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The stable stationary value of the Earth's global average Planck-weighted greenhouse-gas optical thickness

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By the line-by-line method, a computer program was used to analyze Earth atmospheric radiosonde data from hundreds of weather balloon observations. Fundamental infrared atmospheric radiative flux components were calculated: at the top boundary, the outgoing long wave radiation, the surface transmitted radiation, and the upward atmospheric emittance; at the bottom boundary, the downward atmospheric emittance. The partition of the outgoing long wave radiation into upward atmospheric emittance and surface transmitted radiation components is based on the accurate computation of the true greenhouse-gas optical thickness for the radiosonde data. In the 1948-2008 time period the global average annual mean true greenhouse-gas optical thickness is found to be time-stationary.