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Giant Radio Galaxies and their environment

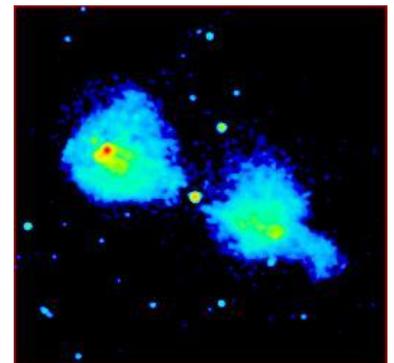


Richard Strom (NAOC & University of Amsterdam)

Born in New York City, Richard Strom attended the Bronx High School of Science for 3 years (until his family left New York). He earned a B.A. from Tufts University, and M.Sc. and Ph.D. degrees in radio astronomy from the University of Manchester (Jodrell Bank), UK. Until his retirement in 2009, he was a senior research astronomer with ASTRON (the Netherlands Institute for Radio Astronomy) in Dwingeloo and an Adjunct Professor at the University of Amsterdam. He continues to be an Adjunct Professor at James Cook University in Australia, and is now a Senior International Visiting Professor, Chinese Academy of Sciences for a third year. He has also regularly been a Visiting Professor of Physics at the National University of Singapore, and in 2012 was elected a fellow of the Institute of Physics. Richard is a past Secretary and Organizing Committee Member of IAU Commission 40 (Radio Astronomy) and is also a member of Commissions 28, 34 and 41. He chaired one of the review panels for the XMM-Newton Observatory, and has served on time allocation panels for BeppoSAX, the European VLBI Network, the UK Infrared Telescope and the Westerbork Radio Telescope. He serves as associate editor of the Journal of Astronomical History and Heritage. His research interests include supernova remnants, gamma-ray bursts, large radio galaxies, pulsars, radio polarimetry, new telescopes (including FAST), Chinese historical records, and the history of radio astronomy, especially in the Netherlands.

Abstract

Giant Radio Galaxies (GRGs) are defined as double radio sources associated with galaxies, and with an overall size (from the end of one component to the end of the other) of 1 Mpc ($H_0 = 75 \text{ km s}^{-1} \text{ Mpc}^{-1}$) or more. The first members of the class, DA 240 and 3C 236, were mapped in detail in 1973 with the Westerbork telescope. I will cover the early history, including the discovery and the question of why they weren't noticed earlier, in my introduction. DA 240 was first incorrectly identified with the wrong galaxy, but it later transpired that this object is a distant companion of the correct identification, and in fact there are about 20 galaxies in a small group around the radio source, with most of them roughly aligned along the radio components. With my colleagues at NAOC, we have been studying the nearest of the GRGs and their galaxy companions, in an effort to understand their environment, and the reasons for their large size. As one might expect, it seems that GRGs are usually in a region of low ambient density, but there are also some surprises. The present state of our study will be discussed in the talk.



All are welcome! Tea, coffee, biscuits will be served at 2:45 P.M.