# Macro Roundup Artcile

**Headline:** **Abrupt Reduction In Shipping Emission As An Inadvertent Geoengineering Termination Shock Produces Substantial Radiative Warming**

**Article Link:** https://www.nature.com/articles/s43247-024-01442-3

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| Author(s) | Tianle Yuan, Hua Song, Lazaros Oreopoulos, et al. |
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**Tweet:** A 2020 mandate that reduced the emission of sulfur dioxide from international shipping by about 80% likely doubled the rate of global warming by reducing the amount of light being reflected back into space.

**Summary:** In 2020, fuel regulations abruptly reduced the emission of sulfur dioxide from international shipping by about 80% and created an inadvertent geoengineering termination shock with global impact. Here we estimate the regulation leads to a radiative forcing of Wm−2 averaged over the global ocean. The amount of radiative forcing could lead to a doubling (or more) of the warming rate in the 2020s compared with the rate since 1980 with strong spatiotemporal heterogeneity. The warming effect is consistent with the recent observed strong warming in 2023 and expected to make the 2020s anomalously warm. The forcing is equivalent in magnitude to 80% of the measured increase in planetary heat uptake since 2020. The radiative forcing also has strong hemispheric contrast, which has important implications for precipitation pattern changes.

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**Primary Topic:** Global Warming

**Topics:** Academic paper, Database, Global Warming, Important!, Science

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