



Tropospheric NO₂ VCDs over the US East Coast (top) and Europe (bottom) averaged separately for different weekdays, based on GOME measurements for the time period 1996-2001. In Europe or the US, NO₂ is significantly reduced over weekends due to less traffic and industrial activities. This is different in other regions of the world: In Islamic cities, a Friday minimum is observed, while in Israel, Saturday shows lowest values. In China, NO₂ pollution stays on the same level throughout the week at least in GOME data. More recent satellite data indicates that a weekend effect is developing in China as well as traffic emissions become more important. The weekly cycle of NO₂ holds important information on source type (traffic, industry etc.), but also the lifetime of nitrogen oxides (which controls e.g. in how far the Monday levels are influenced by the Sunday reductions). From Beirle et al. (2003).