

The last word

FREE-FALLING

What is the greatest height from which one could parachute, and why does such a limit exist?

● The chief factor limiting the height is the jump vehicle. No plane carrying humans has exceeded about 26,000 metres, and at that altitude it is going too fast to drop a human. Spacecraft travel higher but are faster still, so the parachutist would need a heat shield to survive re-entry. The only human-carrying vehicles that fill the gap between aircraft and spacecraft are balloons, so the maximum height is that which a balloon can reach. This is 34,668 metres, set by US naval officers, Victor Prather and Malcolm Ross, flying from the USS Antietam in the Gulf of Mexico on 4 May 1961. However, they didn't jump.

The highest-altitude parachute jump was made by Joseph Kittinger of the US airforce, who jumped from a balloon at 31,333 metres on 16 August 1960. He was in free fall for 4 minutes

per second. As air thickens, velocity decreases. For most skydivers are decelerating.

Falling through higher, you would be travelling fast the terminal velocity of the when you meet it and the peaks. Effectively, you collide atmosphere. During his jump Kittinger felt this force as a feeling, peaking at about 1. around 23,000 metres.

A fall from 75,000 metre give a 3 g impact with the at about 31,000 metres, which wear out over 20 seconds or when the jump would become uneventful skydive. A skydiver re-entering from low Earth not suffer much more than position their body across to to lengthen the time of impact the atmosphere it would get

I write as a skydiver of 21
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● Kittinger wore a full press