



National Aeronautics and Space Administration

Amateur Radio on the International Space Station (ARISS)



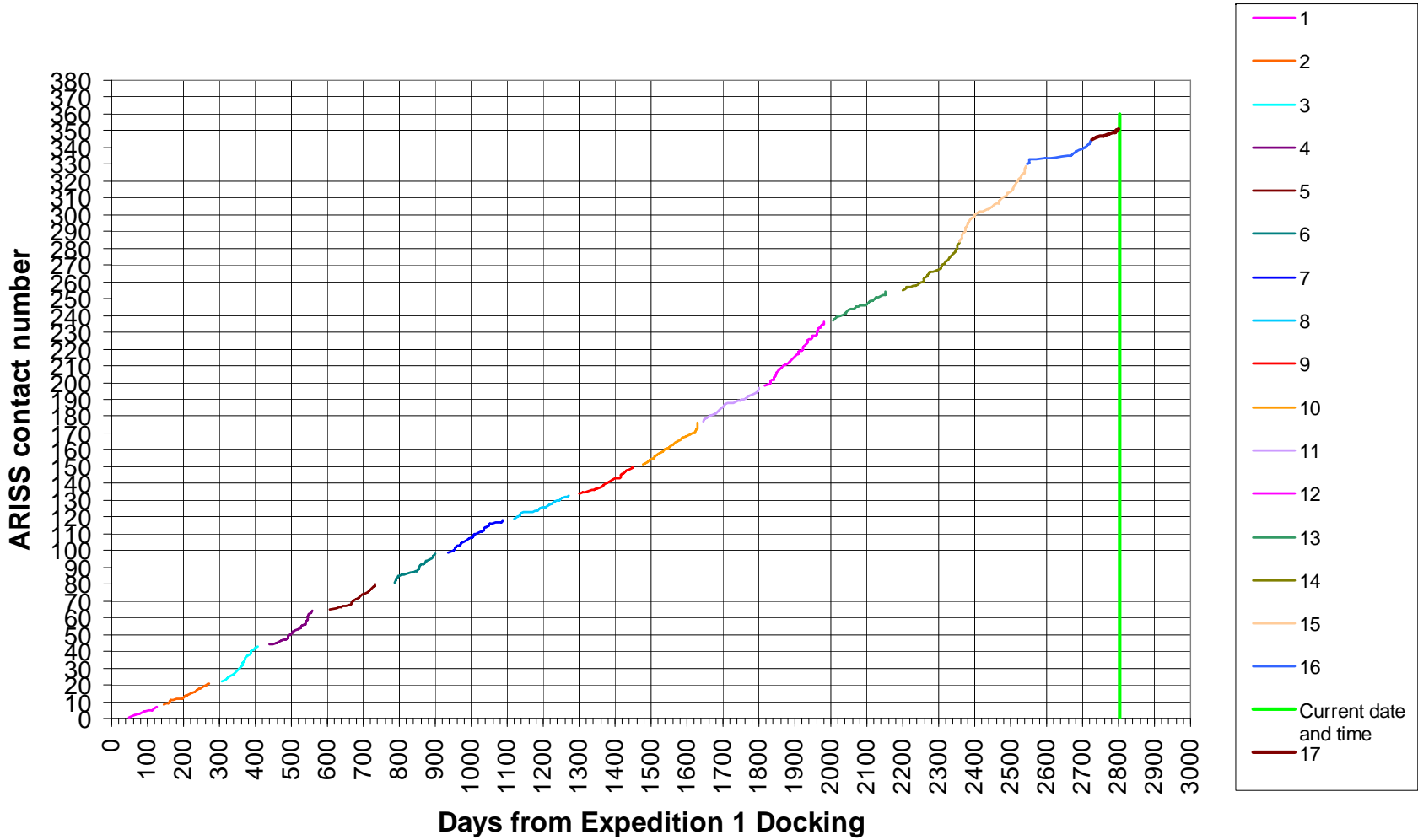
Amateur Radio on the ISS

School Operations summary

as of 2008-07-07

Will Marchant, KC6ROL

ARISS Total history running count from Expedition 1 Docking



Waiting List

- 52 schools on waiting list
 - CA 10
 - EU 21
 - JA 12
 - US 9
- Recent wait time 1 to 1.5 year?

OSU U12 Girls talk to astronaut Dr. Robert Thirsk



Expedition 17 Plans

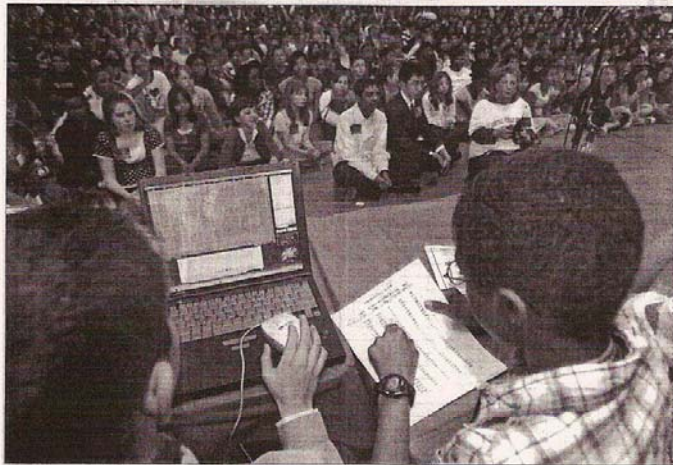
- Greg Chamitoff,
KD5PKZ
- One done
- Two before Moscow
TIM
- Eleven more
- Two unscheduled
weeks being held in
reserve
- Two crew picks so far:
 - Santa Barbara, CA Boy
Scouts
 - Columbia Mission
Project at Buchannan
High School
- Unknown third school

Spaceflight Participants Schools

- Dennis Tito (TBD)
- Vittori (1)
- Shuttleworth (4)
- Olsen (3)
- Ansari (1)
- Simonyi (4)
- Shukor (5)
- So-yeon (2)
- Richard Garriott
 - Oct 14 to 23
 - Six events

Expedition18 Plans

- Mike Fincke, KE5AIT
- Two schools per week
- Plus one Saturday
- Start immediately
- Willing to support “odd hour” contacts
- New Zealand (+12UTC) schools



Rocky Trifari, left, and Aaron Wood, members of the New Providence Amateur Radio Club and students at Parsippany's Central Middle School, yesterday work with a tracking computer, above, as astronaut and school alumnus Garret Reisman, below left, is on the line from the International Space Station, answering questions from nine students, including Delsia Barnes, below right.

Astronaut phones home from space to his old school

Students track him as he passes overhead

BY AL FRANK
STAFF WRITER

"Hello Central," came the clear voice from the International Space Station yesterday afternoon. It was alumnus Garret Reisman calling his former middle school in Parsippany from 220 miles up as he crossed the western hemisphere a little after 1 p.m.

Talk about long distance. And for eight minutes, he held court a gym full of students and parents as he answered questions about the view, how he slept and the food, including his favorite item: Swedish fish and Jolly Fruit.

"It was pretty amazing," Bhakti Moradia, a sixth grader at Central Middle School, said later. "Like, wow, we were actually talking to someone in space."

"It was as if he was in the room talking to the kids," said Superintendent Lee Seltz, marveling at the "clarity of the transmission over ham radio."

Reisman, 40, a 1986 graduate of Parsippany High School, is on his first space mission after joining the astronaut corps 10 years ago. He blasted off in the Shuttle Endeavour on March 11 and is due to re-remain on the space station until next month. He will be bringing back souvenirs the town presented him last November when he gave a talk at town hall about the mission.

The summer before, he had already contacted Principal Jeff Rutzky about doing a space conference with Central students. Rutzky said he saw it as a great opportu-



NASA TV

nity to broaden science classes for the school's sixth-, seventh- and eighth-graders to include units on space travel, complete with photos and Power Point presentations.

NASA put Rutzky in contact with the New Providence Amateur Radio Club, which has arranged two other space station transmissions by using ham radio to contact it when it passes within range. The federally licensed operators erected their antennas on Central's roof and provided the radio in the gym and, in the last month, trained the kids to use them, member Barry Cohen explained.

Students Daniel Simmons and Rocky Trifari were among the six "engineers" who worked a controller to make sure the antenna precisely tracked the space station's orbit by following a written protocol that required adjustments to be made every 20 seconds. "Otherwise, we would lose the connection," Trifari said.

The nine students who asked the written questions were equally precise, having practiced over the phone for weeks with a retired astronaut in Houston to make sure they would get all of them in during the allotted time.



WILLIAM PERLMAN/THE STAR-LEDGER

Asked about the view, Reisman said he could plainly see New York and, with the naked eye can make out Central Park. "As for brushing his teeth, well, the paste has to be swallowed and washing up is "wet towel basically." For sleeping the crew doesn't have pillows, and the zero-gravity means "you use Bungee cords (to strap in) because you can't lay down."

A Russian space ship docked at the station can be used as a lifeboat for emergencies and can get the crew home in five hours, he said. And while there are experiments to conduct, he said the main reason for staying in space for a prolonged period is to prepare data on the body's exposure to prolonged weightlessness for the ultimate mission to Mars. "We're like

big guinea pigs," Reisman said.

The students were selected from about 200 of their peers who wrote essays. Finalists were screened by a faculty panel and other interested kids.

Science teacher Jennifer Flynn said she initially fretted whether kids, who can pick up a cell phone and call or text anyone at any time, would realize what a big deal Reisman's transmission was. But the cheers, whoops and applause that punctuated yesterday's event showed there was no worry on that score.

"This was a once-in-a-lifetime experience," said sixth-grader Jacqueline Jee, another engineer.

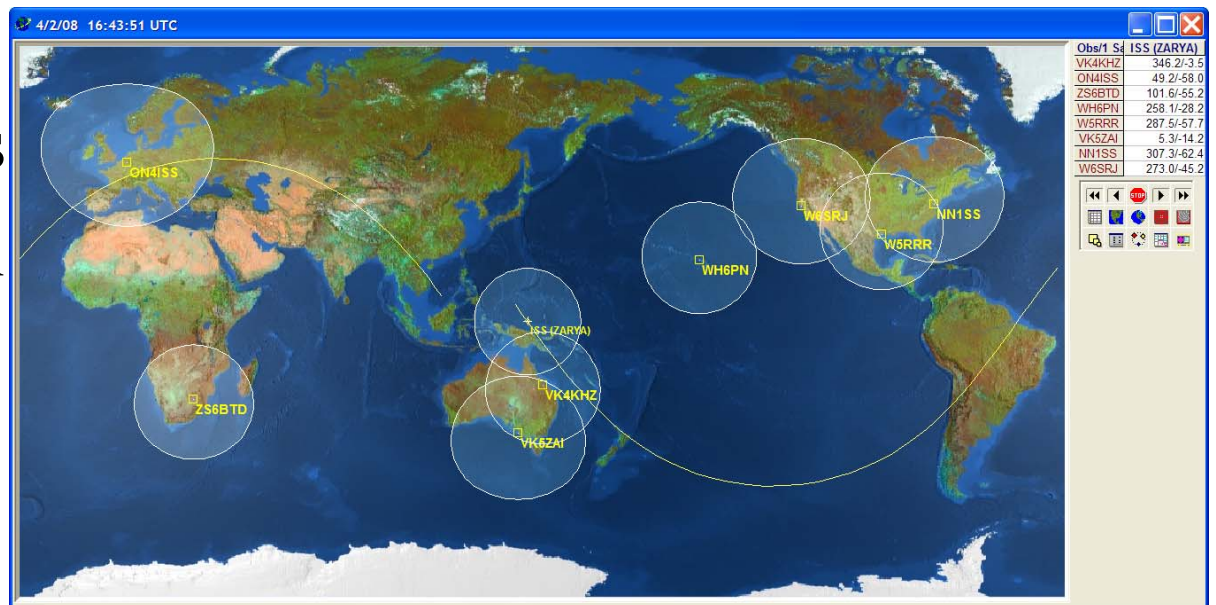
Al Frank may be reached at alfrank@starledger.com or (973) 532-7119.

Upcoming Special Events

- International Education Week
 - 3 schools: 2 USA, 1 Ecuador
 - Via two bridge stations
- Space Week, Malaysia
 - Direct with Richard Garriott?

Telebridge Network

- Eight stations
- Four continents
- New stations in process:
 - Canada
 - Portugal
 - South America



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Newsbriefs

Incumbents win, budgets pass

AREA — Voters in both Berkeley Heights and New Providence passed the school budgets in the April 15 election, and in both communities incumbent candidates were re-elected to office.

In Berkeley Heights, the two three-year terms were returned to board members Paul Beisser and Gerard Crisonino. There were 1,501 voters who cast "yes" ballots on the budget, and 850 voted "no."

Meanwhile, in New Providence, incumbents Robert Lucid garnered 758 votes and John Wolak got 700, while first-time candidate Mairym Azcona garnered 377 votes.

In the borough, the budget passed by a vote of 687 to 517.

College funding is event's focus

BERKELEY HEIGHTS — The non-profit Consortium for Education Funding Awareness will present a workshop on college

Club helps students 'chat' with astronaut

NEW PROVIDENCE — Members of the New Providence Amateur Radio Club helped arrange a space conversation between students at Parsippany Central Middle School and the International Space Station.

The NPARC was selected to mentor a conversation between students and astronaut Garrett Reisman, who is orbiting the earth on the ISS. The conversation, via amateur radio, took place on Monday, April 14. The students each asked the astronaut a question about his spaceflight experiences, and Mr. Reisman answered each student by name and in detail.

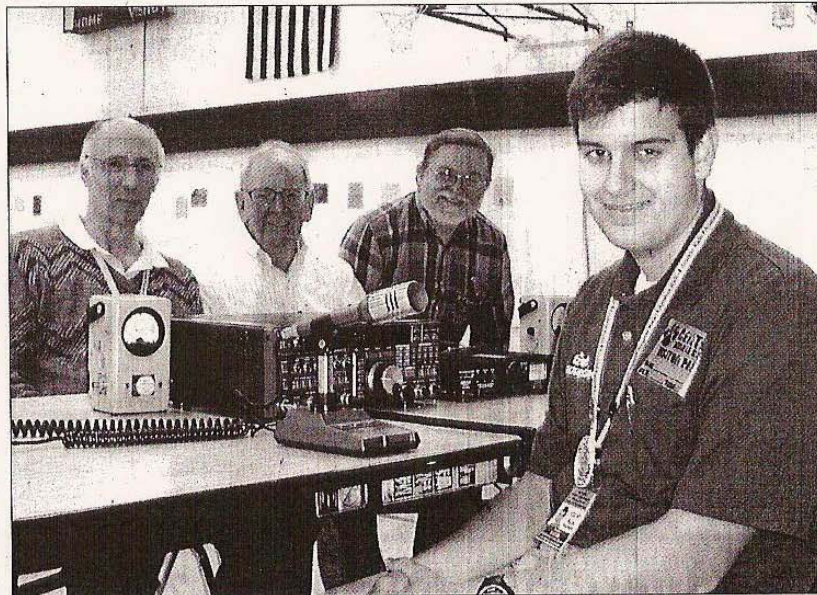
Central Middle School was scheduled to participate with help from the members of NPARC because Mr. Reisman is a graduate of the Parsippany-Troy Hills School System. The students have been practicing communications with "simulated" astronauts, who are actually members of NPARC, operating from their amateur radio stations at home. This was the third such contact mentored by NPARC.

ARRISS — Amateur Radio on the International Space

Station — is a program to help students learn about communications, science, geography and space programs. It is an international program supported by 15 countries, including the U.S., Russia, Germany and Japan. Through ARISS, students from all countries have the opportunity to speak directly with an astronaut orbiting the earth.

All of the equipment was set up in the school by members of NPARC. The actual communication was under the control of Nicholas Esposito KC2ONP, a federally-licensed radio amateur and a student at New Providence High School. Nick obtained his federal amateur radio license in 2005, and has had considerable experience in on-the-air contacts, and in emergency communications. Nick was the local control operator at Ridgefield Park High School during a conversation between students and Dr. Greg Olsen aboard the ISS in 2005.

He was also control operator at Salt Brook School in the borough in 2006, when students conversed with astronaut Jeff Williams on the ISS.



ON THE RADIO...TO OUTER SPACE — Members of the New Providence Amateur Radio Club gathered at a ham radio station installed at Central Middle School in Parsippany to plan for the April 14 conversation between students and Garrett Reisman, an American astronaut in orbit on the International Space Station. Seated at the operator's desk was Nick Esposito, KC2ONP, a ninth grader at New Providence High School. Assisting in and observing the operations were senior members of the NPARC, from left, David Berkley, K2MUN, of Basking Ridge, Frank McAneny, K2EZR, of New Providence, and Vince Lobosco, KC2IZK, of Scotch Plains.

Mavor: Proposed COAH rules are flawed

Constraints

- Schools asking for weekend contacts
- Fixed weekday schedules
- Crew “agreements”

Planning Process

- Operations manager duty six months
- Predict “best weeks” for six months
- Accurate predictions for 5 weeks
- Two week notification of
 - Pass selection
 - Acceptance of Saturday passes

Lots of work!

- Too many to name, but, special thanks to:
 - Keith Pugh, W5IU and Dave Taylor W8AAS as next ops leads
 - Charlie Sufana, AJ9N for statistics and schedule
 - Gil Carman, WA5NOM orbit mechanic
 - The school mentors
 - The telebridge operators