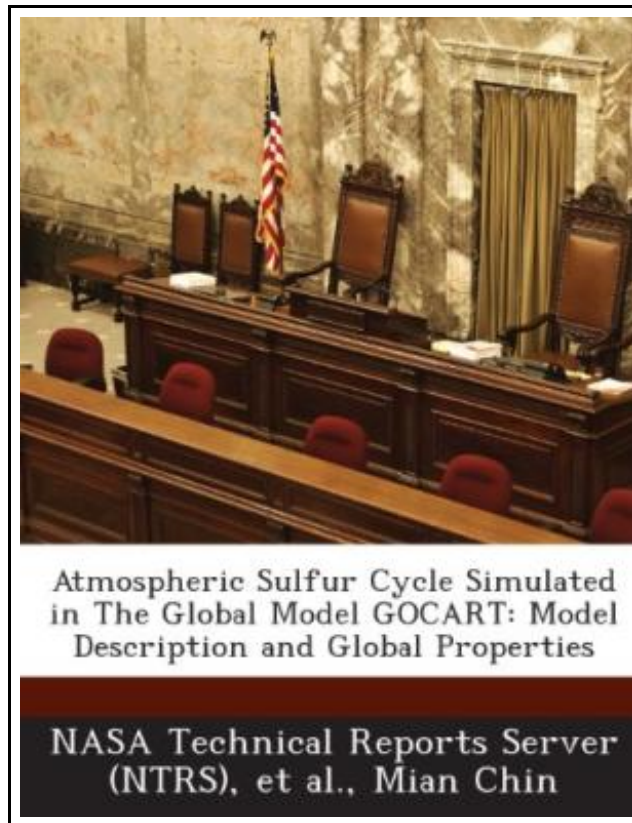


Atmospheric Sulfur Cycle Simulated in the Global Model Gocart: Model Description and Global Properties



Filesize: 1.13 MB

Reviews

Comprehensive guideline for book lovers. It is really simplified but excitement in the fifty percent in the publication. Your daily life period is going to be change as soon as you full looking at this book.
(Kayley Lind)

ATMOSPHERIC SULFUR CYCLE SIMULATED IN THE GLOBAL MODEL GOCART: MODEL DESCRIPTION AND GLOBAL PROPERTIES



BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 34 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. The Georgia TechGoddard Global Ozone Chemistry Aerosol Radiation and Transport (GOCART) model is used to simulate the atmospheric sulfur cycle. The model uses the simulated meteorological data from the Goddard Earth Observing System Data Assimilation System (GEOS DAS). Global sulfur budgets from a 6-year simulation for SO₂, sulfate, dimethylsulfide (DMS), and methanesulfonic acid (MSA) are presented in this paper. In a normal year without major volcanic perturbations, about 20 of the sulfate precursor emission is from natural sources (biogenic and volcanic) and 80 is anthropogenic: the same sources contribute 339 and 67 respectively to the total sulfate burden. A sulfate production efficiency of 0.41 - 0.42 is estimated in the model, an efficiency which is defined as a ratio of the amount of sulfate produced to the total amount of SO₂ emitted and produced in the atmosphere. This value indicates that less than half of the SO₂ entering the atmosphere contributes to the sulfate production, the rest being removed by dry and wet depositions. In a simulation for 1990, we estimate a total sulfate production of 39 Tg S yr with 36 and 64 respectively from in-air and in-cloud oxidation of SO₂. We also demonstrate that major volcanic eruptions, such as the Mt. Pinatubo eruption in 1991, can significantly change the sulfate formation pathways, distributions, abundance, and lifetime. Comparison with other models shows that the parameterizations for wet removal or wet production of sulfate are the most critical factors in determining the burdens of SO₂ and sulfate. Therefore, a priority for future research should be to reduce the large uncertainties associated with the wet physical and chemical processes. This item ships from La Vergne, TN. Paperback.



[Read Atmospheric Sulfur Cycle Simulated in the Global Model Gocart: Model Description and Global Properties Online](#)



[Download PDF Atmospheric Sulfur Cycle Simulated in the Global Model Gocart: Model Description and Global Properties](#)

Related Books



Animalogy: Animal Analogies

Sylvan Dell Publishing. Paperback. Book Condition: New. Cathy Morrison (illustrator). Paperback. 32 pages. Dimensions: 9.8in. x 8.4in. x 0.4in. Compare and contrast different animals through predictable, rhyming analogies. Find the similarities between even the most incompatible...

[Read PDF »](#)



The Whale Tells His Side of the Story Hey God, Ive Got Some Guy Named Jonah in My Stomach and I Think Im Gonna Throw Up

B&H Kids. Hardcover. Book Condition: New. Cory Jones (illustrator). Hardcover. 32 pages. Dimensions: 9.1in. x 7.2in. x 0.3in. Oh sure, we all heard the story of Jonah and the Whale a hundred times. But have we...

[Read PDF »](#)



God Loves You. Chester Blue

Henry and George Press. Paperback. Book Condition: New. Ursula Andrejczuk (illustrator). Paperback. 140 pages. Dimensions: 8.0in. x 5.2in. x 0.3in. BEAUTIFUL NEW ILLUSTRATIONS BRING THE STORY TO LIFE! A charming book about a mysterious bear that shows...

[Read PDF »](#)



Good Night, Zombie Scary Tales

Feiwei & Friends. Paperback. Book Condition: New. Iacopo Bruno (illustrator). Paperback. 112 pages. Dimensions: 8.2in. x 5.4in. x 0.2in. Welcome. Have a seat. Ignore the shambling undead outside. Let us tell you a story. But be...

[Read PDF »](#)



Molly on the Shore, BFMS 1 Study score

Petrucci Library Press. Paperback. Book Condition: New. Paperback. 26 pages. Dimensions: 9.7in. x 6.9in. x 0.3in. Percy Grainger, like his contemporary Bela Bartok, was intensely interested in folk music and became a member of the English...

[Read PDF »](#)