

Gary A. Morris, Ph.D.

Associate Dean of Arts & Sciences, Professor of Physics & Astronomy, Valparaiso U.

Adjunct Professor of Earth & Atmospheric Sciences, U. of Houston

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- NASA funded atmospheric scientist and Fulbright Scholar attracting > \$2 million in grants with > 30 peer-reviewed publications and 80 conference presentations
- Academic administrator with experience in managing internal grant programs, academic program analysis, cost modeling, budget management, and strategic planning
- Research experience in modeling, field measurements, and satellite data analysis
- Award-winning college-level Physics, Earth Science, and Astronomy professor with extensive experience developing state-of-the-art electronic educational resources and research projects with significant roles for undergraduate students

EMPLOYMENT

2004 – Present	Associate Dean of Arts & Sciences (2010 – present), Professor (2013); Associate Professor (2006 – 2013) and Assistant Professor (2004 – 2006) of Physics & Astronomy, Valparaiso University (VU), Valparaiso, IN
2012 – Present	Adjunct Professor, Dept. of Earth & Atmospheric Sciences, University of Houston (UH), Houston, TX
Spring 2008	Visiting Assistant Professor, Dept. of Geosciences, UH, Houston, TX
2003 – 2006	Intermittent Assistant Research Scientist, Goddard Earth Sciences and Technology Center, University of Maryland Baltimore County (UMBC), Baltimore, MD
2000 – 2008	Faculty Fellow, Wiess Instructor, and Clinical Assistant Professor of Physics & Astronomy (2000 – 2004); Adjunct Assistant (2004 – 2007) and Adjunct Associate (2007 – 2008) Professor, Rice University (Rice), Houston, TX
1998 – 2000	Visiting Assistant Professor of Physics & Astronomy, VU, Valparaiso, IN
1997 – 1998	Research Assistant Professor, Joint Center for Earth Systems Technology (JCET), UMBC, Baltimore, MD
Spring 1997	Astronomy Instructor, Prince George's Community College (PGCC), Largo, MD
1994 – 1997	National Research Council Post-Doctoral Fellow, NASA Goddard Space Flight Center (GSFC), Greenbelt, MD

EDUCATION

Ph.D.	1995	Rice University, Houston, TX – <i>Space Physics and Astronomy</i> Dissertation: “A Demonstration and Evaluation of Trajectory Mapping”
M.S.	1992	Rice University, Houston, TX – <i>Space Physics and Astronomy</i> Thesis: “Background and Early Results from the Atmospheric Electrical Current Sensor Project”
A.B.	1989	Washington University, St. Louis, MO – <i>Physics and Mathematics</i> Graduated with college honors

HONORS AND AWARDS

- Research Professor – Valparaiso University (2010)
- Fulbright Scholar – Japan (2008 – 2009)
- NASA Group Achievement Award – Tropical Composition, Cloud and Climate Coupling (2008)
- NASA Group Achievement Award – Upper Atmosphere Research Satellite Team (2006)
- Project Kaleidoscope Faculty 21 Member (Baca Class of 2006)
- NASA Group Achievement Award – Intercontinental Chemical Transport Experiment North America Science Team (2005)
- Rice University Pre-Medical Society Outstanding Faculty Award (2003)
- Outstanding Faculty Associate at Martel College (Rice, 2001/2002)
- Distinguished Faculty Associate at Martel College (Rice, 2000/2001)
- National Research Council Post-Doctoral Fellowship (1994 – 1996)
- Department of Energy Graduate Fellowship for Global Change (1992 – 1994)
- NASA Goddard Space Flight Center Graduate Student Summer Program, Universities Space Research Association (1992)

PROFESSIONAL AFFILIATIONS

- Council of Colleges of Arts & Sciences Deans (since 2012)
- American Association for the Advancement of Science (1994 – 2003 and since 2011)
- American Conference of Academic Deans (since 2011)
- Indiana Academy of Sciences (since 2011)
- Fulbright Association (since 2010)
- Council for Undergraduate Research (2006 – 2007 and since 2010)
- American Meteorological Society (since 2007).
- Association of American Colleges and Universities (since 2006).
- American Association of Physics Teachers (since 1998).
- American Association of University Professors (since 1998).
- Earth System Science Education (ESSE) Program (since 1996).
- American Geophysical Union (since 1992).

RESEARCH GRANTS

As Principal Investigator

- “Ozonesonde Releases in Southeast and East Texas,” Texas Commission on Environmental Quality (2013), \$80,000
- “Ozonesonde Launches from the University of Houston and Smith Point, Texas in Support of DISCOVER-AQ,” University of Texas Air Quality Research Program (2013), \$86,666.
- “U.S. – Japan Bilateral Workshop: The Tropical Tropopause Layer,” NSF Catalyzing New International Collaborations Program (2012), \$35,418.
- Second extension of “HGB O3 Sonde Launches 2010-08 and Vertical Ozone Profiles in Eastern Texas 2010-10,” Texas Commission on Environmental Quality (2012), \$142,000.
- “Mathematics and Science Education Enrollment (MSEED) Program,” NSF STEP Program (2011 – 2016), \$499,951.
- Extension of “HGB O3 Sonde Launches 2010-08 and Vertical Ozone Profiles in Eastern Texas 2010-10,” Texas Commission on Environmental Quality (2011), \$67,500.
- “Natural Science Colloquium Series,” Committee to Enhance Teaching and Learning Grant, VU (2011), \$1000.
- “Reprocessing and submission of ozonesonde data to the World Ozone and Ultraviolet Radiation Data Centre (WOUDC) and the NASA Aura Validation Data Center (AVDC),” Creative Work and Research Grant, VU (2011), \$2500.
- “HGB O3 Sonde Launches 2010-08 and Vertical Ozone Profiles in Eastern Texas 2010-10,” Texas Commission on Environmental Quality (2010), \$135,000.
- “Houston ozonesonde observations and data analysis during 2009,” Texas Commission on Environmental Quality (2009), \$120,500.
- “A study of the influence of Chinese pollution on air quality in Japan,” Fulbright Program (2008 – 2009), 5.8 million J.Y.
- “Preliminary ozone profile analysis and source partitioning,” with Marc Taylor (Sr.) and Brittini Emery (Soph.), Pierce Cedar Creek Institute (Summer 2007), \$3000 for students + \$3000 for supplies.
- “Additional Ozonesondes in Northwest Indiana in Support of INTEX-B and Aura Validation,” NASA *Earth Science Enterprise* (2006), \$50,000.
- “Additional Ozonesondes in Houston, Texas in Support of INTEX-B and Aura Validation,” NASA *Earth Science Enterprise* (2006 – 2008), \$125,292.
- “Validation of Non-Coincident Trace Species Measured by AURA Using Trajectory Mapping and Statistical Analysis,” NASA *Earth Science Enterprise* (2006 – 2008), \$495,000 (\$104,850 for Morris).
- “Tropospheric Ozone Pollution Project (TOPP): Investigating Air Quality Through Additional Ozonesonde Launches in Houston, Beaumont, and East Texas,” Texas

Commission on Environmental Quality *New Technology Research and Development Program* (2005 – 2006), \$107,486.

- “Great Lakes Region Ozonesonde Network (GLRON),” Indiana Space Grant Consortium *Early Career Faculty Program* (2005), \$3996.
- “Rice University Tropospheric Ozone Pollution Project,” Shell Center for Sustainability (2003 – 2005), \$40,190.
- “Measuring Urban Ozone Pollution in Houston, Texas with MICROTOPS,” Rice Space Institute Seed Money Program (2002 – 2004), \$1500.
- “Research in Physics Education (RIPE) Project,” Rice University Brown Teaching Grant (2001 – 2002 and 2002 – 2003), \$5600.
- “MATCH Ozone Loss Analysis Technique,” NASA GSFC Purchase Order (2002 – 2005), \$40,000.
- “Simulation of Aircraft Exhaust Emissions Using the GSFC Trajectory Model,” NASA GSFC Purchase Order (2000), \$10,000.
- “Research in Physics Education (RIPE) Project,” Valparaiso University CELT Expense Grant (1999 – 2000), \$1200.
- “Validation of H₂O and O₃ Measurements from SAGE III Using Trajectory Mapping and Constituent Reconstruction,” NASA Earth Observing System program (1997 – 2003), \$185,000.
- “Simulation of Aircraft Exhaust Emissions Using the GSFC Trajectory Model,” NASA GSFC Purchase Order (1999), \$14,500.

As Co-Investigator

- “TICOSONDE: Tropical balloonsonde observations of ozone, water vapor and sulfur dioxide for continued support of satellite calibration and validation capabilities,” PI – Henry Selkirk (USRA/GESTAR) – NASA Earth Science Division (2013 – 2017), \$672,000 (\$271,964 for Morris), funded.
- “Dual O₃/SO₂ Sondes in Costa Rica for the Ticosonde Project,” PI – Henry Selkirk (USRA/GESTAR) – NASA Earth Science Division (2012), \$200,000 (\$158,248 for Morris), funded.
- “Enhancing Interest in STEM at NW Indiana Middle and High Schools Through Balloon Launches and Tracking,” PI – Mark Spsychala (senior at Valparaiso Univ.) – Indiana Space Grant Consortium, \$7,451.
- “O₃ and SO₂/O₃ Sonde Launches in Support of the Proposal, ‘SEAC-IONS,’” PI – Anne Thompson (Penn. State Univ.) – NASA Earth Science Division (2011 – 2014), \$500,000 (\$9994 for Morris), funded.
- “Air Pollution over the Eastern US: Integration of AURA/OMI NO₂ and SO₂, Aircraft, and Ground-Based Observations with Numerical Models,” PI – Russell Dickerson (U. of

Maryland) – NASA Earth Science Division – Aura Science Team (2011 – 2014), \$599,911 (\$18,934 for Morris).

- “TC4: Ground-based Validation for Aura and CALIPSO with NATIVE and Sondes,” Anne Thompson, Penn State, PI – NASA Tropical Composition, Convection & Climate Coupling program (2007), \$157,000 (\$52,331 for Morris).
- “North American – North Atlantic Ozone Soundings During INTEX-A (2004),” Anne Thompson, Penn State, PI, NASA Tropospheric Chemistry Program (2004), \$150,000 (\$5000 for Morris).
- “Atmospheric Transport of Trace Gases and Aerosols: Evaluating Models and Observations,” Mark Schoeberl, NASA GSFC, PI – NASA Interdisciplinary Science Program (2003 – 2005), \$2.2 million (\$45,000 for Morris).
- “The Interaction Between the Troposphere and the Stratosphere: The Impact of Climate Change,” Mark Schoeberl, NASA GSFC – NASA Interdisciplinary Science Program (2000 – 2002), \$1.9 million (\$45,000 for Morris).
- “A Climatology of Tropospheric CO over the Central and Southeastern United States and the Southwestern Pacific Ocean Derived from Space, Air, and Ground-based Infrared Interferometer Spectra,” Wallace McMillan, UMBC, PI – NASA GSFC (1998 – 2001), \$234,000.
- “Validation of MOPITT Column and Profile CO from Spaceborne, Airborne, and Ground-based Interferometers,” Wallace McMillan, UMBC, PI – NASA GSFC (1997 – 2000), \$237,000.

PUBLICATIONS

Graduate Student Co-Authors; Undergraduate Student Co-Authors

Reviewed

1. *Stauffer, R.M., G.A. Morris*, A.M. Thompson, E. Joseph, and G.J.R. Coetzee, Propagation of radiosonde pressure sensor errors to ozonesonde measurements, *Atmos. Meas. Tech.*, submitted, July 2013.
2. *Morris, G.A., S. Schwartz*, and *S. Skees*, Transition Matrices: A Tool to Assess Student Learning and Improve Instruction, *The Physics Teacher*, under revision, July 2013.
3. *Morris, G.A.*, G. Labow, H. Akimoto, M. Takigawa, M. Fujiwara, F. Hasebe, J. Hirokawa, and T. Koide, On the use of the correction factor with Japanese ozonesonde data, *Atmos. Chem. Phys. Discuss.*, 12, 15,597 – 15,638, 2012; *Atmos. Chem. Phys.*, 13, 1243 – 1260, 2013.
4. *Morris, G.A.*, L. Branum-Martin, N. Harshman, E. Mazur, T. Mzoughi, and S.D. Baker, An Item Response Curves analysis of the Force Concept Inventory, *Am. J. Phys.*, 80(9), 825 – 831, 2012.
5. *Haman, C.L.*, B. Lefer, and *G.A. Morris*, Seasonal variability in the diurnal evolution of the boundary layer in a near coastal urban environment, *J. Atmos. Ocean. Tech.*, 29 (5), 697 – 710, 2012.
6. *Tang, W.*, D.S. Cohan, *G.A. Morris*, D.W. Byun, W.T. Luke, Influence of vertical mixing uncertainties on ozone simulation in CMAQ, *Atmos. Environ.*, 45 (17), 2898 – 2909, 2011.
7. *Morris, G.A.*, W. Komhyr, J. Hirokawa, *J. Flynn*, N. Krotkov, and B. Lefer, A balloon sounding technique for measuring SO₂ plumes, *J. Atmos. Ocean. Tech.*, 27 (8), 1318 – 1330, 2010.
8. *Morris, G.A.*, A.M. Thompson, K.E. Pickering, S. Chen, E.J. Bucsela, and P.A. Kucera, Observations of ozone production in a dissipating tropical convective cell during TC4, *Atmos. Chem. Phys. Discuss.*, 10, 18,953 – 19,004, 2010; *Atmos. Chem. Phys.*, 10, 11,189 – 11,208, 2010.
9. Krotkov, N.A., M.R. Schoeberl, *G.A. Morris*, S. Carn, and K. Yang, Dispersion and lifetime of the SO₂ cloud from the August 2008 Kasatochi eruption, *J. Geophys. Res.*, 115, D00L20, doi:10.1029/2010JD013984, 2010.
10. Thompson, A.M., A.M. MacFarlane, G.A. Morris, *J.E. Yorks*, S.K. Miller, B.F. Taubman, G. Verver, H. Vomel, M.A. Avery, J.W. Hair, G.S. Diskin, E.V. Browell, J.V. Canossa, T.L. Kucsera, C.A. Klich, and D.L. Hlavka, Convective wave signatures in ozone profiles over the equatorial Americas: Views from TC4 (2007) and SHADOZ, *J. Geophys. Res.*, 115, D00J23, doi:10.1029/2009JD012909, 2010.
11. *Morris, G.A., B. Ford*, B. Rappengluck, A.M. Thompson, *A. Mefford*, F. Ngan, and B. Lefer, An evaluation of the interaction of morning residual layer and afternoon mixed layer ozone in Houston using ozonesonde data, *Atmos. Environ.*, 44, doi:10.1016/j.atmosenv.2009.06.057, 4024 – 4034, 2010.

12. Pierce, R.B., J. Al-Saadi, C. Kittaka, T. Schaack, A. Lenzen, K. Bowman, J. Szykman, A. Soja, T. Ryerson, A.M. Thompson, P. Bhartia, and **G.A. Morris**, Impacts of background ozone production on Houston and Dallas, TX air quality during the TexAQS field mission, *J. Geophys. Res.*, 114, D00F09, doi:10.1029/2008JD011337, 2009.
13. Rappenglück, B., *R. Perna*, S. Zhong, and **G.A. Morris**, An analysis of the vertical structure of the atmosphere and the upper-level meteorology and their impact on surface ozone levels in Houston, TX, *J. Geophys. Res.*, 113, D17315, doi:10.1029/2007JD009745, 2008.
14. Fishman, J., K.W. Bowman, J.P. Burrows, A. Richter, K.V. Chance, D.P. Edwards, R.V. Martin, **G.A. Morris**, R.B. Pierce, J.R. Ziemke, J.A. Al-Saadi, T.K. Schaack, and A.M. Thompson, Remote sensing of tropospheric pollution from space, *Bull. Am. Meteorol. Soc.*, 89, 6, 805 – 821, 2008.
15. Thompson, A.M., *J.E. Yorks*, S.K. Miller, J.C. Witte, K.M. Dougherty, **G.A. Morris**, D. Baumgardner, L. Ladino, and B. Rappenglück, Free tropospheric ozone sources and wave activity over Mexico City and Houston during MILAGRO/Intercontinental Transport Experiment (INTEX-B) ozonesonde network study, 2006 (IONS-06), *Atmos. Chem. Phys.*, 8, 5113 – 5125, 2008.
16. Nassar, R., J.A. Logan, H.M. Worden, I.A. Megretskaya, K.W. Bowman, G.B. Osterman, A.M. Thompson, D.W. Tarasick, S. Austin, H. Claude, M.K. Dubey, W.K. Hocking, B.J. Johnson, E. Joseph, J. Merrill, **G.A. Morris**, M. Newchurch, S.J. Oltmans, F. Posny, F.J. Schmidlin, H. Vömel, D.N. Whiteman, J.C. Witte, Validation of Tropospheric Emission Spectrometer (TES) Nadir Ozone Profiles Using Ozonesonde Measurements, *J. Geophys. Res.*, 113, D15S17, doi:10.1029/2007JD008819, 2008.
17. Cooper, O.R., M. Trainer, A.M. Thompson, S.J. Oltmans, D.W. Tarasick, J.C. Witte, A. Stohl, S. Eckhardt, J. Lelieveld, M.J. Newchurch, B.J. Johnson, R. W. Portmann, L. Kalnajs, M.K. Dubey, T. Leblanc, I.S. McDermid, G. Forbes, D. Wolfe, T. Carey-Smith, **G.A. Morris**, B. Lefer, B. Rappenglück, E. Joseph, F. Schmidlin, J. Meagher, F.C. Fehsenfeld, T.J. Keating, R.A. VanCuren, and K. Minschwaner, Evidence for a recurring eastern North America upper tropospheric ozone maximum during summer, *J. Geophys. Res.*, 112, D23304, doi: 10.1029/2007JD008710, 2007.
18. Jiang, Y.B., L. Froidevaux, A. Lambert, N.J. Livesey, W.G. Read, J.W. Waters, B. Bojkov, T. Leblanc, I.S. McDermid, S. Godin-Beckmann, M.J. Filipiak, R.S. Harwood, R.A. Fuller, W.H. Daffer, B.J. Drouin, R.E. Cofield, D.T. Cuddy, R.F. Jarnot, B.W. Knosp, V.S. Perun, M.J. Schwartz, W.V. Snyder, P.C. Stek, R.P. Thurstans, P.A. Wagner, M. Allaart, S.B. Andersen, G. Bodeker, B. Calpini, H. Claude, G. Coetzee, J. Davies, H. De Backer, H. Dier, M. Fujiwara, B. Johnson, H. Kelder, N.P. Leme, G. König-Langlo, E. Kyro, G. Laneve, L.S. Fook, J. Merrill, **G. Morris**, M. Newchurch, S. Oltmans, M.C. Parronondos, F. Posny, F. Schmidlin, P. Skrivankova, R. Stubi, D. Tarasick, A. Thompson, V. Thouret, P. Viatte, H. Vömel, P. von der Gathen, M. Yela, and G. Zabolocki, Validation of Aura Microwave Limb Sounder ozone by ozonesonde and lidar measurements, *J. Geophys. Res.*, 112, D24S34, doi: 10.1029/2007JD008776, 2007.
19. Schoeberl, M.R., J.R. Ziemke, B. Bojkov, N. Livesey, B. Duncan, S. Strahan, L. Froidevaux, S. Kulawik, P.K. Bhartia, S. Chandra, P.F. Levelt, J.C. Witte, A.M.

- Thompson, E. Cuevas, A. Redondas, D.W. Tarasick, J. Davies, G. Bodeker, G. Hansen, B.J. Johnson, S.J. Oltmans, H. Vomel, M. Allaart, H. Kelder, M. Newchurch, S. Goldin-Beekmann, G. Ancellet, H. Claude, S.B. Andersen, E. Kyro, M. Parrondons, M. Yela, G. Zablocki, D. Moore, H. Dier, P. von der Gathen, P. Viatte, R. Stubi, B. Calpini, P. Skrivankova, V. Dorokhov, H. de Backer, F. J. Schmidlin, G. Coetzee, M. Fujiwara, V. Thoret, F. Posny, **G. Morris**, J. Merrill, C.P. Leong, G. König-Langlo, and E. Joseph, A trajectory-based estimate of the tropospheric column ozone column using the residual method, *J. Geophys. Res.*, *112*, D18105, doi: 10.1029/2007JD008773, 2007.
20. Tarasick, D.W., M.D. Moran, A. Thompson, T. Carey-Smith, Y. Rochon, V.S. Bouchet, W. Gong, P.A. Makar, C. Stroud, S. Ménard, L.-P. Crevier, S. Cousineau, J.A. Pudykiewicz, A. Kallaur, R. Moffet, R. Ménard, A. Robichaud, O.R. Cooper, S.J. Oltmans, J.C. Witte, G. Forbes, B.J. Johnson, J. Merrill, **G. Morris**, M.J. Newchurch, F.J. Schmidlin, and E. Joseph: Comparison of Canadian air quality forecast models with tropospheric ozone profile measurements above mid-latitude North America during IONS/ICARTT campaign: Evidence for stratospheric input, *J. Geophys. Res.*, *112*, D12S22, doi:10.1029/2006JD007782, 2007.
21. Thompson, A.M., J.B. Stone, J.C. Witte, S.K. Miller, R.B. Pierce, R.B. Chatfield, S.J. Oltmans, O.R. Cooper, A.L. Loucks, B.F. Taubman, B.J. Johnson, E. Joseph, T.L. Kucsera, J.T. Merrill, **G.A. Morris**, [S. Hersey](#), G. Forbes, M.J. Newchurch, F.J. Schmidlin, D.W. Tarasick, V. Thouret, J.-P. Cammas, Intercontinental Chemical Transport Experiment Ozonesonde Network Study (IONS) 2004: 1 Summertime upper troposphere/lower stratosphere ozone over northeastern North America, *J. Geophys. Res.*, *112*, D12S12, doi:10.1029/2006JD007441, 2007.
22. **Morris, G.A.**, [S. Hersey](#), A.M. Thompson, S. Pawson, J. Eric Nielsen, P.R. Colarco, W.W. McMillan, A. Stohl, S. Turquety, J. Warner, B.J. Johnson, T.L. Kucsera, D.E. Larko, S.J. Oltmans, and J.C. Witte, Alaskan and Canadian forest fires exacerbate ozone pollution over Houston, Texas, on 19 and 20 July 2004, *J. Geophys. Res.*, *111*, D24S03, doi:10.1029/2006JD007090, 2006.
23. **Morris, G.A.**, L. Branum-Martin, N. Harshman, S.D. Baker, E. Mazur, S. Dutta, T. Mzoughi, and V. McCauley, Testing the test: Item response curves and test quality, *Am. J. Phys.*, *74*, 449 – 453, 2006.
24. Cooper, O.R., A. Stohl, M. Trainer, A. Thompson, J.C. Witte, S.J. Oltmans, B.J. Johnson, J. Merrill, J.L. Moody, **G. Morris**, D. Trasick, G. Forbes, P. Nedelec, F.C. Fehsenfeld, J. Meagher, M.J. Newchurch, F.J. Schmidlin, S. Turquety, J.H. Crawford, K.E. Pickering, R.C. Cohen, T. Bertarm, P. Wooldrige, and W.H. Brune, Large upper tropospheric ozone enhancement above mid-latitude North America during summer: In situ evidence from the IONS and MOZAIC ozone monitoring network, *J. Geophys. Res.*, *111*, D24S05, doi: 10.1029/2006JD007306, 2006.
25. **Morris, G.A.**, M.R. Schoeberl, B. Bojkov, and L.R. Lait, A review of the Match technique as applied to SOLVE/THESEO and AASE-2/EASOE, *Atmos. Chem. Phys. Disc.*, *4*, 4665 – 4717, 2004; *Atmos. Chem. Phys.*, *5*, 2571 – 2592, 2005.
26. **Morris, G.A.**, M.R. Schoeberl, J.E. Rosenfield, and C.H. Jackman, The potential impact of subsonic and supersonic aircraft exhaust on water vapor in the lower stratosphere

assessed via a trajectory model, *J. Geophys. Res.*, *108* (D3), 10.1029/2002JD002614, 06 February 2003.

27. **Morris, G.A.**, J.F. Gleason, J.M. Russell, III, M.R. Schoeberl, and J.P. McCormick, A comparison of HALOE V19 with SAGE II V6.00 ozone observations using trajectory mapping, *J. Geophys. Res.*, *107* (D13), 10.1029/2001JD000847, 12 July 2002.
28. **Morris, G.A.**, J. Ziemke, J. Gleason, and M.R. Schoeberl, Trajectory mapping: A tool for satellite data validation, *J. Geophys. Res.*, *105*, 17,875-17,894, 2000.
29. Schoeberl, M.R., and **G. A. Morris**, A Lagrangian simulation of subsonic and supersonic aircraft exhaust emissions, *J. Geophys. Res.*, *105*, 11,833-11,839, 2000.
30. **Morris, G.A.**, S.R. Kawa, A.R. Douglass, M.R. Schoeberl, L. Froidevaux, and J. Waters, Low ozone “pockets” explained, *J. Geophys. Res.*, *103*, 3599-3610, 1998.
31. **Morris, G.A.**, D.B. Considine, A.E. Dessler, S.R. Kawa, A.E. Roche, J. Kumer, and J.M. Russell, III, Nitrogen partitioning in the middle stratosphere as observed by the Upper Atmosphere Research Satellite, *J. Geophys. Res.*, *102*, 8955-8965, 1997.
32. Dessler, A.E., D.B. Considine, **G.A. Morris**, M.R. Schoeberl, A.E. Roche, J.L. Mergenthaler, J.M. Russell, J.W. Waters, J.C. Gille, and G.K. Yue, Correlated observations of HCl and ClONO₂ from UARS and implications for stratospheric chlorine partitioning, *Geophys. Res. Lett.*, *22*, 1721-1724, 1995.
33. **Morris, G.A.**, M.R. Schoeberl, L. Sparling, P.A. Newman, L.R. Lait, L. Elson, J. Waters, A.E. Roche, J. Kumer, and J.M. Russell, III, Trajectory mapping and applications to data from the Upper Atmosphere Research Satellite, *J. Geophys. Res.*, *100*, 16,491-16,505, 1995.
34. Byrne, G.J., J.R. Benbrook, E.A. Bering, A.A. Few, **G.A. Morris**, W.J. Trabucco, and E.W. Paschal, Ground-based instrumentation for measurements of atmospheric conduction current and electric field at the South Pole, *J. Geophys. Res.*, *98*, 2611-2618, 1993.

Other

1. **Morris, G.A.**, A. Gettelman, and F. Hasebe, Coordinating Observational Campaigns to Study the Tropical Tropopause Layer, *EOS*, *94* (9), 91, 26 Feb. 2013.
2. Gettelman, A., K.P. Hamilton, **G.A. Morris**, F. Hasebe, and H.B. Selkirk, U.S.-Japan Bilateral Workshop on the Tropical Tropopause Layer: State of the Current Science and Future Observational Needs, 15 – 19 October 2012, Honolulu, HI, USA, SPARC newsletter, 40, 37 – 47, January 2013.
3. Gettelman, A., **G.A. Morris**, K.P. Hamilton, H.B. Selkirk, and F. Hasebe, U.S.-Japan Workshop on the Tropical Tropopause Layer: State of Current Science and Future Observational Needs, *IGAC News*, 48 (November), 39 – 40, 2012.
4. Muller, R., R. J. Salawitch, et al., contributors include **G.A. Morris**, Chapter 6: Upper Stratospheric Processes in *Scientific Assessment of Ozone Depletion: 1998*, *WMO*, *44*, 1999.
5. Russell, J.M., H.G.J. Smit, et al., co-authors include **G.A. Morris**, Chapter 2: Data Quality in *Assessment of Trends in the Vertical Distribution of Ozone*, *WCRP-SPARC*, *1*, 1998.

6. **Morris, G.A.** "A Demonstration and Evaluation of Trajectory Mapping." *Ph.D. Thesis, Rice University*, August 1994.
7. Bering, E.A., J.R. Benbrook, R. Chadwick, G.J. Byrne, A.A. Few, and **G.A. Morris**, Feasibility of long term vertical electric current measurements in the Antarctic, *Antarctic J. of the U.S.*, XXVIII, 5, 314-317, 1993.
8. **Morris, G.A.** "Background and Early Results for the Atmospheric Electrical Current Sensor Project." Master's Thesis, Rice University, 1992.
9. Bering, E.A., J.R. Benbrook, R. Chadwick, G.J. Byrne, A.A. Few, and **G.A. Morris**, Magnetospheric influences on atmospheric electricity at the South Pole Station, *Proceedings of the Ninth International Conference on Atmospheric Electricity 1992, Volume 1*, 476-479, A.I. Voeikor Main Geophysical Observatory, St. Petersburg, Russia, 1992.
10. Few, A.A., **G.A. Morris**, E.A. Bering, J.R. Benbrook, R. Chadwick, and G.J. Byrne, Maxwell current measurements at the South Pole: Evaluation of measurements and instrument performance, *Proceedings of the Ninth International Conference on Atmospheric Electricity 1992, Volume 1*, 23-26, A.I. Voeikor Main Geophysical Observatory, St. Petersburg, Russia, 1992.
11. Few, A.A., **G.A. Morris**, E.A. Bering, J.R. Benbrook, R. Chadwick, and G. J. Byrne, Surface observations of global atmospheric electric phenomena at Amundsen-Scott South Pole Station, *Antarctic J. of the U.S.*, XXVII, 5, 307-309, 1992.
12. Byrne, G.J., E.A. Bering, A.A. Few, and **G.A. Morris**, Measurements of atmospheric conduction currents and electric fields at the South Pole, *Antarctic J. of the U.S.*, XXVI, 5, 291-294, 1991.
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PRESENTATIONS

Invited

Morris, G.A., Summary of Tropospheric Ozone Pollution Project Ozonesonde Data from 2004 – 2012, Texas Commission for Environmental Quality, Austin, Texas, 9 July 2013.

Morris, G.A., The Tropospheric Ozone Pollution Project (TOPP): O₃ and SO₂ Sondes from 2004 – 2012

- Joint Center for Earth Systems Technology, University of Maryland Baltimore County, 24 June 2013.
- Dept. of Physics & Astronomy/Dept. of Chemistry Joint Colloquium, Valparaiso University, 12 April 2013.
- Summer Celebration of Undergraduate Research, Valparaiso University, 3 Aug. 2012.
- Dept. of Physics, Hope College, 21 Sept. 2012.

Morris, G.A., Summary of Tropospheric Ozone Pollution Project Ozonesonde Data from 2004 – 2011, Texas Commission for Environmental Quality, Austin, Texas, 12 June 2012.

Morris, G.A., The Tropospheric Ozone Pollution Project (TOPP) and Dual O₃/SO₂ Sonde, Universidad de Costa Rica, San Pedro, Costa Rica, 30 Jan. 2012.

Morris, G.A., Summary of Tropospheric Ozone Pollution Project Ozonesonde Data from 2004 – 2010, Texas Commission for Environmental Quality, Austin, Texas, 28 Feb. 2011.

Morris, G.A., Summary of Tropospheric Ozone Pollution Project Ozonesonde Data from 2004 – 2009, Texas Commission for Environmental Quality, Austin, Texas, 6 May 2010.

Morris, G.A., Assessing the influence of Chinese pollution on air quality in Japan in summer: Initial results from my Fulbright Research project

- Acid Deposition and Oxidant Research Center, Niigata, Japan, 6 Nov. 2009.
- Research Institute for Global Change, Yokohama, Japan, 22 Dec. 2009.
- Depts. of Physics & Astronomy and Chemistry, Valparaiso University, 15 Jan. 2010.
- Dept. of Chinese & Japanese Studies, Valparaiso University, 24 Feb. 2010.
- Dept. of Earth and Atmospheric Sciences, University of Houston, 31 Mar. 2010.
- Dept. of Meteorology, Texas A&M University, College Station, TX, 20 Apr. 2010.
- Dept. of Civil and Environmental Engineering, Rice University, Houston, TX, 19 May 2010.
- Dept. of Physics & Astronomy, American University, Washington, DC, 13 Sept. 2010.
- NOAA Air Resources Laboratory, Silver Spring, MD, 13 Sept. 2010.
- Valparaiso University Faculty Seminar Series, 23 Feb. 2011.

Morris, G.A., Texas Ozonesonde Observations: 2004 – 2009 and Beyond, Texas Commission for Environmental Quality, Austin, Texas, 22 June 2009.

Morris, G.A., A study of the impact of China's pollution on air quality in Japan before, during, and after the Olympics: Measurement program overview and preliminary analysis, Frontier Research Center for Global Change, Yokohama, Japan, 6 Nov. 2008.

Morris, G.A., A study of the influence of Chinese pollution on air quality in Japan, Faculty of Environmental Earth Science, Hokkaido University, Sapporo, Japan, 15 July 2008.

Morris, G.A., Four years of ozonesonde observations in Houston, TX, Texas Commission for Environmental Quality, Austin, Texas, 2 May 2008.

Morris, G.A., Global Climate Change Science, Focus the Nation event, Sid Richardson College, Rice University, Houston, Texas, 30 Jan. 2008.

Morris, G.A., Comparison of satellite derived tropospheric ozone columns with balloon soundings, Dept. of Physics, Taylor University, 25 Sept. 2006.

Morris, G.A., Providing the monitoring needed to clean tomorrow's air: A proposal for a regional network to study ozone

- Dept. of Chemistry, Chicago State University, 28 Sept. 2006.
- Dept. of Physics, Hope College, 7 Apr. 2006.
- Dept. of Physics and Astronomy, Ball State University, 30 Mar. 2006.
- Dept. of Chemistry, Marietta College, 1 Mar. 2006.
- Dept. of Chemistry, Valparaiso University, 24 Feb. 2006.
- Dept. of Physics, Carthage College, 20 Feb. 2006.
- Dept. of Chemistry, Ohio Northern University, 15 Feb. 2006.
- Dept. of Physics & Astronomy, Calvin College, 14 Feb. 2006.
- Dept. of Environmental Sciences, Taylor University, 1 Feb. 2006.
- Dept. of Physics & Astronomy, Valparaiso University, 13 Jan. 2006.

Morris, G.A., Alaskan Forest Fires Exacerbate Houston Ozone Pollution July 19 – 20, 2004

- Dept. of Geosciences, University of Houston, 8 Feb. 2008.
- The Center for Atmospheric Particle Studies, Carnegie-Mellon University, Pittsburgh, PA, 2 Mar. 2006.
- Dept. of Physics & Astronomy, Rice University, Houston, TX, 2 Mar. 2005.
- Dept. of Physics & Astronomy, Valparaiso University, Valparaiso, IN, 18 Feb. 2005.
- Dept. of Biology, Valparaiso University, Valparaiso, IN, 10 Jan. 2005.

Morris, G.A., Arctic Ozone Loss in 1992 and 2000

- Dept. of Physics & Astronomy, Valparaiso University, Valparaiso, IN, 6 Feb. 2004.
- Dept. of Physics, University of Evansville, Evansville, IN, 23 Jan. 2004.
- Dept. of Natural Sciences, University of Virginia's College at Wise, Wise, VA, 14 Nov. 2003.

Morris, G.A., An Overview of the Rice University Tropospheric Ozone Pollution Project (RU-TOPP)

- Dept. of Geosciences, University of Houston, Houston, TX, 30 Jan. 2004.
- Dept. of Atmospheric Science, The University of Alabama in Huntsville, Huntsville, AL, 11 Nov. 2003.

Morris, G.A., Evaluating Arctic Ozone Loss During the Winters of 1992 and 2000, Dept. of Physics & Astronomy, Rice University, Houston, TX, 24 Sept. 2003.

Morris, G.A., Using Trajectory Mapping to Diagnose Ozone Loss in the Arctic Winter, Dept. of Physics, Ithaca College, Ithaca, NY, 3 March 2003.

Morris, G.A., Using a Dynamical Model to Validate Satellite Observations of Ozone

- Dept. of Physics, James Madison University, Harrisonburg, VA, 22 Feb. 2000
- Dept. of Physics, Rice University, Houston, TX, 11 Feb. 2000.

Morris, G.A., Validating Satellite Measurements of Ozone Using Trajectory Mapping, Dept. of Physics, Ball State University, Muncie, IN, 18 Nov. 1999.

Morris, G.A., Understanding Satellite Data on Ozone, Dept. of Physics, Indiana University/Purdue University at Indianapolis, Indianapolis, IN, 21 Oct. 1999.

Morris, G.A., Ozone Depletion

- VOLTS meeting at Valparaiso University, Valparaiso, IN, 29 Oct. 1999.
- NASA Educators Conference, Seattle, WA, 31 Oct. 1998.
- Dept. of Biology, Valparaiso University, Valparaiso, IN, 12 Oct. 1998.
- Department of Physics, University of Purdue Calumet, Hammond, IN, 9 Dec. 1998.
- Educators' Workshop in Conjunction with the Launch of the NOAA-K Satellite, Vandenberg Air Force Base, Lompoc, CA, 13 May 1998.
- Mission to Planet Earth Education Products Workshop, NASA Goddard Space Flight Center, Greenbelt, MD, 12 Dec. 1997 and 7 Dec. 1996.
- NASA MTPE K - 12 Teacher Workshop for Science and Environmental Education/NASA MTPE GSFC Scientific and Educational Endeavor Product Evaluation (high school - 14), West Chester University, West Chester, PA, 17 July 1997.

Morris, G.A., The Use of Trajectory Mapping to Enhance Our Understanding of Ozone Behavior

- Dept. of Physics, Valparaiso University, Valparaiso, IN, 6 Nov. 1998.
- Dept. of Physics, University of Maryland Baltimore County, Baltimore, MD, 16 March 1998.

Morris, G.A., Understanding Ozone Data with the Use of Trajectory Analysis,

- Dept. of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA, 14 April 1997.
- Dept. of Physics, University of Maryland Baltimore County, Baltimore MD, 12 March 1997.

Morris, G.A., J. Gleason, J. Ziemke, L. Sparling, M.R. Schoeberl, S. Hollandsworth, Validation of Stratospheric Ozone Measurements Using Trajectory Mapping, Joint Center for Earth System Science, University of Maryland College Park, College Park, MD, 28 Feb. 1997.

Morris, G.A., Satellite Data Analysis Using Trajectory Mapping Techniques, Dept. of Marine, Earth, and Atmospheric Sciences, North Carolina State University, Raleigh, NC, 21 Oct. 1996.

Morris, G.A., STELLA Tutorial, ESSE Workshops, Berkeley Springs, WV, 5 – 6 Aug. 1996.

Morris, G.A., The Use of Trajectory Mapping in Atmospheric Data Analysis, Institute for Terrestrial and Planetary Atmospheres, State University of New York at Stony Brook, Stony Brook, NY, 21 June 1996.

Contributed:

Graduate Student Co-Authors; Undergraduate Student Co-Authors

1. *Spychala, M.D.*, **G.A. Morris**, B. Lefer, D. Cohan, and *W. Zhou*, Using tropospheric ozone profiles and surface data (2004 – 2012) to determine background ozone levels in Houston, Texas, Abstract A53Q-0442 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3 – 7 Dec. 2012.
2. Diaz, J.A., **G.A. Morris**, H.B. Selkirk, N.A. Krotkov, D.C. Pieri, and E. Corrales, In-situ detection of SO₂ plumes in Costa Rica from Turrialba Volcano using balloon-borne sondes, Abstract A53Q-0433 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3 – 7 Dec. 2012.
3. **Morris, G.A.**, D. Martins, A. Thompson, *A. Reed*, E. Joseph, and *E. Thompson*, The impact of radiosonde pressure sensor errors on ozone profiles and columns as reported by ozonesondes, Quadrennial Ozone Symposium 2012, Toronto, Canada, 27 – 31 Aug. 2012.
4. **Morris, G.A.**, R.W. Clark, D.H. Gillispie, K.E. Leach, M.A. Desjarlais, and G. Doneske, Mobilizing the troops: First-year STEP experience of the MSEED Program at Valparaiso University, 2012 NSF STEP Grantees' Meeting, Washington, DC, 15 – 16 Mar. 2012.
5. **Morris, G.**, and J. Schoer, Environmental research with undergraduates in East Asia: Collaborations in China and Japan, Council for Undergraduate Research Pre-Conference Workshop: International Perspectives on Undergraduate Research and Inquiry – A Scholarly Discussion, Milwaukee, WI, 19 October 2011.
6. **Morris, G.**, B. Lefer, R. Rappenglueck, *C. Haman*, C. Boxe, *S. Hersey*, D. Byun, V. Thouret, J.P. Cammus, B. Johnson, and S. Oltmans, Ozone profile observations in Houston, Texas (1994 – 2010) from aircraft, balloons, and satellites, Abstract, EGU General Assembly 2011, Vienna, Austria, 3 – 8 April 2011.
7. **Morris, G.A.**, B. Lefer, B. Rappenglueck, *C. Haman*, *M. Taylor*, and M.R. Schoeberl, Source attribution of ozone in Southeast Texas before and after the Deepwater Horizon accident using satellite, sonde, surface monitor, and air mass trajectory data, Abstract 31B-0056 presented at 2010 Fall Meeting, AGU, San Francisco, CA, 13 – 17 Dec. 2010.
8. *Haman, C.*, **G.A. Morris**, Evidence of entrainment impacting surface ozone and sulfur dioxide in Houston, TX, Abstract 31B-0050 presented at 2010 Fall Meeting, AGU, San Francisco, CA, 13 – 17 Dec. 2010.
9. *Taylor, M.*, B. Rappenglueck, **G. Morris**, A. Thompson, B. Lefer, *C. Haman*, *J. Flynn*, and C. Klich, Stratosphere-Troposphere exchange over Houston, Abstract 31B-0053 presented at 2010 Fall Meeting, AGU, San Francisco, CA, 13 – 17 Dec. 2010.
10. Lefer, B., W. Brune, D. Collins, J. Dibb, R. Griffin, S. Herndon, L. Huey, B. Jobson, W. Luke, J. Melqvist, **G. Morris**, G. Mount, S. North, E. Olaguer, B. Rappenglueck, X. Ren, J. Stutz, X.-Y. Yu, and R. Zhang, Overview of major findings of the Study of Houston

Atmospheric Radical Precursors (SHARP) 2009 Campaign, Abstract A34C-05 presented at 2010 Fall Meeting, AGU, San Francisco, CA, 13 – 17 Dec. 2010.

11. [Tang, W.](#), D.S. Cohan, **G.A. Morris**, and D.W. Byun, Effects of uncertainties in vertical mixing schemes on ozone simulations, Community Modeling and Analysis Systems Conference, University of North Carolina, Chapel Hill, NC, 11 – 13 October 2010.
12. **Morris, G.A.**, Long-range and UT/LS influences on surface ozone in Houston, SHARP Data Analysis Workshop, Texas Commission for Environmental Quality, Austin, TX, 13 – 14 July 2010.
13. Krotkov, N., K. Yang, S. Carn, A. Krueger, G. Vicente, E. Hughes, P. Colarco, **G. Morris**, C. Seftor, J. Joiner, R. Kahn, and M. Pavolonis, Current capabilities and limitations of satellite monitoring and modeling forecasting of volcanic clouds: An example of Eyjafjallajokull eruption, 15th OMI Science Team Meeting, DeBilt, Netherlands, 15 – 17 June 2010.
14. Krotkov, N., K. Yang, S. Carn, A. Krueger, G. Vicente, E. Hughes, P. Colarco, **G. Morris**, C. Seftor, and J. Joiner, Current capabilities and limitations of satellite monitoring and modeling forecasting of volcanic clouds: An example of Eyjafjallajokull eruption, Air Quality Research Subcommittee Meeting, Washington, DC, 20 May 2010.
15. [Taylor, M.E.](#), **G. Morris**, B.L. Lefer, B. Rappenglueck, [C. Haman](#), and [J.H. Flynn](#), Influence of frontal passages on tropospheric ozone during SHARP 2009, 90th American Meteorological Society Annual Meeting, Atlanta, GA, 17 – 21 Jan. 2010.
16. Fishman, J, J.K. Creilson, X.Xu, C.Y. Gallegos, A.E. Wozniak, and **G.A. Morris**, An examination of the relationship between surface ozone observations from air quality monitoring networks and satellite-derived tropospheric ozone amounts from UV-backscatter measurements, *EOS Trans. AGU*, 90(52), Fall. Meet. Suppl., Abstract A53A-0232, San Francisco, CA, 14 - 18 Dec. 2009.
17. **Morris, G.A.**, H. Akimoto, M. Takigawa, J. Hirokawa, F. Hasebe, M. Fujiwara, K. Miyagawa, N. Krotkov, J. Witte, Y. Kanaya, [N. Kellams](#), and [T. Pietrzak](#), An examination of the impact of air from China on summertime air quality in Japan before, during, and after the Beijing Olympics, 15th Annual Discussion Meeting of Atmospheric Chemistry, Japan Meteorological Agency, Tsukuba, Japan, 20 – 22 October 2009.
18. **Morris, G.A.**, H. Akimoto, Y. Kanaya, M. Takigawa, J. Hirokawa, F. Hasebe, M. Fujiwara, K. Ishida, K. Miyagawa, M.R. Schoeberl, E. Celarier, N. Krotkov, [S. Christensen](#), [N. Kellams](#), [B. Lehmann](#), and [T.G. Pietrzak](#), An examination of the impact of air from China on air quality in Hokkaido Japan before, during, and after the Beijing Olympics, *EOS Trans. AGU*, 90(22), Jt. Assem. Suppl., Abs. A21B-04, Toronto, Ontario, Canada, 24 – 27 May 2009.
19. Thompson, A.M., A.M. Luzik, S.K. Miller, J.C. Witte, **G.A. Morris**, S.J. Oltmans, D. Tarasick, and B. Rappengluck, Urban ozone over North America from soundings, Mixed influences from pollution, stratosphere, lightning, and convection, 89th American Meteorological Society Annual Meeting, Phoenix, AZ, 11 – 15 Jan. 2009.
20. **Morris, G.A.**, J. Hirokawa, M. Fujiwara, F. Hasebe, [K. Ishida](#), N. Krotkov, M.R. Schoeberl, W. Komhyr, and B. Lefer, Detection of an SO₂ plume over Sapporo, Japan

- from the eruption of Mt. Kasatochi using a balloon sounding technique, *EOS Trans. AGU*, 89, Fall Meet. Suppl., Abs. A53B-0273, San Francisco, CA, 15 – 19 Dec. 2008.
21. Miller, S.K., A.M. Thompson, A.M. Luzik, **G.A. Morris**, *A.M. Bryan*, *J.E. Yorks*, B.F. Taubman, H. Voemel, M. A. Avery, Convective and wave signatures in ozone profiles in Equatorial Americas: Views from TC4 and SHADOZ, *EOS Trans. AGU* 89, Fall Meet. Suppl., Abs. A21I-02, San Francisco, CA, 15 – 19 Dec. 2008.
 22. **Morris, G.A.**, J. Hirokawa, M. Fujiwara, F. Hasebe, *K. Ishida*, E. Celarier, N. Krotkov, M. Schoeberl, and W. Komhyr, A study of the impact of China's pollution on air quality in Japan before, during, and after the Olympics: Measurement program overview and preliminary analysis, 14th Annual Discussion Meeting of Atmospheric Chemistry, Frontier Research Center for Global Change, Yokohama, Japan, 29 – 31 October 2008.
 23. Thompson, A.M., S. Lee, S.K. Miller, A. Loucks, **G.A. Morris**, and H. Voemel, Latitudinal and longitudinal gradients in GW/KW signatures in the TTL inferred from ozonesondes, SPARC 2008 General Assembly, Bologna, Italy, 31 Aug.– 5 Sept. 2008.
 24. Thompson, A.M., *J.E. Yorks*, S.K. Miller, J.C. Witte, K. Meaghan-Dougherty, **G.A. Morris**, D. Baumgardner, L. Ladino, and B. Rappenglueck, Ozone profiles over Mexico City and Houston during MILAGRO/Intercontinental Transporte Experiment (INTEX-B) Ozonesonde Network Study, 2006 (IONS-06): Stratospheric lightning and pollution signals in the troposphere, Abstract, EGU General Assembly 2011, Vienna, Austria, 13 – 18 April 2008.
 25. **Morris, G.A.**, *A. Bryan*, A.M. Thompson, *J. Yorks*, J. Gerlach, G. Osterman, E. Celarier, and M. Avery, Ozonesonde observations inside a convective cell over Panama during TC-4, TC-4 Science Team Meeting, Virginia Beach, VA, 26 – 29 Feb. 2008.
 26. Thompson, A.M., *J. Yorks*, B.F. Taubman, **G.A. Morris**, H. Voemel, H.B. Selkirk, M.A. Avery, J. Gerlach, T.L. Kucsera, A. Pino Graell, and I. Petropavloskikh, Ground-based studies of dynamics and composition during TC4: Results from Costa Rica, Panama, and Galapagos, TC-4 Science Team Meeting, Virginia Beach, VA, 26 – 29 Feb. 2008.
 27. Avery, M., K. Severance, G. Diskin, G. Sachse, **G. Morris**, C. Twohy, P. Bui, M. Rana, and J. Plant, Tracer distribution in active convective outflow in the Central American ITCZ Region: A first look at 8.5 – 12 km during the TC4 racetracks, TC-4 Science Team Meeting, Virginia Beach, VA, 26 – 29 Feb. 2008.
 28. Rappenglück, B., S. Alvarez, R. Boudreaux, M. Buhr, D. Byun, F.Y. Cheng, *C. Clements*, *J. Flynn*, R. Fuller, L. Kauffman, B. Lefer, M. Leuchner, W. Luke, *B. McEvoy-Day*, **G. Morris**, F. Ngan, *L. Pedemonte*, *R. Perna*, M. Shauck, and G. Zanin, The vertical mixing experiment during TexAQS II, , 88th American Meteorological Society Annual Meeting, New Orleans, Louisiana, 20 – 24 Jan. 2008.
 29. *Ford, B.J.*, **G. Morris**, *E. Thompson*, B. Rappenglück, B. Lefer, D.W. Byun, X. Li, *R. Perna*, *R. Boudreaux*, *B. McEvoy-Day*, *L. Pedemonte*, and *A. Chow*, The impact of residual layer ozone on surface ozone levels in Houston, Texas during TexAQS II, 88th American Meteorological Society Annual Meeting, New Orleans, Louisiana, 20 – 24 Jan. 2008.

30. [Clements, C.B.](#), B. Rappenglück, [R. Perna](#), [B. Day](#), [M. Patel](#), B. Lefer, and **G. Morris**, Evolution and structure of urban boundary layer in Houston, 88th American Meteorological Society Annual Meeting, New Orleans, Louisiana, 20 – 24 Jan. 2008.
31. Avery, M.A., D. Glenn, G. Sachse, J. Podolske, P. Bui, L. Pfister, E. Korn, R. Cohen, P. Wooldridge, A. Perring, T. Bertram, and **G.A. Morris** (added), Convective vertical redistribution of trace gases in the tropics: A first look at chemical tracer and meteorological measurements from the NASA DC-8 during TC4, *EOS Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract, A22A-07, 2007.
32. [Bryan, A.A.](#), **G.A. Morris**, [D. Lutz](#), A.M. Thompson, G. Osterman, [J. Yorks](#), and B. Taubman, Preliminary analysis of an ozonesonde data from Panama as part of TC-4, *EOS Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract A13C-1354, 2007.
33. Cooper, O.R., M. Trainer, A. Thompson, S.J. Oltmans, D.W. Tarasick, J. Witte, A. Stohl, S. Eckhardt, J. Lelieveld, R. Portmann, B. Johnson, L. Kalnajs, M. Newchurch, M. Dubey, J. Meagher, T. Leblanc, I.S. McDermid, G. Forbes, T. Carey-Smith, D. Wolfe, F. Fehsenfeld, **G. Morris**, B. Lefer, B. Rappenglück, T. Keating, E. Joseph, K. Minschwaner, F. Schmidlin, and R. VanCuren, Evidence for a recurring eastern North America upper tropospheric ozone maximum during summer, *EOS Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract A44C-04, 2007.
34. Dougherty, M., A.M. Thompson, J.C. Witte, S.K. Miller, S.J. Oltmans, O.R. Cooper, D.W. Tarasick, R.B. Chatfield, B.F. Taubman, E. Joseph, D. Baumgardner, J.T. Merrill, **G.A. Morris**, B. Rappenglück, B. Lefer, G. Forbes, M.J. Newchurch, F.J. Schmidlin, R.B. Pierce, T. Leblanc, M. Dubey, and K. Minschwaner, North American tropospheric ozone profiles from IONS (INTEX Ozonesonde Network Study, 2004, 2006): Ozone budgets, pollution statistics, satellite retrievals, *EOS Trans. AGU*, 88(52), Fall Meet. Suppl., A33A-0815, 2007.
35. Ladino, L., D. Baumgardner, A. Hernandez, M. Grutter, A. Thompson, J. Yorks, J. Johnson, S. Oltmans, **G. Morris**, B. Lefer, and B. Rappenglück, Tropospheric ozone production from lightning, *EOS Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract A53-1345, 2007.
36. **Morris, G.A.**, A.M. Thompson, [R. Perna](#), [J. Yorks](#), B. Rappenglück, G. Ostermann, B. Lefer, [R. Boudreaux](#), [A. Chow](#), [B. Ford](#), [E. Thompson](#), and [S. Hersey](#), Construction and analysis of an ozone profile climatology over Houston, Texas, *EOS Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract A53C-1365, 2007.
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38. **Morris, G.A.**, (presented by B. Rappenglück), Ozonesonde data from Houston and SE Texas, Moody Tower Data Analysis Workshop, U. of Houston, 16 – 18 July, 2007.
39. **Morris, G.A.**, [S. Holcomb](#), [S. Hersey](#), A. Thompson, and [J. Yorks](#), Analysis of Houston and SE Texas ozonesonde data, Principal Findings Data Analysis Workshop: TexAQS II/GoMACCS, Austin, Texas, 29 May – 1 June 2007.

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