



Mean tropospheric VCD of NO₂ from SCIAMACHY 2003-2007 after masking out continents and applying a high-pass filter to remove the tropospheric NO₂ background. From space, the major shipping routes can clearly be identified, where large cargo vessels release their exhausts in the otherwise clean oceanic atmosphere. As international trade volume has increased over the last decade, so has the importance of ship emissions on air quality close to shipping lanes at coastal regions and in particular near harbors. Update from Beirle et al. (2004) and Richter et al. (2004).