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Discussions

# *Interactive comment on* "Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2 °C global warming is highly dangerous" *by* J. Hansen et al.

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"Sweden: "Only by turning the fan and expenditure of external energy will the cold be transported, by convection and not radiation, from the colder coil to the warmer room."

Cold is never transported; it is the heat that is transported from the room via the air conditioner thus making the room colder i.e. the removal of heat makes the room colder not the removal of cold. This is a basic principal or should I say: a basic and primitive law of nature."

Well said, and thank you for correcting my poor selection of words of the last paragraph of my reply, comment C6298.

Backradiation=$\varepsilon \sigma$ (Tc) Exp 4

Where backradiation is the energy from the cold object to the hot object. Tc is the temperature of the cold object. Clearly backradiation is an energy (or heat) that measures the temperature of the cold object. It is heat with respect to the zero absolute but COLD, in practical terms, with respect to the hot object. In practical terms, Backradiation is a radiation of the cold.

You cannot say cold can never be transported but it can be radiated. You should be consistent. Cold cannot be exchanged in any form. Therefore, Backradiation cannot exist.

You cited publications that measured backradiation. Are we sure that they were really measuring backradiation from the atmosphere and not from the surroundings or the instruments themselves? Please check the procedure.

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 20059, 2015.