



Professor Tony Slingo, a world-leading climate scientist at Reading University, died very unexpectedly in October 2008 after a short illness. He was 58. Tony had broad interests as a physicist who worked in the environmental sciences, but his principal research interests lay in the study of atmospheric radiation, the Earth's radiation budget and the greenhouse effect, climate variability and feedbacks, and possible climate change. He led very active research groups both at Reading and previously at the Met Office, as well as carrying out his own research, always leading to very clear and well-respected publications. An excellent series of papers on his most recent research is now appearing in the *Journal of Geophysical Research*, and marks the culmination of an outstanding research career.

Tony graduated from the University of Southampton in 1971 with a First Class BSc in Physics. He moved to the University of Cambridge to carry out research in radio astronomy, graduating with a PhD in 1975, by which time he already had three refereed papers from radio astronomy, including his first paper published in 1974 in *Nature Physical Sciences*. While at Cambridge, he decided to apply his skills in a slightly different direction, joining the Met Office in 1974. This was a time of extremely strong recruitment to the Met Office; many of the leaders-to-be of atmospheric sciences in the UK were Tony's contemporaries on the Scientific Officer course at the Met Office College, and many of them became life-long friends.

Tony was already showing an independent scientific streak, and was appointed Head of the Physical Processes Group of the Dynamical Climatology Branch in the Office

in 1981; 1981 also saw an early meteorological publication, in *Weather*, on Fogbows and Glories. This showed his enjoyment of the natural world, and his keen sense of its aesthetics as well as of the physical principles that can be studied and observed. He was interested in climate prediction, and was closely involved in the Met Office development of the 11-layer general circulation model used for the original work, and of the physical parameterisations within the model. Tony had started to specialize in studies of the radiation budget, publishing papers on observations and modelling of clouds, and radiation, including examining the effect of satellite observations.

In 1986, Tony became a visiting scientist at the National Center for Atmospheric Research, in Boulder, Colorado and in 1988 took up a scientific research post there. Although he was well-known in the USA having already published with US scientists, this appointment was timely because interest in possible anthropogenic change was accelerating, and clear heads were needed to lay the radiative foundations for any predictions. Tony's experience of both the North American and the European models really helped the cross-fertilization of ideas across the Atlantic throughout the rest of his career.

Tony returned to the Met Office in 1990 with a Senior Merit position, in the newly formed Hadley Centre. He was a critical senior member of the Hadley Centre, at a time when political interest in the possibility of climate prediction was growing, with ambitious plans not just to model the atmosphere but also the ocean, the land surface, the cryosphere and the chemistry and biology of the planet. In all this, good radiation modelling was key, coupled with good observations. Tony and his colleagues provided rigour here, with key papers in *Nature*, *Science*, and other journals, such as the *Quarterly Journal of the Royal Meteorological Society*. In 1996, his role in the Hadley Centre broadened, and he became Head of Model Parameterisations. This involved him having to provide high standards to all parts of the model, which he did with enthusiasm and with his characteristic rigour. Tony's work justifiably gained notice, and he received the *L.G. Groves Memorial Prize for Meteorology*, the *Len Curtis European Award* from the Remote Sensing Society, and the *Buchan Prize* of the Royal Meteorological Society.

By 2002, Tony had become really interested in the use of Earth observation to confront climate models and sought to provide evidence for their performance. This interest is illustrated by a paper published that year in *Science* on evidence for decadal variability

in the tropical mean radiative energy budget – Bruce Wielicki of the National Aeronautics and Space Administration (NASA) at Langley was lead author and the paper won NASA's *H. J. E. Reid Award*. That same year, Tony moved from the Met Office to the Natural Environment Research Council's (NERC) Environmental Systems Science Centre (ESSC) at the University of Reading, as Professor of Environmental Science. This move would allow him to really work on the use of Earth observation data with global models in order to understand both weather and climate systems. Characteristically, Tony threw himself into his new role, which involved building a research group; supervising research students; winning grants; and interacting with funding bodies – all quite normal for university staff but involving a somewhat different set of pressures from those he had previously experienced. He succeeded extremely well, producing original papers and achieving a very high rate of grant success, while taking full part in academic business as a member of the NERC Peer Review Panel and the like, and attracting excellent research staff.

One of the catalysts for Tony's move was the opportunity to really get to grips with new observations of the Earth radiation budget just becoming available, particularly from the Geostationary Earth Radiation Budget (GERB) instrument. Working closely with the Met Office, he was able to lead research which made careful comparisons between the radiation estimates in the Unified Model and simultaneous observations from GERB. With colleagues, Tony showed that the model results generally agreed very well with observations, except when there was a large aerosol loading, such as over the Sahel. He persuaded the US Department of Energy to deploy its mobile Atmospheric Radiation Measurement facility to Niger for the year 2006, to make observations simultaneously with GERB at the top and at the bottom of the atmosphere. As this coincided with the African Monsoon Multidisciplinary Analysis experiment over the Sahel – a large international project – additional airborne data were collected to allow comparisons between the local surface measurements and the satellite observations that covered large areas. The first results of this unique dataset and model intercomparison are now becoming available, with a special set of papers appearing in the *Journal of Geophysical Research*. This work shows Tony at his best, with an imaginative combination of field observations, satellite observations and modelling, all underpinned by a really good understanding of the physical principles involved. It also shows another side of Tony's

character: he named the experiment *Radagast*, nominally with an extremely contrived acronym but actually because Radagast was the third wizard in the *Lord of the Rings*.

An enumeration of Tony's research achievements, with 72 extremely high-quality research papers and insightful commentary on much other work, is impressive but also misses some of his intellectual exuberance and quick sense of humour, coupled with a rigour and impatience with sloppy thinking that was both challenging and inspirational. He had high intellectual standards, and all of his colleagues respected him for it. Tony helped to lead ESSC in exemplary fashion, and, when this changed into part of the National Centre for Earth

Observation in 2008, he took on joint leadership of the Climate theme and piloted it through to implementation. He was well organized, considerate, and extremely well respected as was shown by his memorial service, held in November 2008 in Dorchester Abbey in Oxfordshire; the abbey was filled with hundreds of well-wishers who represented not just British but international science in his area.

Tony was married to Professor Julia Slingo, then also of Reading University and now Chief Scientist of the Met Office, and current President of the Royal Meteorological Society. Theirs was a partnership in all senses, with joint publications and grants, but also much scientific discussion of all aspects of

climate modelling and prediction. Tony and Julia have two children, Mary and Anna, and Tony was immensely proud of all his family's achievements. He had other interests – cricket, gardening, walking, and photography – and always delighted in the natural world. He trekked to Everest Base Camp in 2002, and showed spectacular photographs at a memorable seminar in ESSC. He is sorely missed by his many friends both for himself and for the new science he will not now carry out. Our thoughts are with Julia, Mary and Anna, and the rest of his family.

Professor Robert Gurney OBE

University of Reading, UK
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Society news

By Penny Tranter

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Items for Society news are always welcome. Please send them to weather@wiley.com or submit as shown on the Contents page.

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The Society has approved the use of the appellation FRMetS by the following Fellows:

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And we welcome the following school members:

Finton House School, London; Counthill School, Oldham.

Society's Annual General Meeting

On 20 May the Society's AGM was held at Imperial College, London to review the previous 12 months, including a video highlighting some of the 2008 activities.