I heard renowned climate scientist Dr. James Hansen speak at UCLA last week, and one of his key messages was that we need to get a better handle on the importance and effect of aerosols on the Earth's warming. He was quite excited about the launch of a new NASA satellite that would gather data to tell us more about aerosols and their effects. This morning, that launch failed and the satellite crashed into the southern Pacific. Read the story here and here.

Aerosols (as described here) are tiny particles suspended in the atmosphere, and they come from both manmade and natural sources. Air pollution often consists of aerosols from burning fossil fuels, biomass and coal. Aerosols act to cool the earth, counteracting the effect of greenhouse gases such as carbon dioxide and, in this way, essentially buffering us from the full brunt of global warming. Hansen's message last week was that he suspects that aerosols are doing more of this 'buffering' that most people (and climate models) assume. If true, this would mean that worldwide efforts to reduce traditional air pollution, as laudable and tremendously worthwhile as they are,
may have significant unintended consequences for climate change.

With the failure of this launch, it'll take us a while longer to figure out if he's right.