Robert Atlas

List of Publications by Year
in descending order

135 papers	6,324 citations	71102 41 h-index	74163 75 g-index
138 all docs	138 docs citations	138 times ranked	5800 citing authors

#	Article	IF	Citations
1	A Cross-calibrated, Multiplatform Ocean Surface Wind Velocity Product for Meteorological and Oceanographic Applications. Bulletin of the American Meteorological Society, 2011, 92, 157-174.	3.3	801
2	AIRS. Bulletin of the American Meteorological Society, 2006, 87, 911-926.	3.3	595
3	New Ocean Winds Satellite Mission to Probe Hurricanes and Tropical Convection. Bulletin of the American Meteorological Society, 2016, 97, 385-395.	3.3	285
4	A Multiyear Global Surface Wind Velocity Dataset Using SSM/I Wind Observations. Bulletin of the American Meteorological Society, 1996, 77, 869-882.	3.3	205
5	The Effect of SST and Soil Moisture Anomalies on GLA Model Simulations of the 1988 U.S. Summer Drought. Journal of Climate, 1993, 6, 2034-2048.	3.2	157
6	The Experimental HWRF System: A Study on the Influence of Horizontal Resolution on the Structure and Intensity Changes in Tropical Cyclones Using an Idealized Framework. Monthly Weather Review, 2011, 139, 1762-1784.	1.4	147
7	Atmospheric Observations and Experiments to Assess Their Usefulness in Data Assimilation (gtSpecial) Tj ETQq1 1 0.784314 rgBT /Over Meteorological Society of Japan, 1997, 75, 111-130.	1.8	142
8	Lidar-Measured Wind Profiles: The Missing Link in the Global Observing System. Bulletin of the American Meteorological Society, 2014, 95, 543-564.	3.3	133
9	Lidar-Measured Winds from Space: A Key Component for Weather and Climate Prediction. Bulletin of the American Meteorological Society, 1995, 76, 869-888.	3.3	132
10	Surface Turbulent Heat and Momentum Fluxes over Global Oceans Based on the Goddard Satellite Retrievals, Version 2 (GSSTF2). Journal of Climate, 2003, 16, 3256-3273.	3.2	132
11	A Multiscale Modeling System: Developments, Applications, and Critical Issues. Bulletin of the American Meteorological Society, 2009, 90, 515-534.	3.3	128
12	Toward Improving High-Resolution Numerical Hurricane Forecasting: Influence of Model Horizontal Grid Resolution, Initialization, and Physics. Weather and Forecasting, 2012, 27, 647-666.	1.4	126
13	AIRS/AMSU/HSB validation. IEEE Transactions on Geoscience and Remote Sensing, 2003, 41, 418-431.	6.3	108
14	The Effects of Marine Winds from Scatterometer Data on Weather Analysis and Forecasting. Bulletin of the American Meteorological Society, 2001, 82, 1965-1990.	3.3	107
15	An overview of the TROPICS NASA Earth Venture Mission. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 16-26.	2.7	101
16	Rigorous Evaluation of a Fraternal Twin Ocean OSSE System for the Open Gulf of Mexico. Journal of Atmospheric and Oceanic Technology, 2014, 31, 105-130.	1.3	89
17	Future Observing System Simulation Experiments. Bulletin of the American Meteorological Society, 2016, 97, 1601-1616.	3.3	88
18	Tropical Cycloneâ€“Like Vortices in the Extratropics: Observational Evidence and Synoptic Analysis. Weather and Forecasting, 2001, 16, 7-34.	1.4	87

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19	Development and validation of a hurricane nature run using the joint OSSE nature run and the WRF model. Journal of Advances in Modeling Earth Systems, 2013, 5, 382-405.	3.8	86
20	On the Rapid Intensification of Hurricane Wilma (2005). Part I: Model Prediction and Structural Changes. Weather and Forecasting, 2011, 26, 885-901.	1.4	81
21	Impact of the Atlantic warm pool on United States landfalling hurricanes. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	67
22	A Nearâ€Realâ€Time Version of the Crossâ€Calibrated Multiplatform (CCMP) Ocean Surface Wind Velocity Data Set. Journal of Geophysical Research: Oceans, 2019, 124, 6997-7010.	2.6	67
23	Is There an Optimal ENSO Pattern That Enhances Large-Scale Atmospheric Processes Conducive to Tornado Outbreaks in the United States?. Journal of Climate, 2013, 26, 1626-1642.	3.2	66
24	Assimilation of SSM/I-Derived Surface Rainfall and Total Precipitable Water for Improving the GEOS Analysis for Climate Studies. Monthly Weather Review, 2000, 128, 509-537.	1.4	64
25	Estimates of Surface Humidity and Latent Heat Fluxes over Oceans from SSM/I Data. Monthly Weather Review, 1995, 123, 2405-2425.	1.4	63
26	Hurricane forecasts with a global mesoscale-resolving model: Preliminary results with Hurricane Katrina (2005). Geophysical Research Letters, 2006, 33, .	4.0	61
27	An Assessment of the FGGE Satellite Observing System during SOP-1. Bulletin of the American Meteorological Society, 1982, 63, 407-426.	3.3	59
28	Air-sea fluxes retrieved from special sensor microwave imager data. Journal of Geophysical Research, 1997, 102, 12706-12726.	3.3	56
29	US regional tornado outbreaks and their links to spring ENSO phases and North Atlantic SST variability. Environmental Research Letters, 2016, 11, 044008.	5.2	56
30	A Two-Dimensional Variational Analysis Method for NSCAT Ambiguity Removal: Methodology, Sensitivity, and Tuning. Journal of Atmospheric and Oceanic Technology, 2003, 20, 585-605.	1.3	55
31	The Emergence of Weather-Related Test Beds Linking Research and Forecasting Operations. Bulletin of the American Meteorological Society, 2013, 94, 1187-1211.	3.3	55
32	Assessing the impact of observations on ocean forecasts and reanalyses: Part 2, Regional applications. Journal of Operational Oceanography, 2015, 8, s63-s79.	1.2	55
33	Comparisons of EOS MLS cloud ice measurements with ECMWF analyses and GCM simulations: Initial results. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	54
34	Report of the COSPAR mars special regions colloquium. Advances in Space Research, 2010, 46, 811-829.	2.6	53
35	Early emergence of anthropogenically forced heat waves in the western United States and Great Lakes. Nature Climate Change, 2018, 8, 414-420.	18.8	52
36	A Comparison of Latent Heat Fluxes over Global Oceans for Four Flux Products. Journal of Climate, 2004, 17, 3973-3989.	3.2	50

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37	Hurricane forecasting with the high-resolution NASA finite volume general circulation model. Geophysical Research Letters, 2005, 32, .	4.0	50
38	Environmental chemistry through intelligent atmospheric data analysis. Environmental Modelling and Software, 2010, 25, 760-769.	4.5	48
39	Time-Continuous Assimilation of Remote-Sounding Data and Its Effect an Weather Forecasting. Monthly Weather Review, 1979, 107, 140-171.	1.4	45
40	Geophysical validation of NSCAT winds using atmospheric data and analyses. Journal of Geophysical Research, 1999, 104, 11405-11424.	3.3	43
41	<title>Application of satellite surface wind data to ocean wind analysis</title>. Proceedings of SPIE, 2008, , .	0.8	43
42	Space-based surface wind vectors to aid understanding of air-sea interactions. Eos, 1991, 72, 201-201.	0.1	38
43	Observing System Simulation Experiments (OSSEs) to Evaluate the Potential Impact of an Optical Autocovariance Wind Lidar (OAWL) on Numerical Weather Prediction. Journal of Atmospheric and Oceanic Technology, 2015, 32, 1593-1613.	1.3	36
44	Use of Observing System Simulation Experiments in the United States. Bulletin of the American Meteorological Society, 2020, 101, E1427-E1438.	3.3	34
45	Performance of the experimental HWRF in the 2008 Hurricane Season. Natural Hazards, 2012, 63, 1439-1449.	3.4	33
46	Value-added Impact of Geostationary Hyperspectral Infrared Sounders on Local Severe Storm Forecastsâ€”via a Quick Regional OSSE. Advances in Atmospheric Sciences, 2018, 35, 1217-1230.	4.3	32
47	Largeâ€scale analysis and forecast experiments with wind data from the Seasat A scatterometer. Journal of Geophysical Research, 1984, 89, 4927-4936.	3.3	31
48	Simulating the Midwestern U.S. Drought of 1988 with a GCM. Journal of Climate, 2003, 16, 3946-3965.	3.2	31
49	Predicting tropical cyclogenesis with a global mesoscale model: Hierarchical multiscale interactions during the formation of tropical cyclone Nargis (2008). Journal of Geophysical Research, 2010, 115, .	3.3	31
50	The impact of Seasatâ€A scatterometer data on the numerical prediction of the Queen Elizabeth II storm. Journal of Geophysical Research, 1986, 91, 2241-2248.	3.3	30
51	The 0.125 degree finite-volume general circulation model on the NASA Columbia supercomputer: Preliminary simulations of mesoscale vortices. Geophysical Research Letters, 2006, 33, .	4.0	29
52	The 2012 Triply Nested, High-Resolution Operational Version of the Hurricane Weather Research and Forecasting Model (HWRF): Track and Intensity Forecast Verifications. Weather and Forecasting, 2015, 30, 710-729.	1.4	29
53	Impact Of Satellite Temperature Sounding And Wind Data On Numerical Weather Prediction. Optical Engineering, 1985, 24, 242341.	1.0	28
54	Global surface wind and flux fields from model assimilation of Seasat data. Journal of Geophysical Research, 1987, 92, 6477-6487.	3.3	28

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55	OSSE impact analysis of airborne ocean surveys for improving upper-ocean dynamical and thermodynamical forecasts in the Gulf of Mexico. Progress in Oceanography, 2015, 130, 32-46.	3.2	28
56	A Preliminary Impact Study of CYGNSS Ocean Surface Wind Speeds on Numerical Simulations of Hurricanes. Geophysical Research Letters, 2019, 46, 2984-2992.	4.0	28
57	Numerical Experiments Related to the Summer 1980 U.S. Heat Wave. Monthly Weather Review, 1987, 115, 1345-1357.	1.4	27
58	Observing System Simulation Experiments to Assess the Potential Impact of New Observing Systems on Hurricane Forecasting. Marine Technology Society Journal, 2015, 49, 140-148.	0.4	27
59	The role of oceanic fluxes and initial data in the numerical prediction of an intense coastal storm. Dynamics of Atmospheres and Oceans, 1987, 10, 359-388.	1.8	26
60	A comparison of surface wind products over the North Pacific Ocean. Journal of Geophysical Research, 1996, 101, 1011-1023.	3.3	25
61	Hurricane interaction with the upper ocean in the Amazon-Orinoco plume region. Ocean Dynamics, 2016, 66, 1559-1588.	2.2	25
62	A Case Study of Forecast Sensitivity to Data and Data Analysis Techniques. Monthly Weather Review, 1984, 112, 1544-1561.	1.4	24
63	Designing the Climate Observing System of the Future. Earth's Future, 2018, 6, 80-102.	6.3	24
64	North Atlantic Ocean OSSE system: Evaluation of operational ocean observing system components and supplemental seasonal observations for potentially improving tropical cyclone prediction in coupled systems. Journal of Operational Oceanography, 2017, 10, 154-175.	1.2	24
65	Comparison of special sensor microwave imager vector wind stress with modelâ€derived and subjective products for the tropical Pacific. Journal of Geophysical Research, 1993, 98, 6961-6977.	3.3	23
66	North Atlantic Ocean OSSE system development: Nature Run evaluation and application to hurricane interaction with the Gulf Stream. Progress in Oceanography, 2016, 148, 1-25.	3.2	23
67	Impact of CYGNSS Ocean Surface Wind Speeds on Numerical Simulations of a Hurricane in Observing System Simulation Experiments. Journal of Atmospheric and Oceanic Technology, 2017, 34, 375-383.	1.3	23
68	An efficient radiative transfer model for hyperspectral IR radiance simulation and applications under cloudyâ€sky conditions. Journal of Geophysical Research D: Atmospheres, 2017, 122, 7600-7613.	3.3	23
69	Variational Analysis of Simulated Ocean Surface Winds from the Cyclone Global Navigation Satellite System (CYGNSS) and Evaluation Using a Regional OSSE. Journal of Atmospheric and Oceanic Technology, 2018, 35, 1571-1584.	1.3	23
70	Community Global Observing System Simulation Experiment (OSSE) Package (CGOP): Description and Usage. Journal of Atmospheric and Oceanic Technology, 2016, 33, 1759-1777.	1.3	22
71	Validation of an Airborne Doppler Wind Lidar in Tropical Cyclones. Sensors, 2018, 18, 4288.	3.8	22
72	Track Uncertainty in High-Resolution HWRF Ensemble Forecasts of Hurricane Joaquin. Weather and Forecasting, 2019, 34, 1889-1908.	1.4	22

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73	Processes controlling dimethylsulfide over the ocean: Case studies using a 3-D model driven by assimilated meteorological fields. Journal of Geophysical Research, 1998, 103, 8341-8353.	3.3	21
74	A Study of the HWRF Analysis and Forecast Impact of Realistically Simulated CYGNSS Observations Assimilated as Scalar Wind Speeds and as VAM Wind Vectors. Monthly Weather Review, 2018, 146, 2221-2236.	1.4	21
75	Diagnostic Evaluation of Vertical Motion Forcing Mechanisms by Using Q-Vector Partitioning. Monthly Weather Review, 1998, 126, 2166-2184.	1.4	20
76	The Impact of Doppler Lidar Wind Observations on a Single-Level Meteorological Analysis. Journal of Applied Meteorology and Climatology, 2004, 43, 810-820.	1.7	20
77	A New Cross-Calibrated, Multi-Satellite Ocean Surface Wind Product. , 2008, , .		20
78	Airborne Doppler Wind Lidar Observations of the Tropical Cyclone Boundary Layer. Remote Sensing, 2018, 10, 825.	4.0	20
79	Responses of the tropical Pacific to wind forcing as observed by spaceborne sensors and simulated by an ocean general circulation model. Journal of Geophysical Research, 1996, 101, 16345-16359.	3.3	19
80	Advances in Tropical Cyclone Intensity Forecasts. Marine Technology Society Journal, 2015, 49, 149-160.	0.4	18
81	S4: An O2R/R2O Infrastructure for Optimizing Satellite Data Utilization in NOAA Numerical Modeling Systems: A Step Toward Bridging the Gap between Research and Operations. Bulletin of the American Meteorological Society, 2016, 97, 2359-2378.	3.3	18
82	The alternative of CubeSat-based advanced infrared and microwave sounders for high impact weather forecasting. Atmospheric and Oceanic Science Letters, 2019, 12, 80-90.	1.3	18
83	Impact of Assimilating CYGNSS Data on Tropical Cyclone Analyses and Forecasts in a Regional OSSE Framework. Marine Technology Society Journal, 2017, 51, 7-15.	0.4	18
84	The Effect of Model Resolution and Satellite Sounding Data on GLAS Model Forecasts. Monthly Weather Review, 1982, 110, 662-682.	1.4	17
85	Global weather prediction and high-end computing at nasa. Computing in Science and Engineering, 2004, 6, 29-35.	1.2	17
86	New Multiplatform Ocean Surface Wind Product Available. Eos, 2009, 90, 231-231.	0.1	16
87	Error Estimates for Ocean Surface Winds: Applying Desroziers Diagnostics to the Cross-Calibrated, Multiplatform Analysis of Wind Speed. Journal of Atmospheric and Oceanic Technology, 2013, 30, 2596-2603.	1.3	16
88	East Asian Monsoon as a Modulator of U.S. Great Plains Heat Waves. Journal of Geophysical Research D: Atmospheres, 2019, 124, 6342-6358.	3.3	16
89	The impact of Seasat scatterometer winds on the Navy's Operational Model. Journal of Geophysical Research, 1984, 89, 7238-7244.	3.3	15
90	OSSE quantitative assessment of rapidâ€response prestorm ocean surveys to improve coupled tropical cyclone prediction. Journal of Geophysical Research: Oceans, 2017, 122, 5729-5748.	2.6	15

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91	The Structure and Evolution of Extratropical Cyclones, Fronts, Jet Streams, and the Tropopause in the GEOS General Circulation Model. Bulletin of the American Meteorological Society, 2001, 82, 1853-1867.	3.3	13
92	An Observing System Simulation Experiment for the Unmanned Aircraft System Data Impact on Tropical Cyclone Track Forecasts. Monthly Weather Review, 2014, 142, 4357-4363.	1.4	13
93	Community Global Observing System Simulation Experiment (OSSE) Package (CGOP): Perfect Observations Simulation Validation. Journal of Atmospheric and Oceanic Technology, 2018, 35, 207-226.	1.3	12
94	Monthly Mean Forecast Experiments with the GISS Model. Monthly Weather Review, 1976, 104, 1215-1241.	1.4	11
95	Diagnostic Evaluation of Numerical Model Simulations Using the Tendency Equation. Monthly Weather Review, 1991, 119, 2936-2955.	1.4	11
96	OSSE Assessment of Underwater Glider Arrays to Improve Ocean Model Initialization for Tropical Cyclone Prediction. Journal of Atmospheric and Oceanic Technology, 2020, 37, 467-487.	1.3	11
97	Effects of data selection and error specification on the assimilation of AIRS data. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 181-196.	2.7	10
98	Combined Use of Satellite Observations and Global Hawk Unmanned Aircraft Dropwindsondes for Improved Tropical Cyclone Analyses and Forecasts. Weather and Forecasting, 2018, 33, 1021-1031.	1.4	10
99	Developing Priority Observational Requirements from Space Using Multi-Attribute Utility Theory. Bulletin of the American Meteorological Society, 2019, 100, 1753-1774.	3.3	10
100	Chapter 4 The use of satellite surface wind data to improve weather analysis and forecasting at the NASA Data Assimilation Office. Elsevier Oceanography Series, 2000, , 57-78.	0.1	9
101	Application of SeaWinds scatterometer and TMI-SSM/I rain rates to hurricane analysis and forecasting. ISPRS Journal of Photogrammetry and Remote Sensing, 2005, 59, 233-243.	11.1	9
102	Evaluation of the Earth Systems Research Laboratoryâ€™s global Observing System Simulation Experiment system. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 65, 19011.	1.7	9
103	An Observing System Simulation Experiment with a Constellation of Radio Occultation Satellites. Monthly Weather Review, 2018, 146, 4247-4259.	1.4	9
104	Impact of Gulfstream-IV Dropsondes on Tropical Cyclone Prediction in a Regional OSSE System. Monthly Weather Review, 2019, 147, 2961-2977.	1.4	9
105	Are stronger North-Atlantic southwesterlies the forcing to the late-winter warming in Europe?. International Journal of Climatology, 2002, 22, 743-750.	3.5	8
106	Impact of Refractivity Profiles from a Proposed GNSS-RO Constellation on Tropical Cyclone Forecasts in a Global Modeling System. Monthly Weather Review, 2020, 148, 3037-3057.	1.4	8
107	Atmospheric Response to Variations in Sea-Surface Temperature. Journal of Applied Meteorology, 1975, 14, 1235-1245.	1.1	7
108	Analysis of the Impact of Seasat Scatterometer Data and Horizontal Resolution on GLA Model Simulations of the QE II Storm. Monthly Weather Review, 1993, 121, 499-521.	1.4	7

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109	North-Atlantic surface winds examined as the source of winter warming in Europe. Geophysical Research Letters, 2002, 29, 18-1-18-4.	4.0	7
110	A cross-calibrated multiple platform ocean surface wind data set. , 2009, , .		7
111	Community Global Observing System Simulation Experiment (OSSE) Package (CGOP): Assessment and Validation of the OSSE System Using an OSSEâ€“OSE Intercomparison of Summary Assessment Metrics. Journal of Atmospheric and Oceanic Technology, 2018, 35, 2061-2078.	1.3	7
112	Enhance Low Level Temperature and Moisture Profiles Through Combining NUCAPS, ABI Observations, and RTMA Analysis. Earth and Space Science, 2021, 8, e2020EA001402.	2.6	7
113	Relationship of Late-Winter Temperatures in Europeto North Atlantic Surface Winds: A Correlation Analysis. Theoretical and Applied Climatology, 1999, 64, 201-211.	2.8	6
114	A comparison of a two-dimensional variational analysis method and a median filter for NSCAT ambiguity removal. Journal of Geophysical Research, 2003, 108, .	3.3	6
115	<title>Application of OSSEs to observing system design</title>. Proceedings of SPIE, 2008, , .	0.8	4
116	Observing system simulation experiments to assess the potential impact of proposed satellite instruments on hurricane prediction. Proceedings of SPIE, 2014, , .	0.8	4
117	The Impact of Doppler Wind Lidar Measurements on High-Impact Weather Forecasting: Regional OSSE and Data Assimilation Studies. , 2017, , 259-283.		4
118	The Growth of Prognostic Differences Between GLAS Model Forecasts from SAT and NOSAT Initial Conditions. Monthly Weather Review, 1982, 110, 877-882.	1.4	3
119	Global analysis of ocean surface wind and wind stress using a general circulation model and Seasat scatterometer winds. Journal of Geophysical Research, 1986, 91, 2233-2240.	3.3	3
120	Space observations of ocean surface winds aid monitoring of Northeast Pacific climate shifts. Eos, 1998, 79, 575-581.	0.1	3
121	Advection from the North Atlantic as the forcing of winter greenhouse effect over Europe. Geophysical Research Letters, 2002, 29, 133-1-133-4.	4.0	3
122	Analysis of satellite scatterometer data and its impact on weather forecasting. , 1982, , .		2
123	Winter-to-spring transition in Europe 48-54Â°N: From temperature control by advection to control by insolation. Geophysical Research Letters, 2000, 27, 561-564.	4.0	2
124	Potential impact of space-based lidar wind profiles on weather predicition. , 2003, , .		2
125	Improving Hurricane Prediction Through Innovative Global Modeling. Operations Research/ Computer Science Interfaces Series, 2007, , 1-14.	0.3	2
126	Review Of Experiments On The Impact Of Satellite Data On Numerical Weather Prediction. , 1984, 0481, 108.		1

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127	A simple diagnostic tool for the investigation of persistent phenomena with application to the summer 1980 U.S. heat wave. Atmosphere - Ocean, 1986, 24, 111-127.	1.6	1
128	OSSEs to determine the requirements for space-based lidar winds for weather prediction. , 2003, , .		1
129	Review of Observing System Simulation Experiments to evaluate the potential impact of lidar winds on weather prediction. , 2010, , .		1
130	Application of Doppler wind lidar observations to hurricane analysis and prediction. , 2017, , .		1
131	Overview of the NASA TROPICS CubeSat Constellation Mission. , 2018, , .		1
132	GLAS Globak Analysis of Ocean Surface Wind and Wind Stress Using SEASAT Scatterometer Winds. , 1984, , .		0
133	Impact on regional winter climate by CO2increases vs. by maritime-air advection. Geophysical Research Letters, 2003, 30, .	4.0	0
134	Impact of satellite surface wind observations on ocean surface wind analyses and numerical weather prediction. Proceedings of SPIE, 2010, , .	0.8	0
135	Application of remotely sensed wind measurements to ocean surface wind analyses. , 2010, , .		0