

Curriculum Vitae

Summary:

Name: Hans Rudolf de Ruiter

Date of birth: October 23, 1946

Place of Birth: Amsterdam, the Netherlands

1973-1978: Ph.D. study at the Observatory of Leiden

(thesis supervisor: Prof. H. van der Laan)

1978-1980: Post-doctoral fellow at ESO (then at Geneva, Switzerland)

1980-1981: Post-doctoral fellow at the Scuola Normale Superiore (Pisa, Italy)

1981-1989: Research fellow at the Institute of Radio Astronomy (Bologna, Italy)

1984: visiting scientist at the Very Large Array, Socorro, NM, USA

1988: visiting scientist (three months) at the Mount Stromlo Observatory, Australia,
collaboration with G. Bicknell

1989-present: Associate Astronomer, INAF-Bologna Observatory

After my school-years (I did the final exam in 1965, at the Cartesius Lyceum, Gymnasium β) I started studying Physics and Astronomy at the **University of Amsterdam**. The subject of my pre-graduation thesis was the development of a computer-programme that calculated spectral line profiles, using model stellar atmospheres. This work was done under the supervision of the late Prof. J. van Paradijs, with whom I collaborated closely in 1972 and 1973. After graduation I went to **Leiden Observatory**, where I worked on my Ph. D. Thesis until 1978 (supervisor Prof. H. van der Laan). I made use of radio data that were produced by the then recently constructed Westerbork Synthesis Radio Telescope, and studied the cosmological evolution of radio galaxies and quasars. Optical data (mostly deep plates) were obtained at the **Hale Observatories** (Pasadena, USA, now Mt. Wilson and Mt. Palomar Observatories). I spent several months there working together with Dr. H.C. Arp. The thesis ("Faint radio sources and their optical identifications") was finished in 1978, and I defended it successfully on May 24 of that year.

Since then I have been "abroad", first as a post-doctoral fellow at the **European Southern Observatory**, (then in Geneva, Switzerland), and from 1980 in Bologna (Italy). During the first period in Italy, from 1981-1989, I worked as a research scientist at the **Institute of Radio Astronomy (IRA)** of the Consiglio Nazionale delle Ricerche (CNR); since 1989 I am Associate Astronomer at the **Osservatorio Astronomico di Bologna**. I am still linked to the Istituto di Radioastronomia as a scientific collaborator. After an extensive reorganisation of Italian astronomy, both institutes are now part of the big national institute, INAF.

Although I did some research in the field of stellar atmospheres while I was still a student in Amsterdam, I quickly switched to extragalactic radio astronomy. As the title of my thesis indicates, I worked on samples of faint radio sources (i.e. of the order of a few mJy), the associated optical objects (galaxies and quasars) and their space distribution and cosmological evolution. I have more or less remained faithful to the radio and optical wavelength bands, and have, in fact, done numerous observing sessions with both radio and optical telescopes, for example, the *Very Large Array* (VLA), the *Australia Telescope* (ATNF), ESO, and the *La Palma Observatory*. The subject of investigation always was the class of Active Galactic Nuclei (AGN), but the objects included many different types of AGN, like Seyfert galaxies, low luminosity radio galaxies, and quasars (see my list of selected publications below). My more recent studies concern physical and statistical properties of radio galaxies, with a particular emphasis on the structure of radio jets in low luminosity (FR I) sources. Recently I also carried out an analysis of the optical brightness profiles of radio galaxies, using Hubble Space Telescope images.

My present scientific interests concern dying radio sources (i.e. sources in their last phase of activity, before they fade into oblivion), and the sub-mJy population of radio sources.

- In the years 2005 and 2006 I have been a member of the ESO Observing Programme Committee (OPC).
- Since 2001 I am an expert evaluator of the European Union Marie Curie networks, in the FP5, FP6 and (current) FP7 programmes.
- Total number of papers in main journals: 58
- Other (e.g. conference proceedings): about 70.

Articles that give an indication of my current research:

In search of dying radio sources in the local universe.

Parma, P., Murgia, M., **de Ruiter, H.R.**, Fanti, R., Mack K.-H., Govoni, F. 2007, A&A, 470, 875

A molecular gas study of low luminosity radio galaxies.

Prandoni, I., Laing, R.A., Parma P., **de Ruiter H.R.**, Montenegro-Montes, F.M, Wilson, T.L. 2007, NewAR, 51, 43

The ATESP 5 GHz Survey. I Source counts and spectral index of the faint radio population.

Prandoni, I., Parma, P., Wieringa, M.H., **de Ruiter, H.R.**, Gregorini, L., Mignano, A., Vettolani, G., Ekers, R.D. 2006, A&A, 457, 517

Are radio galaxies and quiescent galaxies different? Results from the analysis of HST brightness profiles

de Ruiter, H.R., Parma, P., Capetti, A., Fanti, R., Morganti, R., Santantonio, L. 2005, A&A, 439, 487

HST images of B2 radio galaxies: a link between circum-nuclear dust and radio properties?

de Ruiter, H.R., Parma, P., Capetti, A., Fanti, R., & Morganti, R. 2002, A&A, 396, 857

Selected articles (mostly frequently cited or characteristic of the type of work I have been doing):

A Westerbork 1415 MHz survey of background radio sources. II.

de Ruiter, H.R., Willis, A.G., & Arp, H.C. 1977, A&AS, 28, 211

(This article has over a hundred citations and is still being cited regularly, as a reference for identification analysis using the likelihood ratio)

Asymmetries in the jets of weak radio galaxies

Laing, R.A., Parma, P., **de Ruiter, H.R.**, & Fanti, R. 1999, MNRAS, 306, 513

(The idea that the inner parts of low luminosity radio jets are relativistic and quickly decelerate moving outwards was first proposed by Parma, P., de Ruiter, H.R., Fanti, R., & Laing, R. 1994, The First Stromlo Symposium "The physics of active galaxies", eds. G.V. Bicknell, M.A. Dopita, & P.J. Quinn, p. 241; the MNRAS paper gives our final analysis on the subject)

Optical Variability of Seyfert Nuclei. I VBLUW photometry

de Ruiter, H.R., & Lub, J. 1986, A&AS, 63, 59

(This paper is cited relatively often, since it gives many details on VBLUW photometry not found anywhere else)

VLA observations of low luminosity radio galaxies. VII General properties

de Ruiter, H.R., Parma, P., Fanti, C., & Fanti, R. 1990, A&A, 227, 351

(A general discussion on low luminosity radio galaxies, based on the final revised B2 sample)

Evidence for the location of quasars in superclusters

Oort, J.H., Arp, H.C., & **de Ruiter, H.R.** 1981, A&A, 95, 7

(This is one of the last articles of Prof. Oort. It also gives an idea of my work on the sky-distribution of quasars around 1980-1982.