

SOFIA: The Next Airborne Observatory

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Abstract

The Stratospheric Airborne Observatory will fly at altitudes of 12.5 – 13.7 km, above 99% of the atmosphere's water vapor. This will open nearly the entire spectrum for observations, from near-UV to beyond sub-millimeter wavelengths. SOFIA's spectrographs will see many atomic and molecular features which have been either poorly studied or undetected thus far; their interpretation will rely heavily on laboratory astrophysics data. The SOFIA observatory, instrumentation, and mission are described in this talk. Examples of observations of interest to laboratory astrophysicists will be given, and there will be some discussion of what laboratory astrophysics data are needed to ensure that SOFIA will achieve NASA's astrophysics goals.

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