Supplementary Materials for

Evolution of Tropospheric Ozone and Surface Temperature in Mexico City from 2000 to 2021

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Table S1. RAMA and REDMET instrumentation

Parameter / variable	Instrument	Brand	Model (based on documents and audits) / Source	Comments
Ozone (O_3)	Continuous UV photometric analyzer	Thermo Environmental / Thermo Scientific and Teledyne API (API)	Thermo 49i; Teledyne API 400E, 400A (and T400). (Aire CDMX)	Audits from 2012–2018 list 49i and API 400E/400A at stations and in the SIMAT laboratory. The network uses a mix of Thermo and API depending on the season and year.
NO, NO_2, NOx	Continuous chemiluminescent analyzer	Thermo Environmental / Thermo Scientific and Teledyne API	Thermo 42i; Teledyne API 200 / T200. (Aire CDMX)	Audits show that NOx is measured with 42i at some stations and API 200/T200 at others.
SO_2	Continuous UV Fluorescent Analyzer	Teledyne API and Thermo Environmental	Teledyne API T100 / 100 / 100E; Thermo 43i. (Aire CDMX)	The reports and audits mention SO_2 Analyzer – Model T100, API 100E/T100 and Thermo 43i.
CO	Continuous IR analyzer (gas filter correlation)	Teledyne API and Thermo Scientific	Teledyne API T300 (CO Analyzer); Thermo 48i. (Aire CDMX)	The 2012–2018 audits report T300 (API) at several stations and 48i (Thermo) in the laboratory and at other sites.
PM_{10}	Continuous monitoring by beta attenuation / TEOM	Met One, Thermo Scientific	BAM-1020 (Met One); Thermo FH62C-14 (beta gauge); Thermo TEOM 1405DF / 1405. (Aire CDMX)	The BAM-1020 is documented for PM_{10}/$PM_{2.5}$ in SIMAT; beta gauge Thermo FH62C-14 and TEOM 1405DF are also used according to audits.
$PM_{2.5}$	Idem PM_{10}	Met One, Thermo Scientific	BAM-1020; Thermo FH62C-14; Thermo TEOM 1405DF. (RIAA UAEM)	Since 2003, $PM_{2.5}$ has been incorporated in several RAMA stations with BAM-1020; recent audits show coexistence with FH62C-14 and TEOM 1405DF.
PST, Pb y others in particulated matter (REDMA / laboratory)	High-volume handheld samplers, metal analyzers	Tisch, others	SMCA manuals and reports in Mexico mention Tisch as a typical supplier of high-volume samplers; the specific use in SIMAT is inferred from SMCA strengthening documents. (Gobierno de México)	This applies more to REDMA and the laboratory (LAA) than to the strict RAMA, but it is part of the SIMAT "ecosystem".

Parameter / variable	Instrument	Brand	Model (based on documents and audits) / Source	Comments
Weather: wind speed (VV)	Anemometer (cup/sonic)	Not documented by brand in SIMAT	INECC Manual 3 for air quality networks describes typical sensors (cup/sonic anemometers) but does not specify a single brand for SIMAT. (RIAA UAEM)	There are no documents that specifically mention the brand.
Weather: wid directon (DV)	Wind vane / sonic sensor	—	Ídem VV. (RIAA UAEM)	—
Temperature (T)	RTD / resistance thermometer	—	Some manuals mention RTD type sensors; recent theses refer to Manual 3 of the INECC. (RIAA UAEM)	—
Relative humidity (HR)	Capacitive hygrometer	—	—	—
Atmospheric pressure	Electronic barometer	—	—	
Global solar radiation / UV	Pyranometer, UV radiometer	Skye	Reports mention the Skye brand for radiation sensors in Mexican networks, without specific details for Mexico City. (Gobierno de México)	—

Sources:

Audit 2018: https://www.aire.cdmx.gob.mx/descargas/monitoreo/2018_audit_report_Final.pdf

Audit 2017: https://www.aire.cdmx.gob.mx/descargas/monitoreo/2017_audit_report_Final.pdf

Audit 2005: https://www.aire.cdmx.gob.mx/descargas/monitoreo/audit2005simat-report.pdf

Exponential adjustment of two periods (2000-2009, 2010-2021)

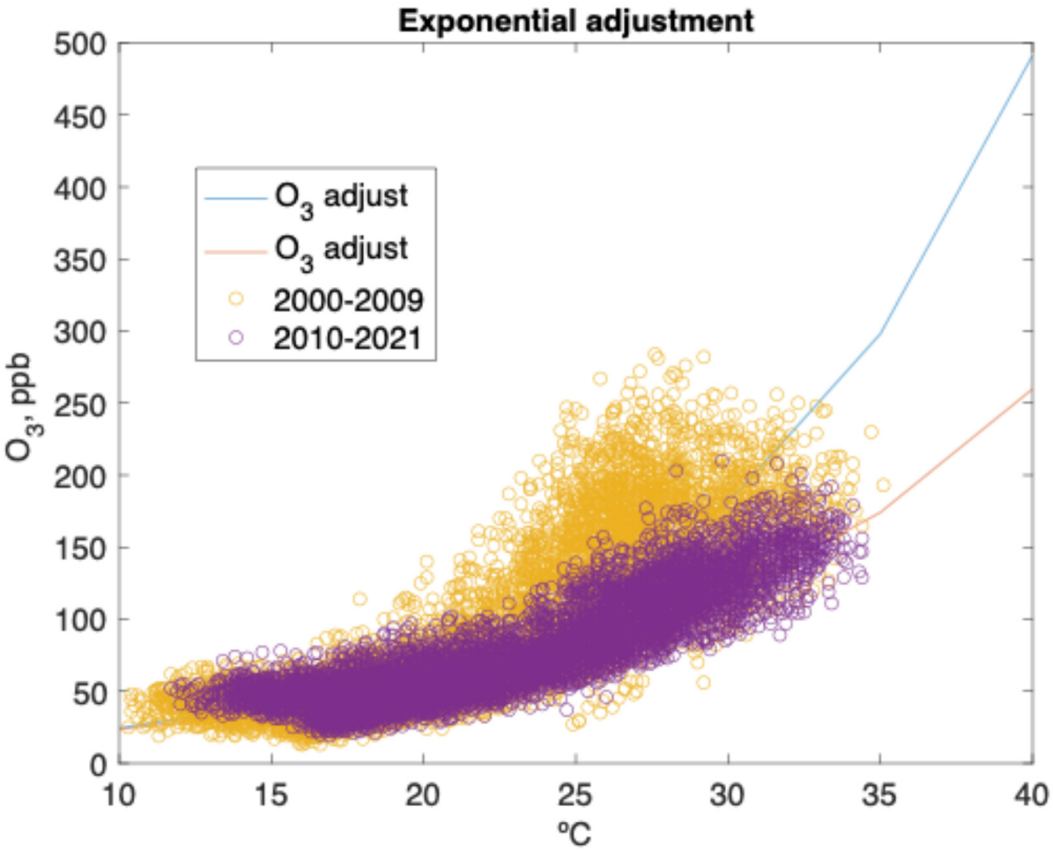


Figure S1. Exponential adjustment of O3 maxima and temperature grouped by 10-year (2000-2009 and 2010-2021).

Table S2. Adjustment coefficients

	A	*b*	R^2	SSE	RMSE
2000-2009	9.00	0.10	0.70	8.26E06	30.72
2010-2021	10.59	0.08	0.80	2.05E06	15.29

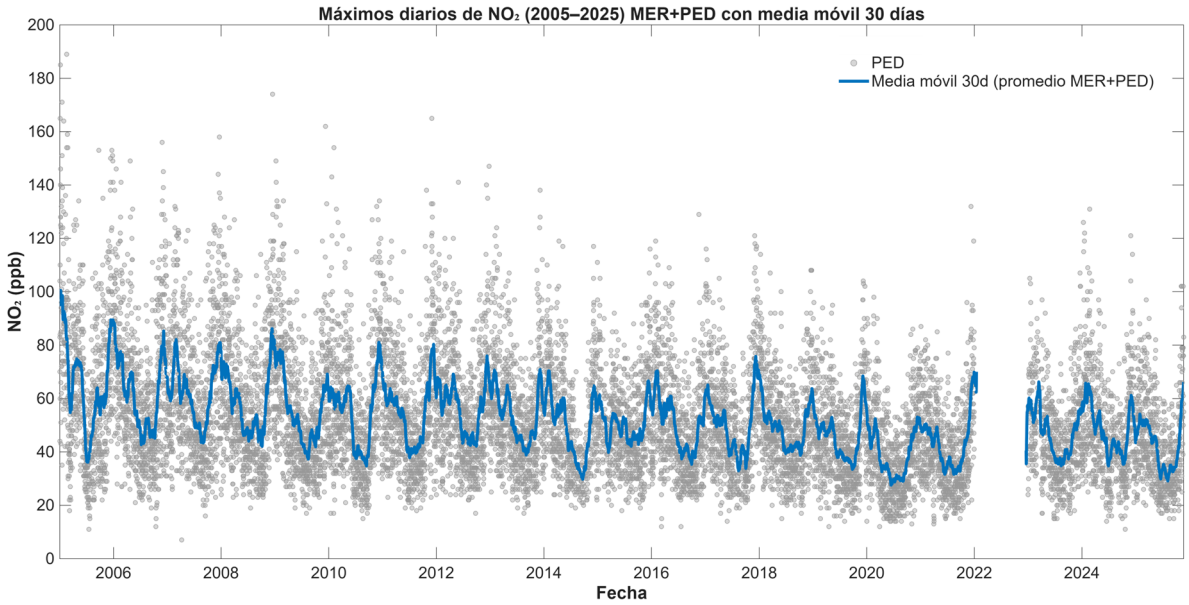


Figure S2. Maxima NO_2 daily concentrations (gray dots) and 30-day moving average (blue line).