

CURRICULUM VITAE (v. 04.09.2018)

Personal data :

Name: Ilya G. Usoskin
Birth: 17 January 1965, Leningrad, USSR
Citizenship: Finland + Russia (double citizenship)
Marital Status: Married (1986), two children (1989, 2001)
Languages: *Russian* mother tongue, *English* fluent, *Finnish* intermediate, *Italian* basic
Home address: Terttutie 8, FIN-90540 Oulu, Finland
Tel: +358-503441247 (mobile)
Office address: Space Climate Research unit and Sodankylä Geophysical Observatory,
FIN-90014 University of Oulu, Finland
e-mail: ilya.usoskin@oulu.fi
URL: <http://spaceweb.oulu.fi/~usoskin/>

Academic background :

since 2012: Full Professor of Space Physics, University of Oulu, Finland;
2015-2018: Visiting Professor, National Research Nuclear University MEPhI, Moscow, Russia;
2013-2015: Visiting Professor, Institut de Physique du Globe de Paris (IPGP), France;
2006 : Qualified as full professor, Lund University and Swedish Institute for Space Physics;
2002 : Docent (= Habilitation / Assoc. Prof.) in Space Physics, University of Oulu, Finland;
2000 : Ph.D. in Space Physics, University of Oulu, Finland;
1995 : Cand. Sci. in Astrophysics, Ioffe Physical-Technical Inst., St.Petersburg, Russia;
1982-1988: M.Sc. (with honour) in Space Physics, Leningrad Polytechnics, Russia;
1980-1982: Leningrad High School No.239 with intensified studying of mathematics.

Employment history :

2014–2019: Vice-Director of ReSoLVE Center of Excellence of the Academy of Finland;
Since 2012: Full Professor of Space Physics, University of Oulu (permanent 50%);
Since 2000: Head of Cosmic Ray Station, University of Oulu (permanent 50%);
1999 : Research Fellow, University of Oulu
1997–1999: Postdoctoral Fellow, Italian National Institute of Nuclear Physics, INFN Milano, Italy;
1988-1999: Staff Researcher, Ioffe Physical-Technical Institute, St.Petersburg, Russia.

Personal Merits and Awards (selected) :

most honourable:

2018: Julius Bartels medal (Europ. Geosci. Union) to a *founder of the space climate discipline*;
2013: Knighthood (1st class) of the Order of the Lion of Finland *for promotion of Finnish science*;
1997: UNESCO/ICSU/TWAS Personal Award for Research in the Basic Sciences;

other selected

2018: University of Oulu award for outstanding achievements;
2017: The most downloaded paper in Springer Astronomy;
2016: The most valuable reviewer for *Astroparticle Physics* journal;
2011: Principal authors of the most cited paper in *Acta Geophys.* journal;
2010-2016: Personal Gratitude from the Ministry of Education and Science of Russian Federation for the assessment of research proposal in a National Call as an expert group leader;
2010: Principal author of a top-cited paper in *J. Atmos. Solar-Terr. Phys.* (2005-2010);
2001: INTAS Personal Prize for Young Scientists;
1997: Personal Prize Scholarship of the Nordic Council of Ministers in the field of Space Research;
1994: Personal Award of the American Astron. Soc. for young scientists of the former USSR;
1993: Personal Award of the International Science Foundation for scientists of the former USSR;
1988: Prize of Phys.-Mech. Dept. of the Leningrad Polytechnics for the best student research work.

Publications :

About 300 scientific publications (including 12 invited reviews, 6 book chapters, 6 popular articles) in total, among them ~250 papers in peer-review journals with 7400/11400 citations, Hirsch citation h -index = 46/56 (WoS/Google_Scholar). Four papers have been ranked as "highly cited", "hot" and "research front" ones (WoS, 2016-2018).

Public relations :

Research results have been broadly highlighted by the scientific community: e.g., press releases of the *Astron. Astrophys.* (2006, 2013), *Oulu University* (2011, 2014-2018), *Helsinki University* (2018), *Leibniz-Institut für Astrophysik Potsdam* (2011), *Max-Planck Society* (2003, 2004, 2006, 2017), *Physics News* (2003), *Science News* (2004), *EOS* (2012), *Royal Astron. Soc.* (2017), *CORDIS* (2006); popular scientific magazines: *the New Scientist* (2003, 2009, 2013), *the American Scientist* (2004), *Natural History* (2004), *Pour la Science* (2006), *Science Now* (2004, 2006), *Science Daily* (2017), etc., by news agencies: *Kaleva* (Finland), *Le Monde* (France), *Berliner Zeitung* and *Spiegel* (Germany), *BBC News*, *Guardian*, *Daily Telegraph* (UK), *Observer Budapest* (Hungary), *Washington Times*, *Discovery Channel* and *CBC News* (USA), *Rzeczpospolita* (Poland), *Sydney Morning Herald* (Australia), *Neue Zürcher Zeitung* (Switzerland), etc.

A number of interviews have been given to: Japan Broadcasting Corporation *NKH* (2013); *YLE TV* Finland (2004, 2006, 2010); *Swedish broadcasting corporation* (2003); *Norwegian broadcasting* (2003), *Polskie Radio* (2003), *DailyTech* (2008). Several articles have been published in science popular magazines *Tähdet ja Avaruus* (2016, 2017), *African Skies* (2006), *Solar Observer* (2010), *Troitsky Variant* (2009, 2010 – in Russian), etc.

A number of public lectures have been given: University of Oulu (2005), University of Bern (2005), Geophysical Society of Finland (2010), Moscow State University (2014), High Altitude Observatory, Boulder (2015), National Research Nuclear University, Moscow (2016), Great Debate and J. Bartels Medal lecture at EGU GA (Wien, 2018).

Expert duties and memberships (selected) :

- * Council member for:
 - o C4 (Astroparticle physics) commission of ICSU/IUPAP, associate/full since 2010/2017;
 - o E3 (Solar Impact throughout the Heliosphere) commission of IAU (2014-2017, 2018-2021);
 - o Government of Russian Federation (Council for Research Grants, 2013-2016, 2017-2020);
 - o Research Council of Russian Academy of Sciences (Cosmic Rays section, since 2011);
 - o International Advisory Board of the International Cosmic Ray Conference, 2015, 2017, 2019;
 - o Scientific Advisory Board of European Cosmic Ray Symposium, 2012-2018;
- * Member of Editorial Board of *Solar Physics* journal (2009-2012, 2013-2016, 2017-2020);
- * Member of the National Board for ESO (European Southern Observatory) 2013-2016;
- * Referee of research journals: *Adv. Geosci.*, *Adv. Space Res.*, *Annales Geophys.*, *Astron. Astrophys.*, *Astron. Lett.*, *Astrophys. J.*, *Dendrochronology*, *Earth Planet. Sci.*, *Earth Planet. Sci. Lett.*, *Earth Sci. Rev.*, *Environ. Res. Lett.*, *Geophys. Res. Lett.*, *J. Atm. Solar-Terrestrial Phys.*, *J. Geophys. Res.*, *Mon. Not. Roy. Astron. Soc.*, *Nature*, *Phys. Rev. Lett.*, *Proc. Royal Soc. A*, *Science*, *Solar Physics*, *Space Sci. Rev.*, *Survey Geophys.* etc.
- * Expert-evaluator of research proposals for: *European Research Council*; *European Science Foundation*; *European Space Agency*; *INTAS*; *National Science Foundation (USA)*; *Czech Science Foundation*; *Russian Science Foundation*; *Italian Scientific Committee*; *Australian Antarctic Science Program*, *Natural Environment Research Council (UK)*; *Antarctic Research Program (Chile)*; *National Research Foundation (South Africa)*, etc.;
- * Invited expert for ESA (2002), French Academy of Sciences (2007), Technical University of Tokyo (2008), Russian Ministry of Education and Sciences (2010-2011);
- * Scientific consultant for IASON GmbH, Austria (2009-2014);
- * Guest editor of topical issues: "Space Climate: direct and indirect observations of long-term solar activity", *Solar Phys.* (2004); "Space Climate: Long-term changes in the sun", *Adv. Space Res.* (2007); "Space Climate", *J. Atmos. Solar-Terr. Phys.* (2010); "Solar variability, Cosmic rays and climate", *Adv. Space Res.* (2011), IOP book "Extreme solar events" (2018);
- * Meeting organiser (selected):
 - o Organiser of a series of biennial International Space Climate Symposia since 2004;

- o Main Scientific Organizer of *Space Climate* events at COSPAR Sci. Assemblies since 2012;
- o Member of SOC, IAU Symposia: Argentina (2011), UK (2017), India (2018);
- o Main organizer of ISEE workshop on extreme solar events, Nagoya, Japan (2018);
- o Chair of SOC of the 22nd European Cosmic Ray Symposium, Turku, Finland (2010);
- o Convenor of events at COSPAR Scientific Assemblies in 2004 (Paris) and 2008 (Montreal);
- o Convenor of Sessions at Joint AGU Assemblies (2007, 2008).
- o Convenor of a workshop at 27th Intern. Cosmic Ray Conf., Germany (2003).
- * Task leader, CAWSES/SCOSTEP-II Project 2009-2013 (Task 1 "*Solar influence upon climate*");
- * National representative for COST Programs (ES0803, ES1005, CA15211);
- * member of societies: *European Astronomical Society* (since 1995), *European Physics Society* (since 2000), *COSPAR* (since 2000), *European Geophysical Society* (since 2005), *Asian-Oceanic Geophysical Society* (since 2004), *International Astronomical Union* (since 2009).

Selected positions of trust :

- * Grand Holder for the European COST ES1005 Project (2011-2015, budget ~400 k€);
- * Member of the EGU Julis Bartels medal committee (2019, 2020);
- * Chair/member of selection committees for tenure-track (2013, 2016, 2017) and tenured (2017) positions at the University of Oulu.

Main research achievements :

- * Foundation of a new research discipline *Space Climate*, focused on long-term global changes of the terrestrial and near-Earth environment;
- * Breakthrough in modelling of cosmic-ray induced effects in the Earth's atmosphere via a novel method based on full Monte-Carlo simulation of the nucleonic-electromagnetic-muon cascade;
- * Standardization and calibration of the ground-based cosmic-ray measurements by neutron monitors making them the quantitative benchmark instrument for cosmic-ray variability;

Grant and Project history :

Four major ongoing projects worth of ~6200 k€, and additionally ~2000 k€ in nine past project (see details in the attached Table).

Important Scientific Conferences :

180+ contributions, including 60 keynote, rapporteur, highlight, invited, and solicited talks presented at 70+ major international conferences.

Theses supervision and examining :

- * Supervisor of 11 PhD theses at University of Oulu, Finland: Mr. P. Väisänen (expected in 2019); Mr. S. Koldobskiy (2019), Mr. A. Artamonov (2017), Ms. E. Asvestari (2016), Mr. S. Poluyanov (2016), Ms. R. Leussu (2016), Mrs. A. Abe Pacini (2015), Mr. I. Virtanen (2013), Mrs. L. Zhang (2012), Ms. O. Yakovchuk (2012), Mrs. K. Alanko-Huotari (2007);
- * Opponent of Mr. F. Inceoglu, PhD in Space Physics, Univ. Aarhus, Denmark (2015);
- * Examiner of 11 PhD dissertations: University of Turku (M. Battarbee, 2013; J. Laivola, 2010; A. Al-Sawad, 2009; T. Laitinen, 2003, T. Sahla, 2003, P. Mäkelä, 2004), University of Helsinki (N. Olsper, 2018; Lehtinen, 2016; A. Sandroos, 2010), St. Petersburg State Univ. (N. Zolotova, 2008), Shafer Inst. Geocosmophys., Yakutsk (I. Petukhov, 2007);
- * Supervisor of 16 M.Sc. theses at the University of Oulu (since 2003), University of Milano (1998-1999), and St.Petersburg State Tech. Univ (1994-1997).