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Microplastics: All Up in the Air?

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It is often said that plastics, and particularly microplastics (<5mm), are all around us, especially in the oceans where there is much concern about possible harmful effects on marine life. The route of entry for plastics to the marine environment is generally seen to be via rivers acting as a conduit after their production on the land by a whole host of processes and uses by our societies. But in all the discussion on the topic and rapidly growing research activity, the atmosphere barely gets a mention.

But, recently published results show significant amounts of microplastics in air at a remote terrestrial location in the Pyrenees (Allen et al., 2019, *Nature Geoscience* **12**:339). However, there appear to be no results from measurements over the oceans. If these results from the Pyrenees are representative of the marine atmosphere a simple calculation indicates a significant atmospheric route for the distribution of microplastics and their subsequent deposition to the oceans. If correct such a pathway would lead to the distribution of microplastics wider and faster than by ocean circulation alone. It would also more readily explain why microplastics have been reported recently in Arctic snow (Bergmann et al., 2019, *Sci. Adv.* **5**: eaax1157). In addition, it would also lead to a reframing of our understanding of the budget and distribution of microplastics globally.

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