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## Hu Gets \$10.2 Million More For Cloud Study

December 16, 2009 | By Samieh Shalash, [sshalash@dailypress.com](mailto:sshalash@dailypress.com) 247-4537

HAMPTON — NASA is giving Hampton University an extra \$10.2 million to research mysterious clouds formed by ice that shine brightly at night at the Earth's poles.

The money is an extension of the \$140 million contract NASA gave the university in 2002 to build and launch a satellite that collects data on the clouds.

HU is trying to find out why the noctilucent, or "night shining," clouds form, how they're changing over time and if they're connected to climate change, said James Russell, principal investigator of the satellite mission and co-director of Hampton University's Center for Atmospheric Sciences.

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"You see the clouds just after sunset, in the first hour or so of darkness," he said. "They're a very iridescent blue color and very interesting-looking, and they capture your imagination. You're just drawn to them."

The clouds form about 50 miles above Earth, while regular clouds are about seven miles above the Earth, he said. Because they're so high, they reflect the sun's light even after it's below the horizon, Russell added.

In the Northern Hemisphere they appear mid-May through late August, and in the Southern Hemisphere from late November to late February.

Night-shining clouds made headlines this summer after being spotted in Colorado, Utah and France. In the past, they were visible only in Northern Europe and Canada.

Part of the satellite mission is to find out why they are being seen at lower latitudes, Russell said.

"They've been changing in ways we don't understand," he said. "They're getting brighter and occurring more often."

The \$10.2 million extension will allow HU to continue funding the AIM satellite, for Aeronomy of Ice in the Mesosphere, through September 2012. HU's mission is the first global mapping of the clouds, which were first spotted in 1885 but never thoroughly studied, Russell said.

NASA's initial \$140 million helped the idea go from "just paper and an idea to in-orbit and collecting two years of data," Russell said. "Once you get it into orbit, it's a lot less expensive to keep it going and collecting data."

HU's continual research shows that the clouds turn on and off like a "geophysical lightbulb," Russell said - they sometimes disappear, then fill the sky all at once for a few days, then turn off again.

#### 'NIGHT-SHINING' CLOUDS

- \* First seen in 1885
- \* Appear at the Earth's poles, 50 miles above Earth
- \* Formed from ice crystals
- \* HU launched a satellite to study them in 2007

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