

Distribution of minor constituents in Venus' atmosphere calculated by an atmospheric general circulation model

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Venus is covered with thick clouds of sulfuric acid droplets, and the atmospheric motion below the cloud tops is hidden from observation. However, some minor constituents in the lower atmosphere are observed from above the clouds. Since distributions of materials are affected by advection, we may infer the atmospheric circulation from the distribution of minor constituents. In this study, we have developed an atmospheric general circulation model with chemistry in Venus' atmosphere, and calculated three-dimensional distributions of CO, H₂O, and H₂SO₄. The general circulation in Venus' atmosphere is examined based on a comparison of the calculated distribution and observation.

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