

Gary P. Ellrod - Publications

Refereed Journals:

Ellrod, G. P. and K. Pryor, 2018: Applications of Geostationary Satellite data to Aviation. *Pure and Appl. Geophys., Special Issue: Aviation Meteorology- Observations and Modeling*. DOI [10.1007/s00024-018-1821-1](https://doi.org/10.1007/s00024-018-1821-1)

Lynn, B. H., G. Kelman, and G. Ellrod, 2015: [An Evaluation of the Efficacy of Using Observed Lightning to Improve Convective Lightning Forecasts](#). *Weather and Forecasting*, **30**, 407-423.

Ellrod, G. P., J. A. Knox, P. F. Lester, and L. J. Ehernberger, 2014: [Aviation: Clear Air Turbulence](#) in: Gerald R. North (Editor in Chief), John Pyle and Fuqing Zhang (editors). *Encyclopedia of Atmospheric Science*, 2nd Edition, Academic Press, Elsevier, Inc., Vol 1, pp 177-186.

Ellrod, G. P., A. R. Lupo, P. Roohr, K. Lavin, and S. W. Harned, 2012: [National Weather Digest: More Than Three Decades of Service to the Meteorological Community](#). *National Weather Digest*, **36**, 163-168.

_____, and J. A. Knox, 2010: [Improvements to an Operational Clear-Air Turbulence Diagnostic Index by Addition of a Divergence Trend Term](#). *Weather and Forecasting*, **25**, 789-798.

_____, and I. Gultepe, 2007: Inferring low cloud base heights at night for aviation using satellite infrared and surface temperature data. *J. Pure Appl. Geophys.* Special issue on fog, edited by I. Gultepe. **164**, 1193-1205.

_____ and S. A. Lindstrom, 2006: [Performance of Satellite Fog Detection Techniques with Major, Fog-related Highway Accidents](#). *NWA Electronic Journal, of Operational Meteorology*, **3**.

_____, G. P. and A. A. Bailey, 2007: [Assessment of aircraft icing potential and maximum icing altitude from geostationary meteorological satellite data](#). *Weather and Forecasting*, **22**, 160-174.

_____ and A. J. Schreiner, 2004: [Volcanic ash detection and cloud top height estimates from the GOES-12 Imager: Coping without a 12 micrometer infrared band](#), *Geophysical Res. Letters*, **31**, August 11, 2004.

Pryor, K. L. and G. P. Ellrod, 2004: [Recent Improvements to the GOES Microburst Products](#). *Weather and Forecasting*, **19**, 582-594.

Ellrod, G. P., 2004: [Impact on Volcanic Ash Detection Caused by the Loss of the 12.0 micrometer "Split Window" Band on GOES Imagers](#), in: Volcanic Observations from Space: New Results from

the EOS Satellite Instruments, *Journal of Volcanology and Geothermal Research*, **135 (1-2)**, 91-103, Elsevier Press, Amsterdam.

Underwood, J., G. P. Ellrod and A. Kuhnert, 2004: [A Multiple Case Analysis of Nocturnal Radiation Fog Development in the Central Valley of California Utilizing the Night Time Fog Product](#). *J. Applied Meteor.*, **43**, 297-311.

Ellrod, G. P., 2002: [Estimation of Low Cloud Base Heights at Night Using GOES Infrared and Surface Temperature Data](#). *National Weather Digest*, **26 (1-2)**, 39-44.

_____, B. H. Connell, and D. W. Hillger, 2003: [Improved Detection of Airborne Volcanic Ash Using Multispectral Infrared Satellite Data](#), *J. Geophys. Res -Atmosphere*, **108**, No. D12, 4356.

Hillger, D. W. and G. P. Ellrod, 2003: [Detection of Important Atmospheric and Surface Features by Employing Principal Component Image Transformation of GOES Imager](#). *J. Appl. Meteor*, **42**, 611-629.

_____, J. P. Nelson,, M. R. Witiw, L. Bottos, W. P. Roeder, 2000: [Experimental GOES Sounder Products for the Assessment of Downburst Potential](#). *Weather and Forecasting*: **15**, 527–542.

_____, 2000: [Satellite Images Provide Valuable Information Supplement to the Aviation Meteorologist](#). *ICAO Journal*, **55**, No. 2 (March), 6-10, 27.

_____, 1998: [The use of GOES Sounder Imagery for the Detection of Hazardous Volcanic Ash Plumes](#). *National Weather Digest*, **22**, No. 4, National Weather Association, Montgomery, Alabama, 3-9.

_____, R.V. Achutuni, J. M. Daniels, E. M. Prins, and J. P. Nelson, III, 1998: [An Assessment of GOES-8 Imager Data Quality](#). *Bulletin of Amer. Meteor. Soc.*, **79**, 2509-2526.

_____, 1995: [Advances in the Detection and Analysis of Fog at Night Using GOES Multispectral Infrared Imagery](#). *Weather and Forecasting*: **10**, 606–619.

A. J. Schreiner, D. A. Unger, W. P. Menzel, G. P. Ellrod, K. I. Strabala and J. L. Pellet. 1993: A [Comparison of Ground and Satellite Observations of Cloud Cover](#). *Bulletin of Amer. Meteor. Soc*: **74**, 1851–1861.

Ellrod, G. P. and D. I. Knapp. 1992: [An Objective Clear-Air Turbulence Forecasting Technique: Verification and Operational Use](#). *Weather and Forecasting*: **7**, 150–165.

_____, 1990: [A water vapor image feature related to severe thunderstorms](#). *National Weather Digest*, **10**, 21-29.

Ellrod, G. P. 1989: [Environmental Conditions Associated with the Dallas Microburst Storm Determined from Satellite Soundings](#). *Weather and Forecasting*: **4**, 469–484.

Technical Reports:

Ellrod, G. P., R. Helz, and G. Wadge, 2001: Volcanic Hazard Assessment, *CEOS Disaster Management Support Group, Final Report*. NOAA/NESDIS.

_____, 1994: Detection and analysis of fog at night using GOES multispectral infrared imagery. *NOAA Tech. Report NESDIS 75*, U. S. Dept. of Commerce, Washington, DC, 22 pp.

_____, 1990: [The Use of Water Vapor Imagery to Identify Clear Air Turbulence](#). *Satellite Applications Information Note 90/8*, U.S. Dept. Of Commerce, 9 pp.

_____, 1989: A decision tree approach to clear air turbulence analysis using satellite and upper air data. *NOAA Tech. Memo. NESDIS 23*, U. S. Dept. of Commerce, Washington, DC, 20 pp.

_____, 1985: Detection of high level turbulence using satellite imagery and upper air data. *NOAA Tech. Memo. NESDIS 10*, U. S. Dept. of Commerce, Washington, DC, 30 pp.

Selected Conference Papers:

Ellrod, G. P., 2015: [Prediction of Summer Stratus in the San Francisco Bay Aided by Low Level HYSPLIT Trajectories](#). Poster BP23, 40th *National Weather Association (NWA) Annual Meeting*, 18-22 Oct. 2015, Oklahoma City, OK.

Ellrod, G. P., 2015: Use of the NOAA HYSPLIT Trajectory Model for the Short Range Prediction of Coastal Stratus and Fog. 17th *AMS Conference on Aviation, Range and Aerospace Meteorology*, 6-10 Jan 2015, Phoenix, AZ.

Knox, J. A., G. P. Ellrod, S. Silberberg, and E. Wilson, 2011: [Performance of the Ellrod-Knox and Lighthill-Ford-Knox clear air turbulence algorithms at the Aviation Weather Center](#). *15th AMS Conference on Aviation, Range, and Aerospace Meteorology*, 31 July - 4 August, 2011, Los Angeles, CA.

Knox, J. A., G. P. Ellrod, and P. D. Williams, 2006: [Improved clear air turbulence diagnostics based on adjustment dynamics](#). *12th AMS Conf. On Aviation, Range, and Aerospace Meteorology*, 30 Jan. - 2 Feb. 2006, Atlanta, GA.

Ellrod, G. P., 2006: [Evaluation of Moderate-Resolution Imaging Spectroradiometer \(MODIS\) Shortwave Infrared Bands for Optimum Nighttime Fog Detection](#). *14th AMS Conference on Satellite Meteorology and Oceanography*, 30 Jan. - 2 Feb. 2006, Atlanta, GA.

_____ 2004: [Detection of Hazardous Fog at Night Using Data From Meteorological Satellites and Surface Reporting Stations](#). *National Highway Visibility Conference*, 18-19 May 2004, Madison, WI.

_____ and A. Schreiner, 2004: [A first look at volcanic ash detection in the GOES-12 era](#). *11th AMS Conf. On Aviation, Range and Aerospace Meteorology*, 4-8 Oct. 2004, Hyannis, MA.

_____ and A. Bailey, 2004: ['ICECAP': A GOES image product depicting aircraft icing potential and maximum icing altitude](#). *11th AMS Conf. On Aviation, Range and Aerospace Meteorology*, 4-8 Oct. 2004, Hyannis, MA.

A. Schreiner, T. J. Schmit, G. P. Ellrod, and F. Prata, 2004: [Can upper level SO₂ be monitored using the GOES Sounder?](#) *2nd Int'l. Conf. On Volcanic Ash and Aviation Safety*, 21-24 June 2004, Alexandria, VA.

Ellrod, G. P. and S. Bachmeier, 2003: [Inter-comparison of GOES and MODIS imagery in the analysis of fog and stratus](#). *12th AMS Conf. On Satellite Meteor. And Oceanography*, 10-13 Feb. 2003, Long Beach, CA.

_____, and J. S. Im, 2003: [Development of volcanic ash image products using MODIS multi-spectral data](#). *12th AMS Conf. On Satellite Meteor. And Oceanography*, 10-13 Feb. 2003, Long Beach, CA.

_____, 2000: [Global climatology of clear air turbulence activity deduced from a numerical model index](#). *9th AMS Conf. On Aviation, Range, and Aerospace Meteor.*, 11-15 Sept. 2000, Orlando, FL.

_____, 1987: [Identifying High Altitude Mountain Wave Turbulence and Strong Chinook Wind Events with Satellite Imagery](#). *AIAA 25th Aerospace Sciences Meeting*, January 12-15, 1987, Reno, NV, Paper #0183.