



Fig. 1. Synthetic absorption spectrum of the sky between 0.3 and 30 μm calculated with LBLRTM (resolution $R \sim 10\,000$) using the annual mean profile for Cerro Paranal (Noll et al. 2012). The eight main molecules O_2 , O_3 , H_2O , CO , CO_2 , CH_4 , OCS , and N_2O contribute more than 5% to the absorption in some wavelength regimes. The red regions mark the ranges where they mainly affect the transmission, minor contributions of these molecules are not shown. The green regions denote minor contributions (see Table 1) from the following molecules: (1) NO ; (2) HNO_3 ; (3) COF_2 ; (4) H_2O_2 ; (5) HCN ; (6) NH_3 ; (7) NO_2 ; (8) N_2 ; (9) C_2H_2 ; (10) C_2H_6 ; and (11) SO_2 .