

Curriculum vitae

Johan Arvelius

Personal

Full name: Sven Johan Arvelius
Date of birth: Jan 4 1973 in Katrineholm, Sweden
Marital Status: Married, two childrens
Nationality: Swedish
Address: Swedish Institute of Space Physics, Box 812, 981 28 Kiruna, Sweden

Education and Achievements

2007-10-16 Ph.D. in atmospheric physics at Umeå University. The thesis is a monography entitled “Calibration and quality assessment of DESCARTES –grabsampler for stratospheric tracers.”. Supervised by Prof. Sheila Kirkwood and Dr. Hans Nilsson, Swedish Institute of Space Physics.

1998-06-15 Master of Science in Physics at Lund University 1998. Thesis title: “Solar variation signals in the Earth’s atmosphere — a study using neural network”. Supervised by Prof. Sheila Kirkwood, Swedish Institute of Space Physics.

1993-06-14 – 1994-03-25 Military service as head of staff group by I19/P5 in Boden.

1993-06-04 Graduation from upper secondary technical school 4-year, chemistry branch.

Major scientific interest

Dynamics and vertical transport in the troposphere (including the boundary layer) and stratosphere and the interaction between them in the arctic regions.

Scientific experiences

Development of a groundbased instrument for monitoring of long-lived chemical tracers.

Operation including development of calibration methodology and quality assessment of the stratospheric balloon borne grabsampler instrument DESCARTES for long-lived tracers.

Studies of tropopause folds in the arctic region using ozone sondes and the Esrange Mesosphere, Stratosphere, Troposphere (MST) radar, ESRAD.

Presentations of scientific results at international scientific conferences.

Lecturing experiences

- 2006** – Teaching and examination at Rymdgymnasiet upper secondary technical school. Courses: Mathematics, MaA, MaC och MaE, as well as supervision and examination of MaB. Physics course FyA, half course. Computer technology, Electronics, Astronomy and Space technology, electronics part.
- 2006-01-16 – 2006-05-09** Teaching Modern Physics and Optics 5 p (10 weeks half time course) in the space engineer program, Department of Space Science, Umeå University. All lecturing including calculation exercises, two full day laboratory exercises and examination.
- 2002-10-07 – 2003-03-27** Supervision of MSc Degree project in Engineering Biology at Umeå University by Susanne Roslin entitled “Adsorption of CFC on Carboxen during sampling in the stratosphere”.
- 1999 – 2006** Supervision and development of laboratory exercises at the Space engineering programs and summer course at Umeå University and Luleå Technical University.
- 1999 – 2006** Giving seminars and popular science lectures in atmospheric physics for general audience, schools and colleagues.

Positions

- 2008-08-25** – Teacher at Rymdgymnasiet, Malmens friskola.
- 2008-06-02** – Research engineer in the Atmospheric Research Programme at the Swedish Institute of Space Physics.
- 2007-01-01 – 2007-05-31** Research engineer at the Swedish Institute of Space physics Atmospheric Research Programme.
- 2006-07-21 – 2007-05-25** Teacher at Rymdgymnasiet, Malmens friskola.
- 2006-01-16 – 2006-05-09** Teacher at Department of Space Science, Luleå University of Technology and Umeå University.
- 2005-06-25 – 2005-07-19** Teacher at Department of Space Science, Luleå University of Technology and Umeå University.
- 2003-02-01 – 2003-12-31** Research engineer at the Swedish Institute of Space Physics, Atmospheric Research Programme.
- 1998-09-01 – 2005-06-30** PhD student in the Atmospheric Research Program at the Swedish Institute of Space Physics with shorter interleavees for other employments.

Linguistic skills

Mother tongue: Swedish

Working language: English

Computer skills

Working experience of GNU/linux, OS-X and UNIX environments.

Good knowledge of MATLAB and LaTeX.

Experience of PHP, HTML, CSS, perl, SQL and octave.