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Aviation induced cloud over the North Atlantic

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We show from a range of satellite data a visually striking example of persistent line-shaped contrails located to the Northwest of the British Isles on the 1st of September 2007, before sunrise. We explain how their distinctive formation was governed by the atmospheric conditions at the time (specifically the position of the Polar jet stream), and unintentionally enhanced by human action. An estimation of the local instantaneous LW radiative forcing of the persistent linear contrails is given based on CERES data (20.96 ± 0.26 W/m2). However, we also show how later in the day the contrails developed in to cirrus, making an estimation of their complete radiative impact difficult to determine.