

4. Sazhin, S.S. (1977) Non resonant interaction of whistlers with electrons, *Soviet Physics. Technical Physics*, **22**(1), 142-144.
5. Sazhin, S.S. (1977) Magnetospheric capture of electrostatic waves at frequencies below the proton plasma frequency, *Radiophysics and Quantum Electronics*, **20**(6), 652-653.
6. Ponyavin, D.I., Pudovkin, M.I. and Sazhin, S.S. (1977) Self-consistent parallel electric field in the magnetosphere of the Earth, *Geomagnetism and Aeronomy* (English translation), **17**(3), 323-325.
7. Sazhin, S.S. and Titova, E.E. (1977) Dynamic spectrum of VLF chorus events calculated from the data recorded at Lovozero station data, *Cosmic Research* (English translation), **15**(5), 684-685.
8. Pudovkin, M.I. and Sazhin, S.S. (1977) Estimation of the large scale magnetospheric electric field from the character of the dynamic spectrum of VLF chorus, *Cosmic Research* (English translation), **15**(6), 813-814.
9. Sazhin, S.S. (1978) A model of quasiperiodic VLF emissions, *Planet. Space Sci.*, **26**(5), 399-401.
10. Sazhin, S.S. (1978) On the conductivity of the solar wind plasma, *Letters to the Astronomical J.*, **4**(7), 321-322 (in Russian).
11. Sazhin, S.S. and Vershinina, N.I. (1978) Estimation of the large scale magnetospheric electric field from the frequency drift of bursts of VLF emissions, *Cosmic Research* (English translation), **16**(3), 376-377.
12. Ponyavin, D.I. and Sazhin, S.S. (1978) Development of whistler cyclotron instability in a magnetospheric plasma with allowance for the self-consistent parallel electric field, *Geomagnetism and Aeronomy* (English translation), **18**(4), 503-4.
13. Sazhin, S.S. (1979) Spontaneous polarization of a turbulent magnetized plasma, *Soviet Physics. Technical Physics*, **24**(3), 371-373.
14. Ponyavin, D.I. and Sazhin, S.S. (1979) Whistler damping near the electron gyrofrequency in a plasma with components at different temperatures, *Soviet Physics. Technical Physics*, **24**(4), 515-516.
15. Pudovkin, M.I. and Sazhin, S.S. (1979) Pedersen conductivity of the magnetospheric plasma, *Geomagnetism and Aeronomy* (English translation), **19**(1), 55-56.
16. Sazhin, S.S., Ponyavin D.I. and Varshavskii, S.P. (1979) Some features of whistler propagation in magnetospheric plasma. *Radiophysics and Quantum Electronics*, **22**(7), 547-550.
17. Likhter, Ja.I. and Sazhin, S.S. (1980) On the frequency shift in modulated VLF emissions. *J. Atmos. Terr. Physics*, **42**(4), 381-384.
18. Sazhin, S.S., Sizova, L.Z. and Larkina, V.I. (1980) Latitude dependence of the intensity of VLF emissions, *Geomagnetism and Aeronomy* (English translation), **20**(2), 239-240.
19. Sazhin, S.S. (1981) Some studies of whistler-mode propagation in the magnetospheric plasma, *J. Atmos. Terr. Physics*, **43**(2), 139-146 (Errata p. 373).
20. Sazhin, S.S., Kobeleva, O.A., Sazhina, E.M. and Varshavskii, S.P. (1981) Propagation of whistlers at a small angle to the magnetic field in hot anisotropic plasma. *Radiophysics and Quantum Electronics*, **24**(8), 628-634.
21. Sazhin, S.S. (1982) A physical model for oblique whistler-mode instabilities, *Ann. Geophysique*, **38**(2), 111-118.
22. Sazhin, S.S. (1982) Oblique ordinary-mode propagation in the magnetospheric plasma, *J. Atmos. Terr. Physics*, **44**(1), 31-36.
23. Sazhin, S.S. and Sazhina, E.M. (1982) Oblique whistler-mode propagation in a hot anisotropic plasma, *J. Plasma Physics*, **27**(2), 199-204.
24. Sazhin, S.S. and Varshavski, S.P. (1982) Whistler trapping in the vicinity of the plasmopause, *Geomagnetism and Aeronomy* (English translation), **22**(2), 192-195.
25. Sazhin, S.S. (1983) Whistler-mode propagation at frequencies near the electron gyrofrequency, *J. Plasma Physics*, **29**(2), 217-222.
26. Kobelev, V.V. and Sazhin, S.S. (1983) Estimate of the temperature of magnetospheric electrons temperature from the shape of whistler spectrograms, *Soviet Technical Physics Letters*, **9**(7), 369-370.
27. Kobelev, V.V. and Sazhin, S.S. (1983) Trapping of whistlers in magnetospheric ducts, *Geomagnetism and Aeronomy* (English translation), **23**(5), 654-657.
28. Sazhin, S.S. (1984) On whistler-mode trapping in the magnetospheric ducts. *J. Plasma Physics*, **31**(3), 487-493.
29. Sazhin, S.S. (1984) A model for hiss-type mid-latitude VLF emissions, *Planet. Space Science*, **32**(10), 1263-1271.
30. Majewski, M. and Sazhin, S.S. (1984) Oblique extraordinary mode propagation in the magnetospheric plasma, *J. Atmos. Terr. Physics*, **46**(10), 937-944.
31. Kobelev, V.V. and Sazhin, S.S. (1984) Quasilongitudinal whistler-mode propagation in a rarefied plasma, *Geophysical Journal*, **6**(2), 69-74 (in Russian).
32. Sazhin, S.S. (1985) Almost parallel electromagnetic wave propagation in a hot anisotropic plasma, *J. Atmos. Terr. Physics*, **47**(6), 517-522.

33. Sazhin, S.S. (1985) Whistler-mode polarization in a hot anisotropic plasma, *J. Plasma Physics*, **34**(2), 213-226.

63. Sazhin, S.S. and Strangeways, H.J. (1989) Ray tracing in inhomogeneous plasma. *Planet. Space Sci.*, **37**(6), 739-47.
64. Sazhin, S.S. (1989) Parallel whistler-mode propagation in a weakly relativistic plasma. *Physica Scripta*, **40**(1), 114-6.
65. Sazhin, S.S. (1989) Effects of ions and finite electron density on quasi-electrostatic whistler-mode propagation. *Astrophys. Space Science*, **158**, 107-15.
66. Sazhin, S.S. (1989) Improved quasilinear models of parallel whistler-mode instability. *Planet. Space Sci.*, **37**(6), 633-47.
67. Sazhin, S.S. (1989) A physical model of quasi-electrostatic whistler-mode propagation. *Astrophys. Space Science*, **161**, 171-174.
68. Horne, R.B. and Sazhin, S.S. (1990) Quasielectrostatic and electrostatic approximations for whistler-mode waves in the magnetospheric plasma. *Planet. Space Sci.*, **38**(2), 311-8.
69. Sazhin, S.S. (1990) Storey angle for whistler-mode waves. *Planet. Space Sci.*, **38**(3), 327-31.
70. Sazhin, S.S., Smith, A.J. and Sazhina, E.M. (1990) Can magnetospheric electron temperature be inferred from whistler dispersion measurements? *Annales Geophysicae*, **8**(4), 273-85.
71. Sazhin, S.S., Walker, S.N. and Woolliscroft, L.J.C. (1990) On spin-modulation diagnostics of whistler-mode wave normal angles in the vicinity of the Earth's magnetopause. *Planet. Space Sci.*, **38**(3), 333-9.
72. Sazhin, S.S. and Temme, N.M. (1990) Relativistic effects on parallel whistler-mode propagation and instability. *Astrophys. Space Sci.*, **166**, 301-13.
73. Sazhin, S.S., Walker, S.N. and Woolliscroft, L.J.C. (1990) Oblique whistler-mode waves in the presence of electron beams. *Planet. Space Sci.*, **38**(6), 791-805.
74. Sazhin, S.S. (1990) A new approximate solution of parallel whistler-mode dispersion equation. *Astrophys. Space Sci.*, **172**, 235-47.
75. Sazhin, S.S., Walker, S.N. and Woolliscroft, L.J.C. (1990) On whistler-mode trapping in the vicinity of the Earth's magnetopause. *Annales Geophysicae*, **8**(9), 583-9.
76. Sazhin, S.S. and Horne, R.B. (1990) Quasilonitudinal approximation for whistler-mode waves in the magnetospheric plasma. *Planet. Space Sci.*, **38**(12), 1551-3.
77. Sazhin, S.S., Bullough, K., Smith, A.J. and Saxton, J.M. (1991) On the influence of the ring current on whistler group delay time in the magnetosphere. *Annales Geophysicae*, **9**(1), 21-9.
78. Sazhin, S.S. and Temme, N.M. (1991) The threshold of parallel whistler-mode instability. *Annales Geophysicae*, **9**(1), 30-3.
79. Sazhin, S.S. (1991) Whistler-mode polarization in a rarefied plasma. *Planet. Space Sci.*, **39**(5), 725-8.
80. Sazhin, S.S. and Temme, N.M. (1991) Marginal stability of parallel whistler-mode waves (asymptotic analysis). *Annales Geophysicae*, **9**(5), 304-308. (Erratum: **9**(7), p. 500.).
81. Nunn, D. and Sazhin, S.S. (1991) On the generation mechanism of hiss-triggered chorus. *Annales Geophysicae*, **9**(9), 603-13.
82. Sazhin, S.S. (1991) Landau damping of low frequency whistler-mode waves. *Annales Geophysicae*, **9**(10), 690-5.
83. Sazhin, S.S. (1991) Is electron diffusion at low L shells always weak? *Indian J. of Radio and Space Physics.*, **20**, 446.
84. Sazhin, S.S., Smith, A.J., Bullough, K., Clilverd, M.A., Saxton, J.M., Strangeways, H.J. and Tarcsai, Gy. (1992) Group delay times of whistler-mode signals from VLF transmitters observed at Faraday, Antarctica. *J. Atmosph. Terr. Physics*, **54**(1), 99-107.
85. Sazhin, S.S. and Temme, N.M. (1992) A relativistic theory of the R wave cut-off. *Planet. Space Sci.*, **40**(4), 433-7 (Erratum: No. 6, p. 891).
86. Sazhin, S.S., Balmforth, H.F., Mottet, R.J. and Rippeth, Y. (1992) Modified models of electron distribution in the magnetosphere at $L = 2.3$. *Planet. Space Sci.*, **40**(5), 671-9.
87. Sazhin, S.S. and Hayakawa, M. (1992) Magnetospheric chorus emissions: a review. *Planet. Space Sci.*, **40**(5), 681-97.
88. Sazhin, S.S., Hayakawa, M. and Bullough, K. (1992) Whistler diagnostics of magnetospheric parameters: a review. *Ann. Geophysicae*, **10**(5), 293-308.
89. Sazhin, S.S., Sumner, A.E. and Temme, N.M. (1992) Relativistic and nonrelativistic analysis of whistler-mode waves in a hot anisotropic plasma. *J. Plasma Phys.*, **47**(1), 163-74.
90. Sazhin, S.S. (1992) The propagation of damped or growing whistler-mode waves. *Planet. Space Sci.*, **40**(7), 985-8.
91. Temme, N.M., Sumner, A.E. and Sazhin, S.S. (1992) Analytical and numerical analysis of the generalized Shkarofsky function. *Astr. Space Sci.*, **194**, 173-196.
92. Hayakawa, M. and Sazhin, S.S. (1992) Mid-latitude and plasmaspheric hiss emissions. *Planet. Space Sci.*, **40**(10), 1325-1338.

93. Shklyar, D.R., Nunn, D., Smith, A.J. and Sazhin, S.S. (1992) An investigation into the nonlinear frequency shift in magnetospherically propagated VLF pulses. *J. Geophys. Res.*, **97**(A12), 19,389-19,402.
94. Sazhin, S.S., Sumner, A.E., Temme, N.M. and Gugic, F. (1993) An approximate solution of the parallel whistler-mode dispersion equation in a weakly relativistic plasma. *Plasma Phys. and Controlled Fusion*, **35**(1), 117-126.
95. Sazhin, S.S., Bullough K. and Hayakawa M. (1993) Auroral hiss: a review. *Planet. Space Sci.*, **41**, 153-166.
96. Sazhin, S.S., Bognar P., Smith A.J. and Tarcsai Gy. (1993) Magnetospheric electron temperature inferred from whistler dispersion measurements. *Annales Geophysicae*, **11**, 619-623.

122. Goldfarb, I., Goldshtein, V., Kuzmenko, G. and Sazhin, S.S. (1999) Thermal radiation effect on thermal explosion in gas containing fuel droplets. *Combustion Theory and Modelling*, **3**, 769-787.
123. Sazhin, S.S. (1999) Assessment of mathematical elements in engineering and science subjects. *The International Journal of Engineering Education*, **15**(6), 402-405.
124. Pavlov, A.N., Sazhin, S.S., Fedorenko, R.P. and Heikal, M.R. (2000) A conservative finite difference method and its application for the analysis of a transient flow around a square prism. *International Journal of Numerical Methods for Heat and Fluid Flow*, **10** (1), 6-46.
125. Sazhin, S.S., Sazhina, E.M. and Heikal, M.R. (2000). Modelling of the gas to fuel droplets radiative exchange. *Fuel*, **79**, 1843-1852.
126. Sazhina, E.M., Sazhin, S.S., Heikal, M.R., Babushok, V.I. and Johns, R. (2000). A detailed modelling of the spray ignition process in Diesel engines. *Combustion Science and Technology* **160**, 317-344.
127. Sazhin, S.S., Goldshtein, V. and Heikal, M.R. (2001). A transient formulation of Newton's cooling law for spherical bodies. *ASME J Heat Transfer* **123**(1), 63-64.
128. Sazhin, S.S., Feng, G., Heikal, M.R., Goldfarb, I., Goldshtein, V. and Kuzmenko, G. (2001) Thermal ignition analysis of a monodisperse spray with radiation. *Combustion and Flame* **124**(4), 684-701.
129. Dombrovsky, L.A., Sazhin, S.S, Sazhina, E.M, Feng, G., Heikal, M.R., Bardsley, M.E.A. and Mikhalovsky, S.V. (2001) Heating and evaporation of semi-transparent Diesel fuel droplets in the finite domain

150. Sazhin, S.S., Abdelgha ar, W.A., Krutitskii, P.A., Sazhina, E.M. and Heikal, M.R. (2005) New ap-

177. Abdelghafar, W.A., Elwardany, A.E., Sazhin, S.S. (2010) Modelling of the processes in Diesel engine-like

202. Gun'ko, V.M., Nasiri, R., Sazhin, S.S., Lemoine, F., Grisch, F. (2013) A quantum chemical study of the processes during the evaporation of real-life Diesel fuel droplets, *Fluid Phase Equilibria* **356** 146-156.
203. Sazhin, S.S., Al Qubeissi, M., Kolodnytska, R., Elwardany, A., Nasiri, R., Heikal, M.R. (2014) Modelling of biodiesel fuel droplet heating and evaporation, *Fuel* **115** 559-572.
204. Shishkova, I.N., Sazhin, S.S. (2014) A solution of the Boltzmann equation in the presence of three components and inelastic collisions, *International J of Heat and Mass Transfer* **71** 26-34.
205. Gun'ko, V.M., Nasiri, R., Sazhin, S.S. (2014) A study of the evaporation and condensation of n-alkane clusters and nanodroplets using quantum chemical methods, *Fluid Phase Equilibria* **366** 99-107.
206. Sazhin, S.S., Al Qubeissi, M., Nasiri, R., Gun'ko, V.M., Elwardany, A.E., Lemoine, F., Grisch, F., Heikal, M.R. (2014) A multi-dimensional quasi-discrete model for the analysis of Diesel fuel droplet heating and evaporation, *Fuel* **129** 238-266.
207. Sazhin, S.S., Al Qubeissi, M., Xie, J.-F. (2014) Two approaches to modelling the heating of evaporating droplets, *Int. Comm. in Heat and Mass Transfer* **57** 353-356.
208. Sazhin, S.S., Shishkova, I.N., Al Qubeissi, M. (2014) Heating and evaporation of a two-component droplet: hydrodynamic and kinetic models, *International J of Heat and Mass Transfer* **79** 704-712.
209. Gun'ko, V.M., Nasiri, R., Sazhin, S.S. (2015) Effects of the surroundings and conformerisation of n-dodecane molecules on evaporation/condensation processes, *J Chemical Physics* **142**(3) 034502. DOI: 10.1063/1.4905496.
210. Petrovic, V., Bracanovic, Z., Branka, G., Petrovic, S., Sazhin, S.S. (2015) The design of a full flow dilution tunnel with a critical flow venturi for the measurement of Diesel engine particulate emission, *Faculty of Mechanical Engineering (FME) Transactions* **43** (2), 99-106.
211. Al Qubeissi, M., Sazhin, S.S., Crua, C., Turner, J., Heikal, M.R. (2015) Modelling of biodiesel fuel droplet heating and evaporation: effects of fuel composition, *Fuel* **154** 308-318.
212. Danaila, I., Kaplanski, F., Sazhin, S.S. (2015) Modelling of confined vortex rings *J. Fluid Mechanics* **774** 267-297.
213. Nasiri, R., Gun'ko, V.M., Sazhin, S.S. (2015) The effects of internal molecular dynamics on the evaporation/condensation of n-dodecane, *Theoretical Chemistry Accounts* **134** Issue 83. DOI 10.1007/s00214-015-1681-z.
214. Al Qubeissi, M., Sazhin, S.S., Turner, J., Begg, S., Crua, C., Heikal, M.R. (2015) Modelling of gasoline fuel droplets heating and evaporation, *Fuel* **159** 373-384. doi:10.1016/j.fuel.2015.06.028
215. Sazhin, S.S., Gun'ko, V.M., Nasiri, R. (2016) Quantum-chemical analysis of the processes at the surfaces of Diesel fuel droplets, *Fuel* **165** 405-412.
216. Sazhin, S.S., Shishkova, I.N., Al Qubeissi, M. (2016) A self-consistent kinetic model for droplet heating and evaporation, *International J of Heat and Mass Transfer* **93** 1206-1217.
DOI information: 10.1016/j.ijheatmasstransfer.2015.10.039
217. Rybdylova, O., Osiptsov, A.N., Sazhin, S.S., Begg, S., Heikal, M. (2016) A combined viscous-vortex, thermal-blob and Lagrangian method for non-isothermal, two-phase flow modelling,

206. *ansobectsC(r)51(a1.955 sal.)-338*
Fuel

9.a, Rybdylova, O., Qubeissi

Int. Comm. in Heat and Mas

227. Sazhin, S.S., Rybdylova, O., Crua, C. (2018) A mathematical model for the evolution of a system of interacting particles

9. Achasov, O.V., Labuda, S.A., Begg, S.M., Heikal, M.R., Savich, S. and Sazhin, S.S. (1999) Gasdynamically controlled combustion in gas mixtures: application to internal combustion engines. In *Proceedings of the Inter-*

24. Sazhin, S.S., Krutitskii, P.A., Martynov, S.B., Mason, D, Heikal, M.R. and Sazhina, E.M. (2005) Transient

modelling versus experiment. Proceedings of the 19th International Symposium on Transport Phenomena, 17-20

76. Sazhin, S.S. (2013) Droplet heating and evaporation: hydrodynamic, kinetic and molecular dynamics models. Proceedings of the 8th Symposium on Numerical Analysis of Fluid Flow and Heat Transfer { Numerical Fluids Symposium September 21-27 2013. AIP Conference Proceedings 1558, 62-65 (2013); doi: 10.1063/1.4825421.

77. Lebedeva, N.A., Osiptsov, A.N., Sazhin, S.S., Fully Lagrangian modeling of two-phase impulse microjets. Proceedings of the ASME 2013 International Mechanical Engineering Congress & Exposition, 15-21 November 2013, San Diego CA, USA. CD. 8 pages.

78. Sazhin, S.S., Shishkova, I.N. (2014) Kinetic modelling of Diesel fuel droplet heating and evaporation: effects of inelastic collisions and three components. Proceedings of the 15th International Heat Transfer Conferences, Kyoto 10-15 August 2014, paper IHTC15-8860. ISBN: 978-1-56700-421-2.

79. Sazhin, S.S., Al Qubeissi, M., Heikal, M.R. (2014) Modelling of biodiesel and Diesel fuel droplet heating and evaporation. Proceedings of the 15th International Heat Transfer Conferences, Kyoto 10-15 August 2014, paper IHTC15-8936. ISBN: 978-1-56700-421-2.

80. Sazhin, S.S. (2014) Processes in the vicinity of the surfaces of individual droplets. Proceedings of the International Conference 'Fluxes and Structures in Fluids { 2013', St Petersburg, June 25-28, MAKS Press, Moscow, Eds. Y.D. Chashechkin and V.G Baydulov (Selected papers), pp. 193-202. ISBN 978-5-317-04780-1.

81. Sazhin, S.S., Shishkova, I.N., Al Qubeissi, M. (2014) Kinetic modelling of Diesel fuel droplet heating and evaporation: effects of the approximation of fuel composition. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany, CD, paper ABS-148.

82. Al Qubeissi, M., Sazhin, S.S., de Sercey, G., Cyril C. (2014) Multi-dimensional quasi-discrete model for the investigation of heating and evaporation of Diesel fuel droplets. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany, CD, paper ABS-135.

83. Rybdylova, O., Sazhin, S.S., Osiptsov, A.N., Begg, S., Heikal, M. (2014) Modelling of non-isothermal sprays using a combined viscous vortex method and the Fully Lagrangian Approach. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany, CD, paper ABS-179.

84. Duret, B., Al Qubeissi, M., Sazhin, S.S., Cyril C. (2014) Evaporating droplets: comparisons between DNS and modelling. Proceedings of ILASS Europe 2014, 26th Annual Conference on Liquid Atomization and Spray Systems, Sep. 2014, Bremen, Germany, CD, paper ABS-187.

85. Al Qubeissi, M., Sazhin, S.S., Crua, C., and Heikal, M.R. (2015) Modelling of heating and evaporation of biodiesel fuel droplets, World Academy of Science, Engineering and Technology, International Science Index 97, International Journal of Mechanical, Aerospace, Industrial and Mechatronics Engineering, V. 9(1), pp. 46-49.

86. Sazhin, S.S., Elwardany, A.E., Heikal, M.R. (2015) New approaches to the modelling of multi-component fuel droplet heating and evaporation. *Journal of Physics, Conference Series*, Published by Institute of Physics (UK) 585 012014 doi:10.1088/1742-6596/585/1/012014

Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper DHE-01, Editors: G. de Sercey and S. Sazhin.

95. Zubkov, V., Cossali, G.E., Tonini, S., Crua, C., Sazhin, S.S. (2016) Mathematical modelling of heating and evaporation of a spheroidal droplet. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper DHE-07. Editors: G. de Sercey and S. Sazhin.

96. Kaplanski, F., Danaila, I., Begg, S., Rybdylova, O., Sazhin, S.S., Heikal, M. (2016) Connected vortex rings in gasoline fuel sprays: modelling and observations. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper MF-01. Editors: G. de Sercey and S. Sazhin.

97. Lebedeva, N.A., Osiptsov, A.N., Sazhin, S.S. (2016) A combined vortex method and fully Lagrangian approach for simulation of axially symmetric gas-droplet vortex ring-like flows. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper MF-02. Editors: G. de Sercey and S. Sazhin.

98. Papoutsakis, A., Danaila, L., Sazhin, S.S. (2016) Modelling of the evolution of a droplet cloud in a turbulent flow. Proceedings of the 27th European Conference on Liquid Atomization and Spray Systems. Paper MF-07. Editors: G. de Sercey and S. Sazhin.

99. Rybdylova, O., Danaila, I., Osiptsov, A., Begg, S., Sazhin, S.S. (2016) Modelling of a two-phase vortex ring flow based on the fully Lagrangian Approach. 27th European Conference on Liquid Atomization and Spray Systems. Paper MF-10. Editors: G. de Sercey and S. Sazhin.

100. Rybdylova, O., Sazhin, S.S. (2017) Meshless methods for 'gas { evaporating droplet' flow modelling. Proceedings of 8th Multi-Rate Processes and Hysteresis (MURPHYS-HSFS-2016), Barcelona, Spain, 13th-17th June 2016. Journal of Physics: Conference Series **811** 012014. doi:10.1088/1742-6596/811/1/012014 .

101. Sazhin, S.S., Shchepakina, E., Sobolev, V., (2017) Positively invariant manifolds: concept and applications. Processes and Hysteresis (MURPHYS-HSFS-2016), Barcelona, Spain, 13th-17th June 2016. Journal of Physics: Conference Series **811** 012015. doi:10.1088/1742-6596/811/1/012015 .

102. Sazhin, S.S., Al Qubeissi, M., Heikal, M. (2017) Modelling of spherical automotive droplet heating and evaporation: recent developments. Proceedings of the 7th International Symposium on Advances in Computational Heat Transfer (CHT-17), 28th May { 1 June 2017, Napoli, Italy. Begell House, ISBN: 978-1-56700-461-8 paper 272.

103. Zubkov, V., Cossali, G.E., Tonini, S., Crua, C., Sazhin, S.S. (2017) Modelling of heating and evaporation of spheroidal droplets. Proceedings of the 7th International Symposium on Advances in Computational Heat Transfer (CHT-17), 28th May { 1 June 2017, Napoli, Italy. Begell House, ISBN: 978-1-56700-461-8 paper 271.

104. Poulton, L., Rybdylova, O., Sazhin, S.S., Crua, C., Al Qubeissi, M., Elwardany, A.E. (2017) A model for mono- and multi-component droplet heating and evaporation and its implementation into ANSYS Fluent. Proceedings of the 28th European Conference on Liquid Atomization and Spray Systems. Pages 67-74. Editors: R. Payri and X. Margot. Publisher Editorial Universitat Politecnica de Valencia.

105. Papoutsakis, A., Sazhin, S.S., Begg, S., Danaila, L., Luddens, F. (2017) A new approach to modelling the two way coupling for momentum transfer in a hollow-cone spray. Proceedings of the 28th European Conference on Liquid Atomization and Spray Systems. Pages 448-455. Editors: R. Payri and X. Margot. Publisher Editorial Universitat Politecnica de Valencia.

106. Al Qubeissi, M., Sazhin, S.S., Al-Esawi, N. (2017) Models for automotive fuel droplets heating and evaporation. Proceedings of the 28th European Conference on Liquid Atomization and Spray Systems. Pages 1044-1051. Editors: R. Payri and X. Margot. Publisher Editorial Universitat Politecnica de Valencia.

107. Al Qubeissi, M., Al-Esawi, N., Sazhin, S.S. (2017) Droplets heating and evaporation: an application to diesel-biodiesel fuel mixtures. Proceedings of the 28th European Conference on Liquid Atomization and Spray Systems. Pages 1060-1067. Editors: R. Payri and X. Margot. Publisher Editorial Universitat Politecnica de Valencia.

108. Sazhin, S.S., Shishkova, I.N. (2017) Kinetic and MD modelling of automotive fuel droplet heating and evaporation: recent results. Proceedings of the 28th European Conference on Liquid Atomization and Spray Systems. Pages 1076-1082. Editors: R. Payri and X. Margot. Publisher Editorial Universitat Politecnica de Valencia.

109. Sazhin, S.S. (2017) Modelling of automotive fuel droplet heating and evaporation: recent results and unsolved problems. Proceedings of the 28th International Symposium on Transport Phenomena, 22-24 September 2017. Published by the University of Peradeniya, Sri Lanka.

110. Papoutsakis, A., Danaila, I., Kaplanski, F., Luddens, F., Sazhin, S.S. (2017) Numerical modelling of connected swirling vortex rings. Proceedings of 28th International Symposium on Transport Phenomena, 22-24 September 2017. Published by the University of Peradeniya, Sri Lanka.

111. Al-Esawi, N., Al Qubeissi, M., Sazhin, S.S., Emekwuru, N., Blundell, M.V. (2018) Impact of corrected activity coefficient on the estimated droplet heating and evaporation. Proceedings of Eleven International Conference on Thermal Engineering: Theory and Applications, February 25-28, 2018, Doha, Qatar.

In press:

112. Al-Esawi, N., Al Qubeissi, M., Sazhin, S.S. (2018) The impact of fuel blends and ambient conditions on the heating and evaporation of Diesel and biodiesel fuel droplets. Proceedings of the 16th International Heat Transfer Conference, IHTC-16 August 10-15, 2018, Beijing, China.

113. Sazhin, S.S., Shchepakina, E., Sobolev, V., (2018) Modelling of sprays: recent results and future challenges Journal of Physics: Conference Series (in press)

F. Papers (others):

1. Pudovkin, M.I. and Sazhin, S.S. (1974) Instabilities in the magnetospheric plasma. In *High-latitude geophysical phenomena*, ed B.E. Brunelly, pp. 199-223. Leningrad: Nauka (in Russian).

2. Sazhin, S.S. (1975) VLF emissions in the auroral zone. In *Substorms and disturbances in dimness* TJ/F8 9.9626 Tf 102
lead

20. Sazhin, S.S., Heikal, M.R., Pozorski, J., Petrovich, S. and Jovanovich, Z. (2001) Fuel spray penetration modelling in diesel engines (paper CG-29201A28). In proceedings of *6th International Scientific and Professional Conference on Power Source and Transfer*. Power source and transfer, IPS'2001, edited by Prof Dr Bozidar Nikolic, University of Montenegro, Montenegro, Podgorica, pp. 221-226 (in Serbian).
21. Dombrovsky, L.A., Sazhin, S.S. and Heikal, M.R. (2002) A model for computation of radiative characteristics of diesel fuel droplets. Proceedings of 3rd Russian National Heat and Mass Transfer Conference, v. 6, pp. 262-265 (in Russian). English Translation: Computational Model of Spectral Radiation Characteristics of Diesel Fuel Droplets. In Heat Transfer Research. Vol. 35, Issues 1-2 (7 pages). Published by Begell House, 2004.
22. Goldfarb, I., Goldshtein, V., Katz, D. and Sazhin, S.S. (2003) Effect of thermal radiation on thermal explosion in a hot gas containing cold fuel droplets. "Proceedings of the 3rd European Combustion Meeting 2003", CDROM.
23. Goldfarb, I., Sazhin, S.S. and Zinoviev, A. (2004) Thermal explosion in inflammable gas containing fuel droplets: asymptotic analysis. Proceedings of '5th Minsk International Heat and Mass Transfer Forum' (May, 2004) Section 4, CDROM.
24. Sazhin, S.S., Abdelghar, W.A., Krutitskii, P.A., Sazhina, E.M. and Heikal, M.R. (2004) Numerical modelling of droplet transient heating and evaporation. Proceedings of '5th Minsk International Heat and Mass Transfer Forum' (May, 2004) Section 6, CDROM.
25. Snegirev A.Yu., Sazhin S.S., Talalov V.A. (2011) The model and numerical algorithm to predict heating and vaporization of a liquid droplet. Proc. SPbSPU, 2011, No 1 (116), pp. 44-55 (ISSN 1994-2354) (in Russian).
26. Snegirev A.Yu., Sazhin S.S., Talalov V.A., Savin, M.V. (2011) Validation study of the model to predict heating and vaporization of a liquid droplet. Proc. SPbSPU, 2011, No 2 (122), pp. 48-59 (ISSN 1994-2354) (In Russian).
27. Snegirev A.Yu., Sazhin S.S., Talalov V.A. (2011) The effect of non-uniform temperature distribution inside a vaporizing liquid droplet. Proc. SPbSPU, 2011, No 3 (129), pp. 17-26 (ISSN 1994-2354) (in Russian).
28. Sazhin, S.S., Sobolev, V.A. and Shchepakina, E.A. (2011) A new mathematical tool for modelling the processes in fuel sprays. Vestnik Samarskogo Gosudarstvennogo Aerokosmicheskogo Universiteta imeni akademika Koroleva, No. 5(29), pp. 215-220 (in Russian).
29. Sazhin, S.S. (2016) Book of Abstracts of the 27th European Conference on Liquid Atomization and Spray Systems. Editors: G. de Sercey and S. Sazhin, p. 3; Preface.
30. Zeidan, D., Saghir, M.Z., Sazhin, S. S., Darwash, M. (Guest Editors) (2017) Preface to the special issue of a selection of papers representative of the Eighth International Conference on Thermal Engineering Theory and Applications { ICTEA 2015, held in Amman, Jordan, 18-21 May, 2015, *International Journal of Engineering Systems Modelling and Simulation* 9(1) 1-2.
31. Zaripov, T.S., Gilfanov, A.K., Zaripov, S.K., Rybdylova, O., Sazhin, S.S. (2017) Computation of particle concentration fields in the flow of high-inertial aerosols around a cylindrical fiber. Proceedings of the third international conference 'The environment and stable development of the regions: ecological challenges of the 21st century', Editors: S.Yu. Selivanovskaya and M.B. Kozhevnikova, pp. 641-643, Academy of Science of Tatar Republic Publishing House, Kazan (in Russian).
32. Gilfanov, A.K., Zaripov, S.K., Rybdylova, O., Sazhin, S.S. (2017) Mathematical modelling of the evaporation of polydisperse aerosols taking into account particle disappearance. Proceedings of the conference '11th Petrianov and 2nd Fukhs workshops'. pp. 85-87, State Atomic Energy Corporation (ROSATOM) Publishing House, Moscow (in Russian).

G. Abstracts

1. Sazhin, S.S. (1975) On the theory of discrete VLF emissions. In *Programs and abstracts of the XVI IUGG General Assembly*, Grenoble, ed L.P.Alldredge, p. 349.
2. Sazhin, S.S. (1977) A model of quasiperiodic VLF emissions. In *Final program of IAGA / IAMAP Joint Assembly*, Seattle, p. 122.

published by the Secretary General of IAGA, Aberdeen University.

7. Sazhin, S.S., Smith, A.J. and Sazhina, E.M. (1989) Can magnetospheric electron temperature be inferred from whistler dispersion measurements? *Ibid.*, p. 427.

8. Sazhin, S.S. (1989) Improved quasilinear models of parallel whistler-mode instability. *Ibid.*, p. 435.

9. Horne, R.B. and Sazhin, S.S. (1989) Quasielectrostatic and electrostatic approximations for whistler-mode waves in the magnetospheric plasma. *Ibid.*, p. 464.

10. Sazhin, S.S., Walker, S.N. and Woolliscroft, L.J.C. (1990) Observations and theory of whistler-mode waves in the vicinity of the Earth's magnetopause. In *Twenty-eighth plenary meeting of the committee on space research (25 June - 6 July 1990)*. Abstracts. The Hague, p. 33.

11. Sazhin, S.S., Bullough, K., Smith, A.J. and Saxton, J.M. (1991) On the influence of the ring current on whistler group delay time in the magnetosphere. In *IAGA XX General Assembly (Vienna, 11-24 August 1991): Program and Abstracts*, p. 415 (printed by RM Druck und Verlagsgesellschaft, Graz, Austria).

12. Sazhin, S.S. (1994) Approximate solutions of the parallel whistler-mode dispersion equation in a weakly relativistic plasma. In *Institute of Physics Annual Congress 11 (14 April 1994) (Abstract book)* p. 59.

13. Sazhin, S.S., Wild, P., Sazhina, E.M., Makhlof, M., Leys, C., and Toebaert, D. (1994) The three dimensional modelling of the processes in the fast-axial-flow CO

2006). The UNIVERSITY CARLOS III DE MADRID, July 10-14 2006.

47. Sazhin, S., Martynov, S., Shishkova, I., Crua, C., Karimi, K., Gorokhovski, M., Sazhina, E. and Heikal, M. (2006) Modelling of droplet heating, evaporation and break-up: recent developments. International Heat Transfer Conference (IHTC-13), Sydney, Australia, 13-18 August, 2006. Book of Abstracts, p. 28.

48. Martynov, S., Mason, D., Heikal, M, Sazhin, S. and Gorokhovski, M. (2006) Modelling of cavitation flow in a nozzle and its effect on spray development. International Heat Transfer Conference (IHTC-13), Sydney, Australia, 13-18 August, 2006. Book of Abstracts, pp. 210-211.

49. Sazhin, S.S., Crua, C., Martynov, S.P., Kristyadi, T. and Heikal, M. (2007) Advanced models for droplet heating and evaporation: effect on the autoignition of diesel fuel sprays. Third European Combustion Meeting ECM 2007, Book of Abstracts, p. 15-2.

50. Ribaucour, M., Minetti, R., Sazhina, E.M., Sazhin, S.S. (2007) Autoignition of n-pentane in a rapid compression machine: experiment versus modelling. Third European Combustion Meeting ECM 2007, Book of Abstracts, p. 1-1.

51. Katoshevski, D., Shakked, T., Sazhin, S.S. (2007) Grouping of droplets/particles in oscillating flows. UK-Israel Workshop 'Sprays: Modelling versus Experimentation', 16-18 July 2007, Brighton, UK (Abstract).

52. Kaplanski, F., Fukumoto, Y. and Sazhin, S.S. (2007) Modelling of a vortex ring flow at high Reynolds numbers. UK-Israel Workshop 'Sprays: Modelling versus Experimentation', 16-18 July 2007, Brighton, UK (Abstract).

53. Sazhin, S.S. (2007) Recent progress in modelling droplet heating and evaporation. UK-Israel Workshop 'Sprays: Modelling versus Experimentation', 16-18 July 2007, Brighton, UK (Abstract).

54. Martynov, S.B., Sazhin, S.S., Crua, C., Gorokhovsky, M.A., Chtab, A., Sazhina, E.M., Karimi, K., Kristyadi, T., Heikal, M.R. (2007) Effects of droplet breakup, heating and evaporation on autoignition of Diesel sprays. UK-Israel Workshop 'Sprays: Modelling versus Experimentation', 16-18 July 2007, Brighton, UK (Abstract).

55. Sazhin, S.S. and Shishkova, I.N. (2008) Evaporation of droplets into a background gas: hydrodynamic and kinetic modelling. 19th National & 8th ISHMT-ASME Heat and Mass Transfer Conference, January 3-5, JNTU Hyderabad, India. Book of Abstracts, page K1 (Keynote lecture).

56. Sazhin, S.S. Shishkova, I., Martynov, S. and Heikal, M. (2008) Hydrodynamic and kinetic models of droplet heating and evaporation. CHT-08 ICHMT International Symposium on Advances in Computational Heat Transfer. May 11-16, 2008, Marrakesh, Morocco, Book of Abstracts, paper CHT-08-101. Begell House, Inc., Redding, CT, USA.

57. Katoshevski, D., Shakked, T. and Sazhin, S.S. (2008) Grouping of droplets in oscillating flows. ILASS 2008, 22nd European Conference on Liquid Atomization and Spray Systems, September 8-10, 2008, Como Lake, Italy. Book of Abstracts, page 4-8.

58. Sazhin, S.S., Kaplanski, F., Begg, S. and Heikal, M. (2008) Vortex ring-like structures in gasoline fuel sprays: modelling and observations. ILASS 2008, 22nd European Conference on Liquid Atomization and Spray Systems, September 8-10, 2008, Como Lake, Italy. Book of Abstracts, page 6-5.

59. Kaplanski, F., Fukumoto, Y. and Sazhin, S.S. (2008) Vortex rings in a viscous fluid: Asymptotic theory and numerical simulations. EUROMECH Fluid Mechanics Conference 7, University of Manchester, 14-18 September 2008, Book of Abstracts, page 169.

60. Sazhin, S.S. Shishkova, I., Levashov, V.Yu. and Heikal, M. (2008) Modelling of droplet heating and evaporation in computational fluid dynamics codes. Fourth International PhD, DLA Symposium, University of Pecs, Pollack Mihaly Faculty of Engineering (Hungary). Book of Abstract, page 49.

61. Healey J.J., Sazhin, S.S. and Turner M.R. (2010) Transient unstable jets: mathematical analysis and applications. 5th International workshop on multi-rate processes and Hysteresis (MURPHYS), University of Pecs, Pollack Mihaly Faculty of Engineering (Hungary). Book of Abstract, page 19. Published by Rotari Press, Komlo, Hungary.

62. Gusev, I.G., Krutitskii, P.A. and Sazhin, S.S. (2010) Droplet heating and evaporation in the presence of a moving boundary: numerical analysis based on analytical solutions. 11th International Conference on Integral Methods in Science and Engineering, University of Brighton (UK), 12-14th July 2010. Book of Abstracts, page 42.

63. Sazhin, S.S., Shishkova, I.N., Gusev, I.G., Elwardany, A., Krutitskii, P.A. and Heikal, M. (2010) Fuel droplet heating and evaporation: new hydrodynamic and kinetic models. Proceedings of the 14th International Heat Transfer Conferences, Washington 8-13 August 2010. Book of Abstracts, page 26.

64. Sazhin, S.S., Krutitskii, P.A., Elwardany, A., Castanet, G., Lemoine, F. and Heikal, M. (2010) An

65. Kaplanski, F., Sazhin, S.S., Fukumoto, Y. and Rudi, Y. (2010) The evolution of an elliptic vortex rings in viscous fluid: Asymptotic theory and numerical simulations. EUROMECH Fluid Mechanics Conference 8,

and Analytical Solutions. Proceedings of the IUceedings ofof7(osium-3rTI912-3edings`W02(oa)f)-v linedingsFluids:ing29(

problems of aerohydrodynamics, dedicated to the memory of acad. G.G. Chernyj and to the MSU Institute of Mechanics 55th anniversary". August 20-30, 2014, Sochi, Russia, MSU Publishing. P. 21. (in Russian).

117. Zubkov, V., Cossali, G.E., Tonini, S., Crua, C., Sazhin, S.S. (2016) Mathematical modelling of heating and evaporation of a spheroidal droplet. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 193-194.
118. Kaplanski, F., Danaila, I., Begg, S., Rybdylova, O., Sazhin, S.S., Heikal, M. (2016) Connected vortex rings in gasoline fuel sprays: modelling and observations. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 307-309.
119. Lebedeva, N.A., Osiptsov, A.N., Sazhin, S.S. (2016) A combined vortex method and fully Lagrangian approach for simulation of axially symmetric gas-droplet vortex ring-like flows. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 309-311.
120. Papoutsakis, A., Danaila, L., Sazhin, S.S. (2016) Modelling of the evolution of a droplet cloud in a turbulent flow. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 319-321.
121. Rybdylova, O., Danaila, I., Osiptsov, A., Begg, S., Sazhin, S.S. (2016) Modelling of a two-phase vortex ring flow based on the fully Lagrangian Approach. 27th European Conference on Liquid Atomization and Spray Systems. Book of Abstracts. Editors: G. de Sercey and S. Sazhin pp. 355-356.
122. Sazhin, S.S. (2017) Modelling Of automotive fuel droplet heating and evaporation: recent results and unsolved problems. Proceedings of the 2nd World Congress on Momentum, Heat and Mass Transfer (MHMT'17) Barcelona, Spain - April 6-8, 2017. ISSN: 2371-5316. DOI: 10.11159/csp17.1
123. Sazhin, S.S., Al Qubeissi, M., Heikal, M. (2017) Modelling of spherical automotive droplet heating and evaporation: recent developments. Computational Heat Transfer (CHT-17), 28th May { 1 June 2017, Napoli, Italy. Book of Abstracts (Edited by Y. Jaluria and O. Manca), Begell House, page 177.
124. Zubkov, V., Cossali, G.E., Tonini, S., Crua, C., Sazhin, S.S. (2017) Modelling of heating and evaporation of spheroidal droplets. Computational Heat Transfer (CHT-17), 28th May { 1 June 2017, Napoli, Italy. Book of Abstracts (Edited by Y. Jaluria and O. Manca), Begell House, page 176.
125. Sazhin, S.S. (2017) Hydrodynamic and kinetic modelling of automotive fuel droplet heating and evaporation: recent results and unsolved problems. In Proceedings of the World Congress on Engineering, London, UK, 5-7 July 2013, volume 1, pp. lii-liii.
126. Sazhin, S.S. (2017) Modelling of automotive fuel droplet heating and evaporation: recent results and unsolved problems. 28th International Symposium on Transport Phenomena { 2017, Book of Abstracts, page 14. Published by International Research Centre (InRC), University of Peradeniya, Sri Lanka.
127. Papoutsakis, A., Sazhin, S.S., Danaila, I., and Kaplanski, F. (2017) Numerical modelling of swirling vortex rings. 28th International Symposium on Transport Phenomena { 2017, Book of Abstracts, page 15. Published by International Research Centre (InRC), University of Peradeniya, Sri Lanka.
128. Sazhin, S.S. (2018) Modelling of sprays: recent results and future challenges. 15th International Conference On Integral Methods In Science And Engineering (IMSE 2018), Book of Abstracts, page 3.

H. Papers not related to Physics or Engineering

1. Sazhin, S.S. (1988) Human rights are not only the Jewish rights. The Times Higher Education Supplement, 14 October.
2. Sazhin, S.S. (1989) Letter. Frontier, May-June issue.
3. Sazhin, S.S. (1989) Are perestroika and glasnost reversible?, Posev, No. 4, pp. 13-14 (in Russian).
4. Sazhin, S.S. (1989) Is perestroika tolerant towards Christianity?, Posev, No. 7, pp. 59-62 (in Russian).
5. Sazhin, S.S. (1989) Through Russian eyes. Frontier, September-October issue, pp. 8-9.
6. Sazhin, S.S. (1989) Russian culture: Slavonic, Orthodox or Christian?, Posev, No. 9, pp. 60-61 (in Russian).
7. Sazhin, S.S. (1989) Who is to restore the Churches?, Posev, No. 11, p. 44 (in Russian).
8. Sazhin, S.S. (1989) Who is to restore the Churches?, Orthodox America, Nov.-December issue, p. 2.
9. Sazhin, S.S. (1990) Perspectives of Perestroika "No turning back", Human rights Briefing, May issue.
10. Sazhin, S.S. (1990) Is Orthodoxy archaic?, Orthodox America, June issue, vol. 10, NO. 10 (100), p. 14.
11. Sazhin, S.S. (1991) Russians versus Jews. Frontier, January-February issue, p. 4.
12. Sazhin, S.S. (1992) Does socialism self-destruct? Frontier, January-March issue, p. 4.
13. Sazhin, S.S. (1999) Letter, Sunday Times, April.

I. Translations

1. *Bilan de la theologie du XXe siecle*, sous la direction de Robert Vander Gucht et Herbert Vorgrimler. T. II: La theologie chretienne (suite) : Les disciplines particulieres. Portraits de theologiens. (see Revue Philosophique de Louvain, Annee 1974, Vol. 72, Numero 14, pp. 424-425) Translation of selected chapters from French into

Russian (1982-1983) by S.S. Sazhin. Manuscript is available from St Petersburg Theological Academy of the Russian Orthodox Church.

2. Tuvya Zaretsky *Turning to God*, Intervarsity Press. Translated from English into Russian (1990) by S.S. Sazhin and E.M. Sazhina. Published by Loimaan Kirjapaino Oy, ISBN 0-87784-064-4.