

One of the biggest difficulties in climate models is posed by clouds. Modelers need to know what kinds of clouds will form, at what altitudes, and with what precipitation resulting. These turn out to be very hard to calculate, and scientists use heuristic approximations to fill the gaps. A new study suggests that on the whole, models are getting cloud behavior pretty much right, and that clouds probably cause a moderately positive feedback effect on climate, augmenting temperature increases.

As [ClimateWire](#) explains:

The new analysis is based on the first 10 years of data collected by an instrument flying aboard NASA's Terra satellite that monitors how much radiation is entering and leaving Earth's atmosphere. The instrument, known as CERES (short for "Clouds and Earth's Radiant Energy System"), began collecting information in March 2000.

Dessler used the data to determine how the El Niño-Southern Oscillation weather cycle affected the amount of radiation leaving the atmosphere over a 10-year period — an indirect measurement of cloud behavior and the ensuing climate response.