

Q&A Steve Miller

The chair of the group steering the RAS 200: Sky & Earth project discusses chemistry, politics and the birth of the solar system.



What will the RAS200 legacy be?

RAS200 is part of making the RAS a modern and relevant scientific society as well as the “go-to” place for genuine expertise and scholarship. I think that kind of outward looking approach is needed more than ever: recent(-ish) political developments, such as the UK Brexit vote last year, have shown that a large number of people feel very un-engaged and even disenfranchised with the world that science and globalization have dished up for them. So by 2020, I want us to be able to say that the RAS will still be here in another 200 years time, and that our sciences will be even more relevant, popular and respected than ever before.

How can you tell if the projects have been successful?

The projects that have been going for a couple of years have all told us that the courses, workshops, events etc that they have put on have been hugely enjoyable – and this is confirmed by our own observations and those of our external evaluators, Jenesys Associates Ltd. The real test comes once the RAS200 funding runs out after the five years – we have tried to choose projects that have a genuine chance of providing a lasting legacy. The Steering Group will discuss how to widen access to what the projects are doing, so others can take up the materials and ideas that are being produced and give them a longevity that goes beyond 2020. I have been hugely impressed by the commitment that RAS Fellows have to outreach and engagement – supporting community-based groups and giving of their time and hard-won knowledge so freely – but we hope to get many more involved, either with the existing projects or in taking up some of the fabulous ideas that didn’t quite make the funding cut-off.

What drew you to astronomy?

I came into astronomy through chemistry – into understanding how simple and more complex molecules play a role in shaping the universe in which we live. I tried to explain that in my book *The Chemical Cosmos: a Guided Tour*. It’s absolutely amazing to me how we get from a universe of hydrogen and helium (and a smidgeon of deuterium and lithium) to a world in which we have complex macromolecules that enable life to evolve. Talk about one-plus-one making an awful lot more than two!

Who has been the biggest influence on your career?

My chemistry teacher at Wallington Grammar School in the 1960s. He taught me to respect chemistry, with stories of the great variety and potential of the elements. He was an enthusiast for phosphorus, but did not shirk from explaining the horrors of the fire-bombing of Dresden in World War 2.

What are your greatest professional achievements?

I was in on the first paper to announce the discovery of the simple molecular ion H_3^+ outside of the laboratory, in the atmosphere of Jupiter, in 1988. And I co-authored the book *Science in Public: Communication, Culture and Credibility*, which has been a very useful introductory “textbook” for those interested in public engagement and communication.

What are you researching at the moment?

I am still working on the atmospheres of giant planets, and on issues around public engagement and responsible research and innovation.

What keeps you awake at night?

Cuts to the science budgets in the UK and across the world. President Trump’s attitude to climate change is truly horrifying.

What are you looking forward to in the next 10 years?

Getting some sanity back into politics here and abroad.

What’s your favourite astronomical object?

The Earth has to be number one. We have to look after it: it’s the only place we know for sure that life exists, whatever we may believe about the billions of exoplanets we know must exist. Titan is probably the most fascinating place we could hope to visit: Cassini–Huygens has just whetted our appetite.

Where and when would you go if you had a TARDIS?

I’d go back 4.65 billion years to watch our solar system form. I know that with ALMA, JWST etc we can see other planetary systems form, but ours now seems to be atypical. The TARDIS would have to take steps forward in time from the original formation to see how and why our planets got to where they are now. ●



RAS200: SKY & EARTH

RAS200 was established to celebrate the Society’s bicentenary in 2020. It is a £1m outreach and engagement fund to support astronomy and geophysics projects that create a buzz about science in diverse sections of the community. The first five projects were selected in 2015, with a further five announced in April 2017.

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RAS <http://www.ras.org.uk/200>

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