

BO THIDÉ
 Publication record
 MARCH 2002–FEBRUARY 2011¹

1 Reviews, books and book chapters

1. B. Thidé, N. M. Elias II, F. Tamburini, S. M. Mohammadi, and J. T. Mendonça. *Applications of Electromagnetic OAM in Astrophysics and Space Physics Studies*. In Juan P. Torres and Lluís Torner, editors, *Twisted Photons: Applications of Light With Orbital Angular Momentum*, Wiley-Vch Verlag, John Wiley and Sons, Weinheim, DE, ISBN: 978-3-527-40907-5, 2011.
2. Bo Thidé, *Electromagnetic Field Theory*. Second Edition. Dover Publications, NY, USA, ISBN 978-0-486-4773-2, 252 pp, *in press*, 2010.
3. V. N. Melnik, H. O. Rucker, A. A. Konovalenko, V. V. Dorovskyy, E. P. Branagin, A. I. Brazhenko, B. Thidé, and A. A. Stanislavskyy, *Solar Type IV bursts at frequencies 10–30 MHz*. In Pingzhi Wang, editor, *Solar Physics Research Trends*, pages 287–325. Nova Science Publishers, Inc., New York, NY, USA, ISBN 978-1600219870, 2008.
4. Bo Thidé, *Electromagnetic Field Theory*, Internet Book, <http://www.plasma.uu.se/CED/Book>, Uppsala, 2007.

2 Peer-reviewed articles

1. Fabrizio Tamburini, Bo Thidé, Gabriel Molina-Terriza, and Gabriele Anzolin. Twisting of light around rotating black holes, *Nature Phys.*, **7**(3), 195–197, 13 February 2011. <http://dx.doi.org/doi:10.1038/nphys1907>.
2. Siavoush M. Mohammadi, Lars K. S. Daldorff, Kamyar Forozesh, Bo Thidé, Jan E. S. Bergman, Brett Isham, Roger Karlsson, and T. D. Carozzi. Orbital angular momentum in radio—Measurement methods, *Radio Sci.*, **45**(RS4007), 16 July 2010. <http://dx.doi.org/doi:10.1029/2009RS004299>.
3. F. Tamburini, A. Sponselli, B. Thidé, and J. T. Mendonça, Photon orbital angular momentum and mass in a plasma vortex, *Europhys. Lett.*, **90**(4), 45001(4), 4 June 2010. <http://dx.doi.org/10.1209/0295-5075/90/45001>.
4. Mykola V. Khotyaintsev, Valentin N. Mel'nik, Bo Thidé, and Yuri V. Khotyaintsev. Radar detection of interplanetary shocks: Scattering by anisotropic Langmuir turbulence, *Adv. Space Res.*, **45**(6), 804–811, 15 March 2010. <http://dx.doi.org/10.1016/j.asr.2009.12.005>.

¹Full publication record at www.physics.irfu.se/Publications

5. Siavoush M. Mohammadi, Lars K. S. Daldorff, Jan E. S. Bergman, Roger L. Karlsson, Bo Thidé, Kamyar Forozesh, and Tobia D. Carozzi. Orbital angular momentum in radio—a system study, *IEEE Trans. Antennas Propag.*, **58**(2), 565–572, 2 February 2010.
6. J. T. Mendonça, S. Ali, and B. Thidé. Plasmons with orbital angular momentum, *Phys. Plasmas*, **16**, 112103 (5 pp), 11 November 2009. <http://dx.doi.org/10.1063/1.3261802>.
7. José T. Mendonça, Bo Thidé, and Holger Then, Stimulated Raman and Brillouin backscattering of collimated beams carrying orbital angular momentum, *Phys Rev. Lett.*, **102**, 185005 (4 pp), 8 May, 2009.
8. L. Norin, T. B. Leyser, E. Nordblad, B. Thidé, and M. McCarrick, Unprecedentedly strong and narrow electromagnetic emissions stimulated by high-frequency radio waves in the ionosphere, *Phys. Rev. Lett.*, **102**, 065003 (4 pp), 12 February 2009. <http://dx.doi.org/10.1103/PhysRevLett.102.065003>.
9. J. T. Mendonca and B. Thidé, Neutrino orbital angular momentum in a plasma vortex, *Europhys. Lett.*, **84**, 41001, 2008. <http://dx.doi.org/10.1209/0295-5075/84/41001>.
10. H. Rothkaehl, J. E. S. Bergman, B. Thidé, and Z. Klos, The COMPASS-2 satellite and the ground-based LOIS vector sensing radar facility as novel tools for ionospheric plasma diagnostic, *J. Atmos. Terr. Phys.*, **70**, 926–936, 2008.
11. L. Norin, S. M. Grach, T. B. Leyser, B. Thidé, E. N. Sergeev, and M. Berlin, Ionospheric plasma density irregularities measured by stimulated electromagnetic emission, *J. Geophys. Res.*, **113**, A09314, 2008. <http://dx.doi.org/10.1029/2008JA013338>.
12. B. Eliasson and B. Thidé, Zakharov simulation study of spectral features of Langmuir turbulence in an inhomogeneous plasma, *J. Geophys. Res.*, **113**, A02313, 2008. <http://dx.doi.org/10.1029/2007JA012491>.
13. Bo Thidé, Nonlinear physics of the ionosphere and LOIS/LOFAR. *Plasma Phys. Control. Fusion*, **49**, B103–109, 2007.
14. B. Eliasson and B. Thidé, Reply to comment by N. A. Godarenko et al. on “Simulation study of the interaction between large-amplitude HF radio waves and the ionosphere”, *Geophys. Res. Lett.*, **34**, L23105, 2007. <http://dx.doi.org/10.1029/2007GL031989>.
15. B. Thidé, H. Then, J. Sjöholm, K. Palmer, J. Bergman, T. D. Carozzi, N. H. Ibragimov and R. Khamitova, Utilization of photon orbital angular momentum in the low-frequency radio domain, *Phys. Rev. Lett.*, **99**, 087701 (4 pp), 22 August, 2007. <http://dx.doi.org/10.1103/PhysRevLett.99.087701>.
16. Bengt Eliasson and Bo Thidé, Simulation study of the interaction between large-amplitude HF radio waves and the ionosphere, *Geophys. Res. Lett.*, **34**, L0610, 30 March 2007, <http://dx.doi.org/10.1029/2006GL028948>.

17. Nail H. Ibragimov, Raisa Khamitova, and Bo Thidé, Conservation laws for the Maxwell-Dirac equations with a dual Ohm's law, *J. Math. Phys.*, **48**(5), 053523, 31 May, 2007.
18. L. Norin, S. M. Grach, B. Thidé, and T. B. Leyser, Transient Dynamics of Secondary Radiation From an HF Pumped Magnetized Space Plasma, *J. Geophys. Res.*, **112**, A09303, 8 September, 2007. <http://dx.doi.org/10.1029/2007JA012454>.
19. P. V. Kotov, L. Norin, E. N. Sergeev, S. M. Grach, and B. Thidé, Recovery of ponderomotive parametric instability after long pumping of ionosphere *Adv. Space Res.*, **40**, 377–383, 2007. <http://dx.doi.org/10.1016/j.asr.2007.04.067>.
20. Oscar Stål, J. Bergman, B. Thidé, L. K. S. Daldorff, and G. Ingelman, Prospects for satellite detection of radio pulses from ultrahigh energy neutrinos interacting with the Moon, *Phys. Rev. Lett.*, **98**, 071103 (4 pp), 2007.
21. N. F. Blagoveshchenskaya, T. D. Borisova, V. A. Kornienko, T. B. Leyser, M. T. Rietveld, and B. Thidé, Artificial field-aligned irregularities in the nightside auroral ionosphere, *Adv. Space Res.*, **38**(11), 2503–2510, 2006.
22. N. F. Blagoveshchenskaya, V. A. Kornienko, T. D. Borisova, M. T. Rietveld, T. Bösinger, B. Thidé, T. B. Leyser, and A. Brekke, Heater-induced phenomena in a coupled ionosphere-magnetosphere system, *Adv. Space Res.*, **38**(11), 2495–2502, 2006.
23. Nail H. Ibragimov, Raisa Khamitova, and Bo Thidé, Adjoint system and conservation laws for symmetrized electromagnetic equations with a dual Ohm's law. In Archives of ALGA, volume 3, pages 214–228. *ALGA Publications*, Blekinge Institute of Technology, Karlskrona, Sweden, 3 edition, 2006. ISSN 1652-4934.
24. Roger L. Karlsson, Tobia D. Carozzi, Jan E. S. Bergman, Lars Norin, and Bo Thidé, Statistical properties of ionospheric Stimulated Electromagnetic Emissions, *Ann. Geophys.*, **24**, 1851-859, 2006.
25. M. V. Khotyaintsev, V. N. Mel'nik, B. Thidé, and O. O. Konovalenko, Combination scattering by anisotropic Langmuir turbulence with application to solar radar experiments, *Solar Phys.*, 234(1), 169-186, March 2006.
26. L. Norin, S. M. Grach, and B. Thidé, On the linear stage of thermal parametric instabilities in the ionosphere excited by HF pumping near electron gyroharmonics, *Adv. Space Res.*, **38**(11), 2527–2532, 2006. <http://dx.doi.org/10.1016/j.asr.2004.12.014>.
27. N. F. Blagoveshchenskaya, T. D. Borisova, V. A. Kornienko, B. Thidé, M. T. Rietveld, M. J. Kosch, and T. Bösinger, Phenomena in the ionosphere-magnetosphere system induced by injection of powerful HF radio waves into night-side auroral ionosphere, *Ann. Geophys.*, **23**, No. 2, 87–100, 2005.
28. T. D. Borisova, N. F. Blagoveshchenskaya, V. A. Kornienko, M. T. Rietveld, B. Thidé and T. B. Leyser, Ionospheric effects induced by turn-on and turn-off of the Tromsø HF heater, *Geomagn. Aeron.*, **45**(3), 390–397, 2005.

29. V. L. Frolov, E. N. Sergeev, B. Thidé, and E. A. Shorokhova, Experimental studies of effects observed by a nonlinear interaction of two powerful radio waves in magnetised plasmas, *Radiophys. Quant. Electr.*, **48**(2), 98–119, 2005.
30. B. Thidé, E. N. Sergeev, S. M. Grach, T. B. Leyser, and T. D. Carozzi, Competition between Langmuir and upper hybrid turbulence in an HF pumped ionosphere, *Phys. Rev. Lett.*, 95(25), 255002, December 15, 2005. <http://dx.doi.org/10.1103/PhysRevLett.95.255002>.
31. V. L. Frolov, E. N. Sergeev, G. P. Komrakov, P. Stubbe, B. Thidé, M. Walden-vik, E. Veszelei, and T. B. Leyser, The ponderomotive narrow continuum (NC_p) component in stimulated electromagnetic emission spectra, *J. Geophys. Res.*, **109**, A07304, <http://dx.doi.org/10.1029/2001JA005063>, 2004.
32. B. Thidé, Radio research and large low frequency array telescopes, in *Mathematical Modelling of Wave Phenomena*, Börje Nilsson and Louis Fisherman (Eds.), Växjö University Press, 315–331, 2004.
33. N. F. Blagoveshchenskaya, V. A. Kornienko, T. D. Borisova, M. T. Rietveld, and B. Thidé, Modification of the ionospheric-magnetospheric coupling by powerful HF radio waves beamed into the night-side auroral ionosphere, *Res. Geomagn. Aeron., Solar Phys.*, **4**, 37–46, 2003.
34. V. A. Kornienko, N. F. Blagoveshchenskaya, T. D. Borisova, B. Thidé, and A. Brekke, Modification of the local substorm ionospheric and field-aligned currents produced by the Tromsø heating facility, *Int. J. Geomag. Aeron.*, **4**, No. 1, 37–46, 2003.
35. K. Stasiewicz, P. K. Shukla, G. Gustafsson, S. Buchert, B. Lavraud, B. Thidé, and Z. Klos, Magnetosonic Solitons Detected by the Cluster Spacecraft, *Phys. Rev. Lett.* **90**, 085002, 2003.
36. T. D. Borisova, N. F. Blagoveshchenskaya, I. V. Moskvina, M. T. Rietveld, M. J. Kosch and B. Thidé, Doppler shift simulation of scattered HF signals during the Tromsø HF pumping experiment on 16 February, 1996, *Ann. Geophys.*, **20**, 1479–1486, 2002.
37. T. D. Carozzi, B. Thidé, S. M. Grach, T. B. Leyser, M. Holz, G. P. Komrakov, V. L. Frolov, and E. N. Sergeev, Stimulated electromagnetic emissions during pump frequency sweep through fourth electron cyclotron harmonic, *J. Geophys. Res.* **107**, A9, 1253 (13 pp), 2002.
38. E. N. Sergeev, S. M. Grach, G. P. Komrakov, B. Thidé, T. B. Leyser, T. D. Carozzi, and M. Holz, Analyzing the processes of excitation and decay of plasma turbulence near the fifth electron gyroharmonic using Stimulated Electromagnetic Emission of the ionosphere, *Radiophys. Quant. Electr.*, **45**(3), 193–210, 2002.

3 Peer-reviewed conference contributions (including invited)

1. Bo Thidé. Photon Orbital Angular Momentum at Radio Frequencies: Challenges and Possibilities. In International Conference on Optical Angular

- Momentum, York, UK, 23-25 March 2010. University of East Anglia/University of York. Invited oral paper.
2. B. Thidé and J. T. Mendonça. Plasma vorticity and electromagnetic angular momentum. In C. Z. Cheng, editor, International Workshop on Frontiers in Space and Fusion Energy Sciences, Tainan, Taiwan, 30 November–3 December 2009. Plasma and Space Science Center, National Cheng Kung University, Taiwan. Invited oral paper.
 3. Bo Thidé et al. LOIS, Space Weather KSP, and New Radio Methods. In Swedish LOFAR Science Interest Meeting, Alba Nova University Centre, Stockholm, Sweden, 15 January 2009. Invited oral paper.
 4. Bo Thidé et al. Orbital Angular Momentum in Radio Experiments. In 15th Annual RF Ionospheric Interactions Workshop, Boulder, CO, USA, 19 April 2009. National Science Foundation, University of Alaska at Fairbanks. Invited oral paper.
 5. Bo Thidé et al. Radio Orbital Angular Momentum and Space Physics. In Second Colloquium on Scientific and Fundamental Aspects of the GALILEO Programme, Palazzo de Bò, University of Padua, Italy, 14–16 October 2009. COSPAR. Invited plenary lecture.
 6. José Tito Mendonça, Bo Thidé, Holger Then, and Shahid Ali. Orbital angular momentum of photons, plasmons and neutrinos in a plasma. In DPP09 Meeting of The American Physical Society, page PO6.00011, Atlanta, GA, USA, 2-6 November 2009. APS Division of Plasma Physics.
 7. H. Rothakehl, B. Thide, and J. E. Bergman. Electromagnetic Earth environment—new radio diagnostic. In 11th International Conference on Ionospheric radio Systems and Techniques, 2009. (IRST 2009), pages 1–6, Edinburgh, UK, 28–30 April 2009. Institution of Engineering and Technology. ISBN: 978-1-84919-123-4.
 8. Krishna Mamidipaka, Roger Rea, Bo Thidé, and Carolyn McGregor. Extreme Analytics on data in-motion: Panel Discussion. In Information on Demand, Berlin, Germany, 2-5 June 2009. IBM.
 9. Bo Thidé et al. Plasma vorticity and electromagnetic orbital angular momentum. In Lars Blomberg, editor, 10th International Workshop on the Interrelationship between Plasma Experiments in Laboratory and Space (IPELS), IPELS 2009 Online Proceedings, Djurönäset, Stockholm Archipelago, Sweden, 8-12 June 2009. Royal Institute of Technology (KTH), School of Electric Engineering.
 10. Bo Thidé et al. Utilising radio OAM to study space plasma vorticity - The LOIS concept and IBM software. In G. Mann, editor, LOFAR Solar KSP Workshop II, Astrophysikalisches Institut Potsdam, Potsdam, Germany, 24-25 June 2009. Astrophysikalisches Institut, AIP.
 11. Bo Thidé. LOIS, Solar Physics, Space Weather KSP and New Radio Methods. In G. Mellema and J. Conway, editors, Swedish LOFAR Science interest meeting, Alba Nova, Stockholm, 16 January 2009. Department of Astronomy, Stockholm University. Invited.

12. Bo Thidé. N-tupling the capacity of wireless communication using electromagnetic angular momentum. In GigaHertz Symposium, Chalmers University of Technology, Göteborg, 5-6 March 2008. GHz Centre.
13. Bo Thidé. LOIS Space Centre. In RVK08, Växjö, Sweden, 9 June 2008. Swedish URSI, Växjö University. Invited thematic oral paper.
14. Bo Thidé and Jan Bergman. On the extraction of all information embedded in radio signals: Implications for SETI. In Jill Tarter, editor, Carl Sagan Center Colloquium, Mountain View, CA, 2 January 2008. SETI Institute. Invited colloquium lecture.
YouTube: <http://www.youtube.com/watch?v=RemNWLcVbiA&feature=channel>.
15. Bo Thidé, EM Radiation Angular Momentum Diagnostic of Plasma Turbulence. In IPELS2007—The 9th International Workshop on the Interrelationship between Plasma Experiments in Laboratory and Space, Palm Cove Resort, Queensland, Australia, 5-10 August 2007. The Australian National University. Invited plenary lecture.
16. Bo Thidé, Next generation radio observatories on Earth and in space for interdisciplinary space physics and astrophysics. In Andrzej A. Zdziarski, editor, FOCUS2007 Workshop on Astrophysics and Space Research, Serock, Poland, 27-30 June 2007. Foundation for Polish Science. Invited oral paper. Conference URL <http://www.convention.com.pl/focus2007>.
17. Bo Thidé, Nonlinear physics of the ionosphere (heating experiments) and LOIS/LOFAR. In The 34th EPS Conference on Plasma Physics, Warsaw, Poland, 2-6 July 2007. Institute of Plasma Physics and Laser Microfusion — Euratom Association, European Physical Society. Invited lecture. Conference URL <http://www.eps2007.ifpilm.waw.pl>.
18. Bo Thidé, Conserved quantities in Maxwell-Lorentz electrodynamics and their use in radio diagnostics and communications. In Nail Ibragimov, editor, 3rd South East Conference on Mathematics, Karlskrona, Sweden, 2006. ALGA, Blekinge Institute of Technology. Invited lecture.
19. Bo Thidé, Lars K. S. Daldorff, and Bengt Eliasson, Turbulent interaction between high-frequency EM waves and the ionosphere. In Francesco Califano, editor, Vlasovia 2006, The Galileo Galilei Institute, Florence, Italy, 18–20 September 2006. Invited lecture.
Conference URL: <http://www.astro.unifi.it/vlasovia/>.
20. Jan Bergman, Bo Thidé, Jonatan Danielsson, Jan Johansson, and Maria Johansson, Radio Development in Uppsala. In Heino Falcke, editor, Towards a European Infrastructure for Lunar Observatories II, Lunar Infrastructure for Exploration, Bremen, Germany, 23–24 November 2006. Astrium, Germany and Astron, The Netherlands. Invited oral paper.
21. J. O. Malo and B. Thidé, Kenya International Radio Observatory (KIRO). Namir E. Kassim, Mario R. Perez, William Junor, and Patricia A. Henning, eds., *From Clark Lake to the Long Wavelength Array: Bill Erickson's Radio Science*, volume 345 of Conference Series, page 488. Astronomical Society of the Pacific, 2006

22. Axel W. Guthmann and B. Thidé, The LOIS project and astrophysics, In F. A. Aharonian, H. J. Völk, and D. Horns, editors, *High Energy Gamma-Ray Astronomy*, 2nd International Symposium, volume 745 of Conference Proceedings, ISBN 0-7354-0229-9, pages 770–773. AIP, Heidelberg, Germany, 21 February, 2005.
23. M. V. Khotyaintsev, V. M. Mel'nyk, B. Thidé, and O. Konovalenko, Combination scattering by anisotropic Langmuir turbulence with application to solar radar experiments, *2005 AGU Joint Assembly*, New Orleans, 23–27 May, 2005.
24. A. Konovalenko, H. O. Rucker, A. Lecacheux, V. N. Melnik, I.S. Falkovich, N. N. Kalinichenko, M. R. Olyak, S. V. Stepkin, B. Thidé, and Yu. V. Tokarev, *Using largest decameter radio telescopes for solar system study as probe and basis for the LOFAR-LOIS concept*. In 6th International Workshop on Planetary and Solar Radio Emission, Austrian Academy of Sciences, Graz, Austria, 20-22 April 2005.
25. A. A. Konovalenko, A. Lecacheux, H. O. Rucker, B. Thidé, V. N. Mel'nik, *et al.*, Using of world largest radiotelescopes for the developing of LOFAR-LOIS concept, V Ukrainian Conference on Space Research, page 33, Evpatoria, Ukraine, 4-11 September, 2005.
26. Oscar Stål, Jan Bergman, Bo Thidé, Lennart Åhlén, and Gunnar Ingelman. Lunar satellite detection of ultra-high energy neutrinos with the use of radio methods, *To Moon and Beyond*, DGLR Report 2005-08, Bremen, Germany, 15-16 September 2005. DGLR, <http://www.beyondmoon.de/>. ISBN 3-932183-47-2.
27. B. Thidé, Space plasmas and lunar electrodynamics, *Towards a European infrastructure for lunar observatories*, Bremen, Germany, 22–24 March, 2005. Invited.
28. Bo Thidé, The LOIS space radio project, RVK05, Swedish National URSI Conference, Linköping, Sweden, 14–16 June 2005.
29. Bo Thidé, Holger Then, Jan Bergman, Yakov Istomin, and Nail Ibragimov, On the use of conserved electromagnetic field quantities in radio studies of space, RVK05, Swedish National URSI Conference, Linköping, Sweden, 14–16 June 2005.
30. Bo Thidé, Holger Then, Yakov N. Istomin, Nail Ibragimov, Jan Bergman, and Roger Karlsson, The use of electromagnetic field symmetries in radio physics, XXVIIIth URSI General Assembly, New Delhi, India, 23–29 October, 2005.
31. B. Thidé, The LOIS space radio research facility—description and first results, XXVIIIth General Assembly of the International Union of Radio Science, New Delhi, India, 23–29 October 2005. Invited
32. Bo Thidé, Digital low-frequency radio telescopes and new EM wave physics methods, *Mathematical Modelling of Wave Phenomena*, Växjö, Sweden, 14–19 August 2005. MSI, Växjö University. Invited

33. Bo Thidé, LOFAR and LOIS. Next-generation sensor networks and radio techniques for probing space, EISCAT Incoherent Scatter Radar School, Kiruna, Sweden, 15–26 August 2005. EISCAT Scientific Association. Invited lecture.
34. Bo Thidé, LOFAR/LOIS—An innovative pan-European infrastructure for space and Earth environment studies, radio and IT research, security, and sustainable societal development, VINNOVA vid VxU, Växjö, Sweden, 14 September 2005. Växjö University. Invited presentation
35. Bo Thidé, LOIS and LOFAR—deep space probing at the longest wavelengths for solar physics and space weather, *International Workshop on Solar Activity: Exploration, Understanding and Prediction*, Lund, Sweden, 19–21 September 2005. Swedish Institute of Space Physics. Invited
36. Bo Thidé, Space plasmas and lunar electrodynamics, *Towards a European Infrastructure for Lunar Observatories*, Bremen, Germany, 22–24 March 2005. EADS Space Transportation. Invited
37. Bo Thidé, Swedish space research on the move, World Year of Physics 2005, Lectures in popular science, Mälardalen University, Eskilstuna, Sweden, 29 November 2005. Invited lecture
38. Bo Thidé, Turbulence on demand, 8th International Workshop in the Interrelationship between Plasma Experiments in Laboratory and Space, IPELS05, Book of Abstracts, page 31, Tromsø, Norway, 5–8 July 2005. Invited
39. Lars K. S. Daldorff, Bo Thidé, and Jan Bergman. LOIS—High-Performance Computing for a Distributed Space Probing Sensor Network, *Linux Clusters for Super Computing*, National Supercomputer Centre, Linköping, Sweden, 18–19 October, 2004.
40. Bo Thidé, Turbulence on demand—using the ionosphere as a space plasma laboratory, *3rd Nordic Symposium on Plasma Physics*, Centre for Advanced Studies, Norwegian Academy of Sciences, Lysebu, Holmenkollen, Oslo, Norway, 4–9 October, 2004. Invited.
41. N. F. Blagoveshchenskaya, T. D. Borisova, V. A. Kornienko, M. T. Rietveld, B. Thidé, and T. Leyser, Striations induced by powerful HF radio waves in the nightside auroral ionosphere, *IV International Suzdal URSI Symposium on Effects of Artificial Action on the Earth Ionosphere by Powerful Radio Waves*, Nizhniy Novgorod, Russia, 2004. Invited.
42. E. N. Sergeev, S. M. Grach, V. L. Frolov, B. Thidé and G. P. Komrakov, Applications of the stimulated electromagnetic emission measurements to artificial turbulence investigations, *IV International Suzdal URSI Symposium on Effects of Artificial Action on the Earth Ionosphere by Powerful Radio Waves*, Nizhniy Novgorod, Russia, 2004. Invited.
43. V. L. Frolov, E. N. Sergeev, E. A. Shorokhova, and B. Thidé, Effects observed by a nonlinear interaction of two O-mode powerful radio waves in magnetised plasma (ionosphere), *IV International Suzdal URSI Symposium*

- on Effects of Artificial Action on the Earth Ionosphere by Powerful Radio Waves*, Nizhniy Novgorod, Russia, 2004.
44. T. D. Borisova, N. F. Blagoveshchenskaya, V. A. Kornienko, M. T. Rietveld, B. Thidé, and T. Leyser, Ionospheric effects induced by turn-on and turn-off of the Tromsø HF heater, *IV International Suzdal URSI Symposium on Effects of Artificial Action on the Earth Ionosphere by Powerful Radio Waves*, Nizhniy Novgorod, Russia, 2004.
 45. N. F. Blagoveshchenskaya, V. A. Kornienko, T. D. Borisova, M. T. Rietveld, B. Thidé, and T. Leyser, Impact of powerful HF radio waves on ionosphere-magnetosphere coupling, *IV International Suzdal URSI Symposium on Effects of Artificial Action on the Earth Ionosphere by Powerful Radio Waves*, Nizhniy Novgorod, Russia, 2004.
 46. N. F. Blagoveshchenskaya, T. D. Borisova, V. A. Kornienko, T. B. Leyser, M. T. Rietveld, and B. Thidé, Artificial field-aligned irregularities in the night-side auroral ionosphere, *35th COSPAR Scientific Assembly*, Abstract No. COSPAR04-A-00361, Paper No. C5.1/D4.1-0038-04, Paris, France, 18–25 July, 2004.
 47. N. F. Blagoveshchenskaya, V. A. Kornienko, T. D. Borisova, M. T. Rietveld, T. Bösinger, B. Thidé, T. B. Leyser, and A. Brekke, Heater-induced phenomena in a coupled ionosphere-magnetosphere system, *35th COSPAR Scientific Assembly*, Abstract No. COSPAR04-A-00358, Paper No. C5.1/D4.1-0037-04, Paris, France, 18–25 July, 2004.
 48. L. Norin, S. M. Grach, and B. Thidé, On the linear stage of the thermal parametric instability in the ionosphere excited by HF pumping near electron gyroharmonics, *35th COSPAR Scientific Assembly*, Abstract No. COSPAR04-A-01034, Paper No. C5.1/D4.1-0042-04, Paris, France, 18–25 July, 2004.
 49. S. M. Grach, E. N. Sergeev, B. Thidé, and T. B. Leyser, Diagnostic possibilities of stimulated electromagnetic emissions, *35th COSPAR Scientific Assembly*, Abstract No. COSPAR04-A-01247, Paper No. C5.1/D4.1-0029-04, Paris, France, 18–25 July, 2004.
 50. M. V. Khotyaintsev, V. M. Mel'nik, B. Thidé, and O. Konovalenko, Reflection of a radio location signal from Langmuir turbulence due to the combination scattering $t + l = t$, *CESRA Workshop*, Sabhal Mor Ostaig, Isle of Skye, Scotland, 7–11 June, 2004.
 51. T. D. Borisova, N. F. Blagoveshchenskaya, V. A. Kornienko, M. T. Rietveld, B. Thidé, and T. B. Leyser, Ionospheric effects induced by turn-on and turn-off of the Tromsø heater, *International Conference on Problems of Geocosmos*, St. Petersburg, Russia, 24–28 May, 2004.
 52. V. A. Kornienko, N. F. Blagoveshchenskaya, M. T. Rietveld, B. Thidé, A. Brekke, and M. Surjasuo, On the possibility of local artificial modification of an auroral arc. Experimental results, *International Conference on Problems of Geocosmos*, St. Petersburg, Russia, 24–28 May, 2004.
 53. A. A. Konovalenko, H. O. Rucker, V. N. Mel'nik, I. S. Falkovich, A. Lecacheux, A. J.-L. Bougeret, G. Mann, B. Thidé, P. Rodriguez, and Yu. V. Tokarev,

- Solar system study by new methods of the decameter radio astronomy, European Geosciences Union, 1st General Assembly, Nice, France, 25–30 April, 2004.*
54. V. M. Mel'nik, M. V. Khotyaintsev, O. O. Konovalenko, B. Thidé, Scattering of the radar signal on the Langmuir turbulence generated by type III Solar burst ($t + l = t$), *11th Young Scientists Conference on Astronomy and Space Physics*, Kyiv, Ukraine, 20–24 April, 2004.
 55. A. A. Konovalenko, V. N. Mel'nik, I. S. Falkovich, A. Lecacheux, J.-L. Bougeret, H. Rucker, G. Mann, and B. Thidé, Using world's largest decameter radio telescopes as probe and basis for developing the LOFAR concept and solar-terrestrial relationship ground-space stud, *State and Prospects of Ukraine-Europe Cooperation in Space Research Area*, Ukraine-Europe Cooperation in Space Research EC/ESA/NSAU Workshop, Kyiv, Ukraine, 29–30 January, 2004.
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