Hamburg Photon Science Colloquium

THEORY, COMPUTATION, AND OBSERVATIONS OF GLOBAL WARMING

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I will introduce the basic theory of global warming, and how our physical understanding has evolved to allow (nearly) a-priori estimates of its magnitude based on a few simple assumptions. The use and character of models will be presented, first as a manifestation of the theory, later as an embedding of the theory to facilitate observational tests, and lastly as a way to relax some of the assumptions needed for more principled calculations.

I will show how more fundamental models are allowing us to go beyond a global picture, and present some of the first observations that allow direct tests of the assumptions and predictions of the basic theory. At the end a few of the frontiers and controversies will be sketched.

FRIDAY,
17.10.2025

2:00 PM

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