

## ლიტერატურა – REFERENCES

1. ამირანაშვილი ა., ბლიაძე თ., დავითაშვილი მ., ხახიაშვილი მ. ანგსტრომის სახანძრო ინ-დექსის ცვალებადობა კახეთში კლიმატის ცვლილების ფონზე. მიხეილ ნოდიას სახელობის გეოფიზიკის ინსტიტუტი, შრომები, ივ. ჟავახიშვილის სახ. თბილისის სახელმწიფო უნივერსიტეტის გამომცემლობა, ISSN 1512-1135, ტ. LXXV, თბილისი, 2022, გვ. 117 – 136. [http://dspace.gela.org.ge/bitstream/123456789/10298/1/12\\_Tr\\_IG\\_75\\_2022.pdf](http://dspace.gela.org.ge/bitstream/123456789/10298/1/12_Tr_IG_75_2022.pdf)
2. ელიზაბარაშვილი ე. საქართველოს კლიმატური რესურსები. ISBN 99928-885-7-1, თბილისი, 2007, 428 გვ. [https://dspace.nplg.gov.ge/bitstream/1234/6090/1/Saqartvelos%20\\_Klimaturi\\_%20Resursebi.pdf](https://dspace.nplg.gov.ge/bitstream/1234/6090/1/Saqartvelos%20_Klimaturi_%20Resursebi.pdf)
3. ელიზაბარაშვილი ე. საქართველოს ჰავა. ISBN 978-9941-0-9584-9, თბილისი, 2017, 360 გვ.
4. ელიზაბარაშვილი მ., გაფრინდაშვილი გ., ელიზაბარაშვილი ე., დვალიშვილი გ., ჩიხრაძე ნ., ხუნწელია თ., რიკაძე გ. საშიში გეოლოგიური და ჰიდრომეტეო-როლოგიური მოვლენები ცენტრალური კავკასიონის საზღვრისპირა რეგიონებში – ყაბბეგი, დუშეთი, თანახოთ და მცხეთა. გამომცემლობა „უნივერსალი“, ISBN 978-9941-33-305-7, თბილისი, 2022, 200 გვ.
5. კლიმატის ცვლილების შესახებ საქართველოს მესამე ეროვნული შეტყობინება, თბილისი, 2015, 288 გვ.
6. კუტალაძე ნ., მიკუჩაძე გ., სოხაძე გ., მეგრელიძე ლ. ამინდის რიცხვითი მოდელი WRF. 2020, 42 გვ.
7. მელაძე მ., ტატიშვილი მ., მკურნალიძე ი., ვაიშაური მ. ნახშირბადის სეკვესტრი გაუყოფეურების და ტყის დეგრადაციის შეემცირებისათვის თანამგზავრული ტექნოლოგიების გამოყენებით. საერთაშორისო სამეცნიერო-პრაქტიკული ურნალი “სატყეო მოამბე”. ტ. 8, 2014, გვ. 45-51.
8. მესტვირიშვილი შ., ბენაშვილი მ., კოდუა მ. ზოგი რამ სეტყვის პრობლემების შესახებ. ახალგაზრდა მეცნიერთა საერთაშორისო კონფერენცია „დედამიწის შემსწავლელი მეცნიერების თანამედროვე პრობლემები“ შრომები, ISBN 978-9941-36-044-2, თბილისი, 21-22 ნოემბერი, 2022 ნ. გვ.169-172. <http://dspace.gela.org.ge/handle/123456789/10248?mode=full>
9. რობიტაშვილი გ., ტატიშვილი მ. ღრუბელში მიმდინარე მიკროფიზიკური პროცესების პარამეტრიზაცია. ჰიდრომეტეოროლოგიის ინსტიტუტის შრომები, ტ.104, 2001, გვ. 55-64.
10. საქართველოს მეოთხე ეროვნული შეტყობინება კლიმატის ცვლილების შესახებ გაეროს ჩარჩო კონვენციისადმი. თბილისი, 2020, 542 გვ. <https://www.undp.org/ka/georgia/publications/საქართველოს-მეოთხე-ეროვნული-შეტყობინება-კლიმატის-ცვლილების-შესახებ-გაეროს-ჩარჩო-კონვენციისადმი>
11. სეტყვა და მასთან ბრძოლა. ჰიდრომეტეოროლოგიური აქტიური ზემოქმედების სამსახურის 1967-1989 წწ. მუშაობის ძირითადი შედეგები. თბ., 1990, 15 გვ.
12. ტატიშვილი მ., ბოლაშვილი ნ., მკურნალიძე ი. დედამიწის ღერძის პრეცესია, მზის აქტივობა და კლიმატის ცვლილება. გეოგრაფიის ინსტიტუტის შრომები, 4(84), 2013.
13. ტატიშვილი მ., დემეტრაშვილი დ., მკურნალიძე ი. ამინდის საპროგნოზო მოდელი-რება საქართველოში. საქართველოს ტექნიკური უნივერსიტეტი. აკად. ი. ფრანგი-შვილის დაბადების 85 წლისთავისადმი მიძღვნილი საერთაშორისო სამეცნიერო კონფერენციის „საინფორმაციო და კომპიუტერული ტექნოლოგიები, მოდელი-რება, მართვა“ შრომები, თბილისი, 2015, გვ. 428-433.

14. ტანამგბავრული ინფორმაციის გამოყენება კლიმატის ცვლილების შერჩილებისათვის აგრომეტყევეობაში. საქართველოს სოფლის მეურნეობის მეცნიერებათა აკადემია. საერთაშორისო კონფერენციის მასალები “კლიმატის ცვლილება და მისი გავლენა სოფლის მეურნეობის მდგრად და უსაფრთხო განვითარებაზე”, 2014.
15. ტანამგბავრული მ., მელაძე მ., მეურნალიძე ი., ვაიშაური მ. თანამგბავრული ინფორმაციის გამოყენება კლიმატის ცვლილების შერჩილებისათვის აგრომეტყევეობაში. საქართველოს სოფლის მეურნეობის მეცნიერებათა აკადემია. საერთაშორისო კონფერენციის მასალები “კლიმატის ცვლილება და მისი გავლენა სოფლის მეურნეობის მდგრად და უსაფრთხო განვითარებაზე”, 2014.
16. ტანამგბავრული მ., მელაძე მ., მეურნალიძე ი., ვაიშაური მ. კლიმატის ცვლილების შერჩილების თანამედროვე მეთოდები ტყის ეკოლოგიური მონიტორინგისათვის. საქართველოს სოფლის მეურნეობის მეცნიერებათა აკადემიის მოამბე, ტ. 23, ISSN 1512-2743, 2013, გვ. 247-251.
17. ტანამგბავრული მ., ქართველიშვილი ლ., მეურნალიძე ი. ელვის ზემოქმედება სხვადასხვა შენობა-ნაგებობაზე. მეცნიერება და ტექნოლოგიები 1(724), ტექნიკური უნივერსიტეტი, თბილისი, 2017, გვ. 62-69.
18. ქართველიშვილი ლ. კომპლექსური კლიმატური პარამეტრების გათვალისწინება მშენებლობაში. თბილისი, 2001, 150 გვ.
19. ქართველიშვილი ლ., ამირანაშვილი ა., მეგრელიძე ლ., ქურდაშვილი ლ. ტურისტულ-რეკრეაციული რესურსების შეფასება კლიმატის ცვლილების ფონზე. გამოცემლობა „მწიგნობარი“, ISBN 978-9941-485-01-5, თბილისი, 2019, 161 გვ., <http://dspace.nplg.gov.ge/bitstream/1234/293074/1/turistulRekreaciuliResursebisShefasebaKlimatisCvlibebisFonze.pdf>
20. A Brief Mathematical Guide to Earth Science and Climate Change. Space Math <http://spacemath.gsfc.nasa.gov>
21. Acquaotta F., Fratianni S., Garzena D. Temperature Changes in the North-Western Italian Alps from 1961 to 2010. Theoretical and Applied Climatology, ISSN 0177-798X, Elettronico, 122:3, 2015, pp. 619-634, DOI 10.1007/s00704-014-1316-7
22. Ahrens C.D., Henson R. Meteorology Today: An Introduction to Weather, Climate and the Environment. 12th Edition, Cengage Learning. ISBN 9781337616669, 1337616664, 2019.
23. Amiranashvili A.G. On the Role of Cosmic and Radioactive Radiation on the Formation of the Secondary Aerosols in Atmosphere. Int. Conference “Near-Earth Astronomy 2007” Abstract, Terskol, Russia, 3-7 September 2007, p. 85.
24. Amiranashvili A. Connection Between the Characteristics of Thunderstorm Activity and Air Pollution in Kakheti Region of Georgia. Proc. of IX Int. Symposium on Lightning Protection, Foz do Iguaçu, Brazil, 26-30 November 2007.
25. Amiranashvili A. Statistical Models of Connection of Lightning Activity with Aerosol Pollution of Atmosphere. Proc. of X Int. Symposium on Lightning Protection, Curitiba, Brazil, 9-13 November 2009, pp. 261-266. [https://scholar.google.ru/citations?view\\_op=view\\_citation&hl=en&user=NtvBm-8AAAAJ&cstart=100&pagesize=100&sorby=pubdate&citation\\_for\\_view=NtvBm-8AAAAJ:ufrVoPGSRksC](https://scholar.google.ru/citations?view_op=view_citation&hl=en&user=NtvBm-8AAAAJ&cstart=100&pagesize=100&sorby=pubdate&citation_for_view=NtvBm-8AAAAJ:ufrVoPGSRksC)
26. Amiranashvili A. Connection of Lightning Activity with Air Electrical Conductivity in Dusheti. Proc. of the XIth Int. Symp. of Lightning Protection, SIPDA, Fortaleza, Brazil, October 3-7, 2011, [http://109.205.44.60/bitstream/123456789/643/1/XI\\_SIPDA\\_2011\\_Amiranashvili\\_Article.pdf](http://109.205.44.60/bitstream/123456789/643/1/XI_SIPDA_2011_Amiranashvili_Article.pdf).
27. Amiranashvili A.G. Increasing Public Awareness of Different Types of Geophysical Catastrophes, Possibilities of Their Initiation as a Result of Terrorist Activity, Methods of

- Protection and Fight with Their Negative Consequences. Engaging the Public to Fight Consequences of Terrorism and Disasters. NATO Science for Peace and Security Series E: Human and Societal Dynamics, vol. 120. IOS Press, Amsterdam•Berlin•Tokyo•Washington, DC, ISSN 1874-6276, 2015, pp. 155-164. <http://www.nato.int/science>; <http://www.springer.com>; <http://www.iospress.nl>
28. Amiranashvili A.G. History of Active Effects on Atmospheric Processes in Georgia. In the book: Essays of the History of Weather Modification in the USSR and the Post-Soviet Territory, ISBN 978-5-86813-450-0, St. Petersburg, RSHMU, 2017, 352 pp., ill., pp. 234-254, (in Russian), <http://mig-journal.ru/toauthor?id=4644>.
  29. Amiranashvili A. Changeability of Air Temperature and Atmospheric Precipitations in Tbilisi for 175 Years. International Scientific Conference "Natural Disasters in Georgia: Monitoring, Prevention, Mitigation". Proceedings, ISBN 978-9941-13-899-7, Publish House of Iv. Javakhishvili Tbilisi State University, December 12-14, Tbilisi, 2019, pp. 86-90.
  30. Amiranashvili A. Variability of the Average Annual Air Temperature in Tbilisi Against the Background of Global Warming in 1880-2021. II International Scientific Conference "Landscape Dimensions of Sustainable Development Science – Carto/GIS – Planning – Governance", Dedicated to the 75th Anniversary of Professor Nikoloz (Niko) Beruchashvili, Proceedings, 12-16 September 2022, Tbilisi, Georgia, Ivane Javakhishvili Tbilisi State University Press, ISBN 978-9941-36-030-5, 2022, pp. 265-269. <http://www.dspace.gela.org.ge/handle/123456789/10118>
  31. Amiranashvili A.G., Amiranashvili V.A., Bachiashvili L.L., Bibilashvili T.N., Supatashvili G.D. Influence of the Anthropogenic Pollution of the Atmosphere and Thunderstorms on the Precipitations Regime and their Chemical Composition in Alazani Valley Conditions. Proc. 14<sup>th</sup> International Conference on Clouds and Precipitation , Bologna , Italy ,18-23 July 2004, 2\_3\_216.1-2\_3\_216.2.
  32. Amiranashvili, A.G., Amiranashvili, V.A., Bakradze, T.S., Chikhladze, V.A., Glonti, N.Ya., Kharchilava, J.F., Tuskia, I.I. On the Influence of Cosmic Rays on the Secondary Aerosols Formation in the Atmosphere. 7th Int. Conference "Problems of Geocosmos", Abstract, St. Petersburg, Russia, 26 – 30 May, 2008.
  33. Amiranashvili A.G., Amiranashvili V.A., Beritashvili B.Sh., Mkurnalidze I.P., Chumburidze Z.A. Some Characteristics of a Thunderstorm Activity in Georgia, Proc. 12<sup>th</sup> Int. Conf. on Atmospheric Electricity, Versailles, France, 9-13 June, vol.1, 2003, pp. 711-714.
  34. Amiranashvili A., Amiranashvili V., Bibilashvili T., Chumburidze Z., Gzirishvili T., Doreuli R., Nodia A., Khorguani F., Kolesnikov Yu. Distribution of Convective Clouds and Lightning Discharges of the Earth Surface in Kakheti Region of Georgia. Proc. 13th Int. Conf. on Clouds and Precipitation, Reno, Nevada, USA, August 14-18, vol. 2, 2000, pp. 1050-1052.
  35. Amiranashvili A.G., Amiranashvili V.A., Gzirishvili T.G., Kharchilava J.F., Tavartkiladze K.A. Modern Climate Change in Georgia. Radiatively Active Small Atmospheric Admixtures. Institute of Geophysics, Monograph, Trans. of M. Nodia Institute of Geophysics of Georgian Acad. of Sc., ISSN 1512-1135, vol. LIX, 2005, 128 p.
  36. Amiranashvili A.G., Amiranashvili V.A., Kirkitadze D.D., Tavartkiladze K.A. Some Results of Investigation of Variations of the Atmospheric Aerosol Optical Depth in Tbilisi. Proc. 16<sup>th</sup> Int. Conf. on Nucleation&Atmospheric Aerosols, Kyoto, Japan, 26-30 July 2004, 416-419.
  37. Amiranashvili A.G., Amiranashvili V.A., Nodia A.G., Khurodze T.V., Toronjadze A.F., Bibilashvili T.N. Spatial-Temporary Characteristics of Number of Days with a Hails in the

- Warm Period of Year in Georgia. Proc. 14<sup>th</sup> International Conference on Clouds and Precipitation, Bologna, Italy, 18-23 July 2004, 2\_2\_215.1-2\_2\_215.2.
38. Amiranashvili A., Amiranashvili V., Nodia A., Kirkitadze D. Connection of Thunderstorm Processes Intensity with Aerosol Pollution of the Atmosphere. Proc. 13<sup>th</sup> Int. Conf. on Atmospheric Electricity, Beijing, China, 13-18 August 2007.
39. Amiranashvili A.G., Bakradze T. S., Berianidze N.T., Japaridze N.D., Khazaradze K.R. Effect of Mean Annual Changeability of Air Temperature, Surface Ozone Concentration and Galactic Cosmic Rays Intensity on the Mortality of Tbilisi City Population. Journal of the Georgian Geophysical Society, Issue B. Physics of Atmosphere, Ocean and Space Plasma, v.19B, Tbilisi, 2016, pp. 135-143.
40. Amiranashvili A., Bakradze T., Erkomaishvili T., Ghlonti N., Tuskia I. On the Relationship of Annual Variations of the Intensity of Galactic Cosmic Rays with the Variability of Total Cloudiness, Atmospheric Precipitation and Air Temperature in Tbilisi in 1966-2015. Journal of the Georgian Geophysical Society, ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 23(2), 2020, pp. 64 – 71. DOI: <https://doi.org/10.48614/ggs2320202731>
41. Amiranashvili A., Bakradze T., Ghlonti N., Khazaradze K., Japaridze N., Revishvili A. Influence of Variations of the Annual Intensity of Galactic Cosmic Rays on the Mortality of the Population of Georgia. International Scientific Conference „Natural Disasters in the 21st Century: Monitoring, Prevention, Mitigation“. Proceedings, ISBN 978-9941-491-52-8, Tbilisi, Georgia, December 20-22, 2021. Publish House of Iv. Javakhishvili Tbilisi State University, Tbilisi, 2021, pp. 163 – 166.
42. Amiranashvili A.G., Bakradze T.S., Ghlonti N.Ya., Khurodze T.V., Tuskia I.I. On the Connection Between Annual Variations of the Intensity of Galactic Cosmic Rays and the Changeability of Cloudiness and Air Temperature in Tbilisi. Journal of the Georgian Geophysical Society, Issue B. Physics of Atmosphere, Ocean and Space Plasma, v.19B, Tbilisi, 2016, pp. 128-134.
43. Amiranashvili A., Basilashvili Ts., Elizbarashvili E., Gaprindashvili G., Varazanashvili O. Statistical Analysis of the Number of Days with Hail in Georgia According to Meteorological Stations Data in 2006-2021. Int. Conf. of Young Scientists “Modern Problems of Earth Sciences”. Proceedings, ISBN 978-9941-36-044-2, Publish House of Iv. Javakhishvili Tbilisi State University, Tbilisi, November 21-22, 2022, pp. 164-168.
44. Amiranashvili A.G., Beritashvili B.Sh., Mkurnalidze I.P. Correlation Between Number of Thunder-Days and Duration of Thunderstorm Activity in Eastern Georgia. Proc. 14<sup>th</sup> International Conference on Clouds and Precipitation, Bologna, Italy, 18-23 July 2004, 2\_1\_214.1-2\_1\_214.4.
45. Amiranashvili A., Bliadze T., Chikhladze V. Photochemical Smog in Tbilisi. Transactions of Mikheil Nodia Institute of Geophysics of Ivane Javakhishvili Tbilisi State University, ISSN 1512-1135, vol. LXIII, 2012, 160 p., (in Georgian).
46. Amiranashvili A., Bliadze T., Jamrishvili N., Kekenadze E., Tavidashvili Kh., Mitin M. Some Characteristics of Hail Process in Georgia and Azerbaijan on May 28, 2019. Journal of the Georgian Geophysical Society, ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 22(2), 2019, pp. 40-54, <http://openjournals.gela.org.ge/index.php/GGS/>
47. Amiranashvili A., Bliadze T., Kartvelishvili L. Statistical Characteristics of Monthly Sums of Atmospheric Precipitations in Tianeti (Georgia) in 1956-2015. Trans. of Mikheil Nodia Institute of Geophysics, ISSN 1512-1135, vol. 70, Tb., 2019, pp. 112-118, (in Russian).

48. Amiranashvili A., Bolashvili N., Gulashvili Z., Jamrishvili N., Suknidze N., Tavidashvili Kh. Distribution of Hail by Mean Max Size on the Territories of Municipalities of the Kakheti Region of Georgia. International Scientific Conference „Natural Disasters in the 21st Century: Monitoring, Prevention, Mitigation“. Proceedings, ISBN 978-9941-491-52-8, Tbilisi, Georgia, December 20-22, 2021. Publish House of Iv. Javakhishvili Tbilisi State University, Tbilisi, 2021, pp. 84 – 87.
49. Amiranashvili A.G., Bolashvili N.R., Gulashvili Z.M., Jamrishvili N.K., Suknidze N.E., Tavidashvili Kh.Z. Modeling the Distribution of Hailstones by Mean Max Sizes on the Territory of Kakheti (Georgia) using Data of the Freezing Level in the Atmosphere and Radar Measurements. Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 24(1), 2021, pp. 25-36. DOI: <https://doi.org/10.48614/ggs2420212881>
50. Amiranashvili A., Chargazia Kh., Matzarakis A., Kartvelishvili L. Tourism Climate Index in the Coastal and Mountain Locality of Adjara, Georgia. International Scientific Conference “Sustainable Mountain Regions: Make Them Work”. Proceedings, Borovets, Bulgaria, ISBN 978-954-411-220-2, 14-16 May, 2015, pp. 238-244, [http://geography.bg/MountainRegions\\_Sofia2015](http://geography.bg/MountainRegions_Sofia2015)
51. Amiranashvili A., Chargazia Kh., Trofimenko L. Dynamics of the Thirty-Year Moving Average Values of the Air Temperature in Tbilisi and St.-Petersburg with 1851 to 2010 and their Extrapolation to 2051-2080. International Conference “Applied Ecology: Problems, Innovations”, ICAE-2015. Proceedings, Tbilisi-Batumi, Georgia, ISBN 978-9941-0-7644-2, 7-10 May, 2015, Tbilisi, 2015, pp. 12-16, <http://icae-2015.tsu.ge/>
52. Amiranashvili A., Chelidze T., Dalakishvili L., Svanadze D., Tsamalashvili T., Tvauri G. Preliminary Results of a Study of the Relationship Between the Variability of the Mean Annual Sum of Atmospheric Precipitation and Landslide Processes in Georgia. Int. Sc. Conf. „Modern Problems of Ecology“, Proc., ISSN 1512-1976, v. 7, Tbilisi-Telavi, Georgia, 26-28 September, 2020, pp. 202-206. [http://www.dspace.gela.org.ge/bitstream/123456789/8809/1/Eco\\_2020\\_3.33.pdf](http://www.dspace.gela.org.ge/bitstream/123456789/8809/1/Eco_2020_3.33.pdf)
53. Amiranashvili A., Chelidze T., Dalakishvili L., Svanadze D., Tsamalashvili T., Tvauri G. Preliminary Results of a Study of the Relationship Between the Monthly Mean Sum of Atmospheric Precipitation and Landslide Cases in Georgia. Journal of the Georgian Geophysical Society, ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 23(2), 2020, pp. 37 – 41. DOI: <https://doi.org/10.48614/ggs2320202726>
54. Amiranashvili A., Chelidze T., Svanadze D., Tsamalashvili T., Tvauri G. Some Results of a Study of the Relationship Between the Mean Annual Sum of Atmospheric Precipitation and Re-Activated and New Landslide Cases in Georgia Taking into Account of Climate Change. Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 25(2), 2022, pp. 38–48. DOI: <https://doi.org/10.48614/ggs2520225959>
55. Amiranashvili A.G., Chikhladze V.A., Dzodzuashvili U.V., Ghlonti N.Ya., Sauri I.P. Reconstruction of Anti-Hail System in Kakheti (Georgia). Journal of the Georgian Geophysical Society, Issue B. Physics of Atmosphere, Ocean and Space Plasma, v.18B, Tbilisi, 2015, pp. 92-106.
56. Amiranashvili A., Chikhladze V., Dzodzuashvili U., Ghlonti N., Sauri I., Telia Sh., Tsintsadze T. Weather Modification in Georgia: Past, Present, Prospects for Development. International Scientific Conference “Natural Disasters in Georgia: Monitoring, Prevention, Mitigation”. Proceedings, ISBN 978-9941-13-899-7, Publish House of Iv. Javakhishvili

Tbilisi State University, December 12-14, Tbilisi, 2019, pp. 216-222,  
<http://dspace.gela.org.ge/handle/123456789/8613>

57. Amiranashvili A., Chikhladze V., Kveselava N., Kvilitaia N., Sauri I., Shavlakadze Sh. Some Characteristics of Hail Processes in Kakheti (Georgia) According to Radar Observations into 2016-2019. Journal of the Georgian Geophysical Society, ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 23(2), 2020, pp. 50 – 56. DOI: <https://doi.org/10.48614/ggs2320202729>
58. Amiranashvili A.G., Gzirishvili T.G., Chumburidze Z.A. On the Role of Artificial Ice Forming Reagents and Radioactive Intermixtures in the Variation of Convective Clouds Thunderstorm and Hail Activity. Proc. 12<sup>th</sup> Int. Conf. on Clouds and Precipitation, Zurich, Switzerland, August 19-23, vol. 1, 1996, pp. 267-270.
59. Amiranashvili A.G., Gzirishvili T.G., Nekhotina L.M., Trofimenko L.T., Bogachuk V.S. Investigation of the Variations of Electrical and Radar Parameters of Thunderclouds. Proc. 8<sup>th</sup> Int. Conf. On Atmospheric Electricity, Uppsala, Sweden, 13-16 June, 1988, pp. 388-391.
60. Amiranashvili A.G., Gzirishvili T.G., Nekhotina L.M., Trofimenko L.T., Bogachuk V.S. Variation of Thunderclouds Electrical and Radar Parameters as a Result of Artificial Modification. Pap. Subm. to the 5<sup>th</sup> WMO Sc. Conf. on Weather Modification and Appl. Cloud Physics, Beijing, China, vol.1, WMO/TD-No 269, 8-12 May 1989, 357-358.
61. Amiranashvili A., Jamrishvili N., Janelidze I., Pipia M., Tavidashvili Kh. Statistical Analysis of the Daily Wind Speed in Tbilisi in 1971-2016. Int. Conf. of Young Scientists “Modern Problems of Earth Sciences”. Proceedings, ISBN 978-9941-36-044-2, Publish House of Iv. Javakhishvili Tbilisi State University, Tbilisi, November 21-22, 2022, pp. 159-163. <http://openlibrary.ge/handle/123456789/10250>
62. Amiranashvili A., Japaridze N., Kartvelishvili L., Khazaradze K., Revishvili A. Changeability the Monthly Mean Values of Air Effective Temperature on Misserend in Batumi in 1956-2015. Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 25(2), 2022, pp. 49–58. DOI: <https://doi.org/10.48614/ggs2520225960>
63. Amiranashvili A., Japaridze N., Kartvelishvili L., Khazaradze K., Revishvili A. Preliminary Results of a Study on the Impact of Some Simple Thermal Indices on the Spread of COVID-19 in Tbilisi. Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 25(2), 2022, pp. 59–68. DOI: <https://doi.org/10.48614/ggs2520225961>
64. Amiranashvili A., Japaridze N., Kartvelishvili L., Megrelidze L., Khazaradze K. Statistical Characteristics of the Monthly Mean Values of Air Effective Temperature on Misserend in the Autonomous Republic of Adjara and Kakheti (Georgia). Transactions of Mikheil Nodia Institute of Geophysics, ISSN 1512-1135, vol. LXIX, 2018, pp. 118-138, (in Russian).
65. Amiranashvili A.G., Kartvelishvili L. G. Long-Term Variations of Air Effective Temperature in Tbilisi. Trans. of the Institute of Hydrometeorology, vol. 115, ISSN 1512-0902, Tb., 2008, pp. 214–219, (in Russian).
66. Amiranashvili A.G., Kartvelishvili L.G. Holiday Climate Index in Kakheti (Georgia). Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 24(1), 2021, pp. 44-62. DOI: <https://doi.org/10.48614/ggs2420212883>
67. Amiranashvili A.G., Kartvelishvili L.G., Kutaladze N.B., Megrelidze L.D., Tatishvili M.R. Holiday Climate Index in Some Mountainous Regions of Georgia. Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512-1127, Physics of Solid Earth,

- Atmosphere, Ocean and Space Plasma, v. 24(2), 2021, pp. 92 – 117. DOI: <https://doi.org/10.48614/ggs2420213327>
68. Amiranashvili A.G., Kartvelishvili L.G., Kutaladze N.B., Megrelidze L.D., Tatishvili M.R. Changeability of the Meteorological Parameters Associated with Holiday Climate Index in Different Mountainous Regions of Georgia in 1956-2015. Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 24(2), 2021, pp. 78-91. DOI: <https://doi.org/10.48614/ggs2420213326>
69. Amiranashvili A.G., Japaridze N.D., Khazaradze K.R. On the Connection of Monthly Mean of Some Simple Thermal Indices and Tourism Climate Index with the Mortality of the Population of Tbilisi City Apropos of Cardiovascular Diseases. Journal of the Georgian Geophysical Society, ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 21(1), Tbilisi, 2018, pp.48 -62. <http://www.jl.tsu.ge/index.php/GGS/article/view/2489>
70. Amiranashvili A., Kartvelishvili L., Matzarakis A. Changeability of the Holiday Climate Index (HCI) in Tbilisi. Trans. of M. Nodia Institute of Geophysics, ISSN 1512-1135, vol. LXXII, Tbilisi, 2020, pp. 129-137.
71. Amiranashvili A., Kartvelishvili L., Matzarakis A. Comparison of the Holiday Climate Index (HCI) and the Tourism Climate Index (TCI) in Tbilisi. Int. Sc. Conf. „Modern Problems of Ecology“, Proc., ISSN 1512-1976, v. 7, Tbilisi-Telavi, Georgia, 26-28 September, 2020, pp. 424-427.
72. Amiranashvili A.G., Kartvelishvili L.G., Megrelidze L.D. Changeability of the Meteorological Parameters Associated with Some Simple Thermal Indices and Tourism Climate Index in Adjara and Kakheti (Georgia). Journal of the Georgian Geophysical Society, ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 21(2), Tbilisi, 2018, pp. 77-94.
73. Amiranashvili A.G., Kartvelishvili L.G., Saakashvili N.M., Chikhladze V.A. Long-Term Variations of Air Effective Temperature in Kutaisi. “Modern Problems of Using of Health Resort Resources”, Collection of Scientific Works of International Conference, Sairme, Georgia, June 10-13, 2010, ISBN 978-9941-0-2529-7, Tbilisi, 2010, pp. 152-157, (in Russian).
74. Amiranashvili A., Kereselidze Z., Mitin M., Khvedelidze I., Chikhladze V. Alarming Factors of the Microclimate of the Vere River Valley and their Influence on the Floods Intensity. Trans. of Mikheil Nodia institute of Geophysics, ISSN 1512-1135, vol. 69, Tb., 2018, pp. 196 – 210, (in Georgian). [http://www.dspace.gela.org.ge/bitstream/123456789/7517/1/IG\\_T\\_69\\_2018\\_Red\\_20.pdf](http://www.dspace.gela.org.ge/bitstream/123456789/7517/1/IG_T_69_2018_Red_20.pdf)
75. Amiranashvili A.G., Kirkitadze D.D., Kekenadze E.N. Pandemic of Coronavirus COVID-19 and Air Pollution in Tbilisi in Spring 2020. Journal of the Georgian Geophysical Society, ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 23(1), 2020, pp. 57-72. DOI: <https://doi.org/10.48614/ggs2320202654>
76. Amiranashvili A., Kveselava N., Kvilitaia N., Sauri I., Shavlakadze Sh., Chikhladze V. Some Results of Anti-Hail Works in Kakheti into 2016-2020. Trans. of M. Nodia Institute of Geophysics, ISSN 1512-1135, vol. LXXII, Tbilisi, 2020, pp. 123-128. (in Georgian). [http://www.dspace.gela.org.ge/bitstream/123456789/8934/1/15\\_Tr\\_72\\_2020.pdf](http://www.dspace.gela.org.ge/bitstream/123456789/8934/1/15_Tr_72_2020.pdf)
77. Amiranashvili A., Matcharashvili T., Chelidze T. Climate Change in Georgia: Statistical and Nonlinear Dynamics Predictions, Journal of Georgian Geophysical Soc., Iss. (A), Physics of Solid Earth, ISSN: 1512-1127, v. 15a, 2011-2012, pp. 67-87.

78. Amiranashvili A., Nodia A., Khurodze T., Kartvelishvili L., Chumburidze Z., Mkurnalidze I., Chikhradze N. Variability of Number of Hail and Thunderstorm Days in the Regions of Georgia with Active Influence on Atmospheric Processes. Bull. of the Georgian Acad. of Sciences, 172, N3, 2005, 484-486.
79. Amiranashvili A., Povolotskaya N., Senik I. Comparative Analysis of the Variability of Monthly and Seasonal Air Temperature in Tbilisi and Kislovodsk in 1931-2020. International Scientific Conference „Natural Disasters in the 21st Century: Monitoring, Prevention, Mitigation“. Proceedings, ISBN 978-9941-491-52-8, Tbilisi, Georgia, December 20-22, 2021. Publish House of Iv. Javakhishvili Tbilisi State University, Tbilisi, 2021, pp. 27 – 30.
80. Amiranashvili A., Povolotskaya N., Senik I. Comparative Analysis of the Tourism Climate Index and the Holiday Climate Index in the North Caucasus. Transactions of Mikheil Nodia Institute of Geophysics, ISSN 1512-1135, vol. LXXIII, 2021, pp. 96-113, (in Russian).
81. Amiranashvili A.G., Revishvili A.A., Khazaradze K.R., Japaridze N.D. Connection of Holiday Climate Index with Public Health (on Example of Tbilisi and Kakheti Region, Georgia). Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 24 (1), 2021, pp. 63-76. DOI: <https://doi.org/10.48614/ggs2420212884>
82. Araci S.F. S., Demiroglu O. C., Pacal A., Hall C. M., Kurnaz, M. L. Future Holiday Climate Index (HCI) Performances of Urban and Beach Destinations in the Mediterranean. EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-13217, <https://doi.org/10.5194/egusphere-egu21-13217>, 2021.
83. Arnold N.F., Robinson T.R. Solar Magnetic Flux Influences on the Dynamics of the Winter Middle Atmosphere. Geophysical Research Letters, Vol. 28, N 12, 2001, pp. 2381-2384.
84. Ayers G.P., Bigg K.K., Turvey D.E. Aitken Particle and Cloud Condensation Nucleus Fluxes in the Plume from an Isolated Industrial Source. J. Appl. Meteor., vol. 18, No 4, 1979, pp. 449-459.
85. Barriopedro D., García-Herrera R., Lupo A.R et al. A Climatology of Northern Hemisphere Blocking. Journal of Climate 19, 2006, pp.1042-1063.
86. Baur G. et al. Nuclear Physics, A 729, 2003, pp. 787–808.
87. Beglarashvili N., Chikhladze V., Janelidze I., Pipia M., Tsintsadze T. Strong Wind on the Territory of Georgia in 2014-2018. International Scientific Conference „Natural Disasters in the 21st Century: Monitoring, Prevention, Mitigation“. Proceedings, ISBN 978-9941-491-52-8, Tbilisi, Georgia, December 20-22, 2021. Publish House of Iv. Javakhishvili Tbilisi State University, Tbilisi, 2021, pp. 19 – 22.
88. Beglarashvili N., Gorgjanidze S., Kobakhidze N., Pipia M., Chikhladze V., Janelidze I., Jincharadze G. Heavy Snow and Avalanches on the Territory of Georgia in 2014-2018. Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 25(2), 2022, pp. 24–28. DOI: <https://doi.org/10.48614/ggs2520225957>
89. Beglarashvili N., Janelidze I., Pipia M., Varamashvili N. Hail Storms in Kakheti (Georgia) in 2014-2018. Int. Sc. Conf. „Modern Problems of Ecology“, Proceedings, ISSN 1512-1976, v. 7, Tbilisi-Telavi, Georgia, 26-28 September, 2020, pp. 176-179.
90. Beglarashvili N., Janelidze I., Pipia M., Varamashvili N. Heavy Rainfall, Floods and Floodings in Kakheti (Georgia) in 2014-2018. Int. Sc. Conf. „Modern Problems of Ecology“, Proc., ISSN 1512-1976, v. 7, Tbilisi-Telavi, Georgia, 26-28 September, 2020, pp. 180-184.

91. Biqiang Zh., Weixing W., Libo L., Igarashi K., Yumoto K., Baiqi N. Ionospheric Response to the Geomagnetic Storm on 13-17 April 2006 in the West Pacific Region. *Journal of Atmospheric and Solar-Terrestrial Physics*, Vol. 71, Iss. 1, 2009, pp. 88-100. <https://ui.adsabs.harvard.edu/abs/2009JASTP..71...88Z/abstract>
92. Bliadze T., Amiranashvili A., Chkhutinidze M., Laghidze L. Statistical Analysis of Angstrom Fire Index for Kutaisi, Georgia. II International Scientific Conference “Landscape Dimensions of Sustainable Development Science – Carto/GIS – Planning – Governance”, Dedicated to the 75th Anniversary of Professor Nikoloz (Niko) Beruchashvili, Proceedings, 12-16 September 2022, Tbilisi, Georgia, Ivane Javakhishvili Tbilisi State University Press, 2022, ISBN 978-9941-36-030-5, pp. 270-274. <http://www.dspace.gela.org.ge/handle/123456789/10119>
93. Bliadze T., Povolotskaya N., Senik I. Comparison of Angstrom Fire Index for Tbilisi (Georgia) and Kislovodsk (Russia). International Scientific Conference „Natural Disasters in the 21st Century: Monitoring, Prevention, Mitigation“, Proceedings, ISBN 978-9941-491-52-8, Tbilisi, Georgia, December 20-22, 2021, pp. 158-162.
94. Bochnócek J., Hejda P., Bucha V., Pycha J. Possible Geomagnetic Activity Effects on Weather. *Ann. Geophysicae* 17, 925±932 (1999) Ó EGS. Springer-Verlag 1999.
95. BSR/ASHRAE Standard 55P, Thermal Environmental Conditions for Human Occupancy 2/24/03 Most Current Draft Standard, 2003, 50 p.
96. Budagashvili T., Karchava J., Gunia G., Inyskirveli L., Kuchava T., Gurgenidze M., Amiranashvili A., Chikhladze T. Inventory of Greenhouse Gas Emissions and Sinks, Georgia’s Initial National Communication on Under the United Nations Framework Convection on Climate Change, Project GEO/96/G31, Tbilisi, 1999, pp. 33-45.
97. Burns A. G., Killeen T. L., Deng' W., Carignan G.R. Geomagnetic Storm Effects in the Low – to Middle-Latitude Upper Thermosphere. *Journal of Geophysical Research*, Vol. 100, N A8, 1995, pp. 14673-1691.
98. CALIPSO Studies Aerosols and Clouds Using Innovative Observation Methods. NASA. Science Mission Directorate. 2008
99. Carrillo J., González A., Pérez J. C., Expósito F. J., Díaz, J. P. Impact of Climate Change on the Future of Tourism Areas in the Canary Islands, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-11981, <https://doi.org/10.5194/egusphere-egu21-11981, 2021.>
100. Chikhladze V., Amiranashvili A., Gelovani G., Tavidashvili Kh., Laghidze L., Jamrishvili N. Assessment of the Destructive Power of a Tornado on the Territory of the Poti Terminal on September 25, 2021. II Int. Sc. Conf. “Landscape Dimensions of Sustainable Development Science – Carto/GIS – Planning – Governance”, Dedicated to the 75th Anniversary of Professor Nikoloz (Niko) Beruchashvili, Proceedings, 12-16 September 2022, Tbilisi, Georgia, Ivane Javakhishvili Tbilisi State University Press, ISBN 978-9941-36-030-5, 2022, pp. 275-281, (in Georgian). <http://www.dspace.gela.org.ge/handle/123456789/10120>
101. Chikhladze V., Jamrishvili N., Tavidashvili Kh. Tornadoes in Georgia. International Scientific Conference „Natural Disasters in the 21st Century: Monitoring, Prevention, Mitigation“. Proceedings, ISBN 978-9941-491-52-8, Tbilisi, Georgia, December 20-22, 2021. Publish House of Iv. Javakhishvili Tbilisi State University, Tbilisi, 2021, pp. 23 – 26.
102. Climate Change 2007: The Physical Science Basis. Summary for Policymakers. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel of Climate Change. <http://www.ipcc.ch>.

- 103.Climate Change 2021: The Physical Science Basis. Summary for Policymakers. Working Group I contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, 41 p., <https://www.ipcc.ch>
- 104.Connor H.K., Zesta E., Fedrizzi M., Shi Y., Raeder J., Codrescu M.V., Fuller-Rowell T. J. Modeling the Ionosphere-Thermosphere Response to a Geomagnetic Storm Using Physics-Based Magnetospheric Energy Input: Open GGCM-CTIM Results. *Journal Space Weather Space Clim.*, 6, A25, 2016. DOI: 10.1051/swsc/2016019
- 105.Daglis I.A. Advanced Study Institute on Space Storms and Space Weather Hazards. National Observatory of Athens, 2000.
- 106.Davitashvili T., Kutaladze N., Megrelidze L., Mikuchadze G., Gogichaishvili G., Samkharadze I., Qvatadze R. Evaluation of Multi-Model Hindcasts for Land Surface Air Temperature over Georgia. *Annals of Agrarian Science* 18, no 4, 2020, pp. 507–520.
- 107.Davitashvili T., Megrelidze L., Kvataladze R., Samkharadze I., Gogichaishvili G., Kutaladze N., Mikuchadze G. Future Scenarios of Air Temperature Maximums and Minimums for Georgia Based on Statistical Downscaling. *Annals of Agrarian Science* 18, no 3, 2020, pp. 314-331.
- 108.Davitashvili T., Samkharadze I., Sharikadze M. Modeling of Extreme Events and Regional Climate Variability on the Territory of the Caucasus (Georgia) Springer Proceedings in Mathematics & Statistics, Vol. 334, 2020, pp. 61-82. Springer, Cham. [https://doi.org/10.1007/978-3-030-56356-1\\_5](https://doi.org/10.1007/978-3-030-56356-1_5)
- 109.Dessens J., Fraile R., Sanchez J.L. Weekly Distribution of Hailfalls and Hailstone Size Distributions in Southwestern France, Proc.13th Int. Conf. on Clouds and Precipitation, Reno, Nevada, USA, August 14-18, Vol. 2, 2000, pp.1061-1064.
- 110.Didan K., Huete A. MODIS Vegetation Index Product Series Collection 5 Change Summary. TBRIS Lab., The University of Arizona, 2006.
- 111.Earthdata.nasa.gov
- 112.Energetic Particle Precipitation Interconnection with Climate. Natural Environment Research Council European Union, 2018. [https://cordis.europa.eu/result/rcn/60754\\_en.html](https://cordis.europa.eu/result/rcn/60754_en.html)
- 113.False Claims of a Coming Ice Age — <https://climatefeedback.org/false-claims-coming-ice-age-ecosystem-unreliable-news-sites-blogs-social-media-accounts/>
- 114.Förster M., Namgaladze A.A., Yurik R.Y. Thermospheric Composition Changes Deduced from Geomagnetic Storm Modeling. *Geophysical Research Letters*, Vol. 26, N 16, 1999, pp. 2625-2628, <http://wdc.kugi.kyoto-u.ac.jp/index.html>
- 115.Fox N., Collier Ch. Physical Disaggregation of Numerical Model Rainfall. *Hydrol. Earth Syst. Sci.*, 4, 2000, pp. 419–424. <https://doi.org/10.5194/hess-4-419-2000>
- 116.Freitas C. R., Grigorjeva E. A. A Comprehensive Catalogue and Classification of Human Thermal Climate Indices. *Int. J. Biometeorol*, 59, 2015, pp. 109–120, DOI 10.1007/s00484-014-0819-3
- 117.Gannon J.L., Love J.J. USGS 1-MinDst Index. *Journal of Atmospheric and Solar-Terrestrial Physics*, 73, 2011, pp. 323–334.
- 118.Gaprindashvili G., Westen C.V. Generation of a National Landslide Hazard and Risk Map for the Country of Georgia. *Nat Hazards*, 80(1), 2016, pp. 69–101. <https://doi.org/10.1007/s11069-015-19585>
- 119.Geneve R., La grele, Paris, 1961, 82 p.
- 120.Ghanbari S., Karimi J. The Review of Changes in Tourism Climate Index (TCI) Isfahan (2005-1976). *Journ. of Regional Planning*, vol. 3, No 12, Winter 2014, pp. 71 – 82.
- 121.Gruza G.V., Meshcherskaya A.V. Izmenenia klimata v Rossii za period instrumentalnih nabliudeni, 2008, <http://climate2008.igce.ru/v2008/v1/vl-3.pdf>.

- 122.Hajcek P. A New Approach to Quantum Measurement Problem: Cluster Separability. Journal of Physics: Conference Series 306, 2011, 012035 doi:10.1088/1742-6596/306/1/012035
- 123.Hajra R., Tsurutani B.T., Echer E., Gonzalez W.D., Gjerloev J.W. Super Substorms (SML<2500nT): Magnetic Storm and Solar Cycle Dependences. J. Geophys. Res. Space Physics, 121, 2016, doi:10.1002/2015JA021835
- 124.Harada Y., Goto A., Hasegawa H., Fujikawa N. A Major Stratospheric Sudden Warming Event in January 2009. Journal of the Atmospheric Sciences, Vol. 67, 2009.
- 125.Hasted D. Physics of Atomic Collisions, 1965.
- 126.Hays J. D., Imbrie J., Shackleton N. J. Variations in the Earth's Orbit: Pacemaker of the Ice Ages. SCIENCE, Vol. 194, Iss. 4270, 1976, pp. 1121-1132. DOI: 10.1126/science.194.4270.1121.
- 127.Heliophysics Science and the Moon Potential Solar and Space Physics Science for Lunar Exploration. Subpanel for Heliophysics Science and the Moon. Report to the NASA Advisory Council Heliophysics Subcommittee. 2007, 70 pp. [https://science.nasa.gov/science-pink/s3fs-public/atoms/files/Final\\_508Compliant\\_MoonRpt.pdf](https://science.nasa.gov/science-pink/s3fs-public/atoms/files/Final_508Compliant_MoonRpt.pdf)
- 128.Hinkle D. E., Wiersma W., Jurs S. G. Applied Statistics for the Behavioral Sciences. Boston, MA, Houghton Mifflin Company, ISBN: 0618124055; 9780618124053, 2003, 756 p.
- 129.Horvath A. Anisotropy of Water Cloud Reflectance: A Comparison of Measurements and 1D Theory. Department of Atmospheric Sciences, The University of Arizona, USA. 2004. <https://doi.org/10.1029/2003GL01838>
- 130.Horvath A., Davies R. Comparison of Microwave and Optical Cloud Water Path Estimates from TMI, MODIS and MISR. Journal of Geophysical Research. Vol. 11, 2007. <https://doi.org/10.1029/2006JD007101>
- 131.Horvath A., Soden B. Lagrangian Diagnostics of Tropical Deep Convection and its Effect Upon Upper-Tropospheric Humidity. American Met. Society, 2008, pp. 1013–1028. DOI: <https://doi.org/10.1175/2007JCLI1786.1>
- 132.<http://cmip-pcmdi.llnl.gov/cmip5/availability.html>
- 133.<http://etccdi.pacificclimate.org/software.shtml>
- 134.<http://www.ipcc.ch/report/ar5/wg1/>
- 135.<https://github.com/ARCCSS-extremes/climpact2>
- 136.Huete A., Justice C., van Leeuwen W. MODIS Vegetation Index (MOD 13) Algorithm Theoretical Basis Document Version 3. University of Arizona. University of Virginia Department of Environmental Sciences, 1999
- 137.Intergovernmental Panel on Climate Change (IPCC, 2013)
- 138.IPCC AR6 Climate Change 2021: The Physical Science Basis (from the 6th Assessment report by the IPCC), 2021.
- 139.Jakob C. Accelerating Progress in Global Model Development – Challenges, Opportunities and Strategies. School of Mathematical Sciences, Monash University, Melbourne, Australia. 2009, 8 pp.
- 140.Jakob C. The Representation of Cloud Cover in Atmospheric General Circulation Models. Dissertation der Fakultat fur Physik der Ludwig – Maximilians – Universit at Munchen. Munchen, den 19, Oktober 2000, 201 pp. [https://edoc.ub.uni-muenchen.de/328/1/Jakob\\_Christian.pdf](https://edoc.ub.uni-muenchen.de/328/1/Jakob_Christian.pdf)
- 141.Jamrishvili N., Tavridashvili Kh. Effect of Climate Change on the Freezing Level in Kakheti. Int. Sc. Conf. “Natural Disasters in Georgia: Monitoring, Prevention, Mitigation”.

Proceedings, ISBN 978-9941-13-899-7, Publish House of Iv. Javakhishvili Tbilisi State University, December 12-14, 2019, pp. 91-95.

- 142.Javakhishvili N., Kekenadze E., Mitin M., Samkharadze I. Storm Wind in Tbilisi and Rustavi Cities on 21 September 2019. Analysis of Data of Radar, Aerological and Ground-Based Measurements. Int. Sc. Conf. „Modern Problems of Ecology“, Proc., ISSN 1512-1976, v. 7, Tbilisi-Telavi, Georgia, 26-28 September, 2020, pp. 172-175.
- 143.Kamide Y., Kusano K. No Major Solar Flares but the Largest Geomagnetic Storm in the Present Solar Cycle. Space Weather, 13 (6), 2015, pp. 365-367. doi:10.1002/2015SW001213
- 144.Karinen A., Mursula K. Correcting the Dst Index: Consequences for Absolute Level and Correlations. Journal of Geophysical Research, Vol. 111, A08207, 2006. doi:10.1029/2005JA011299
- 145.Kauffman Ph., Ruiz-Columbié A. Artificial Atmospheric Ionization: A Potential Window for Weather Modification. Physics, Environmental Science, 2004, 19 pp.
- 146.Klein S.A., Pincus R., Xu K.-M. Using Cloud Resolving Model Simulations of Deep Convection to Inform Cloud Parameterizations in Large-Scale Models. Twelfth ARM Science Team Meeting Proceedings, St. Petersburg, Florida, April 8-12, 2002. [https://www.arm.gov/publications/proceedings/conf12/extended\\_abs/klein-sa.pdf](https://www.arm.gov/publications/proceedings/conf12/extended_abs/klein-sa.pdf)
- 147.Kobisheva N., Narovlianski G. Climatological Processing of the Meteorological Information, Leningrad, Gidrometeoizdat, 1978, 294 p., (in Russian).
- 148.Kutaladze N., Megrelidze L., Kordzakhia G. Evaluation of Multi-Model Hindcasts of Overland Precipitation for Georgia. In: Vitková, J., Botyanszká, L. (eds.), Interdisciplinary Approach in Current Hydrological Research. IH SAS, E-Book, Bratislava, ISBN: 978-80-89139-53-8, 2022, pp. 174-187.
- 149.Kutiev I., Tsagouri I., Perrone L., et al. Solar Activity Impact on the Earth's Upper Atmosphere. J. Space Weather Space Clim., 3, 2013, A06. DOI: <https://doi.org/10.1051/swsc/2013028>
- 150.Lam M.M., Tinsley B.A. Solar Wind-Atmospheric Electricity-Cloud Microphysics Connections to Weather and Climate. Journal of Atmospheric and Solar-Terrestrial Physics Vol. 149, 2016, pp. 277-290. <http://dx.doi.org/10.1016/j.jastp.2015.10.019>
- 151.Landau L.D., Lifshic E.M. Quantum Mechanics. Vol. 3, 1989
- 152.Landsberg H.E. The Assessment of Human Bioclimate. A Limited Review of Physical Parameters. Technical Note No 123, WMO, No 331, 1972, 37 p.
- 153.Landscheidt T. Solar Eruptions Linked to North Atlantic Oscillation. Schroeter Institute for Research in Cycles of Solar Activity, Canada. <http://www.john-daly.com/theodor/solarnao.htm>
- 154.Laštovička J. Laštovička J. Effects of Geomagnetic Storms in the Lower Ionosphere, Middle Atmosphere and Troposphere. Journal of Atmospheric and Terrestrial Physics, Vol. 58, N 7, 1996, pp. 831-843. DOI: 10.1016/0021-9169(95)00106-9
- 155.Le Mouël J-L., Blanter E., Shnirman M., Courtillot V. On Secular Changes of Correlation Between Geomagnetic Indices and Variations in Solar Activity. Journal of Geophysical Research, Vol. 117, A09103, 2012. doi:10.1029/2012JA017643
- 156.Lockett J., Krumm D. Cloudsat Education Network. Colorado State University, Fort Collins, Colorado, 19 pp. cloudsat education network – Ams.Confex.Com.
- 157.Lukić T., Marić P., Hrnjak I., Gavrilov M. B., Mladjan D., Zorn M., ... & Stojsavljević R. Forest Fire Analysis and Classification Based on a Serbian Case Study. Acta geographica Slovenica, 57 (1), 2017, pp. 51-63.

158. Malki K., Bounhir A., Benkhaldoun Z., Makela J.J., Vilmer N., Fisher D.J., Kaab M., Elbouyahaoui Kh., Harding B.J., Laghriyeb A., Daassou A., Lazrek M. Ionospheric and Thermospheric Response to the 27-28 February 2014 Geomagnetic Storm. *Ann. Geophys. Discuss.*, <https://doi.org/10.5194/angeo-2018-24>
159. Malvi1 B., Srivastav P.S., Mansoori A.A., Atulkar R., Bhardwaj S., Purohit P.K. Morphological Investigation of Disturbed Ionosphere during Intense Geomagnetic Storms. *Journal of Physics: Conference Series* 759, 2016, 012067 doi:10.1088/1742-6596/759/1/012067
160. Manninen P. [manninen@chem.helsinki.fi](mailto:manninen@chem.helsinki.fi)  
<http://www.chem.helsinki.fi/~manninen/mqm06.html>
161. Marusek J.A. Solar Storm Threat Analysis. Impact, Bloomfield, Indiana 47424, 2007, 29 p.  
[http://www.breadandbutterscience.com/Solar\\_Storm\\_Threat\\_Analysis.pdf](http://www.breadandbutterscience.com/Solar_Storm_Threat_Analysis.pdf)
162. Matzarakis A. Climate, Thermal Comfort and Tourism. *Climate Change and Tourism-Assessment and Coping Strategies*, 2007, pp.139-154.
163. McCarthy D.D. Precision time and the rotation of the Earth. International Astronomical Union. 2004, pp.180-196. doi:10.1017/S1743921305001377
164. McCarthy D. D., Seidelmann, P. K. Time: From Earth Rotation to Atomic Physics. Wiley-VCH, Weinheim, Germany, ISBN 978-3-527-40780-4, 2009, 351 pp.  
<https://physicstoday.scitation.org/doi/10.1063/1.3529005>
165. McLean J. Late Twentieth-Century Warming and Variations in Cloud Cover. *Atmospheric and Climate Sciences*, 2014, 4, pp. 727-742. <http://www.scirp.org/journal/acs>.  
<http://dx.doi.org/10.4236/acs.2014.44066>
166. Meladze M., Tatishvili M., Mkurnalidze I., Kaishauri M. Carbon Sequestration for Deforestation and Forest Degradation Reduction using Satellite Technologies. *International Scientific-Practical Journal "Forestry Bulletin"*, vol.8, 2014.
167. Meladze M., Tatishvili M., Mkurnalidze I., Kaishauri M. Climate Change Mitigation Modern Techniques for Forest Ecological Monitoring. *Bulletin of Academy of Agricultural Sciences of Georgia*, Vol.32, ISSN 1512-2743, 2013, pp. 247-251.
168. Mieczkowski Z. The Tourism Climate Index: A Method for Evaluating World Climates for Tourism. *The Canadian Geographer* 29, 1985, pp. 220-233.
169. Mihăilă D., Pitică A. E., Briciu A. E., Bistricean P. I., Lazurca L. G., Puțunica A. Changs in Bioclimatic Indices in the Republic of Moldova (1960–2012): Consequences for Tourism. *Boletín de la Asociación de Geógrafos Españoles*, 77, 2018, pp. 521–548. doi: 10.21138/bage.2550
170. Milan S. E., Clausen L. B. N., Coxon J. C. et al. Overview of Solar Wind–Magnetosphere–Ionosphere–Atmosphere Coupling and the Generation of Magnetospheric Currents. *Space Science Reviews*, 206, 2017, pp. 547-573. DOI 10.1007/s11214-017-0333-0
171. Mkurnalidze I., Kapanadze N., Khutsishvili E. Lightning and its Effects on Humans. *Int. Conf. of Young Scientists “Modern Problems of Earth Sciences”*. Proceedings, ISBN 978-9941-36-044-2, Publish House of Iv. Javakhishvili Tbilisi State University, Tbilisi, November 21-22, 2022, pp. 151-153.
172. Mlynczak M.G., Hunt L.A., Marshall B.T., Russell J.M. III, Mertens C.J., Thompson R.E., Gordley L.L. A Combined Solar and Geomagnetic Index for Thermospheric Climate. *Geophys. Res. Lett.*, 42, 2015, pp. 3677–3682. doi: 10.1002/2015GL064038.
173. Mlynczak M.G., Hunt L.A., Russell M.J. III,, Marshall B.T. Thermosphere Climate Indexes: Percentile Ranges and Adjectival Descriptors. *Journal of Atmospheric and Solar-Terrestrial Physics*, 2018. <https://doi.org/10.1016/j.jastp.2018.04.004>

- 174.Mlynczak M.G., Hunt L.A., Russell J. M. III, Marshall B.T., Mertens C.J., Thompson R.E. The Global Infrared Energy Budget of the Thermosphere from 1947 to 2016 and Implications for Solar Variability. *Geophys. Res. Lett.*, 43, 11, 2016, pp. 11934–11940. doi: 10.1002/2016GL070965
- 175.Mukherjee S. Cosmic Influence on the Sun-Earth Environment. *Sensors*, 8, 2008, pp. 7736-7752. DOI: 10.3390/s8127736
- 176.Muraleedharan T.S., Subba Ramu M.S., Vohra K.G. Experimental Studies of the Formation of Aitken Nuclei in the Atmosphere, Proc. 11<sup>th</sup> Int. Conf. on atmospheric aerosols, Condensation and Ice Nuclei, Budapest, Hungary, 3-8 September, vol.1, 1984, pp. 52-57.
- 177.Mysteries of the Sun. Nasa's Heliophysics Division of the Science Mission Directorate. 2012.
- 178.Namgaladze A.A., Förster M., Yurik R. Y. Analysis of the Positive Ionospheric Response to a Moderate Geomagnetic Storm Using a Global Numerical Model. *Ann. Geophysicae* 18, 461±477 (2000) Ó EGS ± Springer-Verlag 2000.
- 179.NASA Science Mission Directorate. <https://science.nasa.gov>
- 180.NOAA. Office of Satellite and Product Information. National Environmental Satellite, Data and Information Service.
- 181.NOAA/SWPC, Boulder, Co, USA. [spaceweatherlive.com](http://spaceweatherlive.com)
- 182.Olsson P.Q., Meyers M.P. Development and Testing of an Aerosol-Stratus Cloud Parametrization Scheme for Middle and High Latitudes. Colorado State University. [https://www.arm.gov/publications/proceedings/conf05/extended\\_abs/olsson\\_pq.pdf](https://www.arm.gov/publications/proceedings/conf05/extended_abs/olsson_pq.pdf)
- 183.Padmashri S. Global Thermospheric Response to Geomagnetic Storms. All Graduate Theses and Dissertations. 5001. 2016. <https://digitalcommons.usu.edu/etd/5001>
- 184.Palmer T.N. Quantum Reality, Complex Numbers and the Meteorological Butterfly Effect. European Centre for Medium-Range Weather Forecasts Shinfield Park, RG2 9AX, Reading .UK. Bulletin of the American Meteorological Society”, April 2005.
- 185.Perelman M.E., Badinov I.Ia. Model of Cloud Formations. Bulletin of Georgian Academy of Sciences, Vol. 131, N2, 1988.
- 186.Phan T.D., Eastwood J.P., Shay M.A. et al. Electron Magnetic Reconnection without Ion Coupling in Earth’s Turbulent Magnetosheath. *Nature* 557, 2018, pp. 202–206. <https://doi.org/10.1038/s41586-018-0091-5>
- 187.Phillips V.T.J., Donner L.J., Garner S.T. Nucleation Processes in Deep Convection Simulated by a Cloud-System-Resolving Model with Double-Moment Bulk Microphysics. *Journal of the Atmospheric Sciences*, Vol. 64, Iss. 3, 2007, pp. 738–761. DOI: <https://doi.org/10.1175/JAS3869.1>
- 188.Pidwirny M. Causes of climate change. Fundamentals of Physical Geography, 2<sup>nd</sup> Edition, 2006.
- 189.Pipia M., Elizbarashvili E., Amiranashvili A., Beglarashvili N. Dangerous Regions of Blizzard in Georgia. *Annals of Agrarian Science*, ISSN 1512-1887, vol. 17, No 4, 2019, pp. 403 – 408.
- 190.Progress Report on the Implementation of the Global Observing System for Climate in Support of the UNFCCC 2004-2008.
- 191.Rangarajan G. K., Iyemori T. Time Variations of Geomagnetic Activity Indices K<sub>p</sub> and A<sub>p</sub>: an Update. *Ann. Geophysicae* 15, 1271±1290, Ó EGS ± Springer-Verlag 1997.
- 192.Reconnection Tames the Turbulent Magnetic Fields Around Earth (2018, May 9). <https://phys.org/news/2018-05-reveals-energy-dissipates-earth-magnetic.html>
- 193.Rohli R.V., Vega A.J. Climatology. 4th Edition. ISBN:9781284119985, 2018, 418 pp.

- 194.Roshan G., Yousefi R., Fitche J.M. Long-Term Trends in Tourism Climate Index Scores for 40 Stations Across Iran: The Role of Climate Change and Influence on Tourism Sustainability. Int. J. Biometeorol., 2015, DOI 10.1007/s00484-015-1003-0
- 195.Rybak O. O., Rybak E. A. Application of Climatic Indices for Evaluation of Regional Differences in Tourist Attractiveness. Nauchnyy zhurnal KubGAU, №121(07), 2016, 24 p., <http://ej.kubagro.ru/2016/07/pdf/16.pdf>, (in Russian).
- 196.Rybak O. O., Rybak E. A. Changes in the Regime of Air Temperature and Precipitation Rate in the Black Sea Region in the 20<sup>th</sup> Century. Nauchnyj zhurnal KubGAU . – Krasnodar: KubGAU, – №90 (06), 2013, 21 p., <http://ej.kubagro.ru/2013/06/pdf/15.pdf> , (in Russian).
- 197.Sastri J.H. Effect of Magnetic Storms and Substorms on the Low- Latitude/Equatorial Ionosphere. ILWS Workshop 2006, GOA, February 19-24, 2006.
- 198.Scott D., Mc Boyle G. Using a “Tourism Climate Index” to Examine the Implications of Climate Change for Climate as a Tourism Resource. International Society of Biometeorology, Proceedings of the First International Workshop on Climate, Tourism and Recreation. Retrieved from <http://www.mif.uni-freiburg.de/isb/ws/report.htm>, 2001.
- 199.Scott D., Rutty M., Amelung B., Tang M. An Inter-Comparison of the Holiday Climate Index (HCI) and the Tourism Climate Index (TCI) in Europe. Atmosphere 7, 80, 2016, 17 p., doi:10.3390/atmos7060080www.
- 200.sdo.gsfc.nasa.gov
- 201.Selvam A. M. A General Systems Theory for Chaos, Quantum Mechanics and Gravity. Apeiron 11, 2004, pp., 134-146, <http://redshift.vif.com/JournalFiles/V11NO3PDF/V11N3SEL.PDF>  
<http://arxiv.org/html/physics/0211066>, 2004
- 202.Shim J. S., Tsagouri I., Goncharenko L., Rastaette, L., Kuznetsova M., Bilitza D., et al. Validation of Ionospheric Specifications during Geomagnetic Storms: TEC and foF2 During the 2013 March Storm Event. Space Weather, 16, 2018. <https://doi.org/10.1029/2018SW002034>.
- 203.Stankevich S.A., Titarenko O.V., Svideniuk M.O. Landslide susceptibility mapping using GIS-based weight-of-evidence modelling in central Georgian regions. Int. Sc. Conf. „Natural Disasters in Georgia: Monitoring, Prevention, Mitigation“, Proceedings, Tbilisi, Georgia, December 12-14, 2019, pp. 187-190.
- 204.Stocker, T.F., Qin D., Plattner G.-K., Tignor M., Allen S.K., Boschung J., Nauels A., Xia Y., Bex V., Midgley P.M. (eds.). IPCC. Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2013, 29 p.
- 205.Tatishvili M. Some Peculiarities of Mathematical Simulation of Cloud Microstructure. Transactions of the Institute of Hydrometeorology, Vol. 114, 2009.
- 206.Tatishvili M. Developing Weather Forecasting System in Georgia. Ecology & Environmental Sciences 2 (7), 2017. DOI:10.15406/mojes.2017.02.00046.
- 207.Tatishvili M. Energy Transformation in Clouds According Quantum Principles. International Scientific Journal. Journal of Environmental Science. vol 3. ISBN- 13: 978-1499721980; ISBN -10: 1499721986, Vienna, Austria 2014. pp. 7-9.
- 208.Tatishvili M. On Some Considerations of Cloud Particles and Photons Interaction. Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512-1127 Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 24(2), 2022. DOI: <https://doi.org/10.48614/ggs2420213324>

- 209.Tatishvili M., Bolashvili N., Palavandishvili A. Impact of Short-Term Geomagnetic Activity on Meteorological Parameters Variability on The Middle Latitude Region. Georgian Geographical Journal, Vol. 2, 2022. <https://doi.org/10.52340/ggj.2022.756> 2022
- 210.Tatishvili M., Elizbarashvili E., Meskhia R., Sh.Elizbarashvi Sh. Natural Hydrometeorological Disasters, their Causes and Prevention Measures. The Macrotheme Review. A multidisciplinary Journal of Global Macro Trends, A Macrotheme Capital Management, LLC Academic Publication, France, ISSN 1848-4735, Vol. 2, Iss. 1, 2013, pp. 148-154.
- 211.Tatishvili M.R., Khvedelidze Z.V., Demet rashvili D.I. On some Weather Forecasting Models in Georgia. Journal of the Georgian Geophysical Society, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, ISSN: 1512-1127, v. 23(2), 2020.
- 212.Tatishvili M., Khvedelidze Z., Mkurnalidze I., Samkharadze I., Kokosadze Kh. The Connection of Geomagnetic Activity and Weather Formation in Georgian Region. International Scientific Conference „Modern Problems of Ecology“, Proceedings, Vol. 6, ISSN 1512-1976, Kutaisi, Georgia, 2018.
- 213.Tatishvili M., Mkurnalidze I., Samkharadze I., Chinchaladze L. Application of Satellite Imaginary in Forestry for Georgia. Journal of the Georgian Geophysical Society, ISSN: 1512-1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v.21(1), 2018, pp.18 -25 <https://openjournals.ge/index.php/GGS/article/view/2484>. 2018
- 214.Tatishvili M., Mkurnalidze I., Samkharadze I., Tsintsadze N. Impact of Solar Coronal Mass Ejections (CME) on Formation of Earth Climate and Weather Pattern. International Scientific Journal. Journal of Environmental Science. Vol.7, Iss 1, ISBN -13:978-1721539185, 2018, pp. 1-5.
- 215.Tatishvili M.R., Palavandishvili A.M. Impact of Short-Term Geomagnetic Activity on Weather and Climate Formation in Georgian Region. Journal of the Georgian Geophysical Society, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, ISSN: 1512-1127, v. 23(2), 2020.
- 216.Tavartkiladze K., Begalishvili N., Kharchilava J., Mumladze D., Amiranashvili A., Vachnadze J., Shengelia I., Amiranashvili V. Contemporary Climate Change in Georgia. Regime of some Climate Parameters and their Variability. Monograph, ISBN 99928-885-4-7, Tbilisi, 2006, 177 p., (in Georgian).
- 217.Tsereteli E.D., Bolashvili N.R., Gaprindashvili, G.M., Gaprindashvili M.V., Machavariani N.G. Risk of Natural Hazards in Georgia. Journal of the Georgian Geophysical Society, e-ISSN: 2667-9973, p-ISSN: 1512- 1127, Physics of Solid Earth, Atmosphere, Ocean and Space Plasma, v. 24(2), 2021, pp. 22 – 29.
- 218.Tsuda T., Shepherd M., Gopalswamy N. Advancing the Understanding of the Sun–Earth Interaction-the Climate and Weather of the Sun–Earth System (CAWSES) II program. Prog. in Earth and Planet. Sci. 2, 28, 2015. <https://doi.org/10.1186/s40645-015-0059-0>
- 219.Varazanashvili O., Tsereteli N., Amiranashvili A., Tsereteli E., Elizbarashvili E., Dolidze J., Qaldani L., Saluqvadze M., Adamia Sh., Arevaladze N., Gventcadze A. Vulnerability, Hazards and Multiple Risk Assessment for Georgia. Natural Hazards, Vol. 64, Number 3, 2012, pp. 2021-2056, DOI: 10.1007/s11069-012-0374-3, <http://www.springerlink.com/content/9311p18582143662/fulltext.pdf>.
- 220.Williams E.R. Lightning and Climate: A Review, Proc. 12<sup>th</sup> Int. Conf. on Atmospheric Electricity, Versailles, France, 9-13 June, vol.2, 2003, pp. 665-668.
- 221.Wood R., Field P.R. Relationships between Total Water, Condensed Water, and Cloud Fraction in Stratiform Clouds Examined Using Aircraft Data. Journal of the Atmospheric

- Sciences, Vol. 57, 1999, pp. 1888-1905.  
<https://www.atmos.washington.edu/~robwood/papers/cfpaper/cfpaper.pdf14>.
222. Wu X., Moncrieff M., Emanuel K. Evaluation of Large-Scale Forcing During TOGA COARE for Cloud-Resolving Models and Single Column Models. American Met. Soc., Vol. 57, 2000, pp. 2977-2985. <https://texmex.mit.edu/pub/emanuel/PAPERS/wuetal2000.pdf>
223. [www.spaceweather.gov](http://www.spaceweather.gov)
224. Yang J., Dettori R., Nunes J.P.F. et al. Direct Observation of Ultrafast Hydrogen Bond Strengthening in Liquid Water. Nature 596, 2021, 531-535. <Https://Doi.Org/10.1038/S41586-021-03793-9>
225. Zossi de Artigas M., Fernandez de Campra P., Zotto, E. M. Geomagnetic Disturbances Analysis Using Discrete Wavelets. Geofísica Internacional, 47(3), 2008, pp. 257-263. <https://doi.org/10.22201/igeof.00167169p.2008.47.3.88>
226. Абшаев М.Т., Абшаев А.М., Барекова М.В., Малкарова А.М. Руководство по организации и проведению противоградовых работ. ISBN 978-5-905770-54-8, Нальчик, “Печатный двор”, 2014, 508 с.
227. Аджиев А.Х., Амиранашвили А.Г., Чаргизиа Х.З. Влияние аэрозольного загрязнения атмосферы на эффективность противоградовых работ в Кахетии и на Северном Кавказе. Доклады Всероссийской открытой конференции по физике облаков и активным воздействиям на гидрометеорологические процессы, посвященной 80-летию Эльбрусской высокогорной комплексной экспедиции АН СССР, 7-9 октября 2014 г., часть 2, ФГБУ «Высокогорный Геофизический Институт», Нальчик, 2015, с. 387-395.  
[http://www.dspace.gela.org.ge/bitstream/123456789/5264/1/Аджиев,Амиранашвили,Чаргизиа\\_Докл\\_Нальчик\\_2014%20\(2015\).pdf](http://www.dspace.gela.org.ge/bitstream/123456789/5264/1/Аджиев,Амиранашвили,Чаргизиа_Докл_Нальчик_2014%20(2015).pdf)
228. Амиранашвили А. Г. Исследование грозо-градовых процессов в Грузии и их связей с аэрозольным загрязнением атмосферы. Автореферат диссертации на соискание ученой степени доктора физико-математических наук, Тбилиси, 2006, 53 с., [http://www.openlibrary.ge/bitstream/123456789/4920/1/Amiranashvili\\_Avtoreferat\\_2006.pdf](http://www.openlibrary.ge/bitstream/123456789/4920/1/Amiranashvili_Avtoreferat_2006.pdf)
229. Амиранашвили А.Г. Влияние антропогенного загрязнение атмосферы на изменчивость интенсивности градовых процессов. Тр. Ин-та геофизики им. М.З. Нодиа, ISSN 1512-1135, том. 64, Тбилиси, 2013, с. 160-177. [http://dspace.gela.org.ge/bitstream/123456789/697/1/Tom-64\\_Amiranashvili.pdf](http://dspace.gela.org.ge/bitstream/123456789/697/1/Tom-64_Amiranashvili.pdf)
230. Амиранашвили А.Г., Бахсолиани М.Г., Бегалишвили Н.А., Берадзе Н.И., Бериташвили Б.Ш., Рехвиашвили Р.Г., Цинцадзе Т.Н., Рухадзе Н.П. О возобновлении работ по регулированию осадков в Восточной Грузии. Тр. Института гидрометеорологии, т. 108, ISSN 1512-0902, Тб.: 2002, с. 249-260.
231. Амиранашвили А.Г., Бахсолиани М.Г., Бегалишвили Н.А., Бериташвили Б.Ш., Рехвиашвили Р.Г., Цинцадзе Т.Н., Читанава Р.Б. О необходимости возобновления работ по искусственноому регулированию атмосферных процессов в Грузии. Тр. Института Гидрометеорологии Грузинского Технического Университета Грузии, т.119, ISSN 1512 – 0902, Тб.: 2013, с. 144 – 152.
232. Амиранашвили А.Г., Богачук В.С., Гзиришвили Т.Г., Нехотина Л.М., Трофименко Л.Т. Исследование взаимосвязей между радиолокационными и электрическими параметрами грозовых облаков и оценка эффективности воздействия на них. Сб. Атмосферное электричество, Тр. 3-го Всесоюзн. Симп. по атмосферному электричеству, Тарту, Эстония, 28-31 октября 1986, Л., Гидрометеоиздат, 1988, с. 116-119.

233. Амиранашвили А.Г., Варазанашвили О.Ш., Нодия А.Г., Церетели Н.С., Мкурналидзе И.П. Характеристики грозовой активности в Грузии. Материалы международной конференции «Климат, природные ресурсы, стихийные катастрофы на Южном Кавказе», Тбилиси, 18-19 ноября, 2008а, с. 284–290. <http://109.205.44.60/bitstream/123456789/9759/1/115-35.pdf>
234. Амиранашвили А.Г., Варазанашвили О.Ш., Нодия А.Г., Церетели Н.С., Хуродзе Т.В. Статистические характеристики числа дней с градом в год в Грузии. Материалы международной конференции «Климат, природные ресурсы, стихийные катастрофы на Южном Кавказе», Тбилиси, 18-19 ноября, 2008б, с. 427–433. <http://openlibrary.ge/bitstream/123456789/743/1/Setqva-Tb-Konf08Ru.pdf>
235. Амиранашвили А.Г., Варазанашвили О.Ш., Пипия М.Г., Церетели Н.С., Элизбарашвили М.Э., Элизбарашвили Э.Ш. Некоторые данные о градобитиях в Восточной Грузии и экономическом ущербе от них. Международная конференция “Актуальные проблемы геофизики”. Материалы научной конференции, посвященной 80 – летию со дня основания Института геофизики. Тбилиси, 2014, с. 145-150. [http://www.openlibrary.ge/bitstream/123456789/726/1/Геофиз\\_80\\_Амиранашвили\\_град.pdf](http://www.openlibrary.ge/bitstream/123456789/726/1/Геофиз_80_Амиранашвили_град.pdf)
236. Амиранашвили А.Г., Дзодзуашвили У.В., Ломтадзе Дж.Д., Саури И.П., Чихладзе В.А. Некоторые характеристики градовых процессов в Кахетии. Труды Института геофизики им. М.З. Нодиа, т. 65, ISSN 1512-1135, Тбилиси, 2015, с. 77-100. [http://www.dspace.gela.org.ge/bitstream/123456789/5286/1/Geoph\\_v.65\\_2015\\_8.pdf](http://www.dspace.gela.org.ge/bitstream/123456789/5286/1/Geoph_v.65_2015_8.pdf)
237. Амиранашвили А.Г., Нодия А.Г., Торонджадзе А.Ф., Хуродзе Т.В. Некоторые статистические характеристики числа дней с градом в теплое полугодие в Грузии в 1941-1990 гг. Труды Института геофизики АН Грузии, т. 58, ISSN 1512-1135, Тбилиси, 2004а, с.133-141.
238. Амиранашвили А.Г., Нодия А.Г., Торонджадзе А.Ф., Хуродзе Т.В. Изменчивость числа дней с градом в Грузии в 1941-1990 гг., Труды Института геофизики АН Грузии, т. 58, ISSN 1512-1135, 2004б, 127-132.
239. Ахвледиани Я.Р., Ломая О.В., Саркисова Л.С. Градовые явления в Алазанской долине по данным метеорологических станций. Труды Института геофизики АН ГССР, т. 25, Тбилиси, 1967, с. 65-74.
240. Балабуев А.Г. Грозы Закавказья. Тбилиси, 1939.
241. Балабуев А.Г. Анализ данных о градовых явлениях в районе долин рек Иори и Алазани. Труды Института геофизики АН ГССР, т. 25, Тбилиси, 1967, с. 56-64.
242. Бартишвили И.Т., Надибаидзе Г.А., Бегалишвили Н.А., Гудушаури Ш.Л. К физическим основам метода ЗакНИГМИ борьбы с градом. Труды ЗакНИГМИ, выпуск 67(73), 1978, с. 73-82.
243. Бердзенишвили Н.М., Кирkitадзе Д.Д. Обзор некоторых исследований градовых и грозовых процессов в Грузии. Труды Института геофизики им. Михаила Нодиа, ISSN 1512-1135, т. LXXV, 2022, с. 57 – 75, <http://openlibrary.ge/handle/123456789/10301>
244. Бериташвили Б.Ш., Мкурналидзе И.П., Амиранашвили А.Г. Исследование пространственно-временных изменений числа дней с грозой на территории Грузии. Сборник статей, Вопросы физики облаков, Облака, осадки и грозовое электричество, ГГО им. А.И.Воейкова, Гидрометеоиздат, Санкт-Петербург, 2004, 155-168.
245. Берлянд М.Е. Современные проблемы атмосферной диффузии и загрязнения атмосферы. Л., Гидрометеоиздат, 1975, 448 с.
246. Ван дер Варден Б.Л. Математическая статистика. М., ИЛ, 1960, 434 с.

247. Гавашели Ш.Г. Радиоактивное загрязнение воздуха в г. Тбилиси и его зависимость от атмосферных осадков. В кн. Метеорологические аспекты радиоактивного загрязнения атмосферы, Л., Гидрометеоиздат, 1975, с. 166-177.
248. Гигинеишвили В.М. Градобития в Восточной Грузии. Л., "Гидрометеоиздат", 1960, 123 с.
249. Гигинеишвили В.М. О градобитиях в Восточной Грузии и о некоторых особенностях градовых процессов в Алазанской долине. Тр. Всесоюзн. научн. совещ. по активным воздействиям на градовые процессы, Ин-т геофизики АН ГССР, Тб., 1964, с. 8 -18.
250. Гуния С.У. Грозовые процессы в условиях Закавказья. Л., Гидрометеоиздат, 1960, 123 с.
251. Давитая Ф.Ф., Тавартиладзе К.А. Проблема борьбы с градобитием, морозами в субтропиках и некоторыми другими стихийными процессами. Тб., "Мецниереба", 1982, 220 с.
252. Климат и климатические ресурсы Грузии. Тр. ЗакНИГМИ, вып. 44(50), Гидрометиздат, Л., 1971, 384 с.
253. Курдиани И.Г. О грозах и градобитиях в Кахетии. Тбилиси, Груз. геогр. общ., 1935.
254. Ландсберг Г.Е. Климат города. Л., Гидрометеоиздат, 1983, 248 с.
255. Лободин Т.В., Разова Е.Н. Грозы и град в различных физико-географических условиях. Тр. ГГО, вып. 514, Л., Гидрометеоиздат, 1989, 134-139.
256. Махарашвили П.И., Дореули Р.И. Исследование градовых явлений в районах Кахетии. Отчет по теме 074.081 "Изучение процессов образования и развития сложных метеорологических условий и опасных явлений погоды (град, грозы, туманы) и разработка методов воздействия на эти явления. Изучение водных ресурсов облаков и изыскание новых реагентов для искусственного воздействия на облака и туманы", часть 3, Ин-т геофизики АН ГССР, Тб., 1975, 209 с.
257. Мествиришвили Ш.А. О причинах увеличения частоты градобитий в виноградарских районах. Сооб. Акад. Наук Грузии, 140, N 2, 1990.
258. МЭК 61024-1. Защита объектов от молний. Часть 1. Общие принципы, 1990.
259. Пипиа М.Г. Об исследованиях современного изменения климата Грузии в институте геофизики им. М. Нодиа, ТГУ. Труды Института геофизики им. Михаила Нодиа, ISSN 1512-1135, т. LXXV, 2022, с. 93 – 116.  
[http://www.dspace.gela.org.ge/bitstream/123456789/10299/1/11\\_Tr\\_IG\\_75\\_2022.pdf](http://www.dspace.gela.org.ge/bitstream/123456789/10299/1/11_Tr_IG_75_2022.pdf)
260. Сванидзе Г.Г., Цуцкиридзе Я.А. (под ред.). Опасные гидрометеорологические явления на Кавказе. Л., "Гидрометеоиздат", 1980, 288 с.
261. Сулаквелидзе Г.К. Ливневые осадки и град. Л., "Гидрометеоиздат", 1967, 412 с.
262. Тавартиладзе К.А. Моделирование аэрозольного ослабления радиации и методы контроля загрязнения атмосферы. Тбилиси, Мецниереба, 1989, 203 с.
263. Тлисов М.И., Загидулин А.А., Хучунаев Б.М., Федченко Л.М. Аппаратура, методика и результаты наземных исследований физических характеристик града. Тр. Всес. конф. "Активн. возд. на гидромет. процессы", Нальчик, 22-25 октября 1991, Санкт-Петербург.: "Гидрометеоиздат", книга 2, 1995, с. 24-30.
264. Тлисов М.И., Хучунаев Б.М. Исследование пространственного распределения зародышей града. Тр. Всес. семин. "Активные воздействия на градовые процессы и перспективы усовершенствования льдообразующих реагентов для практики активных воздействий", Нальчик, 16-21 октября 1989, М.: "МО Гидрометеоиздата", 1991, с. 61-74.
265. Хайруллин К.Ш., Яковлев Б.А. Влияние урбанизации на грозы и град. Тр. ГГО, вып. 527, Л., Гидрометеоиздат, 1990, с. 44-50.

- 266.Хоргуани В.Г. Льдообразующая активность атмосферного аэрозоля и зарождение градовых частиц. Тр. Всес.конф. “Активн. возд. на гидромет. процессы”, Нальчик, 22-25 октября 1991, Санкт-Петербург, Гидрометеоиздат, книга 2, 1995, с. 140-144.
- 267.Царевич Вахушти. География Грузии. Записки Кавказского отдела императорского русского географического общества, книга 24, вып. 5. Введение, перевод и примечания М.Г. Джанашвили, Тифлис, 1904, 289 с.
- 268.Элизбарашивили Э. Ш., Амиранашвили А. Г., Варазданашвили О. Ш., Церетели Н. С., Элизбарашивили М. Э., Элизбарашивили Ш. Э., Пипия М. Г. Градобитие на территории Грузии. Европейские географические исследования, т. 2, № 2, ISSN: 2312-0029, DOI: 10.13187/egs.2014.2.55, www.ejournal9.com, 2014, с. 55-69.  
[https://www.researchgate.net/profile/Mariam-Elizbarashvili/publication/270960401\\_Hailstorms\\_in\\_the\\_Territory\\_of\\_Georgia/links/551a37cb0cf2f51a6fea2d51/Hailstorms-in-the-Territory-of-Georgia.pdf](https://www.researchgate.net/profile/Mariam-Elizbarashvili/publication/270960401_Hailstorms_in_the_Territory_of_Georgia/links/551a37cb0cf2f51a6fea2d51/Hailstorms-in-the-Territory-of-Georgia.pdf)
- 269.Элизбарашивили Э.Ш., Гонгладзе Н.Ш., Власова С.В., Алборова Б.Г., Попов А.А. О грозовой деятельности в Восточной Грузии. Изв. АН СССР, сер. Геогр., № 1, 1983, с.104-110.
- 270.Элизбарашивили Э.Ш., Элизбарашивили М.Э. Стихийные метеорологические явления на территории Грузии. Тбилиси, Зеон, 2012, 104 с.