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DR. KATE MARVEL
Columbia University and NASA GISS

Climate change: how hot will it get?

The scientific consensus is clear: climate change is happening now. Human activities, particularly the emission of greenhouse gases, are warming the planet. But how hot is it really going to get? This depends on how aggressively society moves to limit CO₂ emissions, but surprisingly, even if we could predict this exactly, we still wouldn't be sure. This is because an increase in the average temperature of the planet changes things: ice melts, rainfall patterns shift, clouds appear and disappear. And these changes can, in turn, speed up or slow

down the rate of planetary warming. In this talk I'll discuss what we know about these "feedbacks" to climate change. I'll discuss the computer simulations we use to project the future and the satellites we use to observe the present. There's good news: increases in computational power and a growing body of observational evidence have substantially advanced our understanding of these feedbacks. But there's also bad news: the evidence suggests that we may be in for a hotter future than originally thought.

