SPACE PROPULSION SYMPOSIUM (C4)
Propulsion Technology (1) (3)

Author: Ms. Olwen Morgan
Aerojet Rocketdyne, United States, olwen.morgan@rocket.com

# AEROJET ROCKETDYNE PROPULSION FOR NEXT GENERATION GEO COMSAT PLATFORMS

**Abstract**

Aerojet Rocketdyne has a broad range of existing flight-qualified chemical and electric propulsion product offerings to support the next generation of geosynchronous satellite platforms as well as an extensive set of new products in development that can provide on-ramps for future continued capability enhancement. Aerojet Rocketdyne currently provides monopropellant, bipropellant and electric propulsion products for eight different GEO Comsat platforms spanning commercial, civil and military markets. For each of these existing product offerings, Aerojet Rocketdyne has development programs in place to provide product enhancements that ensure continuous improvements in capability. For the next generation of GEO Comsat platforms, satellite manufacturers seek to improve the performance, capability and reliability compared to current platforms. Since propulsion represents the dominant portion of the launch mass of GEO Comsat platforms, propulsion improvements offer the greatest potential for mass and performance improvement. Aerojet Rocketdyne offerings of interest for next generation GEO Comsat platforms include monopropellant hydrazine engines, green/low-toxicity monopropellant engines; apogee-class bipropellant engines; low thrust bipropellant RCS engines; arcjet subsystems for station-keeping; Hall systems for both orbit raising and station-keeping; and ion systems for both orbit raising and station-keeping. The current and future product offerings described in this paper support a broad range of potential propulsion architectures including a standard all bipropellant architecture, dual-mode architecture, all electric propulsion architecture, and any combination of the above.