

Publications from SIMA

[The upper stratospheric solar cycle ozone response](#)

Ball W. T., Rozanov E., Alsing J., Marsh D. R., Tummon F., Mortlock D. J., Kinnison D. E., Haigh J. D. (2019), The upper stratospheric solar cycle ozone response, in *Geophysical Research Letters*.

[Contributions of Natural and Anthropogenic Forcing Agents to the Early 20th Century Warming](#)

Egorova Tatiana, Rozanov Eugene, Arsenovic Pavle, Peter Thomas, Schmutz Werner (2018), Contributions of Natural and Anthropogenic Forcing Agents to the Early 20th Century Warming, in *Frontiers in Earth Science*, 6, 1-8.

[Revised historical solar irradiance forcing](#)

Egorova T., Schmutz W., Rozanov E., Shapiro A. I., Usoskin I., Beer J., Tagirov R. V., Peter T. (2018), Revised historical solar irradiance forcing, in *Astronomy & Astrophysics*, 615, A85-A85.

[The Response of the Ozone Layer to Quadrupled CO₂ Concentrations](#)

Chiodo G., Polvani L. M., Marsh D. R., Stenke A., Ball W., Rozanov E., Muthers S., Tsigaridis K. (2018), The Response of the Ozone Layer to Quadrupled CO₂ Concentrations, in *Journal of Climate*, 31(10), 3893-3907.

[Tropospheric jet response to Antarctic ozone depletion: An update with Chemistry-Climate Model Initiative \(CCMI\) models](#)

Son Seok-Woo, Han Bo-Reum, Garfinkel Chaim I, Kim Seo-Yeon, Park Rokjin, Abraham N Luke, Akiyoshi Hideharu, Archibald Alexander T, Butchart N, Chipperfield Martyn P, Dameris Martin, Deushi Makoto, Dhomse Sandip S, Hardiman Steven C, Jöckel Patrick, Kinnison Douglas, Michou Martine, Morgenstern Olaf, O'Connor Fiona M, Oman Luke D, Plummer David A, Pozzer Andrea, Revell Laura E, Rozanov Eugene, et al. (2018), Tropospheric jet response to Antarctic ozone depletion: An update with Chemistry-Climate Model Initiative (CCMI) models, in *Environmental Research Letters*, 13(5), 054024-054024.

[Multi-model comparison of the volcanic sulfate deposition from the 1815 eruption of Mt. Tambora](#)

Marshall Lauren, Schmidt Anja, Toohey Matthew, Carslaw Ken S., Mann Graham W., Sigl Michael, Khodri Myriam, Timmreck Claudia, Zanchettin Davide, Ball William T., Bekki Slimane, Brooke James S. A., Dhomse Sandip, Johnson Colin, Lamarque Jean-Francois, LeGrande Allegra N., Mills Michael J., Niemeier Ulrike, Pope James O., Poulain Virginie, Robock Alan, Rozanov Eugene, Stenke Andrea, Sukhodolov Timofei, et al. (2018), Multi-model comparison of the volcanic sulfate deposition from the 1815 eruption of Mt. Tambora, in *Atmospheric Chemistry and Physics*, 18(3), 2307-2328.

[Evidence for a continuous decline in lower stratospheric ozone offsetting ozone layer recovery](#)

Ball William T., Alsing Justin, Mortlock Daniel J., Staehelin Johannes, Haigh Joanna D., Peter Thomas, Tummon Fiona, Stübi Rene, Stenke Andrea, Anderson John, Bourassa Adam, Davis Sean M., Degenstein Doug, Frith Stacey, Froidevaux Lucien, Roth Chris, Sofieva Viktoria, Wang Ray, Wild Jeannette, Yu Pengfei, Ziemke Jerald R., Rozanov Eugene V.

(2018), Evidence for a continuous decline in lower stratospheric ozone offsetting ozone layer recovery, in *Atmospheric Chemistry and Physics*, 18(2), 1379-1394.

[Atmospheric impacts of the strongest known solar particle storm of 775 AD](#)

Sukhodolov Timofei, Usoskin Ilya, Rozanov Eugene, Asvestari Eleanna, Ball William T., Curran Mark A. J., Fischer Hubertus, Kovaltsov Gennady, Miyake Fusa, Peter Thomas, Plummer Christopher, Schmutz Werner, Severi Mirko, Traversi Rita (2017), Atmospheric impacts of the strongest known solar particle storm of 775 AD, in *Scientific Reports*, 7(1), 45257-45257.

[Reconciling differences in stratospheric ozone composites](#)

Ball William T., Alsing Justin, Mortlock Daniel J., Rozanov Eugene V., Tummon Fiona, Haigh Joanna D. (2017), Reconciling differences in stratospheric ozone composites, in *Atmospheric Chemistry and Physics*, 17(20), 12269-12302.

[On the aliasing of the solar cycle in the lower stratospheric tropical temperature](#)

Kuchar Ales, Ball William T., Rozanov Eugene V., Stenke Andrea, Revell Laura, Miksovsky Jiri, Pisoft Petr, Peter Thomas (2017), On the aliasing of the solar cycle in the lower stratospheric tropical temperature, in *Journal of Geophysical Research: Atmospheres*, 122(17), 9076-9093.

[HEPPA-II model–measurement intercomparison project: EPP indirect effects during the dynamically perturbed NH winter 2008–2009](#)

Funke Bernd, Ball William, Bender Stefan, Gardini Angela, Harvey V. Lynn, Lambert Alyn, López-Puertas Manuel, Marsh Daniel R., Meraner Katharina, Nieder Holger, Päivärinta Sanna-Mari, Pérot Kristell, Randall Cora E., Reddmann Thomas, Rozanov Eugene, Schmidt Hauke, Seppälä Annika, Sinnhuber Miriam, Sukhodolov Timofei, Stiller Gabriele P., Tsvetkova Natalia D., Verronen Pekka T., Versick Stefan, von Clarmann Thomas, et al. (2017), HEPPA-II model–measurement intercomparison project: EPP indirect effects during the dynamically perturbed NH winter 2008–2009, in *Atmospheric Chemistry and Physics*, 17(5), 3573-3604.

[Modeling of the middle atmosphere response to 27-day solar irradiance variability](#)

Sukhodolov Timofei, Rozanov Eugene, Ball William T., Peter Thomas, Schmutz Werner (2017), Modeling of the middle atmosphere response to 27-day solar irradiance variability, in *Journal of Atmospheric and Solar-Terrestrial Physics*, 152-153, 50-61.

[An upper-branch Brewer–Dobson circulation index for attribution of stratospheric variability and improved ozone and temperature trend analysis](#)

Ball William T., Kuchař Aleš, Rozanov Eugene V., Staehelin Johannes, Tummon Fiona, Smith Anne K., Sukhodolov Timofei, Stenke Andrea, Revell Laura, Coulon Ancelin, Schmutz Werner, Peter Thomas (2016), An upper-branch Brewer–Dobson circulation index for attribution of stratospheric variability and improved ozone and temperature trend analysis, in *Atmospheric Chemistry and Physics*, 16(24), 15485-15500.

[The role of methane in projections of 21st century stratospheric water vapour](#)

Revell Laura E., Stenke Andrea, Rozanov Eugene, Ball William, Lossow Stefan, Peter Thomas (2016), The role of methane in projections of 21st century stratospheric water vapour, in *Atmospheric Chemistry and Physics*, 16(20), 13067-13080.

[Assessing the beginning to end-of-mission sensitivity change of the PREcision MONitor Sensor total solar irradiance radiometer \(PREMOS/PICARD\)](#)

Ball William, Schmutz Werner, Fehlmann Andre, Finsterle Wolfgang, Walter Benjamin (2016), Assessing the beginning to end-of-mission sensitivity change of the PREcision MONitor Sensor total solar irradiance radiometer (PREMOS/PICARD), in *Journal of Space Weather and Space Climate*, 6, A32.

[High solar cycle spectral variations inconsistent with stratospheric ozone observations](#)

Ball W. T., Haigh J. D., Rozanov E. V., Kuchar A., Sukhodolov T., Tummon F., Shapiro A. V., Schmutz W. (2016), High solar cycle spectral variations inconsistent with stratospheric ozone observations, in *Nature Geoscience*, 9(3), 206-209.

[The Model Intercomparison Project on the climatic response to Volcanic forcing \(VolMIP\): experimental design and forcing \hack{\newline} input data for CMIP6](#)

Zanchettin D., Khodri M., Timmreck C., Toohey M., Schmidt A., Gerber E. P., Hegerl G., Robock A., Pausata F. S. R., Ball W. T., Bauer S. E., Bekki S., Dhomse S. S., LeGrande A. N., Mann G. W., Marshall L., Mills M., Marchand M., Niemeier U., Poulain V., Rozanov E., Rubino A., Stenke A., Tsigaridis K., Tummon F. (2016), The Model Intercomparison Project on the climatic response to Volcanic forcing (VolMIP): experimental design and forcing \hack{\newline} input data for CMIP6, in *Geoscientific Model Development*, 9(8), 2701-2719.