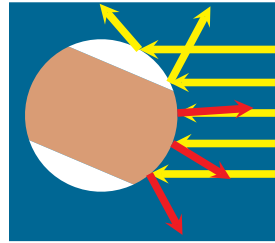
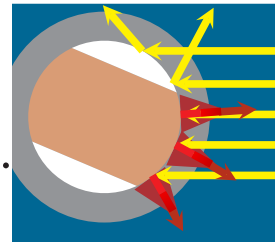


Preface — Quick Tutorial on Global Warming (presented Mar. 2008)



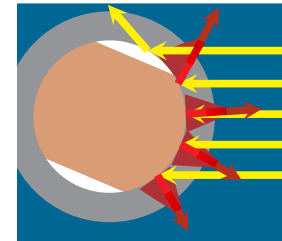
Why are Carbon Dioxide and Methane called “Greenhouse Gases”?

- They are transparent to 1μ radiation, which is most of what the sun sends.
- They block a good amount of 10μ radiation, which is what the earth mostly reradiates.
- Water vapor is transparent to both 1μ and 10μ . Water droplets block both.



Why are melting polar ice-caps very dangerous?

- Ice reradiates a lot of energy from the sun at the same 1μ that is *not* blocked by Greenhouse Gases.
- Less ice \rightarrow less 1μ reradiation \rightarrow more warming \rightarrow less ice.



How will global warming destroy civilization?

- More extreme weather will break down the infrastructure of civilization.
- Recent tornadoes, droughts, floods, snows are all indications.
- If Gulf Stream breaks down, much of Russia may become uninhabitable.