activities carried out in order to obtain the indigenous capability of developing solid rocket motors for the purpose of the sounding rocket program. This include the establishment of a composite solid propellant production facility, a testing facility to characterize solid propellant formulations, a manufacturing facility to build rocket motors and a test stand to perform static tests on the rocket motors. This is followed by a discussion of the development of an analytical model of internal rocket aerothermodynamics and solid propellant performance estimations and experimental tests carried out to validate these models.