

12.818: INTRODUCTION TO ATMOSPHERIC DATA AND LARGE-SCALE DYNAMICS

PROJECT THREE: CONVECTION AND ATMOSPHERIC
THERMODYNAMICS

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In this project we will investigate the nature of convection in the lower troposphere, which is the mechanism responsible for transporting heat from terrestrial radiation vertically upward to the upper troposphere where water vapor concentration and thus infrared absorption is much lower, allowing it to be emitted to outer space.

To carry out this investigation, we will use observed temperature profiles from radiosonde soundings to study the onset of convection in the lower atmosphere.