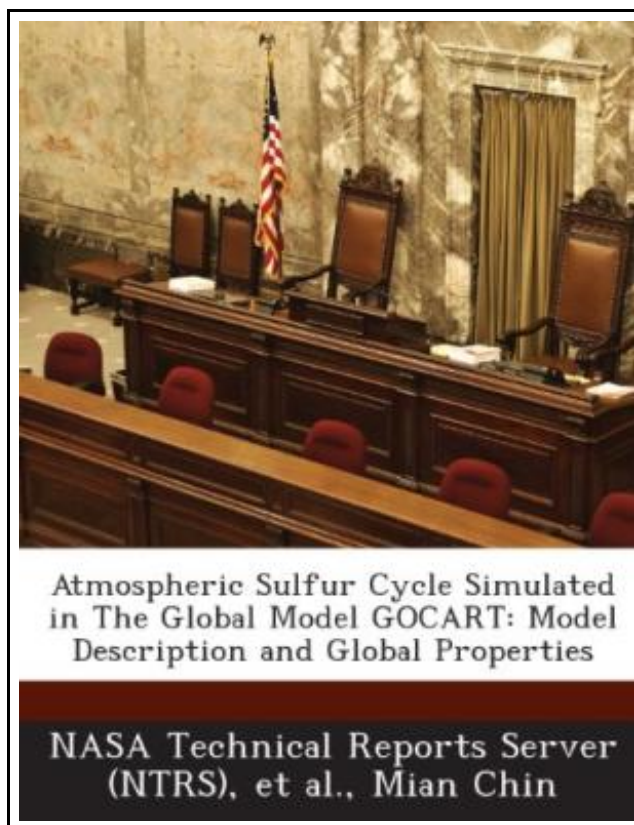


## Atmospheric Sulfur Cycle Simulated in the Global Model Gocart: Model Description and Global Properties



Filesize: 4 MB

### ***Reviews***

*This type of publication is every thing and helped me seeking ahead and much more. It usually fails to charge too much. It is extremely difficult to leave it before concluding, once you begin to read the book.*

*(Juliet Mertz)*

## 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 SO<sub>2</sub>, 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 SO<sub>2</sub> emitted and produced in the atmosphere. This value indicates that less than half of the SO<sub>2</sub> 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 SO<sub>2</sub>. 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 SO<sub>2</sub> 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](#)

## Relevant Books



### **Everything Ser The Everything Green Baby Book From Pregnancy to Babys First Year An Easy and Affordable Guide to Help Moms Care for Their Baby And for the Earth by Jenn Savedge 2009 Paperback**

Book Condition: Brand New. Book Condition: Brand New.

[Save Document »](#)



### **And You Know You Should Be Glad**

HarperCollins Publishers Inc, United States, 2014. Paperback. Book Condition: New. Reprint. 201 x 132 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.A highly personal and moving true story of friend-ship and...

[Save Document »](#)



### **Read Write Inc. Phonics: Set 7 Non-Fiction 3 the Ice and Snow Book**

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. 207 x 86 mm. Language: N/A. Brand New Book. These decodable non-fiction books provide structured practice for children learning to read. Each set of books...

[Save Document »](#)



### **Index to the Classified Subject Catalogue of the Buffalo Library; The Whole System Being Adopted from the Classification and Subject Index of Mr. Melvil Dewey, with Some Modifications .**

Rarebooksclub.com, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.This historic book may have numerous typos and missing text. Purchasers can usually...

[Save Document »](#)



### **Kid Toc: Where Learning from Kids Is Fun!**

Createspace, United States, 2012. Paperback. Book Condition: New. Hanne Simone Larsen (illustrator). 254 x 203 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.Where learning to read from kids is fun!...

[Save Document »](#)