



## Meeting features teen space research

NASA set to debut new equipment in 2015

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Article Last Updated: 12/09/2007 02:39:20 AM PST

MENLO PARK — This past summer, Hassany Alejandre chugged along on his Mongoose BMX street bike to get to a pre-calculus class at Redwood City's Canada College and then to an internship at Stanford University in Palo Alto.

"It was pretty intense," said Hassany, 17, who lives in Menlo Park. But pedaling those miles Monday through Friday could bring the teen to lofty heights — literally. That's because his internship involved testing the insulation capacity of a space antenna that NASA is expected to launch in 2015. And now, Hassany is scheduled to share his findings during the American Geophysical Union conference in San Francisco on Thursday.

The event is expected to draw more than 10,000 scientists worldwide, said Jennifer Saltzman, outreach coordinator for the School of Earth Sciences at Stanford. Youngsters who have the opportunity to make a presentation "get recognition for their work and a lot of self-confidence," Saltzman said. "They also see the diversity of science — all the different research going on in the world. It's very inspirational to students like Hassany who are interested in science."

Hassany is getting a bit nervous, though. "It's mind-blowing," he said. "As I'm getting close to the date to present this, I'm starting to get butterflies in my stomach."

During his internship, Hassany worked with Stanford graduate students on a project linked to the Laser Interferometer Space Antenna. "I had to create a circuit board that could read voltage and temperature" outside and inside an insulator, he said. According to NASA, the antenna would serve as the "first dedicated space-based gravitational wave observatory." The device would "detect waves generated by binaries within our galaxy, the Milky Way, and by massive black holes in distant galaxies," NASA said. The antenna would help scientists better understand the fundamental physical laws of the universe and how it began. When the antenna "goes up, I can say, 'Wow, I helped. I had an influence on that spaceship,'" Hassany said.

But when Hassany was working on his project, he was too busy to think about the future implications. "It never crossed my mind something like that could happen," he said. "It's pretty cool." Saltzman said Hassany impressed his mentors at Stanford. "He was a fast learner and a good worker and showed lots of enthusiasm in learning more," she said. One mentor mentioned that his experiments progressed well with Hassany's assistance and wished the teen could have stayed longer, Saltzman added.

Currently, Hassany is a junior at Cañada's Middle College High School. There he takes college courses in the mornings and high-school classes in the afternoons. Hassany said he wants to attend medical school and pursue a career in neuroscience. "He's really challenging himself more than other high-school students," said Middle College teacher Jen Petroelje. "He's incredibly motivated. He really wants to get ahead." Petroelje also described Hassany as "very conscientious."

Indeed, Hassany chooses his BMX as his usual mode of transportation — not because a car is unavailable.

"I'm kind of worried about global warming," he said, "so I'm trying to help out."

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