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Temporal variations of atmospheric ammonia (NH₃) derived from over a decade of IASI satellite measurements

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The Infrared Atmospheric Sounding Interferometer (IASI) mission consists of a suite of three infrared sounders providing today over 13 years of consistent global measurements (from end of 2007 up to now). In this work we use the recently developed version 3 of the IASI NH₃ dataset to derive global, regional and national trends from 2008 to 2018. Reported national trends are analysed in the light of changing anthropogenic and pyrogenic NH₃ emissions, meteorological conditions and the impact of sulphur and nitrogen oxides emissions. A case study is dedicated to the Netherlands. Temporal variation on shorter timescales will also be investigated.