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UK schoolboy corrects NASA data error

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Miles Soloman tells Radio 4's World At One how he discovered NASA recording false data

A British teenager has contacted scientists at NASA to point out an error in a set of their own data.

A-level student Miles Soloman found that radiation sensors on the International Space Station (ISS) were recording false data.

The 17-year-old from Tapton school in Sheffield said it was "pretty cool" to email the space agency.

The correction was said to be "appreciated" by NASA, which invited him to help analyse the problem.

"What we got given was a lot of spreadsheets, which is a lot more interesting than it sounds," Miles told BBC Radio 4's **World at One programme**.

The research was part of the TimPix project from the Institute for Research in Schools (IRIS), which gives students across the UK the chance to work on data from the space station, looking for anomalies and patterns that might lead to further discoveries.

During UK astronaut Tim Peake's stay on the station, detectors began recording the radiation levels on the ISS.

"I went straight to the bottom of the list and I went for the lowest bits of energy there were," Miles explained.

Miles's teacher and head of physics, James O'Neill, said: "We were all discussing the data but he just suddenly perked up in one of the sessions and went 'why does it say there's -1 energy here?'"

What Miles had noticed was that when nothing hit the detector, a negative reading was being recorded.

But you cannot get negative energy. So Miles and Mr O'Neill contacted NASA.

"It's pretty cool", Miles said. "You can tell your friends, I just emailed NASA and they're looking at the graphs that I've made."

It turned out that Miles had noticed something no-one else had - including the NASA experts.

NASA said it was aware of the error, but believed it was only happening once or twice a year.

Miles had found it was actually happening multiple times a day.



Prof Larry Pinsky, from the University of Houston, told Radio 4: "My colleagues at NASA thought they had cleaned that up.

"This underscores - I think - one of the values of the IRIS projects in all fields with big data. I'm sure there are interesting things the students can find that professionals don't have time to do."

The professor - who works with NASA on radiation monitors - said the correction was "appreciated more so than it being embarrassing".

What do Miles' friends think of his discovery?

"They obviously think I'm a nerd," the sixth-former said. "It's really a mixture of jealousy and boredom when I tell them all the details."

He added: "I'm not trying to prove NASA wrong. I want to work with them and learn from them."

The director of IRIS, Prof Becky Parker, said this sort of "expansion of real science in the classroom" could attract more young people to STEM subjects (science, technology, engineering, mathematics).

She added: "IRIS brings real scientific research into the hands of students no matter their background or the context of the school. The experience inspires them to become the next generation of scientists."
