****

**Timothy J. Schmit**

 NOAA/NESDIS/STAR/ Sensors and Calibration Branch

 University of Wisconsin -- Madison

 1225 West Dayton Street, Madison WI 53706

 Tim.J.Schmit@noaa.gov or tims@ssec.wisc.edu or tjschmit@wisc.edu

 (608) 263-0291

 <http://www.star.nesdis.noaa.gov/star/Schmit_T.php>

 <http://cimss.ssec.wisc.edu/~tims/>

Tim Schmit has been at the forefront of making critical satellite data available to users since NOAA launched the Geostationary Operational Environmental Satellite (GOES) I Series in 1994. Tim has been a leader in defining the mission requirements for the GOES imagers, which resulted in enhanced capability to detect, track, and monitor severe weather. Tim has spent his career ensuring the quality of the visible and infrared imagery produced from GOES data, so that forecasters can accurately analyze and display the imagery and derived products. Tim played a key role in the post-launch checkouts of GOES-8 through -19, 1994-2024, by ensuring high quality images and data are available to users.

**Professional Positions**

**Meteorologist**

NOAA/NESDIS, Madison, WI, 1996-December 31, 2024.

University of Wisconsin-Madison, Madison, WI, 1996-present. (Honorary Fellow)

Tim Schmit works in the Sensors and Calibration Branch within NOAA's NESDIS Center for SaTellite Applications and Research (STAR) located in Madison, WI (the ‘birthplace of satellite meteorology’).

Satellite data and processing, including calibration, simulations and algorithms for processing satellite data into meteorological/environmental information and has a lead role in the band selection for the Advanced Baseline Imager (ABI) on next generation GOES-R series and the applications associated with advanced geostationary sounders.

Extensive experience with data and deriving products from the current GOES imager and sounder data. Involved in the check-out of GOES-8 thru 15 and co-led the science check-outs of GOES-13/14/15. Supported the move of GOES-10 and GOES-12 to 60 degrees for operation over the Southern Hemisphere. In general, Tim acted as the ‘*defacto’* legacy GOES scientist.

GOES-R series: from how to meet requirements, data distribution, calibration, ABI band selection, sounder trade-off studies, simulating the imagery, and modifying data from existing research satellites as proxy data sets, downlink, calibration, re-broadcast, distribution, archive/access, visualization, product generation, education, out-reach, validations and applications. Applications include imagery and soundings (e.g., TPW, etc.), worked to make GOES ABI to routinely capture full disk imagery every 10 minutes.

Supported the GOES-17 Loop Heat Pipe issue (monitoring, new timeline -- which is now used over four periods over the year to provide cooler detector temperatures by taking less images, etc.)

Tim has been a science lead for the Advanced Baseline Imager (ABI) on the GOES-R series (GOES-16/17/18 and 19).

Member of the GEO Extended Orbits working group for next generation instruments, included an advanced geostationary infrared sounder.

**Assistant Researcher**

CIMSS, Madison, WI, June 1991 – April 1996.

Extensive computer work with product development, testing, verification and implementation for geostationary weather satellite products. Products include atmospheric profiles and several derived meteorological parameters.

Facilitated and monitored the transfer of research products into the operational realm in Washington DC.

GOES calibration -- GOES-7, GOES-8 and GOES-9 (imager and sounder).

Wrote or co-authored several publications. Presented at many conferences.

Designed and oversaw several derived products on the CIMSS home page.

Worked with NWS personal at Sullivan (WI) and Salt Lake City (UT) to showcase new satellite products.

Project Manager for the GOES Pathfinder Demonstration Data Set on CD-ROM.

**Senior Research Specialist**

CIMSS, Madison, WI, June 1989 – June 1991.

Simulate information which will come from the next generation geostationary imager and sounder. From simulated data, calculate satellite products for a variety of instrument noise scenarios. Communicated conclusions through memorandums, presentations and a poster.

Compare and report on operational infrared satellite winds. Transfer software to personnel in satellite operations in Washington DC.

Process daily time series of VAS average radiance near the north pole.

Compute radiometric noise statistics for current satellites.

Archive data for 3 field experiments: Pacific typhoons, Brazilian rain forest fires and satellite intercomparisons.

**Research Specialist**

CIMSS, Madison, WI, June 1987 – June 1989.

Calculate satellite water vapor and wind fields over Amazonia and Process satellite-derived rainfall over Brazil.

Initial case for simulation of next generation satellite radiance fields.

Investigate various calibration issues for the next generation geostationary weather satellite.

Monitor operational set-up of VAS satellite sounder retrievals on the VDUC mainframe computer near Washington, DC.

**Project Assistant**

CIMSS, Madison, WI, January 1987 – May 1987.

Archive various satellite data for field experiment over Brazil and Monitor real-time operational satellite products.

**Research Assistant**

SSEC, Madison, WI, August 1985 – December 1986.

Research for Master’s degree: The Moisture Budget over the Arabian Sea during an Active Monsoon

**Education**

**M.S.**, Meteorology. University of Wisconsin-Madison, 1987. Thesis: "The Moisture Budget over the Arabian Sea during an Active Monsoon".

**B.S.**, Meteorology. University of Wisconsin-Madison, 1985.

Physics and Mathematics concentration. St. John’s University (MN), 1981-1983.

**Professional Memberships and Activities**

**Current Memberships**

American Meteorological Society (AMS) member

Co-editor for satellites for the Bulletin of the AMS

Co-chair of the AMS Future / New Generation Satellite Symposium

National Weather Association (NWA) member

**Media**

Numerous media engagements, including provided imagery to many media outlets such as, the program *Years of Living Dangerously*, *Outside Magazine*, Wireless, the *Weather Channel* and the NFL show *Timelines*. Guest on the *Weather Geeks*, another many other shows, including a Big Ten Live football half-time video showcasing the GOES.

**Awards**

2024: The GOES-R program special science award "for his tireless enthusiasm, dedication, and commitment to geostationary imagery, science, and applications".

2023: Part of a NASA Goddard Group award: GeoXO Program Science Working Groups.

2022: National Oceanic and Atmospheric Administration (NOAA) Bronze Medal, for Strategic Planning efforts.

2020: NOAA Administrator's award (with many others) for GOES-16/17 support.

2019: Elected to be an American Meteorological Society (AMS) Fellow.

2018: Finalist for the Samuel J. Heyman Service to America award.

2017: Received the NOAA Administor’s award for ABI GOES-16 beta stage completion

2017: **NASA GOES-R Group Achievement Award for “…**world's highest quality weather monitoring…”

2016: CIMSS animation contest: One of top three for best GOES animation, part of the 40th anniversary celebration.

2015: Certificate of Appreciation for “Exceptional Planning and Execution of the 2015 NOAA Satellite Conference.

2014: U.S. Department of Commerce Gold Medal for Scientific and Engineering Achievement, for “outstanding critical support extending the useful life of aging geostationary weather satellites, thereby greatly improving coverage over South America”.

2013: U.S. Department of Commerce Silver Medal for Scientific and Engineering Achievement, for “their efforts in support of returning GOES-13 to operations after a major on-orbit anomaly that affected the spacecraft and the image and sounder instruments”.

2013: Certificate of Appreciation for “Exceptional Planning and Execution of the 2013 NOAA Satellite Conference.

2012: Part of 7th GOES Users' Conference Support Team that received the GOES-R Outstanding Team award for 1QFY12

2011: U.S. Department of Commerce Silver Medal for Scientific and Engineering Achievement, for “revolutionizing the GOES post-launch tests”.

2011: Recognized by the Spaceflight Meteorology Group for support over the years to the Space Shuttle Program for expertise on both GOES and GOES-R. (This included receiving a patch that had flown in space.)

2011: Received the T. Theodore Fujita Research Achievement Award from the National Weather Association (NWA). The citation read “for excellence in promoting and extending the use of satellite data within the operational community currently and in the future”. This award is for research that has significantly contributed to the field of operational meteorology.

2010: Cash-in-your-account award for “outstanding efforts as Science and Mission Support Session Lead for the STAR External Review”

2009: National Oceanic and Atmospheric Administration (NOAA) Bronze Medal, for Strategic Planning efforts.

2008: NASA Group Achievement Award for GOES-N check-out.

2008: Cash-in-your-account award for "Exceptional work in preparing and providing a CDR for the AWG sounding products.”

2007: National Oceanic and Atmospheric Administration (NOAA) Bronze Medal, for work related to data compression.

2007: NOAA Certificate regarding extended GOES High-Inclination (XGOHI) validations.

2004: Cash-in-your-account award for “help with the GOES-R Users’ Conference”

2000: U.S. Department of Commerce Silver Medal for Scientific and Engineering Achievement, geostationary sounding work.

1999: National Oceanic and Atmospheric Administration (NOAA) Bronze Medal, regarding Distance Learning.

**Research**

Interests: The complete range of GOES, from photons to product applications to users.

Some of Tim's GOES-R Imager activities include: helping to define the early NOAA TRD – Technical Requirements Documents, ABI band selection and definitions, ABI simulations using a myriad of satellite or simulated data and waiver request support. In fact, when Tim began working on the ABI, it only had 8 spectral bands, yet a long list of requirements.

Tim is the co-chair of both the Imagery and Visualizations and Soundings Algorithm Working Group (AWG) teams and has long been communicating the benefits of the ABI.

Tim is NOAA’s product lead for the GeoXO Sounder (GXS) which is slated to be launched in 2035.

**Advising**

Worked with a number of students, both at the under-graduate and masters level.

Taught at a number of AMS short courses, satellite “bookcamp” sessions, on-line ABI training and UW/AOS guest lecturer.

**Publications**

*Summary: Author/co-author approximately 120 refereed papers (listed below), plus numerous conference proceedings papers, several book chapters, co-editor of a book and a variety of workshop papers and technical reports.*

**Reviewed Publications**

|  |
| --- |
| Schmit T. J. and co-authors, 2025: GOES: Past, Present and Future. Book Chapter, Elsevier, in press. Lindsey, Daniel T.; Heidinger, Andrew K.; Sullivan, Pamela C.; McCorkel, Joel; Schmit, Timothy J.; Tomlinson, Michelle; Vandermeulen, Ryan; Frost, Gregory J.; Kondragunta, Shobha; Rudlosky, Scott. GeoXO: NOAA's Future Geostationary Satellite System. Bulletin of the American Meteorological Society, Volume 105, Issue 3, 2024, E660-E679.Li, Jun; Zheng, Jing; Li, Bo; Min, Min; Liu, Yanan; Liu, Chian-Yi; Li, Zhenglong; Menzel, W. Paul; Schmit, Timothy J.; Cintineo, John L.; Lindstrom, Scott; Bachmeier, Scott; Xue, Yunheng; Ma, Yayu; Di, Di and Lin, Han. Quantitative Applications of Weather Satellite Data for Nowcasting: Progress and Challenges. Journal of Meteorological Research, Volume 38, Issue 3, 2024, pp.399-413.Mosher, Frederick R.; Herbster, Christopher G.; Miller, Steven D.; Zuranski, Mike; Sirvatka, Paul; Kohrs, Richard A.; Hoese, David; Schmit, Timothy J.; Nelson, James P. and Haley, Robert. True-Color Imagery from GOES-A Synopsis of Past and Present. Journal of Operational Meteorology, Volume 11, Issue 4, 2023, pp.33-48. Ma, Zheng; Li, Zhenglong; Li, Jun; Min, Min; Sun, Jianhua; Wei, Xiaocheng; Schmit, Timothy J. and Cucurull, Lidia. An enhanced storm warning and nowcasting model in pre-convection environments. Remote Sensing, Volume 15, Issue 10, 2023, pp.2672. Li, Jun; Menzel, W. Paul; Schmit, Timothy J. and Schmetz, Johannes. Applications of geostationary hyperspectral infrared sounder observations: progress, challenges, and future perspectives. Bulletin of the American Meteorological Society, Volume 103, Issue 12, 2023, E2733-E2755..Ayala, Anthony C. Bernal; Gerth, Jordan J.; Schmit, Timothy J.; Lindstrom, Scott S. and Nelson, James P., III. Parallax shift in GOES ABI data. Journal of Operational Meteorology, Volume 11, Issue 2, 2023, pp.14-23..Miller, N. B.; Gunshor, M. M.; Merrelli, A. J.; L'Ecuyer, T. S.; Schmit, T. J.; Gerth, J. J. and Gordillo, N. J. Imaging considerations from a geostationary orbit using the short wavelength side of the mid-infrared water vapor absorption band. Earth and Space Science, Volume 9, Issue 1, 2022. Reprint # 8767.Li, Jun; Zhang, Yurong; Di, Di; Ma, Zheng; Li, Zhenglong; Schmit, Timothy J. and Menzel, W. Paul. The influence of sub-footprint cloudiness on three-dimensional horizontal wind from geostationary hyperspectral infrared sounder observations. Geophysical Research Letters, Volume 49, Issue 11, 2022, e2022GL098460. Li, Zhenglong; Ma, Zheng; Wang, Pei; Lim, Agnes H. N.; Li, Jun; Jung, James A.; Schmit, Timothy J. and Huang, Hung-Lung. An objective quality control of surface contamination observations for ABI water vapor radiance assimilation. Journal of Geophysical Research-Atmospheres, Volume 127, Issue 15, 2022, e2021JD036061. Wang, Pei; Li, Zhenglong; Li, Jun and Schmit, Timothy J. Added-value of GEO-hyperspectral infrared radiances for local severe storm forecasts using the hybrid OSSE method. Advances in Atmospheric Physics, Volume 38, 2021, 1315-1333. Ma, Zheng; Li, Zhenglong; Li, Jun; Schmit, Timothy J.; Cucurull, Lidia; Atlas, Robert and Sun, Bomin. Enhance low level temperature and moisture profiles through combining NUCAPS, ABI observations, and RTMA analysis. Earth and Space Science, Volume 8, Issue 6, 2021, e2020EA001402. Ma, Zheng; Li, Jun; Han, Wei; Li, Zhenglong; Zeng, Qingcun; Menzel, W. Paul; Schmit, Timothy J.; Di, Di and Liu, Chian-Yi. Four-dimensional wind fields from geostationary Hyperspectral Infrared Sounder radiance measurements with high temporal resolution. Geophysical Research Letters, Volume 48, Issue 14, 2021. Li, Zhenglong; Schmit, Timothy J.; Li, Jun; Gunshor, Mathew M. and Nagle, Frederick W. Understanding the imaging capability of tundra orbits compared to other orbits. IEEE Transactions on Geoscience and Remote Sensing, Volume 59, Issue 11, 2021, pp.8944-8956. Di, Di; Li, Jun; Li, Zhenglong; Li, Jinlong; Schmit, Timothy J. and Menzel, W. Paul. Can current hyperspectral infrared sounders capture the small scale atmospheric water vapor spatial variations?. Geophysical Research Letters, Volume 48, Issue 21, 2021. Xue, Yunheng; Li, Jun; Li, Zhenglong; Gunshor, Mathew M. and Schmit, Timothy J. Evaluation of the diurnal variation of upper tropospheric humidity in reanalysis using homogenized observed radiances from international geostationary weather satellites. Remote Sensing, Volume 12, Issue 10, 2020, pp.1628. Wang, Pei; Li, Jun and Schmit, Timothy J. The impact of low latency satellite sounder observations on local severe storm forecasts in regional NWP. Sensors, Volume 20, Issue 3, 2020, pp.650. Li, Jinlong; Li, Jun; Velden, Christopher; Wang, Pei; Schmit, Timothy J. and Sippel, Jason. Impact of Rapid-Scan-Based Dynamical Information From GOES-16 on HWRF Hurricane Forecasts. Journal of Geophysical Research-Atmospheres, Volume 125, Issue 3, 2020, e2019JD031647. Mathew M. Gunshor, Timothy J. Schmit, David Pogorzala, Scott Lindstrom, James P. Nelson, III, 2020: GOES-R Series ABI Imagery Artifacts, JARS. https://doi.org/10.1117/1.JRS.14.032411Schmit, T., and M. Gunshor, Book Chapter on ABI Imagery for the GOES-R Book: The GOES-R Series: A New Generation of Geostationary Environmental Satellites, ISBN: 9780128143278, ElsevierLi, J, J. Li and T. Schmit, Co-author on Book Chapter on Soundings for the GOES-R Book: The GOES-R Series: A New Generation of Geostationary Environmental Satellites, ISBN: 9780128143278, ElsevierLi, Zhenglong, Jun Li, Mathew Gunshor, Szuchia Moeller, Timothy J. Schmit, Fangfang Yu, and Will McCarty, 2019: Homogenized water vapor absorption band radiances from international geostationary satellites, Geophysical Research Letters. https://doi.org/10.1029/2019GL083639Wang, Pei; Li, Jun and Schmit, Timothy J. The impact of low latency satellite sounder observations on local severe storm forecasts in regional NWP. Sensors, Volume 20, Issue 3, 2020. https://doi.org/10.3390/s20030650Schmit, T.J and co-authors, 2019: Legacy atmospheric profiles and derived products from GOES-16: validation and applications, Earth and Space Science. https://doi.org/10.1029/2019EA000729Li, Zhenglong; Li, Jun; Schmit, Timothy J.; Wang, Pei; Lim, Agnes; Li Jinlong; Nagle, Fredrick W.; Bai, Wenguang; Otkin, Jason A.; Atlas, Robert; Hoffman, Ross N.; Boukabara, Sid-Ahmed; Zhu Tong; Blackwell, William J. and Pagano, Thomas S. The alternative of CubeSat-based advanced infrared and microwave sounders for high impact weather forecasting. Atmospheric and Oceanic Science Letters, Volume 12, Issue 2, 2019, pp.80-90. Costa, Simone M. S.; Negri, Renato G.; Ferreira, Nelson J.; Schmit, Timothy J.; Arai, Nelson; Flauber, Wagner; Ceballos, Juan; Vila, Daniel; Rodrigues, Jurandir; Machado, Luiz A.; Pereira, Sergio; Bottino, Marcus Jorge; Sismanoglu, Raffi Agop and Langden, Pedro. A successful practical experience with dedicated Geostationary Operational Environmental Satellites GOES-10 and -12 supporting Brazil. Bulletin of the American Meteorological Society, Volume 99, Issue 1, 2018, pp.33-47. Menzel, W. Paul; Schmit, Timothy J.; Zhang, Peng and Li, Jun. Satellite-based atmospheric infrared sounder development and applications. Bulletin of the American Meteorological Society, Volume 99, Issue 3, 2018, pp.583-603. Li, Zhenglong; Li, Jun; Wang, Pei; Lim, Agnes; Li, Jinlong; Schmit, Timothy J.; Atlas, Robert; Boukabara, Sid-Ahmed and Hoffman, Ross N. Value-added impact of geostationary hyperspectral infrared sounders on local severe storm forecasts--via a quick regional OSSE. Advances in Atmospheric Sciences, Volume 35, 2018, 1217-1230, doi: 10.1007/s00376-018-8036-3. Schmit, Timothy J.; Lindstrom, Scott S.; Gerth, Jordan J. and Gunshor, Mathew M. Applications of the 16 spectral bands on the Advanced Baseline Imager (ABI). Journal of Operational Meteorology, Volume 6, Issue 4, 2018, pp.33-46. Bah, M.K.; Gunshor, M.M. and Schmit, T.J. Generation of GOES-16 true color imagery without a green band. Earth and Space Science, Volume 5, 2018, pp.549-558. Wang, Pei; Li, Jun; Lu, Bing; Schmit, Timothy J.; Lu, Jiazhen; Lee, Yong-Keun; Li, Jinlong and Liu, Zhiquan. Impact of moisture information from Advanced Himawari Imager measurements on heavy precipitation forecasts in a regional NWP model. Journal of Geophysical Research-Atmospheres, Volume 123, Issue 11, 2018, pp.6022-6038. Ackerman, S.A.; Platnick, S.; Bhartia, P.K.; Duncan, B.; L’Ecuyer, T.; Heidinger, A.; Skofronick-Jackson, G.; Loeb, N.; Schmit, T. and Smith, N. Satellites see the world's atmosphere. Meteorological Monographs, Volume 59, 2018, 4.1-4.53. Ai, Yufei; Li, Jun; Shi, Wenjing; Schmit, Timothy J.; Cao, Changyong and Li, Wanbiao. Deep convective cloud characterizations from both broadband imager and hyperspectral infrared sounder measurements. Journal of Geophysical Research-Atmospheres, Volume 122, Issue 3, 2017, pp.1700-1712. Schmit, Timothy J.; Griffith, Paul; Gunshor, Mathew M.; Daniels, Jaime M.; Goodman, Steven J. and Lebair, William J. A closer look at the ABI on the GOES-R series: Supplement. Bulletin of the American Meteorological Society, Volume 98, 2017. **[Most read AMS journal article for 8 months running.]**Line, William E.; Schmit, Timothy J.; Lindsey, Daniel T. and Goodman, Steven J. Use of geostationary super rapid scan satellite imagery by the Storm Prediction Center. Weather and Forecasting, Volume 31, Issue 4, 2016, 483–494. Miller, Steven D.; Schmit, Timothy; Seaman, Curtis J.; Lindsey, Daniel T.; Gunshor, Mathew M.; Kohrs, Richard A.; Sumida, Yasuhiko and Hillger, Donald. A sight for sore eyes: The return of true color to geostationary satellites. Bulletin of the American Meteorological Society, Volume 97, Issue 10, 2016, pp.1803-1816. Jing, Zheng; Li, Jun; Schmit, Timothy J. and Liu, Zhiquan. The impact of AIRS atmospheric temperature and moisture profiles on hurricane forecasts: Ike (2008) and Irene (2011). Advances in Atmospheric Sciences, Volume 32, Issue 3, 2015, pp.319-335. Schmit, Timothy J.; Goodman, Steven J.; Gunshor, Mathew M.; Sieglaff, Justin; Heidinger, Andrew K.; Bachmeier, A. Scott; Lindstrom, Scott S.; Terborg, Amanda; Feltz, Joleen; Bah,Kaba; Rudlosky, Scott; Lindsey, Daniel T.; Rabin, Robert M. and Schmidt, Christopher C. Rapid refresh information of significant events: Preparing users for the next generation of geostationary operational satellites. Bulletin of the American Meteorological Society, Volume 96, Issue 4, 2015, 561–576, supplement. Wang, Pei; Li, Jun; Goldberg, Mitchell D.; Schmit, Timothy J.; Lim, Agnes H. N.; Li, Zhenglong; Han, Hyojin; Li, Jinlong and Ackerman, Steven A. Assimilation of thermodynamic information from advanced infrared sounders under partially cloudy skies from regional NWP. Journal of Geophysical Research-Atmospheres, Volume 120, Issue 16, 2015, pp.5469-5484.Folmer, Michael J.; DeMaria, Mark; Ferraro, Ralph; Beven, John; Brennan, Michael; Daniels, Jaime; Kuligowski, Robert; Meng, Huan; Rudlosky, Scott; Zhao, Limin; Knaff, John; Kusselson, Sheldon; Miller, Steven D.; Schmit, Timothy J.; Velden, Chris and Zavodsky, Bard. Satellite tools to monitor and predict Hurricane Sandy (2012): Current and emerging products. Atmospheric Research, Volume 166, 2015, pp.165-181. Schmit, Timothy J.; Goodman, Steven J.; Gunshor, Mathew M.; Sieglaff, Justin; Heidinger, Andrew K.; Bachmeier, A. Scott; Lindstrom, Scott S.; Terborg, Amanda; Feltz, Joleen; Bah,Kaba; Rudlosky, Scott; Lindsey, Daniel T.; Rabin, Robert M. and Schmidt, Christopher C. Rapid refresh information of significant events: Preparing users for the next generation of geostationary operational satellites. Supplement. Bulletin of the American Meteorological Society, Volume 96, Issue 4, 2015, ES55-ES63. Lee, Yong-Keun; Li, Zhenglong; Li, Jun and Schmit, Timothy J. Evaluation of the GOES-R ABI LAP retrieval algorithm using the GOES-13 sounder. Journal of Atmospheric and Oceanic Technology, Volume 31, Issue 1, 2014, pp.3-19. Wang, Pei; Li, Jun; Li, Jinlong; Li, Zhenglong; Schmit, Timothy J. and Bai, Wenguang. Advanced infrared sounder subpixel cloud detection with imagers and its impact on radiance assimilation in NWP. Geophysical Research Letters, Volume 41, Issue 5, 2014, pp.1773-1780. Li, Zhenping; Grotenhuis, Michael; Wu, Xiangqian; Schmit, Timothy J.; Schmidt, Chris; Schreiner, Anthony J.; Nelson, James P. III; Yu, Fangfang and Bysal, Hyre. Geostationary Operational Environmental Satellite Imager infrared channel-to-channel co-registration characterization algorithm and its implementation in the ground system. Journal of Applied Remote Sensing, Volume 8, 2014, doi:10.1117/1.JRS.8.083530. Xie, Hua; Nalli, Nicholas R.; Sampson, Shanna; Wolf, Walter W.; Li, Jun; Schmit, Timothy J.; Barnet, Christopher D.; Joseph, Everette; Morris, Vernon R. and Yang, Fanglin. Integration and ocean-based prelaunch validation of GOES-R Advanced Baseline Imager legacy atmospheric products. Journal of Atmospheric and Oceanic Technology, Volume 30, Issue 8, 2013, 1743–1756. Miller, Steven D.; Straka, William C. III; Bachmeier, A. Scott; Schmit, Timothy J.; Partain, Philip T. and Noh, Yoo-Jeong. Earth-viewing satellite perspectives on the Chelyabinsk meteor event. Proceedings of the National Academy of Sciences of the United States of America (PNAS), Volume 110, Issue 45, 2013, pp.18092-18097. Schmit, Timothy J.; Goodman, Steven J.; Lindsey, Daniel T.; Rabin, Robert M.; Bedka, Kristopher M.; Gunshor, Mathew M.; Cintineo, John L.; Velden, Christopher S.; Bachmeier, A. Scott; Lindstrom, Scott S. and Schmidt, Christopher C. Geostationary Operational Environmental Satellite (GOES)-14 super rapid scan operations to prepare for GOES-R. Journal of Applied Remote Sensing, Volume 7, Issue 1, 2013, doi:10.1117/1.JRS.7.073462. Gerth, Jordan; Cronce, Lee; Wade, Gary; Schmit, Tim; Craven, Jeff; Cooper, Diane and Crowe, Christina. **Madison, Wis., hosts 37th NWA Annual Meeting brings membership together.** National Weather Association Newsletter, 2013, pp.3-4.  |
| Miller, Steven D.; Schmidt, Christopher C.; Schmit, Timothy J. and Hillger, Donald W. **A case for natural colour imagery from geostationary satellites, and an approximation for the GOES-R ABI.** International Journal of Remote Sensing, Volume 33, Issue 13, 2012, pp.3999-4028.  |
| Li, Jun; Liu, Chian-Yi; Zhang, Peng and Schmit, Timothy J. **Applications of full spatial resolution space-based advanced infrared soundings in the preconvection environment.** Weather and Forecasting, Volume 27, Issue 2, 2012, pp.515-524.  |
| Schmit, Tim**. The ABI on GOES-R.** National Weather Association Newsletter, 2012, pp.4.  |
| Goodman, Steven J.; Gurka, James; DeMaria, Mark; Schmit, Timothy J.; Mostek, Anthony; Jedlovec, Gary; Siewert, Chris; Feltz, Wayne; Gerth, Jordan; Brummer, Renate; Miller, Steven; Reed, Connie and Reynolds, Richard R. **The GOES-R Proving Ground: Accelerating user readiness for the next-generation geostationary environmental satellite system.** Bulletin of the American Meteorological Society, Volume 93, Issue 7, 2012, 1029–1040.  |
| Lindsey, Daniel T.; Schmit, Timothy J.; MacKenzie, Wayne M. Jr.; Jewett, Christopher P.; Gunshor, Mat M. and Grasso, Louie. **10.35 micron: Atmospheric window on the GOES-R Advanced Baseline imager with less moisture attenuation.** Journal of Applied Remote Sensing, Volume 6, 2012, doi:10.1117/1.JRS.6.063598.  |
| Li, Zhenglong; Li, Jun; Li, Yue; Schmit, Timothy J.; Zhou, Lihang; Goldberg, Mitchell D. and Menzel, W. Paul. **Determining diurnal variations of land surface emissivity from geostationary satellites.** Journal of Geophysical Research, Volume 117, 2012, doi:10.1029/2012JD018279.  |
| Li, Jun; Li, Jinlong; Zheng, Jin and Schmit, Tim**. Improving tropical cyclone forecasts with water vapor and temperature information from satellites.** JCSDA Quarterly, Volume 38, 2012, pp.1-2.  |
| Li, Jun; Li, Zhenglong; Jin, Xin; Schmit, Timothy J.; Zhou, Lihang and Goldberg, Mitchell D. **Land surface emissivity from high temporal resolution geostationary infrared imager radiances: Methodology and simulation studies.** Journal of Geophysical Research, Volume 116, 2011, doi:10.1029/2010JD014637.  |
| Li, Jun; Li, Jinlong; Otkin, Jason; Schmit, Timothy J. and Liu, Chian-Yi. **Warning information in a preconvection environment from the geostationary advanced infrared sounding system - a simulation study using the IHOP case.** Journal of Applied Meteorology and Climatology, Volume 50, Issue 3, 2011, pp.776-783.  |
| Jin, Xin; Li, Jun; Schmit, Timothy J. and Goldberg, Mitchell D**. Evaluation of radiative transfer models in atmospheric profiling with broadband infrared radiance measurements.** International Journal of Remote Sensing, Volume 32, Issue 3, 2011, pp.863-874.  |
| Gurka, James and Schmit, Timothy. **Highlights of the 6th GOES Users' Conference.** National Weather Association Newsletter, Volume 10, Issue 4, 2010, pp.4-5.  |
| Li, Zhenglong; Li, Jun; Jin, Xin; Schmit, Timothy J.; Borbas, Eva E. and Goldberg, Mitchell D. **An objective methodology for infrared land surface emissivity evaluation.** Journal of Geophysical Research, Volume 115, 2010, doi:10.1029/2010JD014249.  |
| Schmit, Timothy J.; Rabin, Robert M.; Bachmeier, A. Scott; Li, Jun; Gunshor, Mathew M.; Steigerwaldt, Henry; Schreiner, Anthony J.; Aune, Robert M. and Wade, Gary S. **Many uses of the geostationary operational environmental satellite-10 sounder and imager during a high inclination state.** Journal of Applied Remote Sensing, Volume 3, Issue 1, 2009, doi:10.1117/1.2099709.  |
| Gunshor, Mathew M.; Schmit, Timothy J.; Menzel, W. Paul and Tobin, David C. **Intercalibration of broadband geostationary imagers using AIRS.** Journal of Atmospheric and Oceanic Technology, Volume 26, Issue 4, 2009, pp.746-758.) |
| Li, Zhenglong; Li, Jun; Menzel, W. Paul; Nelson, James P. III; Schmit, Timothy J.; Weisz, Elisabeth and Ackerman, Steven A. **Forecasting and nowcasting improvement in cloudy regions with high temporal GOES sounder infrared radiance measurements.** Journal of Geophysical Research, Volume 114, 2009, doi:10.1029/2008JD10596.  |
| Hillger, Donald W. and Schmit, Timothy J. **The GOES-13 science test: A synopsis.** Bulletin of the American Meteorological Society, Volume 90, Issue 5, 2009, pp.592-597.  |
| Sieglaff, Justin M.; Schmit, Timothy J.; Menzel, W. Paul and Ackerman, Steven A**. Inferring convective weather characteristics with geostationary high spectral resolution IR window measurements: A look into the future.** Journal of Atmospheric and Oceanic Technology, Volume 26, Issue 8, 2009, pp.1527-1541.  |
| Schmit, Timothy J.; Li, Jun; Ackerman, Steven A. and Gurka, James J. **High-spectral- and high-temporal-resolution infrared measurements from geostationary orbit.** Journal of Atmospheric and Oceanic Technology, Volume 26, Issue 11, 2009, pp.2273-2292.  |
| Jin, Xin; Li, Jun; Schmidt, Christopher C.; Schmit, Timothy J. and Li, Jinlong. **Retrieval of total column ozone from imagers onboard geostationary satellites.** IEEE Transactions on Geoscience and Remote Sensing, Volume 46, Issue 2, 2008, pp.479-488.  |
| Li, Zhenglong; Li, Jun; Menzel, W. Paul; Schmit, Timothy J.; Nelson, James P. III; Daniels, Jaime and Ackerman, Steven A. **GOES sounding improvement and applications to severe storm nowcasting.** Geophysical Research Letters, Volume 35, Issue 3, 2008, doi:10.1029/2007GL032797.  |
| Ackerman, Steven A.; Schreiner, Anthony J.; Schmit, Timothy J.; Woolf, Harold M.; Li, Jun and Pavolonis, Michael. **Using the GOES sounder to monitor upper level SO2 from volcanic eruptions.** Journal of Geophysical Research, Volume 113, 2008, doi:10.1029/2007JD009622 |
| Jin, Xin; Li, Jun; Schmit, Timothy J.; Li, Jinlong; Goldberg, Mitchell D. and Gurka, James J. **Retrieving clear-sky atmospheric parameters from SEVIRI and ABI infrared radiances.** Journal of Geophysical Research, Volume 113, 2008, doi:10.1029/2008JD010040.  |
| Schmit, Timothy J.; Li, Jun; Gurka, James J.; Goldberg, Mitchell D.; Schrab, Kevin J.; Li, Jinlong and Feltz, Wayne F. **The GOES-R Advanced Baseline Imager and the continuation of current sounder products.** Journal of Applied Meteorology and Climatology, Volume 47, Issue 10, 2008, pp.2696-2711.  |
| Liu, Chian-Yi; Li, Jun; Weisz, Elisabeth; Schmit, Timothy J.; Ackerman, Steven A. and Huang, Hung-Lung. **Synergistic use of AIRS and MODIS radiance measurements for atmospheric profiling.** Geophysical Research Letters, Volume 35, 2008, doi.10:1029/2008GL035859.  |
| Wang, Fang; Li, Jun; Schmit, Timothy J. and Ackerman, Steven A. **Trade-off studies of a hyperspectral infrared sounder on a geostationary satellite.** Applied Optics, Volume 46, Issue 2, 2007, pp.200-209.  |
| Li, Jinlong; Li, Jun; Schmidt, Christopher C.; Nelson, James P. III and Schmit, Timothy J. **High temporal resolution GOES sounder single field of view ozone improvements.** Geophysical Research Letters, Volume 34, 2007, doi:10.1029/2006GL028172.  |
| Li, J.; Zhang, P.; Schmit, T. J.; Schmetz, J. and Menzel, W. P. **Quantitative monitoring of a Saharan dust event with SEVIRI on Meteosat-8.** International Journal of Remote Sensing, Volume 28, Issue 10, 2007, pp.2181-2186. (doi:1080/01431160600975337) |
| Li, Zhenglong; Li, Jun; Menzel, W. Paul; Schmit, Timothy J. and Ackerman, Steven A. **Comparison between current and future environmental satellite imagers on cloud classification using MODIS.** Remote Sensing of Environment, Volume 108, Issue 3, 2007, pp.311-326.  |
| Rabin, Robert M. and Schmit, Timothy J. **Estimating soil wetness from the GOES sounder.** Journal of Atmospheric and Oceanic Technology, Volume 23, Issue 7, 2006, pp.991-1003.  |
| Zhang, Peng; Li, Jun; Olson, Erik; Schmit, Timothy J.; Li, Jinlong and Menzel, W. Paul. **Impact of point spread function on infrared radiances from geostationary satellites.** IEEE Transactions on Geoscience and Remote Sensing, Volume 44, Issue 8, 2006, pp.2176-2183.  |
| Li, Jun; Liu, Chian-Yi; Huang, Hung-Lung; Schmit, Timothy J.; Wu, Xuebao; Menzel, W. Paul and Gurka, James J. **Optimal cloud-clearing for AIRS radiances using MODIS.** IEEE Transactions on Geoscience and Remote Sensing, Volume 43, Issue 6, 2005, pp.1266-1278.  |
| Schmit, Timothy J.; Gunshor, Mathew M.; Menzel, W. Paul; Gurka, James J.; Li, Jun and Bachmeier, A. Scott. **Introducing the next-generation Advanced Baseline Imager on GOES-R.** Bulletin of the American Meteorological Society, Volume 86, Issue 8, 2005, pp.1079-1096.  |
| Li, Jun; Huang, Hung-Lung; Liu, Chian-Yi; Yang, Ping; Schmit, Timothy J.; Wei, Heli; Weisz, Elisabeth; Guan, Li and Menzel, W. Paul. **Retrieval of cloud microphysical properties from MODIS and AIRS.** Journal of Applied Meteorology, Volume 44, Issue 10, 2005, pp.1526-1543.  |
| Huang, Bormin; Ahuja, Alok; Huang, Hung-Lung; Schmit, Timothy J. and Heymann, Roger W. **Lossless compression of three-dimensional hyperspectral sounder data using context-based adaptive lossless image codec with bias-adjusted reordering.** Optical Engineering, Volume 43, Issue 9, 2004, pp.2071-2079 |
| Li, Jun; Menzel, W. Paul; Sun, Fengying; Schmit, Timothy J. and Gurka, James. **AIRS subpixel cloud characterization using MODIS cloud products.** Journal of Applied Meteorology, Volume 43, Issue 8, 2004, pp.1083-1094.  |
| Gunshor, Mathew M.; Schmit, Timothy J. and Menzel, W. Paul. **Intercalibration of the infrared window and water vapor channels on operational geostationary environmental satellites using a single polar-orbiting satellite.** Journal of Atmospheric and Oceanic Technology, Volume 21, Issue 1, 2004, pp.61-68.  |
| Li, Jun; Menzel, W. Paul; Zhang, Wenjian; Sun, Fengying; Schmit, Timothy J.; Gurka, James J. and Weisz, Elisabeth. **Synergistic use of MODIS and AIRS in a variational retrieval of cloud parameters.** Journal of Applied Meteorology, Volume 43, Issue 11, 2004, pp.1619-1634.  |
| Huang, Hung-Lung; Huang, Bormin; Baggett, Kevin; Ahuja, Alok; Schmit, Timothy J. and Heymann, Roger W. **Hyperspectral infrared measurements simulation and collection for GOES-R sounder lossless and lossy data compression study and beyong.** WSEA Transactions on Systems, Volume 5, Issue 3, 2004, pp.2323-2330.  |
| Huang, Bormin; Ahuja, Alok; Huang, Hung-Lung; Schmit, Timothy J. and Heymann, Roger W. **Improvements to predictor-based methods in lossless compression of 3D hyperspectral sounding data via higher moment statistics.** WSEAS Transactions on Electronics, Volume 1, Issue 2, 2004, pp.299-305.  |
| Huang, Bormin; Ahuja, Alok; Huang, Hung-Lung; Schmit, Timothy J. and Heymann, Roger W. **Investigation of predictor-based schemes for lossless compression of 3D hyperspectral sounder data.** WSEAS Transactions on Systems, Volume 3, Issue 5, 2004, pp.2222-2228.  |
| Huang, Bormin; Ahuja, Alok; Huang, Hung-Lung; Schmit, Timothy J. and Heymann, Roger W. **Mean-removed nearest neighbor reordering based lossless compression of 3D hyperspectral sounder data.** WSEAS Transactions on Circuits and Systems, Volume 3, Issue 4, 2004, pp.858-866.  |
| Plokhenko, Youri; Menzel, W. Paul; Bayler, Gail and Schmit, Timothy J. **Mathematical aspects in meteorological processing of infrared spectral measurements from the GOES sounder, part II: Analysis of spatial and temporal continuity of spectral measurements from the GOES-8 sounder.** Journal of Applied Meteorology, Volume 42, Issue 6, 2003, pp.671-685.  |
| Schmit, Timothy J.; Feltz, Wayne F.; Menzel, W. Paul; Jung, James; Noel, Andrew P.; Heil, James N.; Nelson, James P. III and Wade, Gary S. **Validation and use of GOES sounder moisture information.** Weather and Forecasting, Volume 17, Issue 1, 2002, pp.139-154.  |
| Schreiner, Anthony J.; Schmit, Timothy J. and Aune, Robert M. **Maritime inversions and the GOES Sounder Cloud Product.** National Weather Digest, Volume 26, Issue 1, 2002, pp.27-38.  |
| Li, Jun; Schmidt, Christopher C.; Nelson, James P. III; Schmit, Timothy J. and Menzel, W. Paul. **Estimation of total atmospheric ozone from GOES sounder radiances with high temporal resolution.** Journal of Atmospheric and Oceanic Technology, Volume 18, Issue 2, 2001, pp.157-168.  |
| Schreiner, Anthony J.; Schmit, Timothy J. and Menzel, W. Paul. **Observations and trends of clouds based on GOES sounder data.** Journal of Geophysical Research, Volume 106, 2001, 20,349-20,363.  |
| Dostalek, John F. and Schmit, Timothy J. **Total precipitable water measurements from GOES sounder derived product imagery.** Weather and Forecasting, Volume 16, Issue 5, 2001, pp.573-587  |
| Schmit, Timothy J.; Prins, Elaine M.; Schreiner, Anthony J. and Gurks, James J. **Introducing the GOES-M imager.** National Weather Digest, Volume 25, Issue 3, 2001, pp.28-37.  |
| Zapotocny, Tom H.; Nieman, Steven J.; Menzel, W. Paul; Nelson, James P. III; Jung, James A.; Rogers, Eric; Parrish, David F.; DiMego, Geoffrey J.; Baldwin, Michael and Schmit, Timothy J. **NCEP notes: A case study of the sensitivity of the Eta Data Assimilation System.** Weather and Forecasting, Volume 15, Issue 5, 2000, pp.603-621.  |
| Ma, Xia L.; Schmit, Timothy J. and Smith, William L. **A nonlinear physical retrieval algorithm - Its application to the GOES-8/9 sounder.** Journal of Applied Meteorology, Volume 38, Issue 5, 1999, pp.501-513.  |
| Menzel, W. Paul; Holt, Frances C.; Schmit, Timothy J.; Aune, Robert M.; Schreiner, Anthony J.; Wade, Gary S. and Gray, Donald G. **Application of GOES-8/9 soundings to weather forecasting and nowcasting.** Bulletin of the American Meteorological Society, Volume 79, Issue 10, 1998, pp.2059-2077.  |
| Hayden, Christopher M.; Wade, Gary S. and Schmit, Timothy J. **Derived product imagery from GOES-8.** Journal of Applied Meteorology, Volume 35, Issue 2, 1996, pp.153-162.  |
| Martin, David W.; Schmit, Timothy J.; Goodman, Brian; Ferreira, Nelson J. and Brueske, Kurt F. **A satellite-based estimate of evapotranspiration over Amazonia.** Remote Sensing Reviews, Volume 10, Issue 1, 1994, pp.179-191.  |
| Hayden, C. M.; Menzel, W. P.; Nieman, S. J.; Schmit, T. J. and Velden, C. S. **Recent progress in methods for deriving winds from satellite data at NESDIS/CIMSS.** Advances in Space Research, Volume 14, Issue 3, 1994, (3)99-(3)110.  |
| Hayden, Christopher M. and Schmit, Timothy J. **The anticipated sounding capabilities of GOES-I and beyond.** Bulletin of the American Meteorological Society, Volume 72, Issue 12, 1991, pp.1835-1846.  |
| Martin, David W.; Goodman, Brian; Schmit, Timothy J. and Cutrim, E. C. **Estimates of daily rainfall over the Amazon Basin.** Journal of Geophysical Research, Volume 95, 1990, pp.17043-17050.  |
| Schmit, Timothy J.; Brueske, Kurt F.; Smith, William L. and Menzel, W. Paul. **Visible and infrared spin scan radiometer atmospheric sounder water vapor and wind fields over Amazonia.** Journal of Geophysical Research, Volume 95, 1990, pp.17031-17038.  |
| Menzel, W. Paul; Schmit, T. J. and Wylie, D. P. **Cloud characteristics over Central Amazonia during GTE/ABLE 2B derived from multispectral visible and infrared spin scan radiometer atmospheric sounder observations.** Journal of Geophysical Research, Volume 95, 1990, pp.17039-17042.  |
| Schmit, Tim; Brueske, Kurt; Menzel, Paul; Smith, Bill; Goodman, Brian; Martin, Dave; Wylie, Don; Curtrim, Elen and Achtor, Tom. **Investigating the Amazon hydrologic cycle.** CIMSS View, Volume 6, Issue 1, 1990, pp.1-11.  |
| Raymond, William H. and Schmit, Timothy J. **Steam fog: A System interaction of air and water.** Bulletin of the American Meteorological Society, Volume 70, Issue 11, 1989, pp.1445-1448. |