

Winged Test Rocket with Fully Autonomous Guidance and Control for Realizing Reusable Suborbital Vehicle

Authors : Koichi Yonemoto, Hiroshi Yamasaki, Masatomo Ichige, Yusuke Ura, Guna S. Gossamsetti, Takumi Ohki, Kento Shirakata, Ahsan R. Choudhuri, Shinji Ishimoto, Takashi Mugitani, Hiroya Asakawa, Hideaki Nanri

Abstract : This paper presents the strategic development plan of winged rockets WIRES (Winged REusable Sounding rocket) aiming at unmanned suborbital winged rocket for demonstrating future fully reusable space transportation technologies, such as aerodynamics, Navigation, Guidance and Control (NGC), composite structure, propulsion system, and cryogenic tanks etc., by universities in collaboration with government and industries, as well as the past and current flight test results.

Keywords : autonomous guidance and control, reusable rocket, space transportation system, suborbital vehicle, winged rocket

Conference Title : ICMAE 2016 : International Conference on Mechanical and Aerospace Engineering

Conference Location : Jeddah, Saudi Arabia

Conference Dates : January 26-27, 2016