

Additional tables and figures for “Temporal variability of NO_x emissions from power plants”

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Table S1. Statistical analysis of emission time series for satellite overpass and monthly means.

Power plant	Satellite overpass times			Monthly means		
	MB [%]	χ^2_{red}	r ²	MB [%]	χ^2_{red}	r ²
Belchatow	-5	4.9	0.12	-6	1.6	0.01
Boxberg	37	9.2	0.23	37	2.7	0.46
Kozienice	7	20.1	0.13	68	4.0	0.10
Jänschwalde	6	7.5	0.29	5	1.5	0.30
Lippendorf	41	8.4	0.32	45	2.9	0.64
Weisweiler	88	18.7	0.00	78	3.8	0.24
Alcoa Allowance	30	11.3	0.21	31	3.1	0.58
Colstrip	28	12.8	0.16	34	4.2	0.46
Gen J M Gavin	63	12.4	0.21	77	6.8	0.16
Hunter	128	29.5	0.07	144	11.5	0.13
Intermountain	7	18.2	0.35	8	3.5	0.55
James H Miller	31	18.7	0.01	31	3.5	0.05
Labadie	7	7.4	0.01	4	1.8	0.00
Martin Lake	2	8.6	0.05	13	2.1	0.13
Miami Fort	50	15.2	0.43	64	3.4	0.84
Milton R Young	60	18.1	0.03	66	8.4	0.05
New Madrid	24	10.6	0.41	27	3.7	0.51
Thomas Hill	1	12.0	0.40	8	2.0	0.84

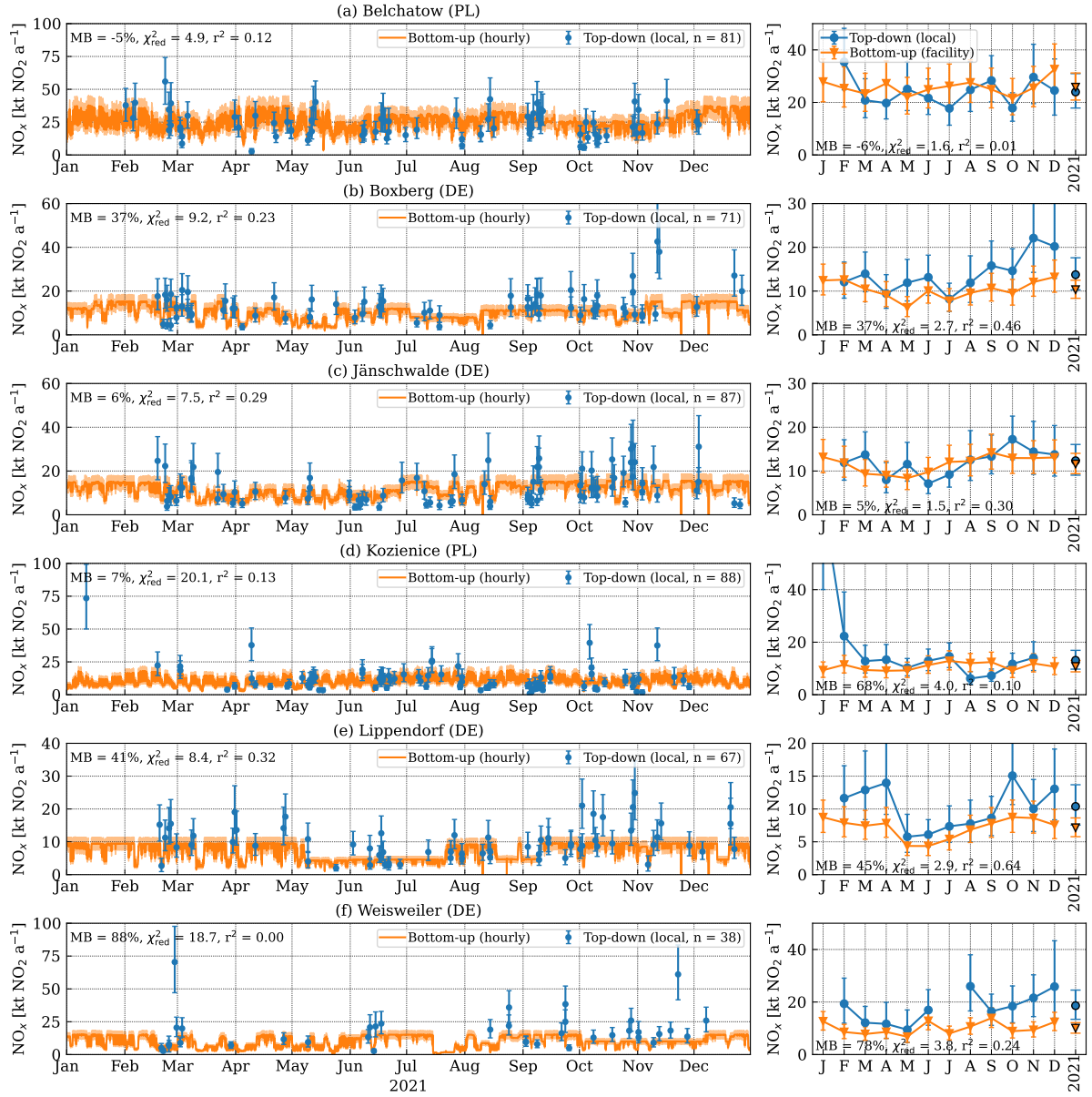


Figure S1. Time series of NO_x emission estimates from top-down (using the local NO_x correction approach) and bottom-up (based on reported values for the power plant). The left column shows individual satellite overpass estimates (n indicates the number of overpasses used), while the right column presents monthly averages. Error bars represent the 1σ confidence interval derived from Monte Carlo simulations.

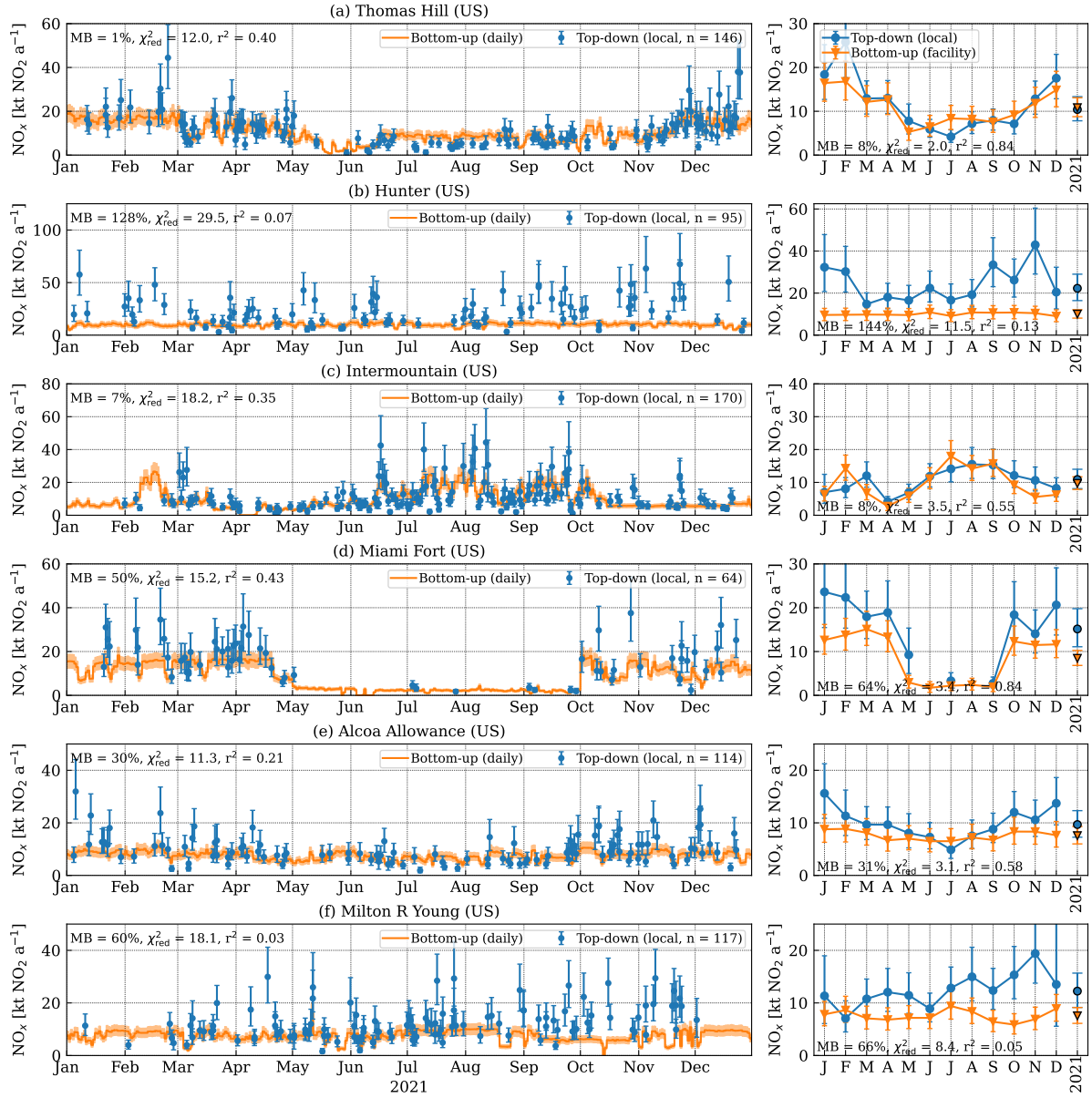


Figure S2. Time series of NO_x emission estimates from top-down (using the local NO_x correction approach) and bottom-up (based on reported values for the power plant). The left column shows individual satellite overpass estimates (n indicates the number of overpasses used), while the right column presents monthly averages. Error bars represent the 1σ confidence interval derived from Monte Carlo simulations.

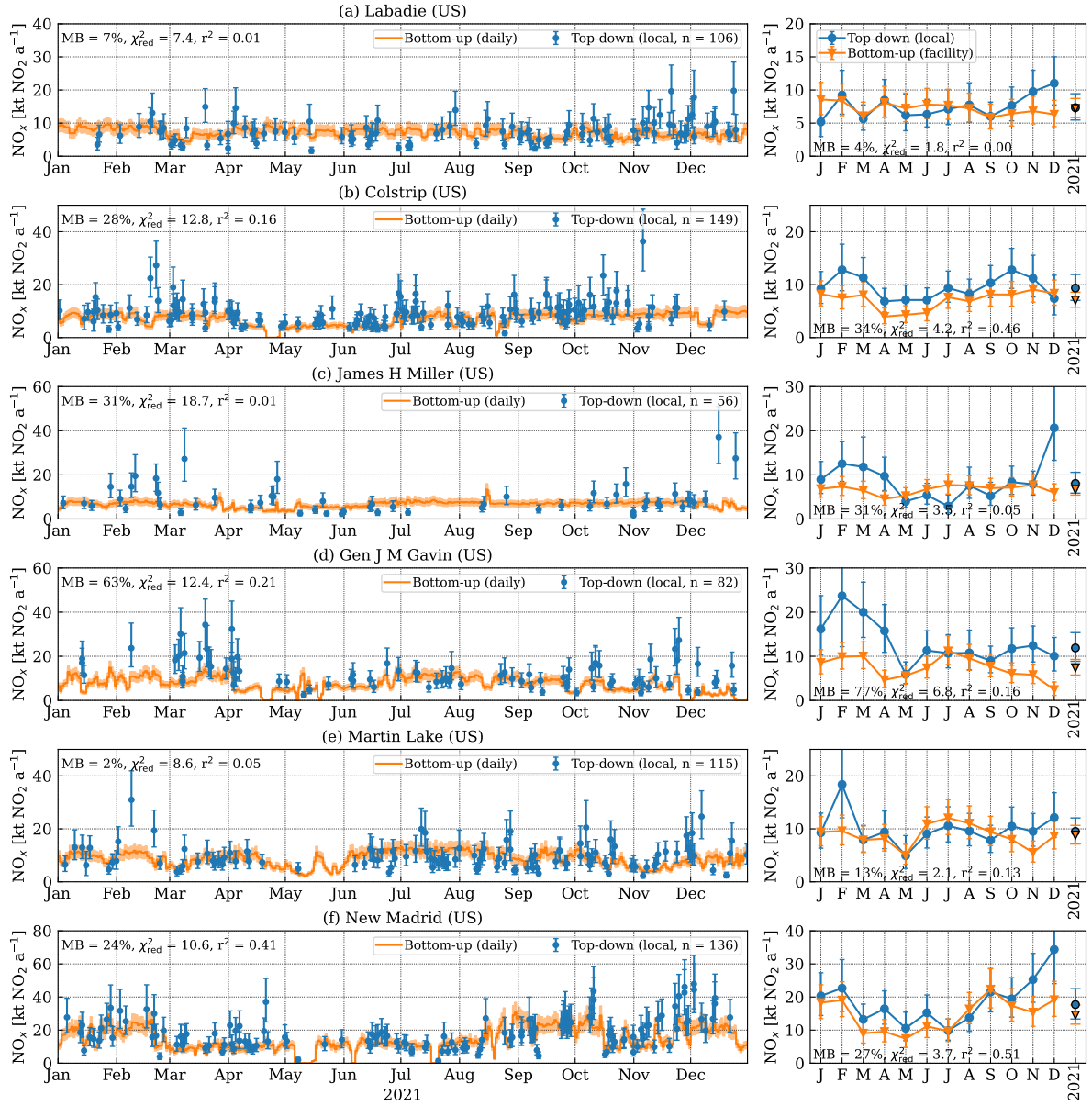


Figure S3. Time series of NO_x emission estimates from top-down (using the local NO_x correction approach) and bottom-up (based on reported values for the power plant). The left column shows individual satellite overpass estimates (n indicates the number of overpasses used), while the right column presents monthly averages. Error bars represent the 1σ confidence interval derived from Monte Carlo simulations.

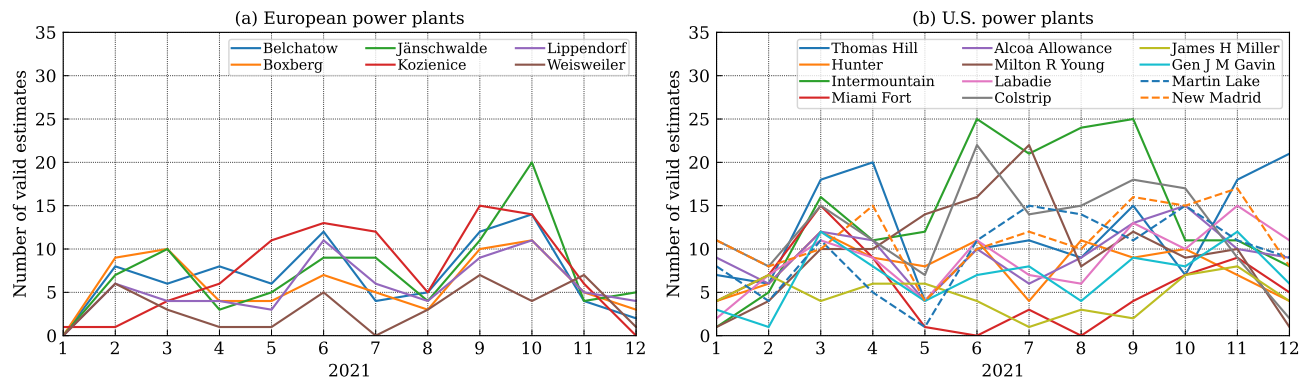


Figure S4. Number of valid top-down emission estimates per month and power plant in 2021.