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Epsilon Launch Vehicle's Development Status For The Further Evolution

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The purpose of the Epsilon launch vehicle, the newest version of Japan's solid propulsion rocket, is to provide small satellites and probes with responsive launching with low-cost, user-friendly and efficient launch system.
Epsilon made its maiden flight in September of 2013 and successfully deployed the extreme ultra-violet planetary telescope satellite, "Hisaki". JAXA appreciates the advantages of the combined power of standardized small satellites and Epsilon's highly efficient launch system to increase space activities.
Now that the first flight was successfully finished, JAXA has been conducting intensive researches on a next generation Epsilon to launch a more powerful and lower cost version of Epsilon. In order to minimize technical risks and to keep up with demand of future payloads, JAXA plans to take a step-by-step approach toward this next Epsilon.
As the first step, the effective development in the short term is ongoing. That includes the development of the new second stage motor, the compactization of the avionics component, and the optimization of the liquid propulsion system in the post boost stage. The development will increase the launch capacity and payload usable volume, and reduce the launch cost. This development will be applied to the second flight of Epsilon to be scheduled for 2016, that is for the launch of the ERG (Exploration of energization and Radiation in Geospace).
As the second step, a research and development aimed at the further future is being conducted in the medium term. In this phase, some configurations are under consideration taking into account the synergy with Japan's Next Flagship Launcher, the successor of H-IIA Launch Vehicle.
Simultaneously, some elemental technologies for the future launch system are being researched mainly in the structural and electrical fields.