



Students reach for the STARS

Young astronomers go for gold at the *Astronomy Olympiad*

Leo

Orion

Cancer

Canis Major

What does the Olympiad involve?

The competition runs over five days and is broken into three phases:

- * Phase 1 is the theoretical part. The students must solve 15 short problems and 2 long problems on astronomy and astrophysics (duration of exams: 5 hours).
- * Phase 2 entails data analysis. Students are provided with real astronomy and astrophysics data and are required to solve 2D and 3D problems based solely on the data provided (duration of exams: 5 hours)
- * Phase 3 is the observational part. Students are outside in the night time (unless it is cloudy with little visibility and they are then inside a planetarium) and are required to answer questions pertaining to constellations, stars, the planets, and the moon.



Four secondary students had a stellar time at the 7th International Astronomy Olympiad (IAO) in August 2013.

It was the first time a New Zealand team had competed in the Olympiad, but certainly not the last, all going well, says Kiwispace education coordinator Haritina Mogosanu.

"I've dreamed about sending New Zealand students to this Olympiad for a long time, and finally this year we did it," she says.

The IAO is an internationally recognised astronomy event for secondary students (14–18 years old) that involves academic tests and learning opportunities.

NZASE (New Zealand Science Teachers' Association), received an invitation to attend the Olympiad from the organisers. Jenny Pollock, who runs the Earth and Space Science committee within NZASE passed it on to the Royal Astronomical Society.

Although there was little time to organise sending a team, Haritina says they decided to take action.

"We asked ourselves, what is it we can do to provide resources and take astronomy education forward in this country?"

"The Olympiad is such an interesting event, so we decided to go for it and send a team from New Zealand," she says.

"And so, with the support of the science community, we made it happen."

Trips to Greece don't come cheaply. Fundraising was a group effort: the team received support from some very generous members of the Wellington Astronomical Society as well as from the Royal Astronomical Society of New Zealand, and the Carter Observatory.

In addition to this, Haritina set up a Pledge Me (crowd sourcing) page online that reached its target goal and organised a special planetarium evening at the Carter Observatory where the ticket sales went towards the trip.

With the event looming, there was no time to go through a traditional student selection process. But Haritina and local astronomers knew four young people who were ideal candidates for the job.

Navodhi Depalchitra and Daniel Yska from Onslow College, Darina Kuhn from Wellington East Girls College, and Connor Hale from Tawa College represented New Zealand at the 7th Astronomy Olympiad in August 2013. They were accompanied by Gordon Hudson, president of the Royal Astronomical Society of New Zealand.

Navodhi, Daniel, Darina, and Connor are all passionate scientists with excellent maths and physics skills. They are also long-time active members of their school astronomical association and in the past, two of the group had attended a US Space Camp.

The students were one of 37 teams from around the world who converged on Greece for the Olympiad.

Downloaded from the official Astronomy Olympiad website for a taster of the science that goes on at the event.

The New Zealand team performed well at the Olympiad, where the skill level of the international participants ran high.

Haritina says next year she would love to see interest from students and teachers from other parts of New Zealand and the implementation of a national selection process. This would allow more students the chance to attend the Olympiad.

"This can only be done with the support of teachers around New Zealand so we would be very keen to know if there is interest for it."

"We'd like to organise a national extra-curricular programme in astronomy that could culminate in a competition to choose students to attend the Olympiad.

"Such a programme would further enhance the science community here in New Zealand," she says.

AN ASTRONOMY OLYMPIAD IN NEW ZEALAND

Haritina would also love to see the Astronomy Olympiad take place here one day.



Navodhi Depalchitra, Daniel Yska from Onslow College, Darina Kuhn from Wellington East Girls College and Connor Hale from Tawa College represented New Zealand at the 7th Astronomy Olympiad in August 2013.

"It's a matter of promoting some of the best skies in the world when it comes to looking at stars, and we could share that with the world. We have here the world's first dark sky reserve with gold status."

That is a long-term goal that could be achieved with the support of universities, astronomical societies, and science teachers throughout the country.

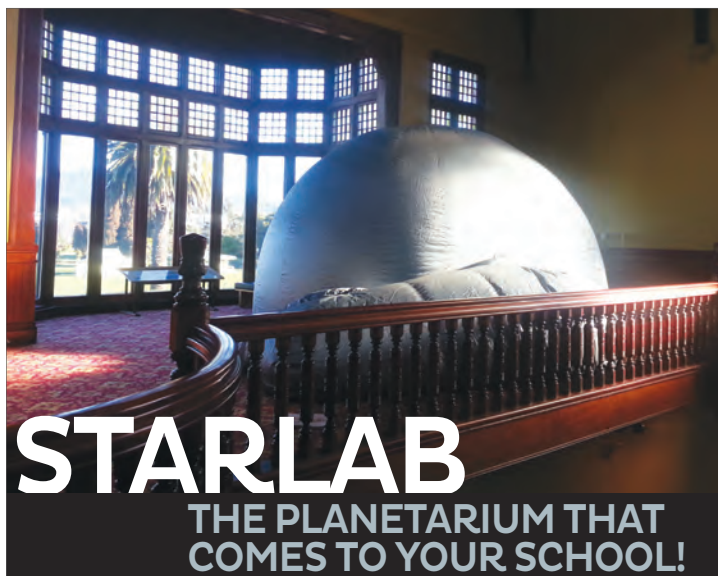
WHY ASTRONOMY?

We can learn a lot by looking at the stars, says Haritina, and New Zealand children are perhaps

the last in the world to observe the starry sky as our ancestors did.

"We are technologically advanced because we looked at the night sky. Maths, physics, and everything that followed happened because we studied the stars, and to me that is fascinating.

"I feel it's our duty as astronomers and planetarium presenters to tell people not to take our night sky for granted but love it and appreciate it for what it means for humankind. It's a beautiful way of looking at the world. And after all, we are made of stardust." ✦



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