*"Climate Scientists" like **Al Gore** invoke the phrase "radiative balance" and claim that without the "greenhouse effect" the Earth's temperature would be 33 Celsius colder . The classic computations here show the maximally biased useless nature of that assumption .*
*When these computations are applied to the parameters of Venus , they show **James Hansen**'s claim that its surface temperature is due to a"runaway greenhouse effect" does not compute .*
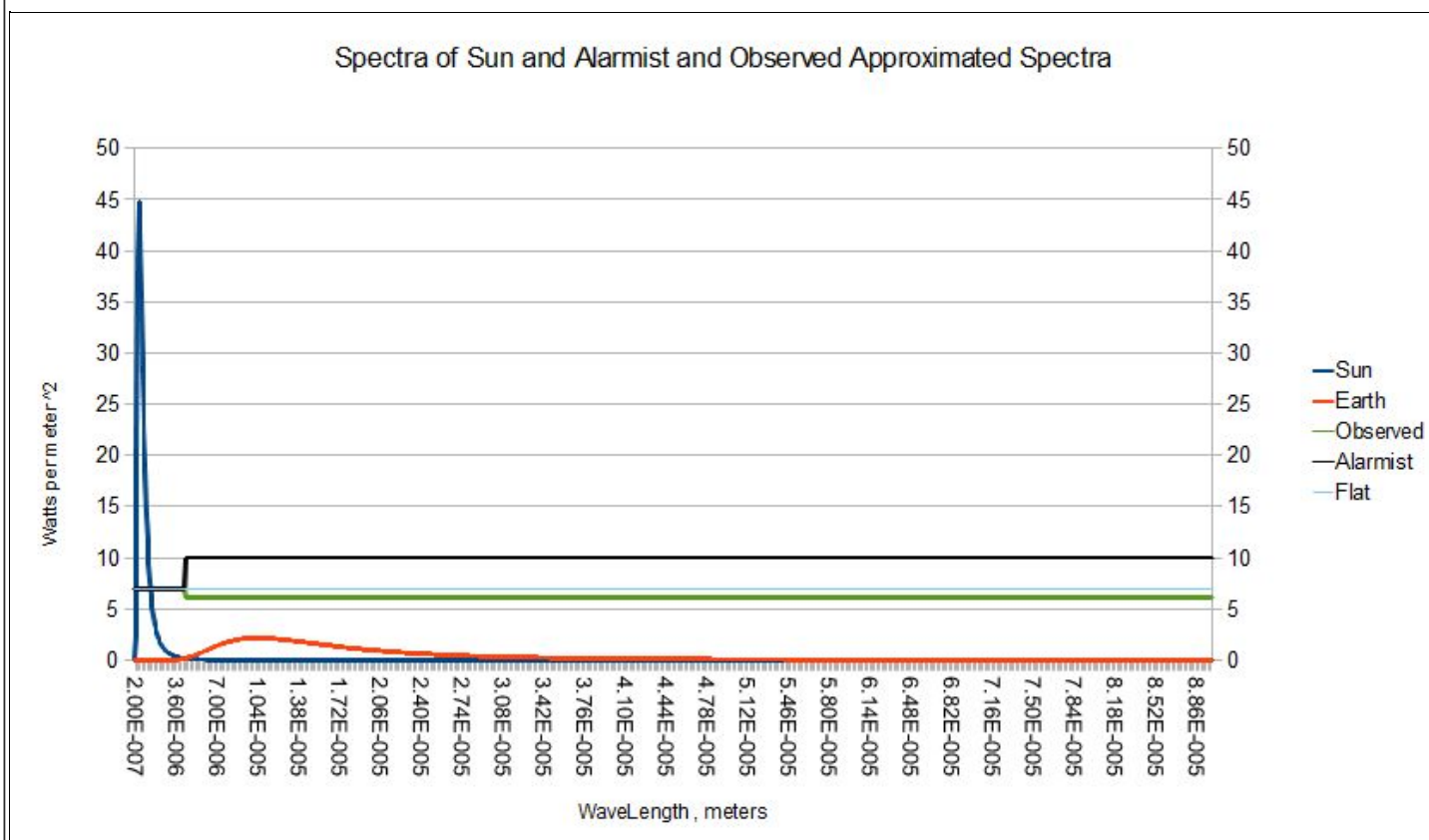
Calculation of Earth's Radiative Balance © Bob Armstrong

Thu.Feb,20130207

Below is a graph showing the calculation of Earth's *radiative balance* given a few different assumptions .

The basics , how to calculate the equilibrium of a gray ball in our orbit , are at Category:Essential Physics - ClimateWiki which is a Heartland site . That provides the basis for How to Calculate the Temperature of a Radiantly Heated Colored Ball which culminates in the graph below :

The blue and red curves are the Planck energy , *black body* , spectra of the sun , scaled to our distance from it , and of a black body in equilibrium with it . The areas under the 2 curves are equal . The temperature generating the red curve is 278.7 kelvin .

The absorptivity of the earth with respect to the sun's spectrum is about 0.7 . There is a line across the sun's spectrum at 7 on the graph . The simple flat , *gray* , spectrum line is extended in very light blue across the graph .

Multiplying by 0.7 or any constant clearly won't change the *radiative balance* between the blue and red spectra . Thus a *gray* ball , no matter how dark or light , will come to the same equilibrium temperature . This is the fact (Kirchhoff-Stewart) that I learned as a grade school nerd during the Eisenhower administration which has driven my battling this global statist nonscience .

The Stefan-Boltzmann law is simply that energy is proportional to the 4th power of temperature . Thus , In order to explain our 3% warmer than gray observed 288 or so temperature , we have to be about 15% less absorptive , more reflective , in the long wavelengths than our 0.7 with respect to the sun . The green line continues at the ~ 0.6 that works out to .

The black line at 10 (1.0) manifests the ubiquitous assertion that without greenhouse gases , our planet would radiate as a black body . It produces a temperature of about 255.7 . This number and 33c *greenhouse effect* generated by this calculation has grossly retarded any progress in *climate science* . The field , both sides , just career around in their computational clouds somehow trying to make sense of a quantity which is 2%3 their own creation .

I think it rather obvious that given any particular full spectrum , its radiative balance can be calculated . This balance depends on its spectrum as seen from the outside , not on how it gets there . Thus it is open to experimental verification as it has been for more than a century .

It's when when applying these calculations to Venus came up in a blog exchange things really got interesting . But I'll leave that to my End of 2012 NewsLetter .

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