

International Radiation Commission <http://www.irc-iamas.org/>
International Association of Meteorology and Atmospheric Sciences



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STATEMENT ON RADIATION MANAGEMENT FOR CLIMATE ENGINEERING

The International Radiation Commission (IRC) notes that the International Association of Meteorology and Atmospheric Sciences (IAMAS) as well as two of its commissions, the International Commission on Clouds and Precipitation (ICCP) and the International Ozone Commission (IO3C), have published statements of caution regarding Radiation Management for Climate Engineering. The IRC recognizes and fully endorses those statements. Based on the commission's specific focus on radiation processes, the IRC adds the following recommendation:

It is well known that modifications of the Earth's incoming and outgoing radiative energy flows impact many other quantities coupled to radiation in the climate system, ultimately altering carbon, energy and water cycles. Thus it is generally invalid to consider changes to Earth's radiation balance in isolation. Ongoing research, assessed by the Intergovernmental Panel of Climate Change (IPCC), has highlighted that radiation management does not provide simple one-to-one offsets of anthropogenic influences but instead, benefits certain locations or seasons while harming others. Therefore, geo-engineering of the climate system should not be implemented without considering the risks of unintended side effects. A deeper understanding and quantification of the dominant processes and their impacts on the integrated system is required, including during the periods after radiation management is turned off. The IRC considers it necessary that a comprehensive assessment of all aspects is mature before radiation management is implemented.

Undersigning:

The members of the International Radiation Commission (<http://www.irc-iamas.org>)

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IRC is a commission of IAMAS (<http://www.iamas.org>),

which is an association of IUGG (<http://www.iugg.org>),

which is a member of the International Council for Science (<http://www.icsu.org>).

A handwritten signature in black ink, appearing to read 'W. Schmutz', with a long horizontal flourish extending to the right.

Werner Schmutz
President, International Radiation Commission