

COMMENT ON "FALSIFICATION OF THE ATMOSPHERIC CO<sub>2</sub> GREENHOUSE EFFECTS  
WITHIN THE FRAME OF PHYSICS"

<http://chriscolose.wordpress.com/2010/05/08/stoat-taking-science-by-the-throat-latest-posts-archives-about-rss-contact-profile-me-my-family-and-me-more-make-sure-youre-familiar-with-the-comment-polic/#comment-2561>

By Michele

Energy is a scalar physical quantity that acts in different forms, all equivalent between them. If not constricted (potential energy) it spreads in order to be shared with environment flowing according to the gradient of its density, measured in joules per cubic meter that correspond to newtons per square meter, that's a pressure. In other words the energy flows in a gradient field and it's well known that its field lines not intersect never, i.e. at any point of the space exists only one vector (the resultant of some presumable components) tangent to it and the effect caused at that point is only one: the vector, if not zero, solely operates in a direction or in the opposite direction.

At the Earth's surface the energy flows as sensible and/or latent heat and as EMR. There will occur only a single sensible heat flow, only a single latent heat flow, and for any frequency into the whole spectrum, only a single EMR flow that, in not zeros, are directed or upward or downward.

Then, the feedback radiation isn't possible because in this case the energy could flow in contrast to its gradient and hence to the second law of thermodynamics, that has a general value for any form of energy, not only for the heat. Otherwise we come back to the 19th century.

The EMR energy density is given by Plank's law that's a decreasing function of the temperature, then the EMR energy can flow only according to decreasing temperatures, as does the heat flow. Naturally, this is solely valid for those frequencies for which there's thermodynamic equilibrium between the thermal energy that becomes EMR energy and vice versa. That means that one can't apply Plank's law to CO<sub>2</sub> 15 microns IR into Earth's atmosphere (or of another planetary atmosphere) since the planetary temperature is too low to thermally excite the CO<sub>2</sub> molecule at the bending resonance frequency needed to emit a 15 microns photon. That can occur into a star, not into a planet. But that's another matter.

----

Thanks Michele, great explanation. Wish more people understood energy the way you do.