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Advective and gravity wave laminae in central Europe

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Ozone laminae are narrow layers of enhanced or depleted ozone concentration. The
main processes which lead to their formation are advection and gravity wave activity. The aim of this paper is quantifying these processes in central Europe. We compare the occurrence of laminae induced by advection with the occurrence of that induced by gravity wave. We show that the advective laminae are 3-5 times more frequent than gravity wave ones. There is a strong yearly course of advective laminae while the gravity wave laminae exhibit only very weak course. With the increasing lamina size the share of gravity waves decreases and the share of advective laminae increases. The vertical profile of lamina occurrence in different for small advective and gravity wave laminae. Tre trend of large lamina number is given by the trend in advective laminae not in the gravity wave ones.