

Layers of the Atmosphere

Layer	Mass of Air	Altitude	Air Pressure	Temperature	Description (found here)
Toposphere	75% - 80% of atmosphere	7 to 20 Km (4 to 12 miles) above sea level	gets less as go higher	@ top (-60°F)	lowest layer weather occurs here nearly all water vapor + dust particles; most clouds here jet stream here air 'stirred up' here.
Thermopause Stratosphere		Top @ 50 Km (31 miles) (8 km to 50 km)	1000x thinner gets less as go higher	Temp. increases as rise through Stratosphere	2nd layer Ozone layer found here air stable here Commercial jet aircraft fly in lowest area dry air; little water vapor
Stratopause Mesosphere		50 Km - 85 Km (31 miles - 53 miles)	gets less as go higher	as get higher temp decreases Top is coldest part @ -130°F	3rd layer most meteors burn up here Noctilucent clouds form here lightning occurs here called sprites + elves air thin → atoms/molecules rarely run into each other
Mesopause Thermosphere		90 Km to between 500 + 1000 Km (50 miles to 311 to 621 miles)	less as get higher	Climb in lower Thermosphere ~360°F hotter in day 900°F hotter when Sun active 932°F to 3,632°F	4th layer Solar activity influences temp. air density so low we typically think of this as outer space space shuttle + International Space Station orbit here absorbs most of X-ray and UV light from Sun Aurora here
Thermopause Exosphere		500 Km - 10,000 Km	extremely thin little to no air particles		atoms/molecules escape into space here 5th layer line between Earth's atmosphere and interplanetary space particles can travel for long distances before bumping into other particles