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Evaluation of the NMMB/BSC-CHEM gas-phase results at global scale for summer 2004

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The model NMMB/BSC-CHEM is a chemical weather prediction system under further development at the Earth Sciences Department of the Barcelona Supercomputing Center. It is a new fully on-line system for meso to global scale applications. The atmospheric driver is the NCEP/NMMB numerical weather prediction model developed at National Centers for Environmental Prediction (NCEP). In this contribution, we present an evaluation of the gas-phase chemistry for summer 2004 at global scale. Background surface O3, NO2 and CO observations from GAWSIS are used complemented with ozonosondes available for the period under study. The model is configured with the CBM-05 chemical mechanism, Fast-J photolysis scheme, dry deposition, and wet deposition from grid and sub-grid scale clouds, all processes coupled on-line within NMMB atmospheric driver. Updated POET emissions are used as anthropogenic emissions while the online MEGAN model computes the biogenic emissions.