

NEF11-2011-020006

Abstract for an Invited Paper
for the NEF11 Meeting of
the American Physical Society

Climate v. Climate Alarm

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The underlying physics of climate contains important elements that are widely agreed on though frequently misunderstood. In this lecture, the basic physics of greenhouse warming are simply described. It will be shown that the dynamic mixing of the troposphere is essential to the mechanism. It will further be shown that there is nothing intrinsically alarming in the basic physics. Alarm depends critically on the assertion that the climate system is dominated by large positive feedbacks that greatly amplify such warming as may be due to increasing CO₂ alone. The nature of possible feedbacks will be described, and the conditions for observationally determining such feedbacks will be explained. It will be seen that the feedback factors, themselves, can be subject to fluctuations, so that large positive feedbacks could occasionally lead to instability. A variety of attempts to evaluate such feedbacks will be described. Some will be shown to be clearly incorrect. The remaining approaches suggest that feedbacks are small and even negative, suggesting little basis for alarm.