

# CURRICULUM VITAE

## Oleg V. Postylyakov

### PERSONAL DATA

Born: August 9, 1962  
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### EDUCATION

May 1994 Ph.D., Institute of Atmospheric Physics of Russian Academy of Sciences, Moscow, Methods for retrieving ozone and aerosol profiles in the atmosphere using space occultation measurements.  
Feb. 1985 M.S., [M.V.Lomonosov Moscow State University](http://www.moscow-state-university.ru/), Diploma with honours, GPA: 4.86 of the highest grade 5.

### ACADEMIC APPOINTMENTS

since Jan. 1991 *Institute of Atmospheric Physics of Russian Academy of Sciences, Moscow* *Senior Research Scientist (since 1997)*

Developed radiative transfer model MCC++ with calculation of weighting functions (air mass factors, derivatives with respect to optical properties of atmosphere) in spherical atmosphere for use in retrieval algorithms (see References [3][5][6][7]). Developed methods for retrieving ozone and aerosol profiles and for measurement planning basing on ground-based zenith sky measurements of polarization [8][4] and UV spectrum [1][10][12], and using space occultation visual observations (the OZAFS experiment) [13][14][15]. Proposed to develop retrieval algorithms specially for investigation of the ozone trends and long-term variability [10]. Consulting and arranging validation of satellite measurements [9]. Responsible for retrieval algorithm development, radiative transfer simulation, validation of space measurements.

Dec. 1988 - *Central Aerological Observatory, Dolgoprudnyi, Moscow Region* *Graduate Student/ Jun. Research Scientist*

Developed method and software for retrieving ozone profiles using space occultation UV measurements (the Meteor-3/SFM-2 experiment). Supervised staff of up to three computer operators.

Mar. 1985 - *Institute of Nuclear Physics of M.V.Lomonosov Moscow State University* *Engineer*

Dec. 1988 Developed soft-ware for Monte Carlo computer simulation of super-high energy processes.

### VISITING POSITIONS

Jan. 2003 - Dec. 2003 [Finnish Meteorological Institute, Helsinki, Finland](http://www.fmi.fi/)

### GRANTS AND AWARDS

2001-2003 Research Group grant of [Russian Foundation of Basic Researches](http://www.rubas.ru/), "Adaptation of ground-based and satellite methods of ozone determination for optimal estimation of long-term changes".

1998-2000 Research Group grant of [Russian Foundation of Basic Researches](http://www.rubas.ru/), "Improvement of reliability of long-term variation estimations of ozone vertical structure basing on development of methods for processing and analysis of ground, balloon and satellite data".

1998-2000 Research Group grant of Committee of Young Scientists of Russian Academy of Sciences, "Development algorithms for monitoring of nitrogen dioxide 2D field over a city".

1993-1994 Individual and Research Group grants of the International Science Foundation Emergency Grant Program.

### COMMUNITY SERVICE

Reviewer for professional journals: [J. Geophys. Res.](http://www.jgras.com/), [J. Quant. Spectrosc. Radiat. Transfer](http://www.jqsrt.com/), [Izvestiya - Atmospheric and Oceanic Physics](http://www.izvestiya.com/), et al.

See reverse

## MAJOR PUBLICATIONS

## [ALL PUBLICATIONS](#)

- [1] **O.V. Postlyakov, I.V. Mitin.** Modeling of effect of polarization on UV sky radiance during twilight. *Submitted to Adv. Space Res., 2004.*
- [2] **O.V. Postlyakov, A.N. Igaev, N.F. Elansky, A.S. Elohov.** Observations of the ozone and nitrogen dioxide profiles in the TROICA-4 experiment. *Submitted to Adv. Space Res., 2004.*
- [3] **O.V. Postlyakov.** Linearized vector radiative transfer model MCC++ for a spherical atmosphere. *J. Quant. Spectrosc. Radiat. Transfer*, doi:10.1016/j.jqsrt.2004.01.009, 2004, **88**, 1-3, 297-317. [Abstract](#) [Introduction](#)
- [4] **O.S. Ugolnikov, O.V. Postlyakov, I.A. Maslov.** Effects of multiple scattering and atmospheric aerosol on the polarization of the twilight sky. *J. Quant. Spectrosc. Radiat. Transfer*, doi:10.1016/j.jqsrt.2003.12.033, **88**, 1-3, 233-241, 2004. [Abstract](#)
- [5] **R.P. Loughman, E. Griffioen, L. Oikarinen, O.V. Postlyakov, A. Rozanov, D.E. Flittner, D.F. Rault.** Comparison of radiative transfer models for limb-viewing scattered sunlight measurements. *J. Geophys. Res.*, doi:10.1029/2003JD003854, 109, D6, D06303, 2004. [Abstract](#)
- [6] **O.V. Postlyakov.** Radiative transfer model MCC++ with evaluation of weighting functions in spherical atmosphere for use in retrieval algorithms. *Adv. Space Res.*, doi:10.1016/j.asr.2003.07.070, 2004, **34**, 4, 721-726. [Abstract](#)
- [7] **O.V. Postlyakov.** Spherical radiative transfer model with computation of layer air mass factors, and some of its applications. *Izvestiya, Atmospheric and Oceanic Physics*, 2004, 40(3), 276-290. [Abstract](#)
- [8] **O.V. Postlyakov, N.F. Elansky, A.S. Elohov, A.N. Masleev, M.N. Orlov, S.A. Sitnov.** Observations of polarized zenith-sky radiances during twilight with application to aerosol profile evaluation. *IRS 2000: Current Problems in Atmospheric Radiation*, W. L. Smith and Yu. M. Timofeyev (Eds.). A. Deepak Publishing, Hampton, Virginia, 2001, p.1197-1200. [Text](#)
- [9] **Y.M. Timofeyev, D.V. Ionov, A.V. Polyakov, N.F. Elansky, A.S. Elokhov, A.M. Gruzdev, O.V. Postlyakov, E.V. Rozanov** Comparison of results of satellite and surface measurements of NO<sub>2</sub>. *Izvestiya, Atmospheric and Oceanic Physics*, 2000, 36(6), 802-808. [Abstract](#)
- [10] **O.V. Postlyakov.** Ozone profile retrieval specially for the trend analysis: theoretical investigation of specialized retrieval algorithms. *Proc. Quadr. Ozone Symp., Sapporo, Japan, 3-8 July 2000*, 575-576. [Text](#)
- [11] **N.F. Elansky, I.V. Mitin, O.V. Postlyakov.** Investigation of top accuracy opportunities of Umkehr method for ozone vertical distribution determination by the Brewer spectrophotometer. *Izvestiya Akademii Nauk, ser. Fizika Atmosfery I Okeana (English translation: Atmospheric and Oceanic Physics)*, 1999, **35** (1), 65-77. [Abstract](#) [Conclusion](#) (220KB)
- [12] **N.F. Elansky, I.V. Mitin, O.V. Postlyakov.** A new approach to observations of vertical ozone distribution by Umkehr method at network of ozonometric stations. *Transactions (Doklady) of the Russian Academy of Sciences / Earth Science Sections*, 1996, **347A** (3), 476-480.
- [13] **G.M. Grechko, N.F. Elansky, M.E. Plotkin, O.V. Postlyakov.** The OZAFS experiment: observing the fine structure of the ozone and aerosol distributions in the atmosphere from the Salyut 7 orbiter. Part I: An introduction and the occultation experiment. *J. Geophys. Res.*, 1991, **96**, D10, 18647-18653.
- [14] **N.F. Elansky, M.E. Plotkin, O.V. Postlyakov, S.A. Ukhinov.** The OZAFS experiment: observing the fine structure of the ozone and aerosol distributions in the atmosphere from the Salyut 7 orbiter. Part II: Formation of the earth's twilight limb coloration and radiance. Numerical calculations. *J. Geophys. Res.*, 1991, **96**, D10, 18655-18660.
- [15] **N.F. Elansky, G.M. Grechko, M.E. Plotkin, O.V. Postlyakov.** The OZAFS experiment: observing the fine structure of the ozone and aerosol distributions in the atmosphere from the Salyut 7 orbiter. Part III: Experimental results. *J. Geophys. Res.*, 1991, **96**, D10, 18661-18670.

## OTHER SKILLS

Experience in C++/C programming since 1990, FORTRAN since 1984.

## HOBBY

Badminton, swimming, skiing.