

Sector focus

Aerospace



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It's Official:

Saturn is now the Furthest Known Destination for Goodfellow Materials

When the Cassini-Huygens spacecraft hurtled toward the surface of Saturn this month for the final act of its magnificent voyage, it took with it a sensor that had a direct connection to Goodfellow.

The spacecraft was made up of the Cassini orbiter, developed by NASA, and the Huygens probe, developed by the European Space Agency. Huygens was the first human-made object to land on a world in the distant outer solar system. Instruments on board Huygens included a sensor that measured thermal conductivity and thermal diffusivity by means of platinum wires supplied by Goodfellow. The sensor relayed to Earth data that showed a surface resembling wet sand or clay with a thin crust and a temperature of minus 180 degrees Celsius, as well as other information of great scientific value.

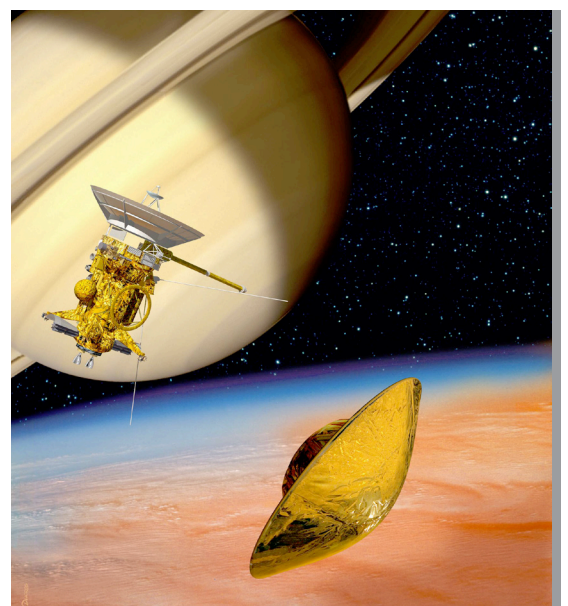
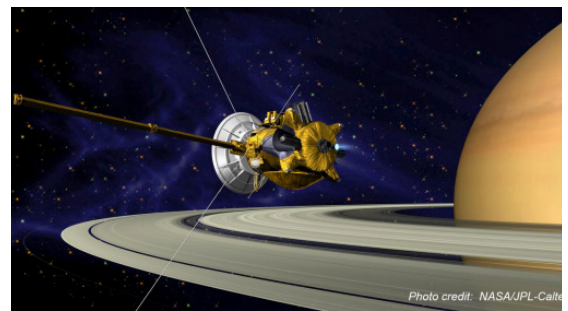
Seeking the origins of life

In the Titan portion of the mission, scientists are seeking clues to how life began on Earth. Titan is the only moon in the Solar System known to have clouds and a thick, planet-like atmosphere, an atmosphere that some scientists believe is very like early Earth. In fact, one scientist working on the project has described Titan as "a time machine taking us to the past to see what Earth might have been like," potentially yielding clues to how a primitive Earth evolved into a life-bearing planet. It is into the far-distant past of Titan's surface that the Huygens probe will descend by parachute to directly sample the atmosphere, provide mankind's first view of its surface, and hopefully begin to answer fundamental questions about our origins.

"Goodfellow is tremendously proud to have been part of the Cassini-Huygens project, one of the most ambitious and challenging interplanetary explorations ever mounted,"

states Stephen Aldersley, Goodfellow Chief Executive Officer.

"We eagerly look forward to contributing to future explorations of the solar system and beyond."



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One of the scientific components to be used in the exploration is the THP sensor, an instrument that measures thermal conductivity and thermal diffusivity by means of platinum wires supplied by Goodfellow. The sensor will transmit data relative to the temperature and thermal conductivity of the surface and lower atmosphere of Titan and the heat capacity of the surface material. Since a brownish-orange haze has always obscured the surface of Titan from observation by even orbiting spacecraft and the Hubble telescope, it is not yet known whether this giant moon has a solid, liquid, or intermediate surface. Therefore, all information gathered will be a tremendous contribution to the scientific community's body of knowledge.

A model of international scientific cooperation

Through the efforts of thousands of academic and industrial participants in 33 American states and 16 European countries, the Cassini-Huygens mission has become a model for future international space science cooperation. The project is one of the most ambitious and challenging interplanetary explorations ever mounted, far beyond the scope and cost that any one nation could afford. The benefits of the mission will be shared, too, as future projects make use of the new technologies and scientific discoveries derived from Cassini-Huygens. According to NASA, scientists expect to reveal new discoveries and enrich our understanding of phenomena in fields including biology, atmospheric chemistry and physics, climatology, volcanism, tectonics, the physics of disc systems such as galaxies and solar systems in formation.

