Boeing to build third all-electric satellite for ABS

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Boeing has been tapped by ABS, a commercial satellite provider, to build ABS-8, the third all-electric propulsion satellite for the company, based on the small platform 702SP. "The decision by ABS to order a third Boeing 702SP satellite is a testament to our customer's confidence in the capabilities of this satellite," said Mark Spiwak, president of Boeing Satellite Systems International, Inc. "With the innovative all-electric propulsion design, Boeing is able to maximize payload while

decreasing overall satellite mass and cost."

The ABS-8 satellite will be delivered in 2017. It will expand broadcast and enterprise services to Australia, New Zealand, the Middle East, Russia, South Asia and Southeast Asia.

Unlike chemically propelled satellites, Boeing's 702SP spacecraft uses Xenon Ion Propulsion System (XIPS) for both station-keeping and orbit-raising maneuvers. It allows significant mass advantage, due to the removal of the fuel tanks, enabling significant cost savings.

"The 702SP uses an all-electric propulsion system that relies exclusively on xenon as the propellant," Joanna E. Climer of Boeing Network and Space Systems, told SpaceFlight Insider. "With the all-electric propulsion design, Boeing is able to maximize payload while decreasing overall satellite mass and cost."

She added that with a lighter satellite mass, two 702SPs can be launched together in a Boeing-patented stacked configuration aboard the same launch vehicle – essentially cutting launch costs in half for customers who choose to launch their satellites together.

Climer also underlined XIPS' advantages when it comes to the environment protection and human safety.

"Xenon is an environmentally responsible inert, non-hazardous element. Unlike other propulsion systems that use hazardous liquid as a propellant, with the xenon-ion propulsion system (XIPS), there are no chemically hazardous operations for personnel at the satellite facility, during transportation, or at the launch site," she said.

The Boeing 702SP can operate in the S-, X-, C-, Ku, and Ka-band frequencies and, as with all Boeing 702s, is designed to provide 15 or

more years of satellite service with additional fuel capacity to enable multiple station changes over the life of the satellite.

ABS-8 will replace ABS-7 at the 116.1degE orbital location. The ABS-8 payload will include traditional wide beam coverage and a high powered Ku- and Ka-band multi-spot high throughput satellite (HTS) configuration.

With a payload of more than 9kW (kilowatts), it will be the highest power payload to date on a Boeing 702SP.

ABS' first all-electric propulsion 702SP satellite (ABS-3A) was launched earlier this year in a stacked configuration using Boeing-patented technology. A second ABS 702SP satellite (ABS-2A) is expected to be launched in the fourth quarter.

Source: Astrowatch.net

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