Bibliography

[1] Katharina Lodders. Solar System Abundances and Condensation Temperatures of the Elements. ApJ, 591(2):1220–1247, July 2003. doi: 10.1086/375492.

[2] K. Lodders. Abundances and Condensation Temperatures of the Elements. *Meteoritics and Planetary Science Supplement*, 38:5272, July 2003.

[3] Carl J. Hansen and Steven D. Kawaler. *Stellar Interiors. Physical Principles, Structure, and Evolution.* 1994. doi: 10.1007/978-1-4419-9110-2.

[4] Eric R. Priest. *Solar Magnetohydrodynamics*. Springer Netherlands, Dordrecht, 1982. ISBN 978-90-277-1833-4 978-94-009-7958-1. doi: 10.1007/978-94-009-7958-1. URL http://link.springer.com/10.1007/978-94-009-7958-1.

[5] Joan T. Schmelz and John C. Brown, editors. *The Sun: A Laboratory for Astrophysics*. Springer Netherlands, Dordrecht, 1992. ISBN 978-94-010-5227-6 978-94-011-2765-3. doi: 10.1007/978-94-011-2765-3. URL http://link.springer.com/10.1007/978-94-011-2765-3.

[6] Matthew J. Penn. Infrared Solar Physics. *Living Reviews in Solar Physics*, 11, 2014. ISSN 1614-4961. doi: 10.12942/lrsp-2014-2. URL http://link.springer.com/10.12942/lrsp-2014-2.

[7] James R. Lemen, Alan M. Title, David J. Akin, Paul F. Boerner, Catherine Chou, Jerry F. Drake, Dexter W. Duncan, Christopher G. Edwards, Frank M. Friedlaender, Gary F. Heyman, Neal E. Hurlburt, Noah L. Katz, Gary D. Kushner, Michael Levay, Russell W. Lindgren, Dnyanesh P. Mathur, Edward L. McFeaters, Sarah Mitchell, Roger A. Rehse, Carolus J. Schrijver, Larry A. Springer, Robert A. Stern, Theodore D. Tarbell, Jean-Pierre Wuelser, C. Jacob Wolfson, Carl Yanari, Jay A. Bookbinder, Peter N. Cheimets, David Caldwell, Edward E. Deluca, Richard Gates, Leon Golub, Sang Park, William A. Podgorski, Rock I. Bush, Philip H. Scherrer, Mark A. Gummin, Peter Smith, Gary Auker, Paul Jerram, Peter Pool, Regina Soufli, David L. Windt, Sarah Beardsley, Matthew Clapp, James Lang, and Nicholas Waltham. The Atmospheric

Imaging Assembly (AIA) on the Solar Dynamics Observatory (SDO). *Solar Physics*, 275(1-2):17–40, January 2012. ISSN 0038-0938, 1573-093X. doi: 10.1007/s11207-011-9776-8. URL https://link.springer.com/10.1007/s11207-011-9776-8.

[8] Vicente Domingo, Bernhard Fleck, and Arthur I. Poland. The SOHO Mission: An Overview. *Solar Physics*, 162:1–37, 1995. doi: 10.1007/BF00733425. URL https://doi.org/10.1007/BF00733425. Publisher: Springer.

[9] Robert P. Lin and others. The Reuven Ramaty High-Energy Solar Spectroscopic Imager (RHESSI). *Solar Physics*, 210:3–32, 2002. doi: 10.1023/A:1022428818870. URL https://doi.org/10.1023/A:1022428818870. Publisher: Springer.

[10] Leon Golub and others. The X-Ray Telescope (XRT) for the Hinode Mission. *Solar Physics*, 243:63–86, 2007. doi: 10.1007/s11207-007-0182-1. URL https://doi.org/10.1007/s11207-007-0182-1. Publisher: Springer.

[11] Brandon Panos and Lucia Kleint. Real-time Flare Prediction Based on Distinctions between Flaring and Non-flaring Active Region Spectra. ApJ, 891(1):17, March 2020. doi: 10.3847/1538-4357/ab700b.

[12] Krivova, N. A., Solanki, S. K., and Floyd, L. Reconstruction of solar UV irradiance in cycle 23. *A&A*, 452(2):631–639, 2006. doi: 10.1051/0004-6361:20064809. URL https://doi.org/10.1051/0004-6361:20064809.

[13] Joanna D. Haigh. The Sun and the Earth's Climate. *Living Reviews in Solar Physics*, 4(1):2, October 2007. doi: 10.12942/lrsp-2007-2.

[14] Martin Asplund, Nicolas Grevesse, A Jacques Sauval, and Pat Scott. The chemical composition of the sun. *Annual review of astronomy and astrophysics*, 47(2009):481–522, 2009.

[15] J. Leenaarts, T. M. D. Pereira, M. Carlsson, H. Uitenbroek, and B. De Pontieu. The Formation of IRIS Diagnostics. I. A Quintessential Model Atom of Mg II and General Formation Properties of the Mg II h&k Lines. ApJ, 772(2):89, August 2013. doi: 10.1088/0004-637X/772/2/89.

[16] R. Rezaei, J. H. M. J. Bruls, W. Schmidt, C. Beck, W. Kalkofen, and R. Schlichenmaier. Reversal-free Ca II H profiles: a challenge for solar chromosphere modeling in quiet inter-network. A&A, 484(2):503–509, June 2008. doi: 10.1051/0004-6361:20079050.

[17] J. S. Morrill, K. P. Dere, and C. M. Korendyke. The Sources of Solar Ultraviolet Variability between 2765 and 2885 Å: Mg I, Mg II, Si I, and Continuum. ApJ, 557(2):854–863, August 2001. doi: 10.1086/321683.

[18] Mats Carlsson and Robert F. Stein. Formation of Solar Calcium H and K Bright Grains. ApJ, 481(1):500–514, May 1997. doi: 10.1086/304043.

[19] Pierre Gouttebroze. Solar Atmospheric Dynamics. III. The Effect of Acoustic Waves on the MG II K Line Profile. ApJ, 337:536, February 1989. doi: 10.1086/167122.

[20] Gary Rottman. The SORCE Mission. *Solar Physics*, 230(1-2):7–25, August 2005. doi: 10.1007/s11207-005-8112-6.

[21] Jerald Harder, George Lawrence, Juan Fontenla, Gary Rottman, and Thomas Woods. The Spectral Irradiance Monitor: Scientific Requirements, Instrument Design, and Operation Modes. Sol. Phys., 230(1-2): 141–167, August 2005. doi: 10.1007/s11207-005-5007-5.

[22] William E. Mcclintock, Gary J. Rottman, and Thomas N. Woods. Solar-Stellar Irradiance Comparison Experiment II (Solstice II): Instrument Concept and Design. *Solar Physics*, 230(1-2):225–258, August 2005. doi: 10.1007/s11207-005-7432-x.

[23] G. Thuillier, T. Foujols, D. Bolsée, D. Gillotay, M. Hersé, W. Peetermans, W. Decuyper, H. Mandel, P. Sperfeld, S. Pape, D. R. Taubert, and J. Hartmann. SOLAR/SOLSPEC: Scientific Objectives, Instrument Performance and Its Absolute Calibration Using a Blackbody as Primary Standard Source. *Solar Physics*, 257(1):185–213, June 2009. doi: 10.1007/s11207-009-9361-6.

[24] B. E. Woodgate, E. A. Tandberg-Hanssen, E. C. Bruner, J. M. Beckers, J. C. Brandt, W. Henze, C. L. Hyder, M. W. Kalet, P. J. Kenny, E. D. Knox, A. G. Michalitsianos, R. Rehse, R. A. Shine, and H. D. Tinsley. The ultraviolet spectrometer and polarimeter on the Solar Maximum Mission. *Solar Physics*, 65(1):73–90, February 1980. doi: 10.1007/BF00151385.

[25] J. David Bohlin, Kenneth J. Frost, Peter T. Burr, Arun K. Guha, and George L. Withbroe. Solar Maximum Mission. Sol. Phys., 65(1):5–14, February 1980. doi: 10.1007/BF00151380.

[26] B. De Pontieu, A. M. Title, J. R. Lemen, G. D. Kushner, D. J. Akin, B. Allard, T. Berger, P. Boerner, M. Cheung, C. Chou, J. F. Drake, D. W. Duncan, S. Freeland, G. F. Heyman, C. Hoffman, N. E. Hurlburt, R. W. Lindgren, D. Mathur, R. Rehse, D. Sabolish, R. Seguin, C. J. Schrijver, T. D. Tarbell, J. P. Wülser, C. J. Wolfson, C. Yanari,

J. Mudge, N. Nguyen-Phuc, R. Timmons, R. van Bezooijen, I. Weingrod, R. Brookner, G. Butcher, B. Dougherty, J. Eder, V. Knagenhjelm, S. Larsen, D. Mansir, L. Phan, P. Boyle, P. N. Cheimets, E. E. DeLuca, L. Golub, R. Gates, E. Hertz, S. McKillop, S. Park, T. Perry, W. A. Podgorski, K. Reeves, S. Saar, P. Testa, H. Tian, M. Weber, C. Dunn, S. Eccles, S. A. Jaeggli, C. C. Kankelborg, K. Mashburn, N. Pust, L. Springer, R. Carvalho, L. Kleint, J. Marmie, E. Mazmanian, T. M. D. Pereira, S. Sawyer, J. Strong, S. P. Worden, M. Carlsson, V. H. Hansteen, J. Leenaarts, M. Wiesmann, J. Aloise, K. C. Chu, R. I. Bush, P. H. Scherrer, P. Brekke, J. Martinez-Sykora, B. W. Lites, S. W. McIntosh, H. Uitenbroek, T. J. Okamoto, M. A. Gummin, G. Auker, P. Jerram, P. Pool, and N. Waltham. The Interface Region Imaging Spectrograph (IRIS). *Solar Physics*, 289(7):2733–2779, July 2014. doi: 10.1007/s11207-014-0485-y.

[27] J-P Wülser, S Jaeggli, Bart De Pontieu, T Tarbell, P Boerner, S Freeland, W Liu, R Timmons, S Brannon, Charles Kankelborg, et al. Instrument calibration of the interface region imaging spectrograph (iris) mission. *Solar Physics*, 293:1–43, 2018.

[28] S. K. Solanki, P. Barthol, S. Danilovic, A. Feller, A. Gandorfer, J. Hirzberger, T. L. Riethmüller, M. Schüssler, J. A. Bonet, V. Martínez Pillet, J. C. del Toro Iniesta, V. Domingo, J. Palacios, M. Knölker, N. Bello González, T. Berkefeld, M. Franz, W. Schmidt, and A. M. Title. Sunrise: Instrument, mission, data, and first results. *The Astrophysical Journal Letters*, 723(2):L127, oct 2010. doi: 10.1088/2041-8205/723/2/L127. URL https://dx.doi.org/10.1088/2041-8205/723/2/L127.

[29] P. Barthol, A. Gandorfer, S. K. Solanki, M. Schüssler, B. Chares, W. Curdt, W. Deutsch, A. Feller, D. Germerott, B. Grauf, K. Heerlein, J. Hirzberger, M. Kolleck, R. Meller, R. Müller, T. L. Riethmüller, G. Tomasch, M. Knölker, B. W. Lites, G. Card, D. Elmore, J. Fox, A. Lecinski, P. Nelson, R. Summers, A. Watt, V. Martínez Pillet, J. A. Bonet, W. Schmidt, T. Berkefeld, A. M. Title, V. Domingo, J. L. Gasent Blesa, J. C. Del Toro Iniesta, A. López Jiménez, A. Álvarez-Herrero, L. Sabau-Graziati, C. Widani, P. Haberler, K. Härtel, D. Kampf, T. Levin, I. Pérez Grande, A. Sanz-Andrés, and E. Schmidt. The Sunrise Mission. Sol. Phys., 268(1):1–34, January 2011. doi: 10.1007/s11207-010-9662-9.

[30] A. Gandorfer, B. Grauf, P. Barthol, T. L. Riethmüller, S. K. Solanki, B. Chares, W. Deutsch, S. Ebert, A. Feller, D. Germerott, K. Heerlein, J. Heinrichs, D. Hirche, J. Hirzberger, M. Kolleck, R. Meller, R. Müller, R. Schäfer, G. Tomasch, M. Knölker, V. Martínez Pillet, J. A. Bonet, W. Schmidt, T. Berkefeld, B. Feger, F. Heidecke, D. Soltau, A. Tischenberg, A. Fischer, A. Title, H. Anwand, and E. Schmidt. The Filter Imager SuFI and the Image Stabilization and Light Distribution System IS-

LiD of the Sunrise Balloon-Borne Observatory: Instrument Description. Sol. Phys., 268(1):35–55, January 2011. doi: 10.1007/s11207-010-9636-y.

[31] Alex Feller, Achim Gandorfer, Francisco A. Iglesias, Andreas Lagg, Tino L. Riethmüller, Sami K. Solanki, Yukio Katsukawa, and Masahito Kubo. The SUNRISE UV Spectropolarimeter and imager for SUNRISE III. In Christopher J. Evans, Julia J. Bryant, and Kentaro Motohara, editors, *Ground-based and Airborne Instrumentation for Astronomy VIII*, volume 11447 of *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, page 11447AK, December 2020. doi: 10.1117/12.2562666.

[32] Avyarthana Ghosh, Subhamoy Chatterjee, Aafaque R. Khan, Durgesh Tripathi, A. N. Ramaprakash, Dipankar Banerjee, Pravin Chordia, Achim M. Gandorfer, Natalie Krivova, Dibyendu Nandy, Chaitanya Rajarshi, Sami K. Solanki, and S. Sriram. The Solar Ultraviolet Imaging Telescope onboard Aditya-L1. In Jan-Willem A. den Herder, Tadayuki Takahashi, and Marshall Bautz, editors, *Space Telescopes and Instrumentation 2016: Ultraviolet to Gamma Ray*, volume 9905, page 990503. International Society for Optics and Photonics, SPIE, 2016. doi: 10.1117/12.2232266. URL https://doi.org/10.1117/12.2232266.

[33] Durgesh Tripathi, Anamparambu Ramaprakash, Aafaque Khan, Avyarthana Ghosh, Subhamoy Chatterjee, Dipankar Banerjee, Pravin Chordia, Achim Gandorfer, Natalie Krivova, Dibyendu Nandy, Chaitanya Rajarshi, and Sami Solanki. The Solar Ultraviolet Imaging Telescope On-Board Aditya-L1. *Current Science*, 113:616–619, 08 2017. doi: 10.18520/cs/v113/i04/616-619.

[34] Durgesh Tripathi, A. N. Ramaprakash, Sreejith Padinhatteeri, Janmejoy Sarkar, Mahesh Burse, Anurag Tyagi, Ravi Kesharwani, Sakya Sinha, Bhushan Joshi, Rushikesh Deogaonkar, Soumya Roy, V. N. Nived, Rahul Gopalakrishnan, Akshay Kulkarni, Aafaque Khan, Avyarthana Ghosh, Chaitanya Rajarshi, Deepa Modi, Ghanshyam Kumar, Reena Yadav, Manoj Varma, Raja Bayanna, Pravin Chordia, Mintu Karmakar, Linn Abraham, H. N. Adithya, Abhijit Adoni, Gazi A. Ahmed, Dipankar Banerjee, B. S. Bhargava Ram, Rani Bhandare, Subhamoy Chatterjee, Kalpesh Chillal, Arjun Dey, Achim Gandorfer, Girish Gowda, T. R. Haridas, Anand Jain, Melvin James, R. P. Jayakumar, Evangeline Leeja Justin, K. Nagaraju, Deepak Kathait, Pravin Khodade, Mandeep Kiran, Abhay Kohok, Natalie Krivova, Nishank Kumar, Nidhi Mehandiratta, Vilas Mestry, Srikanth Motamarri, Sajjade F. Mustafa, Dibyendu Nandy, S. Narendra, Sonal Navle, Nashiket Parate, Anju M. Pillai, Sujit Punnadi, A. Rajendra, A. Ravi, Bijoy Raha, K. Sankarasubramanian, Ghulam Sarvar, Nigar Shaji, Nidhi Sharma, Aditya Singh, Shivam Singh,

Sami K. Solanki, Vivek Subramanian, Rethika T, Srikanth T, Satyanarayana Thatimattala, Hari Krishna Tota, T. S. Vishnu, Amrita Unnikrishnan, Kaushal Vadodariya, D. R. Veeresha, and R. Venkateswaran. The Solar Ultraviolet Imaging Telescope on Board Aditya-L1. *Solar Physics*, 300(3):30, March 2025. ISSN 0038-0938, 1573-093X. doi: 10.1007/s11207-025-02423-1. URL https://link.springer.com/10.1007/s11207-025-02423-1.

[35] S. Seetha and S. Megala. Aditya-L1 mission. *Current Science*, 113(4): 610, August 2017.

[36] Durgesh Tripathi, D. Chakrabarty, A. Nandi, B. Raghvendra Prasad, A. N. Ramaprakash, Nigar Shaji, K. Sankarasubramanian, R. Satheesh Thampi, and V. K. Yadav. The Aditya-L1 mission of ISRO. In Gianna Cauzzi and Alexandra Tritschler, editors, *The Era of Multi-Messenger Solar Physics*, volume 372 of *IAU Symposium*, pages 17–27, January 2023. doi: 10.1017/S1743921323001230.

[37] Janmejoy Sarkar, V. N. Nived, Soumya Roy, Rushikesh Deogaonkar, Sreejith Padinhatteeri, A. Raja Bayanna, Ravi Kesharwani, A. N. Ramaprakash, Durgesh Tripathi, Rahul Gopalakrishnan, Bhushan Joshi, Sakya Sinha, Mahesh Burse, Manoj Varma, Anurag Tyagi, Reena Yadav, Chaitanya Rajarshi, H. N. Adithya, Abhijit Adoni, Gazi A. Ahmed, Dipankar Banerjee, Rani Bhandare, Bhargava Ram B.S., Kalpesh Chillal, Pravin Chordia, Avyarthana Ghosh, Girish Gouda, Anand Jain, Melvin James, Evangeline Leeja Justin, Deepak Kathait, Aafaque Khan, Pravin Khodade, Abhay Kohok, Akshay Kulkarni, Ghanshyam Kumar, Nidhi Mehandiratta, Vilas Mestry, Deepa Modi, Srikanth Motamarri, K. Nagaraju, Dibyendu Nandy, S. Narendra, Sonal Navle, Nashiket Parate, Sujit Punnadi, A. Ravi, K. Sankarasubramanian, Ghulam Sarvar, Nigar Shaji, Sami K. Solanki, Rethika T, Koushal Vadodariya, D. R. Veeresha, and R. Venkateswaran. Test and Calibration of the Solar Ultraviolet Imaging Telescope (SUIT) on Board Aditya-L1. *Solar Physics*, 300(5):60, May 2025. ISSN 0038-0938, 1573-093X. doi: 10.1007/s11207-025-02468-2. URL https://link.springer.com/10.1007/s11207-025-02468-2.

[38] Janmejoy Sarkar, Rushikesh Deogaonkar, Ravi Kesharwani, Sreejith Padinhatteeri, A. N. Ramaprakash, Durgesh Tripathi, Soumya Roy, Gazi A. Ahmed, Rwitika Chatterjee, Avyarthana Ghosh, Sankarasubramanian K., Aafaque Khan, Nidhi Mehandiratta, Netra Pillai, and Swapnil Singh. Science filter characterization of the solar ultraviolet imaging telescope (suit) on board aditya-l1. *Experimental Astronomy*, 59(1):3, Dec 2024. ISSN 1572-9508. doi: 10.1007/s10686-024-09973-5. URL https://doi.org/10.1007/s10686-024-09973-5.

[39] Janmejoy Sarkar, Soumya Roy, Ramaprakash A. N., Rushikesh Deogaonkar, Sreejith Padinhatteeri, Durgesh Tripathi, Avyarthana Ghosh, Raja Bayanna Ankala, and Gazi Ameen Ahmed. Photometric calibration and spectral validation of the Solar Ultraviolet Imaging Telescope onboard Aditya-L1. *Journal of Astronomical Telescopes, Instruments, and Systems*, 11(01), March 2025. ISSN 2329-4124. doi: 10.1117/1.JATIS.11.1.014005. URL https://doi.org/10.1117/1.JATIS.11.1.014005.

[40] H. Angus Macleod. *Thin-Film Optical Filters- Fourth Edition*. CRC Press, Taylor and Francis Group, 2010.

[41] Avyarthana Ghosh, Ravi Kesharwani, Aafaque R. Khan, Sreejith Padinhatteeri, Durgesh Tripathi, A. N. Ramaprakash, Ketan Patel, Tayaramma D. P. V. Jalluri, G. R. Madhumalathi, R. Venkateshwaran, S. Elumalai, Kinshuk Gupta, J. P. Nair, H. Sparrow, R. S. Worlikar, Anit Gupta, and Sanjoy Sen. The thermal filter for the Solar Ultraviolet Imaging Telescope (SUIT) on-board Aditya-L1. In Jan-Willem A. den Herder, Shouleh Nikzad, and Kazuhiro Nakazawa, editors, *Space Telescopes and Instrumentation 2022: Ultraviolet to Gamma Ray*, volume 12181 of *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, page 121813O, August 2022. doi: 10.1117/12.2629760.

[42] Janmejoy Sarkar, Avyarthana Ghosh, Sreejith Padinhatteeri, Ravi Kesharwani, Ramaprakash A. N., Durgesh Tripathi, Bhargava Ram B. S., R. Venkateshwaran, Ketan Patel, Melvin James, Mintu Karmakar, Akshay Kulkarni, Deepa Modi, Chaitanya Rajarshi, Girish M. Gouda, Aafaque R. Khan, Abhijit Adoni, Faisal Mustafa Sajjade, Pravin Khodade, and Abhay Kohok. Design, fabrication, and characterization of the thermal filter assembly on the Solar Ultraviolet Imaging Telescope onboard Aditya-L1. *Journal of Astronomical Telescopes, Instruments, and Systems*, 11(03), July 2025. ISSN 2329-4124. doi: 10.1117/1.JATIS.11.3.034004.

[43] Larry Bradley, Brigitta Sipőcz, Thomas Robitaille, Erik Tollerud, Zé Vinícius, Christoph Deil, Kyle Barbary, Tom J Wilson, Ivo Busko, Axel Donath, Hans Moritz Günther, Mihai Cara, P. L. Lim, Sebastian Meßlinger, Simon Conseil, Zach Burnett, Azalee Bostroem, Michael Droettboom, E. M. Bray, Lars Andersen Bratholm, Adam Ginsburg, William Jamieson, Geert Barentsen, Matt Craig, Brett M. Morris, Marshall Perrin, Shivangee Rathi, Sergio Pascual, and Iskren Y. Georgiev. astropy/photutils: 2.0.2, October 2024. URL https://doi.org/10.5281/zenodo.13989456.

[44] M. Meftah, T. Corbard, A. Hauchecorne, F. Morand, R. Ikhlef, B. Chauvineau, C. Renaud, A. Sarkissian, and L. Damé. Solar radius determined

from PICARD/SODISM observations and extremely weak wavelength dependence in the visible and the near-infrared. A&A, 616:A64, August 2018. doi: 10.1051/0004-6361/201732159.

[45] Manoj Varma, Sreejith Padinhatteeri, Sakya Sinha, Anurag Tyagi, Mahesh Burse, Reena Yadav, Ghanshyam Kumar, Anamparambu Ramaprakash, Durgesh Tripathi, K. Sankarasubramanian, Krishnappa Nagaraju, Koushal Vadodariya, Srikar Tadepalli, Rushikesh Deogaonkar, Manjunath Olekar, Mohamed Azaruddin, and Amrita Unnikrishnan. The Solar Ultra-Violet Imaging Telescope (SUIT) Onboard Intelligence for Flare Observations. Sol. Phys., 298(2):16, February 2023. doi: 10.1007/s11207-023-02108-7.