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NASA Chief Technologist Braun Talks Technology

By Lori Keesey

Bobby Braun, in his first official visit to Goddard as NASA's Chief Technologist, confirmed his commitment to investing in new technology, but said infusing truly advanced technology into spaceflight missions would require a culture change at NASA.

"Project managers are paid to worry about their projects," Braun told employees December 2. "It might require us to change our culture a bit so that infusion of new technology is not entirely a project manager's call. These strategic decisions need to be made by program managers and the Agency's senior leadership. To get the future we all want, we have to be willing to take informed risk," Braun said.

Human spaceflight, however, would not be an area where high-risk technologies would be tried unless they were already proven in orbit, according to Braun. For small science missions and technology-development activities, though, Braun said NASA should consider a higher level of risk acceptance.

Appointed to NASA's top technology job earlier this year, Braun made his remarks at an "Open Session" with employees, sponsored by the Goddard Office of the Chief Technologist (OCT) as part of the their "Goddard Innovates!" celebration. "It was great to see such a strong turnout and interest by Goddard employees in NASA's technology plans for the future," Braun said.



Caption: Scientist Keith Gendreau shows NASA Chief Technologist Bobby Braun a modulated X-ray source, a key component in an X-ray communication system and other instruments he is developing.

The day's activities also included OCT's annual poster session and the award of the 2010 "IRAD Innovator of the Year" award. This year, the organization's top prize went to Technologist John Hagopian and the Nanostructures for Stray Light and Diffraction Suppression team.

Team members receiving the award were: Jim Butler, Georgi Georgiev, Stephanie Getty, Hagopian, Greg Hidobro, Cleophus Hunt, Mary Li, Alex Maldonado, Manuel Quijada, Patrick Roman, Ron Shiri, June Tveerem, and Edward Wollack. They team got the award for groundbreaking work developing a nanotechnology-based material 10 times more effective than black paint used by instrument developers to suppress errant light. Stray light can obscure the faint signals scientists are trying to gather—a particular challenge for ocean-monitoring instruments and future planet-finding missions.



Caption: John Hagopian (left) and his 12-member Nanostructures for Stray Light and Diffraction Suppression team received this year's "IRAD Innovator of the Year" award for groundbreaking work in a new light-suppression technology. Goddard Deputy Director Rick Obenschain (center) and NASA Chief Technologist Bobby Braun were on hand to present the award

"Our job is to develop and advance new technology that will ultimately result in new missions and improved scientific measurements," said Goddard Chief Technologist Peter Hughes, explaining why his organization chose the team for the annual award. "Goddard has a well-deserved reputation for creating technologies that enhance instrument performance because we are adept at quickly infusing emerging technology for specific spaceflight applications. John's team demonstrated that key strength. And in doing so, he's leading the way in NASA's quest to bring about a new level of scientific discovery," Hughes said.

Braun, who was on hand for the awards presentation, earlier in the day spoke to employees who packed the Building 3 auditorium to learn more about NASA's plan to reinvigorate technology research and development. Since assuming his job, Braun and his team have laid out a multifaceted "Space Technology Program" aimed at providing seed funding to develop advanced technologies and experimental flight opportunities to advance their readiness levels.

"The piece of legislation to focus on is the NASA Authorization Act of 2010," Braun said in response to a question regarding the present uncertainty over NASA's budget. "We are ready. The planning is largely complete," Braun told employees. In the meantime, he urged employees to "spend time thinking of the future you would want to create for NASA. I want you to think about the investments we need to make today to enable the exciting missions in NASA's future."

Those ideas then should be proposed in future calls for proposals under the Goddard Internal Research and Development (IRAD) program or NASA's technology-development programs, once they receive funding, according to Braun.

For more information about the Office of the Chief Technologist and its initiatives, visit: <http://www.nasa.gov/oct>. ■