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AUSBAU EISENBAHNACHSE MÜNCHEN-VERONA

BRENNER BASISTUNNEL

Ausführungsphase

POTENZIAMENTO ASSE FERROVIARIO MONACO-VERONA

GALLERIA DI BASE DEL BRENNERO

Progettazione esecutiva di dettaglio

Fachbereich MO1, Monitoring

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Dokumentenart Bericht	**Tipo Documento** Relazione
Titel Bericht 01-12/2025	**Titolo** Relazione 01-12/2025

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1. AUFGABENSTELLUNG

Die iC consulenten ZT GesmbH wurde von der BBT Brenner Basistunnel BBT SE mit Immissionsmessungen im Raum Tulfes – Innsbruck – Steinach beauftragt. Die Messungen dienen einerseits der Beweissicherung (Belastungssituation während der Bauphase, Restbelastung nach Abschluss der Bauarbeiten, eventuell Immissionsauswirkungen durch Verkehrsumlagerungen von der Strasse auf die Schiene), andererseits der Überwachung der Bauphase mit Alarmierung im Fall von erheblichen Immissionsepisoden.

Ein Teil des Messprogramms besteht in der ONLINE-Überwachung der Feinstaub (PM_{10})- und Stickoxidbelastung mit Erfassung der Windrichtung und Windgeschwindigkeit an zurzeit 6 Containerstandorten. Die Containerstandorte wechseln je nach Erfordernis. Des Weiteren wird im Padastertal eine meteorologische Messstation betrieben, die Daten zu Windrichtung, Windgeschwindigkeit, Lufttemperatur, relative Feuchtigkeit und Strahlungsbilanz erfasst. Anhand dieser Daten findet (auch vom Institut für Meteorologie Uni Innsbruck) die Überwachung der Luftströmungscharakteristik statt.

Ein weiterer Bereich des Immissionsmessprogramms besteht aus der Ermittlung des atmosphärischen Stoffeintrages durch Staubniederschlagsmessungen. Durch eine Analyse des aus dem atmosphärischen Stoffeintrag stammenden Trockenrückstands werden der Staubniederschlag, der anorganische Anteil (in g/m²/d), CaO und MgO (in mg/m²/d) bestimmt.

Dementsprechend können anhand der Staubniederschlagsmessungen Rückschlüsse über mögliche Auswirkungen auf die Vegetation und Schadstoffeinträge in den Boden erfolgen.

Zusätzlich finden an den Tunnelportalen „Sillschlucht“ und „Ahrental“, ausgehend vom jeweiligen Tunnelportal in 0 m, 50 m und 100 m Entfernung Temperatur- und Feuchtemessungen statt. Die Messungen gewährleisten 10-Minuten-Mittelwerte und dienen dazu eine durch die Abwärme erzeugte Nebelbildung im Bereich der Tunnelportale so schnell wie möglich zu registrieren.

1. OBIETTIVI DELLO STUDIO

La iC consulenten ZT GesmbH appresentano da un lato il monitoraggio (carico d’inquinamento durante le fasi costruttive, carico d’inquinamento residuale dopo la chiusura dei cantieri, eventualmente l’impatto delle immissioni dovute al trasferimento del traffico dall’autostrada alla rotaia) e dall’altro lato la sorveglianza della fase costruttiva con l’eventuale attivazione dell’allarme nel caso di episodi d’immissioni considerabili.

Una parte del programma delle misurazioni è costituita dal monitoraggio ONLINE del carico con polveri sottili (PM_{10}) e ossidi d’azoto nonché il rilevamento della direzione e la velocità del vento presso attualmente 6 posti container. I posti container saranno trasferiti secondo necessità. Inoltre è gestito un punto di misurazione meteorologica nel Padastertal, nella quale saranno rilevati dati riguardanti la direzione e la velocità del vento, la temperatura dell’aria, l’umidità relativa e la radiazione. Questi dati saranno la base per il monitoraggio della caratteristica della corrente d’aria (eseguito anche dall’istituto meteorologico dell’Università di Innsbruck).

Un'altra area del programma di misurazione delle immissioni consiste nella determinazione dell'apporto di sostanze atmosferiche attraverso la misurazione delle precipitazioni di polvere. La precipitazione della polvere, il contenuto inorganico (in g/m²/d), CaO e MgO (in mg/m²/d) sono determinati analizzando il residuo secco risultante dall'apporto di materiale atmosferico.

In questo modo, le misurazioni di polveri sedimentabili potranno permettere delle conclusioni riguardanti eventuali impatti sulla vegetazione e inquinamenti del suolo.

Inoltre vengono effettuate delle misurazioni di temperatura e umidità presso i portali di galleria “Gola del Sill” e “Ahrental” a 0 m, 50 m e 100 m di distanza dal rispettivo portale. Le misurazioni garantiscono valori medi ogni dieci minuti permettendo così la registrazione immediata della formazione di nebbia dovuta al calore di scarto.

2. MESSSTELLEN

2. SITI DI MISURAZIONE



Abbildung 1: Darstellung Messstellenlage BBT1 und BBT4

Illustrazione 1: Rappresentazione della posizione dei siti di misurazione BBT1 e BBT4



Abbildung 2: Darstellung Messstellenlage BBT2, BBT3 und BBT5

Illustrazione 2: Rappresentazione della posizione dei siti di misurazione BBT2, BBT3 e BBT5



Abbildung 3: Darstellung Messstellenlage BBT6

Illustrazione 3: Rappresentazione della posizione del sito di misurazione BBT6



Abbildung 4: Darstellung Messstellenlage BBT7

Illustrazione 4: Rappresentazione della posizione del sito di misurazione BBT7

Kennung **Codice**	**Name** **Nome**	**Pos. N**	**Pos. E**	**Ausstattung** **Allestimento**
BBT1	Ibk-Frauenanger	47°15,403’	11°24,082’	Wind, PM_{10}, NO, NO_2 Vento, PM_{10}, NO, NO_2
BBT2	Steinach-Siegreith	47°04,937’	11°28,636’	Wind, PM_{10}, NO, NO_2 Vento, PM_{10}, NO, NO_2
BBT3	Steinach-Saxen	47°04,730’	11°28,831’	Wind, PM_{10}, NO, NO_2 Vento, PM_{10}, NO, NO_2
BBT4	Ibk-Sillhöfe	47°15,2421’	11°24,2489’	Wind, PM_{10}, NO, NO_2 Vento, PM_{10}, NO, NO_2
BBT5	Padaster	47°04‘52“	11°28‘52“	Wind, Strahlungsbilanz Vento, radiazione
BBT6	Ampass	47°15’42’’	11°27’05’’	Wind, PM_{10}, NO, NO_2 Vento, PM_{10}, NO, NO_2
BBT7	Tulfes	47°16’44’’	11°32’43’’	Wind, PM_{10}, NO, NO_2 Vento, PM_{10}, NO, NO_2

Tabelle 1: Messstellenbeschreibung *Tabella 1: Descrizione dei siti di misurazione*

2.1. Staubniederschlagsmessstellen (Bergerhoff)

2.1. Siti di misurazione delle polveri in ricaduta (metodo Bergerhoff)



Abbildung 5: Darstellung Bergerhoffmessstelle Ampass

Illustrazione 5: Raffigurazione del sito di misurazione presso Ampass (metodo Bergerhoff)



Abbildung 6: Darstellung Bergerhoffmessstellen Unterberg und Ahrnhof

Illustrazione 6: Raffigurazione dei siti di misurazione Unterberg e Ahrnhof (metodo Bergerhoff)

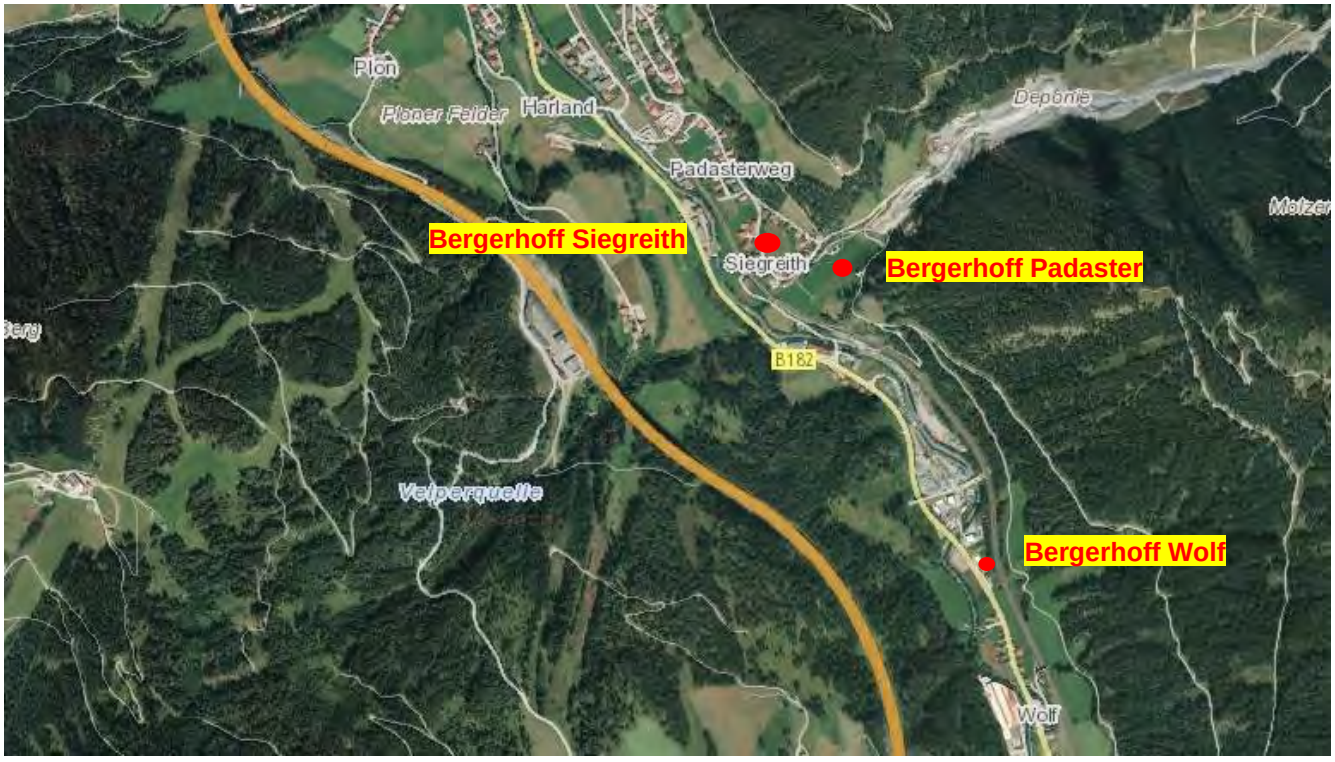

Abbildung 7: Darstellung Bergerhoffmessstellen Steinach Siegreith, Padaster und Wolf

Illustrazione 7: Raffigurazione dei siti di misurazione Steinach Siegreith, Padaster e Wolf (metodo Bergerhoff)



Abbildung 8: Darstellung Bergerhoffmessstellen Frauenanger und Sillschlucht

Illustrazione 8: Raffigurazione dei siti di misurazione Frauenanger e Gola del Sill (metodo Bergerhoff)

Kennung **Codice**	**Name** **Nome**	**Lagebeschreibung** **Descrizione dell'ubicazione**	**Messbeginn** **Data inizio-misurazione**	**Messende** **Data fine misurazione**
BBT1	Ibk-Frauenanger	Südliches Ende Spielplatz Margine meridionale del campo da gioco	13.12.2008	
BBT2	Steinach-Siegreith	Weidefläche Hoferbauer Pascolo fattoria Hoferbauer	19.12.2008	
BBT3	Steinach-Saxen	Kreuzungsbereich Baustellenzufahrt Area d'incrocio con l'accesso al cantiere	17.01.2009	
BBT4	Ibk-Sillhöfe „Alt" dismesso	Einfahrt zur Firma Interglass Accesso alla ditta Interglass	22.01.2009	26.11.2018
BBT4	Ibk-Sillhöfe	Firmengelände der Fa. Schenker Area aziendale della ditta Schenker	16.01.2019	
BBT5	Padaster	Zufahrt Padastertal östlich des Baches Accesso alla valle Padastertal a lato levante del rio	01.01.2009	
BBT6	Ampass	Zwischen Zufahrt Peerhöfe und Straße nach Ampass Tra l'accesso alle fattorie Peerhöfe e la strada verso Ampass	16.07.2010	
BBT7	Tulfes	Obstwiese Aschberger Frutteto Aschberger	14.09.2010	

Tabelle 2: Messzeiträume an den Immissionsmessstellen *Tabella 2: Periodi di tempo presso i siti di misurazione delle immissioni*

3. DARSTELLUNG DER METHODIK DER MESSUNGEN

3.1. Methodik Immissionsmessungen

Im Folgenden werden die Messmethoden für Stickoxide (NO_x), Feinstaub (PM_{10}), Windrichtung und Windgeschwindigkeit erläutert.

Stickstoffoxide (NOx):

API T200, Teledyne Advanced Pollution

Chemilumineszenz (Eignungsprüfung: UBA und TÜV Rheinland Energy GmbH: Eignungsprüfung Zertifikatsnummer 0000038502_03, 04. März 2023)

Nachweisgrenze:	NO:	0,4 ppb
	NO_x:	0,9 ppb

Feinstaub (PM_{10}):

EDM180, Grimm Aerosol Technik Airnring GmbH & Co.KG

90° Streulichtmessung, Halbleiterlaser; Wellenlänge 660nm

(Eignungsprüfung LUBW, Landesanstalt für Umwelt, Messungen und Naturschutz Baden-Württemberg Nr.: 21-18/2005)

Nachweisgrenze:

- ca. 1 µg/m³ bei ½ h Mittelwert
- ca. 0,1 µg/m³ bei 24h Mittelwert

Windrichtung und Windgeschwindigkeit:

WS200-UMB, OTT HydroMet Fellbach GmbH

Kombinierter Geber für die Windgeschwindigkeit und Windrichtung (Ultraschall)

Auflösung:

Auflösung Windrichtung:	0,1°
Auflösung Windgeschwindigkeit:	0,1 m/s
Messgenauigkeit:	gemäß ÖNORM M9490

besser als ± 0,5 m/s für Windgeschwindigkeiten unter 5 m/s

3. RAPPRESENTAZIONE DEI METODI DELLE MISURAZIONI

3.1. Metodi delle misurazioni delle immissioni

Seguono le spiegazioni dei metodi di misurazione degli ossidi d'azoto (NO_x), delle polveri (PM_{10}), della direzione e della velocità di vento.

Ossidi d'azoto:

API T200, Teledyne Advanced Pollution

Chemiluminescenza (test di idoneità: UBA e TÜV Rheinland Energy GmbH: certificato di idoneità numero 0000038502_03, 04 marzo 2023)

Limite di rivelabilità:	NO:	0,4 ppb
	NO_x:	0,9 ppb

PM10:

EDM180, Grimm Aerosol Technik Airnring GmbH & Co.KG

Rilevamento della luce dispersa (90°), laser a semiconduttori; lunghezza d'onda 660 nm

(Test di idoneità effettuato da LUBW, Landesanstalt für Umwelt, Messungen und Naturschutz Baden-Württemberg – Istituto federale per l'ambiente, il monitoraggio e la conservazione della natura Baden-Württemberg No.: 21-18/2005)

Limite di rilevabilità:

- ca. 1 µg/m³ a ½ h (valore medio)
- ca. 0,1µg/m³ a 24 h (valore medio)

Direzione e velocità di vento:

WS200-UMB, OTT HydroMet Fellbach GmbH

Anemometro combinato per misurare la velocità e la direzione del vento (Ultrasuoni)

Risoluzione:

Risoluzione della direzione del vento:	0,1°
Risoluzione della velocità del vento:	0,1 m/s
Precisione:	secondo lo standard austriaco ÖNORM M9490

migliore di±0,5 m/s per velocità di vento minori ai 5 m/s

± 10% vom Messwert über 5 m/s

Richtung: ± 2 Grad

± 10% del valore di misurazione sopra i 5 m/s

Direzione: ± 2 gradi

3.2. Methodik Staubniederschlagsmessungen (Bergerhoff)

Die Bestimmung des partikelförmigen Niederschlags erfolgt gemäß VDI-Richtlinie Nr. 4320 Blatt 2 „Messung atmosphärischer Deposition - Bestimmung des Staubniederschlags nach der Bergerhoff-Methode“.

3.2.1. Probenahme

Die Probenahmeeinrichtung besteht aus einem Auffanggefäß aus Kunststoff mit einem definierten Querschnitt, einem Schutzkorb und einem Ständer. Der atmosphärische Stoffeintrag wird durch Exposition der Auffanggefäße über die vorgesehene Messdauer von 30±2 Tagen erfasst.

Nach Beendigung der vorgeschriebenen Expositionsdauer werden die Auffanggefäße aus den Schutzkörben genommen, sofort dicht verschlossen und in Transportkisten verpackt (nach VDI 4320).

3.2.2. Verfahren zur Bestimmung des organischen Anteils im partikelförmigen Niederschlag

Nach dem Abwägen des Staubniederschlags auf der Analysenwaage wird das Probengefäß im Trockenschrank auf 200°C erhitzt. Anschließend erfolgt die Umschlichtung der Gefäße in den auf 400°C vorgeheizten Muffelofen.

Nach einer Stunde bei 400°C im Muffelofen werden die Probengefäße unter Rücksichtnahme der Reihenfolge der Gläser in den Exsikkator gegeben. Dort kühlen sie mehr als 1 Stunde aus. Anschließend werden die Gefäße in den klimatisierten Wägeraum gestellt.

Nach VDI 4320 werden sie dort stehen gelassen, bis sie die konstante Temperatur des Wägeraums erreicht haben (zirka 1 Stunde). Anschließend erfolgt die Auswaage wieder mit der Analysenwaage und die Berechnung mittels eines EXCEL Datenblattes.

3.2. Metodo di misurazione delle polveri in ricaduta (Bergerhoff)

La misurazione delle particelle in ricaduta viene effettuata secondo la direttiva VDI no. 4320 (VDI: Associazione degli Ingegneri Tedeschi), foglio 2 “Individuazione delle polveri in ricaduta con recipienti di raccolta vitrei o in plastica (metodo Bergerhoff)”.

3.2.1. Campionamento

L’attrezzatura per il campionamento è costituita da un recipiente di raccolta in plastica con un diametro definito e un cestello protettivo munito di asta. Lo input atmosferico è rilevato tramite l’esposizione dei recipienti di raccolta durante il periodo determinato che comprende 30± 2 giorni.

Concluso il periodo di esposizione prescritto, i recipienti di raccolta vengono recuperati dai cestelli protettivi, immediatamente chiusi ermeticamente e sistemati in un’apposita cassa di trasporto (secondo VDI 4320).

3.2.2. Metodo per l’individuazione della quota organica nelle particelle in ricaduta

Dopo aver pesato il precipitato di polvere sulla bilancia analitica, il recipiente del campione viene riscaldato a 200°C nel forno di essiccazione. I recipienti vengono poi trasferiti nel forno a muffola preriscaldato a 400°C.

Dopo un'ora a 400°C nel forno a muffola, le fiale di campione vengono poste nell'essiccatore, tenendo conto dell'ordine delle fiale. Qui si raffreddano per oltre 1 ora. I recipienti vengono quindi collocati nella sala di pesatura climatizzata.

In conformità alla norma VDI 4320, vengono lasciati lì finché non hanno raggiunto la temperatura costante della sala di pesata (circa 1 ora). Vengono quindi pesati nuovamente con la bilancia analitica e calcolati con un foglio dati EXCEL.

3.2.3. Bestimmung der Elementverteilung im Staubniederschlag

Nach dem Abwägen des Staubniederschlags auf der Analysenwaage wird der Feststoff mit Salpetersäure mittels Mikrowellenaufschluss gelöst.

Die Analyse der metallischen Inhaltsstoffe erfolgt gemäß EN ISO 11885 in einem nach EN 17025 akkreditieren Analytik Labor.

Die Ergebnisse des anorganischen Restes werden in mg/(m².d) angegeben.

Die in den Proben quantifizierten Mengen an Calcium und Magnesium werden als Massen ihrer jeweiligen Oxide Calciumoxid (CaO) und Magnesiumoxid (MgO) in mg/(m².d) angegeben.

3.2.3. Individuazione della distribuzione degli elementi nelle polveri in ricaduta

Dopo aver pesato il precipitato di polvere sulla bilancia analitica, il solido viene sciolto con acido nitrico mediante digestione a microonde.

I costituenti metallici vengono analizzati in conformità alle norme EN ISO 11885 in un laboratorio di analisi accreditato secondo la norma EN 17025.

I risultati del residuo inorganico sono espressi in mg/(m².d).

Le quantità di calcio e magnesio quantificate nei campioni sono indicate come masse dei rispettivi ossidi di calcio (CaO) e magnesio (MgO) in mg/(m².d).

4. DOKUMENTATION UND PRÄSENTATION DER MESSERGEBNISSE

4.3. Messergebnisse Immissionsmessungen

Die Messergebnisse zu den kontinuierlichen Immissionsmessungen sind der Beilage (Monatsberichte der einzelnen Stationen von Jänner bis Dezember 2025) zu entnehmen.

Die nachfolgende Tabelle zeigt die Datenverfügbarkeit der Immissionsmessungen für das Jahr 2025:

4.4. Messergebnisse Staubniederschlagsmessungen

Die Messergebnisse der Staubniederschlagmessungen (Bergerhoff) sind in Kapitel 5.3. dargestellt.

Zum Teil besteht die Möglichkeit, dass aufgrund verschiedener Vorkommnisse keine Messergebnisse der Staubniederschlagsmessungen erhoben werden können. Gründe für Ausfälle der Staubniederschlagsmessungen sind im Allgemeinen Beschädigungen am Auffanggefäß oder auch das Fehlen eines solchen. Des Weiteren können aufgrund von Witterungseinflüssen die Proben gefrieren oder stark verschmutzt sein.

Nachfolgend eine Auflistung dieser Ausfälle bezogen auf die jeweiligen Messstandorte:

4. DOCUMENTAZIONE E PRESENTAZIONE DEI RISULTATI DI RILEVAMENTO

4.3. Risultati delle misurazioni delle immissioni

I risultati delle misurazioni continue delle immissioni sono ricavabili dall'allegato (Relazioni mensili delle stazioni singole da gennaio a dicembre 2025).

La tabella seguente indica la disponibilità dei dati delle misurazioni delle immissioni per l'anno 2025:

Messstandort ***Sito di misurazione***	***Datenverfügbarkeit NO_2*** ***Disponibilità dei dati NO_2***	***Datenverfügbarkeit PM_{10}*** ***Disponibilità dei dati PM_{10}***
BBT1 Ibk - Frauenanger	90 %	100 %
BBT2 Steinach Siegreith	95 %	100 %
BBT3 Steinach Saxen	96 %	100 %
BBT4 Ibk - Sillhöfe	97 %	100 %
BBT6 Ampass	95 %	100 %
BBT7 Tulfes	95 %	100 %

Tabelle 3: Datenverfügbarkeit an den jeweiligen Messstandorten

Tabella 3: Disponibilità dei dati presso i relativi siti di misurazione

4.4. Risultati delle misurazioni riguardanti le misurazioni delle polveri in ricaduta

I risultati delle misurazioni delle polveri in ricaduta (metodo Bergerhoff) sono ricavabili dal capitolo 5.3.

È probabile che a causa di vari episodi la realizzazione delle misurazioni delle particelle in ricaduta sia impossibile. Cause per le interruzioni delle misurazioni delle polveri in ricaduta sono generalmente danni ai recipienti di raccolta o la loro mancanza totale. Inoltre i campioni possono essere congelati o inquinati fortemente a causa di condizioni meteorologiche.

La tabella seguente elenca tali interruzioni presso i siti di misurazione indicati:

Messstandort/Sito di misurazione	***Ausfälle (Datum)/Interruzioni (data)***
Ampass A12 Raststätte	Oktober 2025 / ottobre 2025

Tabelle 4: Zeitraum der Ausfälle der Staubniederschlagsmessungen an den jeweiligen Messstandorten

Tabella 4: Periodo delle interruzioni delle misurazioni delle particelle in ricaduta presso i rispettivi siti di misurazione

5. DISKUSSION DER MESSERGEBNISSE

5.5. Stickstoffdioxid (NO_2)

Die nachfolgende Tabelle zeigt die Monatsmittelwerte an NO_2 der jeweiligen Messstationen im Jahr 2025.

5. DISCUSSIONE DEI RISULTATI DI RILEVAMENTO

5.5. Diossido di azoto (NO_2)

La tabella seguente indica i valori medi mensili di NO_2 rilevati presso i relativi siti di misurazione durante l'anno 2025.

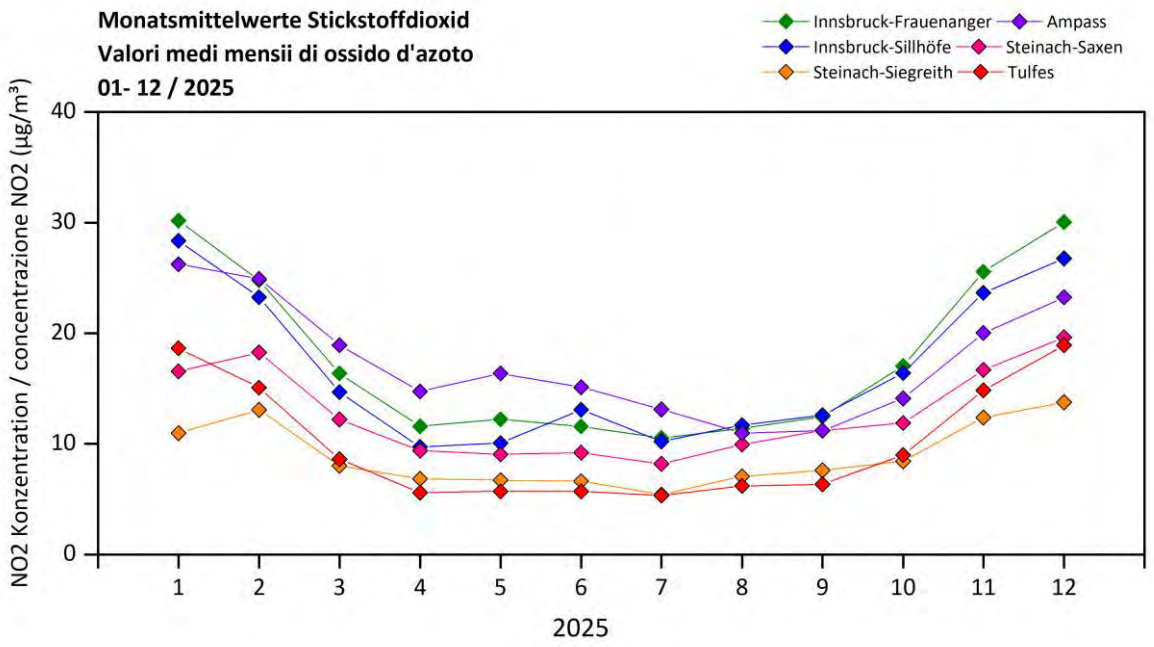

Abbildung 9: Darstellung Konzentrationsverläufe der Monatsmittelwerte NO_2 2025

Illustrazione 9: Sviluppo delle medie mensili delle concentrazioni NO_2 dell'anno 2025

Nach wie vor weisen die städtischen Immissionsmessstellen in Innsbruck und die autobahnnahe Messstelle in Ampass die höchste Gesamtbelastung sowohl für NO als auch für NO_2 auf. Die Werte der ländlich situierten Messstellen in Steinach sowie der autobahnnahen Messstelle in Tulfes sind deutlich niedriger als die vorher genannte Gruppe.

Der höchsten NO_2-Monatsmittelwerte wurde im Jänner bei den städtischen Station Innsbruck Frauenanger und Innsbruck Sillhöfe gemessen. Insgesamt liegt die Station in Ampass in sechs Monaten an der Spitze der Verläufe. Die städtischen Messstellen liegen wie schon erwähnt im Jänner an der Spitze.

Die nachfolgende Tabelle zeigt die Jahresmittelwerte NO_2 der jeweiligen Messstationen aus dem Jahr 2025:

Come in precedenza, i siti di misurazione delle immissioni urbani a Innsbruck e il punto di misurazione situato in vicinanza all'autostrada ad Ampass presentano il più alto carico complessivo sia per NO che per NO_2. I valori registrati presso i siti di misurazione situati in campagna a Steinach e presso quello situato in vicinanza dell'autostrada a Tulfes risultano nettamente più bassi di quelli rilevati presso i siti succitati.

I valori medi mensili più elevati di NO_2 sono stati misurati a gennaio nelle stazioni comunali di Innsbruck Frauenanger e Innsbruck Sillhöfe. Complessivamente, la stazione di Ampass è in cima alla lista per sei mesi. Come già menzionato, le stazioni di misurazione urbane sono al top in gennaio.

La tabella seguente indica le medie annuali NO_2 rilevate presso le relative stazioni di misurazione durante l'anno 2025:

Jahresmittelwerte 2025 [µg/m³] ***Valori medi annuali 2025 [µg/m³]***			
BBT1 Ibk-Frauenanger	18,2	BBT4 Ibk-Sillhöfe	16,7
BBT2 Steinach Siegreith	8,9	BBT6 Ibk-Ampass	17,4
BBT3 Steinach Saxen	12,7	BBT7 Tulfes	10,0

Tabelle 5: Jahresmittelwerte NO_2

Tabella 5: Valori medi annuali NO_2

Der NO_2 **JMW-Grenzwert** gemäß **IG-Luft** liegt **bei 30 µg/m³**. Dieser JMW-Grenzwert wurde an keiner Messstelle überschritten.

Der NO_2 **HMW-Grenzwert** von **200 µg/m³** wurde im Messjahr 2025 an keiner Messstelle überschritten.

Auch der **Richtwert für das Tagesmittel** von 80 µg/m³ NO_2 wurde im Jahr 2025 nirgends überschritten.

Il **valore limite MA** di NO_2 è fissato con **30 µg/m³** dalla legge sulla protezione dalle immissioni-Aria (**IG-L**). Questo valore limite MA non è stato superato in nessun sito di misurazione.

Il **valore limite MM** di NO_2 è di **200 µg/m³** e non è stato superato in nessun sito di misurazione nell'anno in esame 2025.

Anche il **valore guida per la media giornaliera** di 80 µg/m³ NO_2 non è stato superato in nessun sito nel 2025.

5.6. Feinstaubkonzentration (PM_{10})

Die nachfolgend als Staub in µg/m³(korr.) oder PM_{10}(korr.) angegebenen Werte sind Werte, die aus kontinuierlichen Messungen erhoben und anschließend mit dem sog. "Gerätefaktor" [=(c*0,81)+1,7] bei GRIMM EDM180 Geräten korrigiert wurden.

Die nachfolgende Tabelle zeigt die Monatsmittelwerte an PM_{10}(korr) der jeweiligen Messstationen im Jahr 2025.

5.6. Concentrazione delle polveri (PM_{10})

I valori indicati di seguito come polveri in µg/m3(corr.) o PM_{10}(corr.) sono valori ottenuti da misure continue e successivamente corretti con il cosiddetto "fattore dispositivo" [=(c*0,81)+1,7] per i dispositivi GRIMM EDM180.

La tabella seguente indica i valori medi mensili PM_{10}(corr) rilevati presso le relative stazioni di misurazione nell'anno 2025.

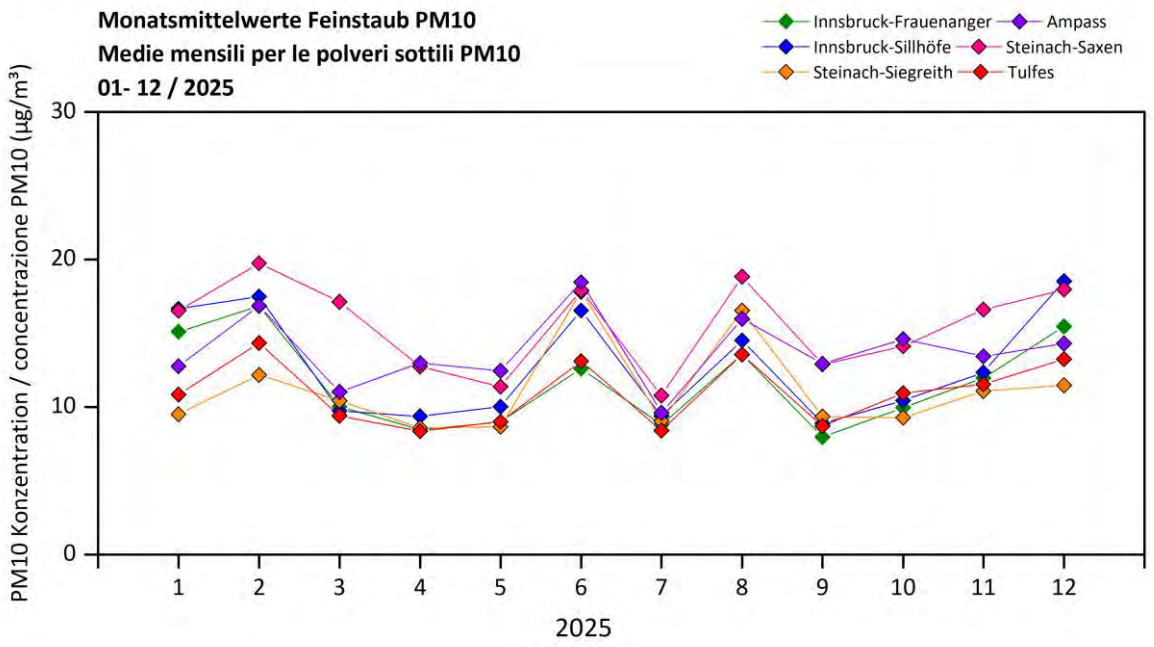

Abbildung 10: Darstellung Konzentrationsverläufe der Monatsmittelwerte PM_{10} im Jahr 2025 unter Berücksichtigung des Standortfaktors

Illustrazione 10: Sviluppo delle medie mensili della concentrazione PM_{10} nell'anno 2025 (con il fattore di sito applicato)

Die nachfolgende Tabelle zeigt die Jahresmittelwerte PM_{10} der jeweiligen Messstationen aus dem Jahr 2025:

La tabella seguente indica i valori medi annuali PM_{10} rilevati presso le relative stazioni di misurazione nell'anno 2025.

Jahresmittelwerte 2025 [µg/m³] ***Valori medi annuali 2025 [µg/m³]***			
BBT1 Ibk-Frauenanger	11,6	BBT4 Ibk-Sillhöfe	12,8
BBT2 Steinach Siegreith	11,2	BBT6 Ibk-Ampass	13,8
BBT3 Steinach Saxen	15,5	BBT7 Tulfes	10,9

Tabelle 6: Jahresmittelwerte PM_{10}

Tabella 6: Valori medi annuali PM_{10}

Der JMW-Grenzwert von 40 µg/m³ für PM_{10} wurde an keinem Messstandort überschritten.

Im Messjahr 2025 kam es zweimal zu einer Überschreitung des PM_{10}-Werts ≥ 300 µg/m³ bei der Station Sillhöfe aus Richtung der Baustelle. Die Ursache der Überschreitung konnte nicht festgestellt werden.

Im Messjahr 2025 kam es einmal zu einer Überschreitung des PM_{10}-Werts ≥ 300 µg/m³ bei der Station Ampass. Die ASFINAG betrieb zur dieser Zeite eine Brückenbaustelle.

Im Messjahr 2025 kam es viermal zu einer Überschreitung des PM_{10}-Werts ≥ 300 µg/m³ bei der Station Steinach - Saxen. Die Ursache war einmal die Aufwirbelung von Streusalz auf der Bundesstraße sowie einmal der Einfluss einer lokalen Hausbrandquelle; die beiden weiteren Überschreitungen konnten nicht festgestellt werden.

Il valore limite JMW di 40 µg/m³ per il PM_{10} non è stato superato in nessun sito di misurazione.

Im Jahr 2025 si sono verificate due volte superamenti del valore di PM_{10} ≥ 300 µg/m³ presso la stazione Sillhöfe provenienti dalla direzione del cantiere. La causa dei superamenti non ha potuto essere determinata.

Nell'anno di misura 2025 si è verificato un superamento del valore di PM10 ≥ 300 µg/m³ presso la stazione Ampass. In quel periodo ASFINAG stava gestendo un cantiere per la costruzione di un ponte.

Nell'anno di misura 2025 si sono verificati quattro superamenti del valore di PM10 ≥ 300 µg/m³ presso la stazione Steinach-Saxen.

La causa è stata in un caso il sollevamento di sale antighiaccio sulla strada statale e in un altro caso l'influenza di una fonte locale di combustione domestica; le altre due superamenti non hanno potuto essere determinati.

Die nachfolgende Tabelle zeigt eine Auflistung der PM_{10} TMW Überschreitungen der einzelnen Immissionsmessstationen.

Tagesmittelwerte ≥ 50,49 µg/m³:

La tabella seguente elenca i superamenti dei valori MG PM_{10} rilevati presso le rispettive stazioni di misurazione delle immissioni:

Valori medi giornalieri PM_{10} ≥ 50,49 µg/m³:

Tagesmittelwerte ≥ 50,49 [µg/m³] ***Valori medi giornalieri PM_{10}≥ 50,49 [µg/m³]***					
BBT1 Ibk-Frauenanger:	BBT2 Steinach Siegreith:	BBT3 Steinach Saxen:	BBT4 Ibk-Sillhöfe:	BBT6 Ibk-Ampass:	BBT7 Tulfes:
		14.01.: 59,05 13.08.: 54,90			
0	0	2	0	0	0

Tabelle 7: PM_{10} TMW Überschreitungen *Tabella 7: Superamento dei valori MG PM_{10}*

Nach dem Immissionsschutzgesetz-Luft (IG-L) liegt der Grenzwert für den **PM_{10}-TMW bei 50 µg/m³**. Es sind **25 Überschreitungen** zulässig. Eine Überschreitung ist ab einem Wert von 50,49 µg/m³ gegeben.

Unter Berücksichtigung der korrigierten PM_{10} TMW (Korrekturfaktor: xk = x*0.81 + 1.7) ist die Überschreitungstoleranz an keinen Immissionsmessstationen überschritten worden.

Alle Messstellen liegen hinsichtlich der TMW-Überschreitungen deutlich unter dem Toleranzwert von 25 Tagen pro Jahr.

Secondo la legge sulla protezione dalle immissioni-Aria (IG-L) il **valore limite** per **MG PM_{10}** è sancito con **50 µg/m³**. Un superamento avviene se il valore tocca i 50,49 µg/m³. Per l'anno 2015 erano permessi **25 superamenti.**

Considerando i valori corretti (fattore di correzione: xk = x*0.81 + 1.7) MG PM_{10} la tolleranza di superamento non è stata sorpassata presso nessuna stazione di misurazione delle immissioni.

Tutti i siti di misurazione sono ben al di sotto del valore di tolleranza di 25 giorni all'anno per quanto riguarda i superamenti del MG.

5.7. Staubniederschlag

Der gesetzlich vorgegebene Grenzwert für den Staubniederschlag liegt nach Immissionsschutzgesetz-Luft bei 210 mg/(m²*d) bezogen auf den Jahresmittelwert, was in der hier verwendeten Dimension 0,21 g/(m²*d) entspricht.

Im Jahr 2025 wurde dieser Grenzwert bei keiner Messstelle überschritten.

5.7. Polveri in ricaduta

A norma della legge sulla protezione dalle immissioni-Aria il valore limite per polveri in ricaduta è di 210 mg/(m²*d) rispetto al valore medio annuale. Nella dimensione usata qui, questo corrisponde a 0,21 g/(m²*d).

Nel 2025 questo valore limite non è stato superato in nessuna stazione di misura.

Messstandort Sito di misurazione	**Staubniederschlag/Polveri in ricaduta** **JMW/MA [mg/m²/d]**	*** Daten-verfügbarkeit / Messperioden** **Disponibilità dei dati/Periodi di misurazione**
Grenzwert IG-Luft / Valore limite IG-L	**210**	**-**
B1 A12 Raststätte/Area servizio A12	167	92% / 11
B2 Ibk-Frauenanger	123	100% / 12
B3 Steinach Siegreith	36	100% / 12
B4 Ahrnhof	102	100% / 12
B5 Padastertal	53	100% / 12
B6 Wolf	111	100% / 12
B7 Ibk-Unterberg	50	100% / 12
B8 Ibk-Sillschlucht	79	100% / 12

* Datenverfügbarkeit bezogen auf das Gesamtjahr; Messperioden: Perioden in denen tatsächlich Messungen durchgeführt wurden, ungeachtet aller Ausfälle.

* Disponibilità dei dati rispetto all'intero anno; Periodi di misurazione: periodi, in cui sono state eseguite effettivamente le misurazioni, senza riguardo alle interruzioni.

Tabelle 8: Vergleich der JMW mit den gesetzlich vorgeschriebenen Grenzwerten

Die Messwerte des Staubniederschlags, anorganischer Anteil, CaO und MgO des Staubniederschlags von allen Bergerhoffmessstellen sind jeweils in einem grafischen Jahresverlauf dargestellt.

Tabella 8: Valori MA contro i valori limite previsti dalla legge

I valori misurati della precipitazione di polvere, del contenuto inorganico, del CaO e del MgO della precipitazione di polvere da tutti i punti di misurazione Bergerhoff sono mostrati in una curva grafica annuale.

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6.10. Abkürzungsverzeichnis

TMW	Tagesmittelwert
HMW	Halbstundenmittelwert
MMW	Monatsmittelwert
JMW	Jahresmittelwert
PM_{10}	Feinstaub < 10 µm Korndurchmesser
NO_2	Stickstoffdioxid
NO_x	Stickoxide
WiRi	Windrichtung
WiGe	Windgeschwindigkeit
LT	Umgebungstemperatur
Rel.F	Relative Luftfeuchte

6.10. Elenco delle abbreviazioni

MG	Valore medio giornaliero
MM	Valore medio ogni Mezz'ora
Mmens	Valore medio mensile
MA	Valore medio annuale
PM_{10}	Polveri sottili < 10 µm diametro
NO_2	Diossido d'azoto
NO_x	Ossidi d'azoto
DV	Direzione del vento
VV	Velocità del vento
TA	Temperatura dell'ambiente
UArel	Umidità relativa dell'aria

6.11. Pläne und sonstige Unterlagen

6.11.4. Zugehörige Unterlagen

Tabellarische Darstellung der erhobenen Messwerte (siehe Beilage)

Verlauf der Halbstundenmittelwerte von den Messstellen Ibk-Frauenanger, Steinach-Siegreith, Steinach-Saxen, Ibk-Sillhöfe, Ampass und Tulfes im Messmonat (siehe Beilage)

Verlauf der meteorologischen Daten als 10 Minuten Mittelwerte von Messstelle Steinach Padastertal im Messmonat (siehe Beilage)

6.11. Elaborati grafici ed ulteriore documentazione

6.11.4. Documentazione attinente

Rappresentazione in forma di tabella dei valori rilevati (vedi allegato)

Sviluppo dei valori medi ogni mezz'ora registrati dai punti di rilevamento Ibk-Frauenanger, Steinach-Siegreith, Steinach-Saxen, Ibk-Sillhöfe, Ampass e Tulfes nel mese di rilevamento (vedi allegato)

L'andamento dei dati meteorologici come medie di 10 minuti per la stazione di misurazione di Steinach Padastertal durante il mese di misurazione è allegato in appendice.

Monatsbericht Jänner 2025 Relazione mensile gennaio 2025

Stickstoffdioxid Biossido di azoto

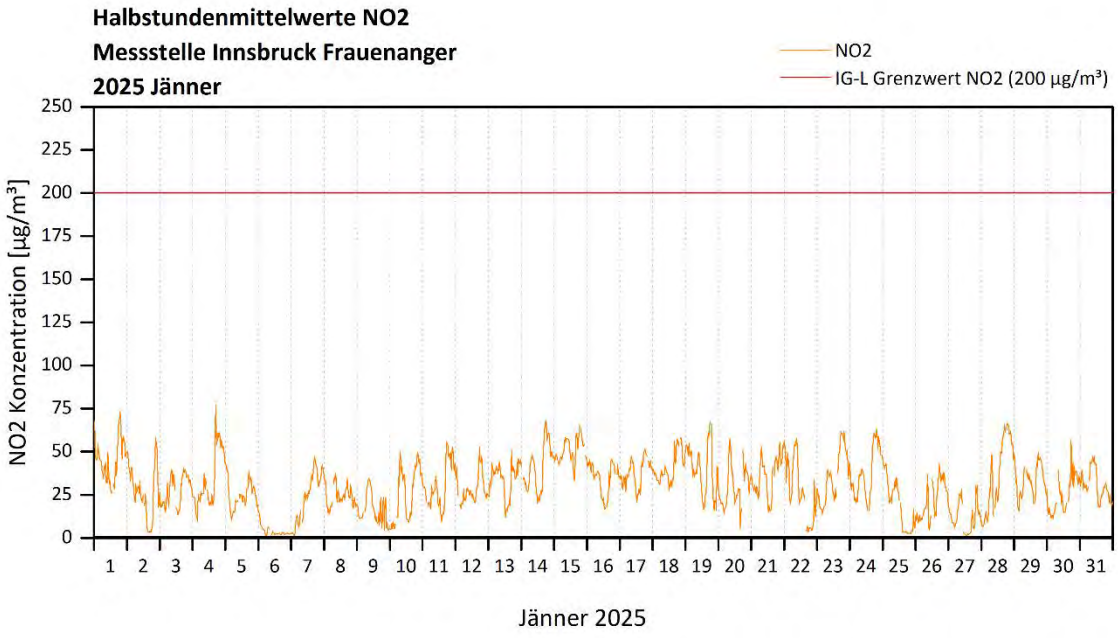
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 e 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	77	30.2	50.8	0		0	
Innsbruck Sillhöfe	72	28.4	50.3	0		0	
Steinach Siegreith	61	11.0	27.9	0		0	
Steinach Saxen	86	16.6	35.8	0		0	
Ampass	84	26.2	48.9	0		0	
Tulfes	63	18.6	38.3	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

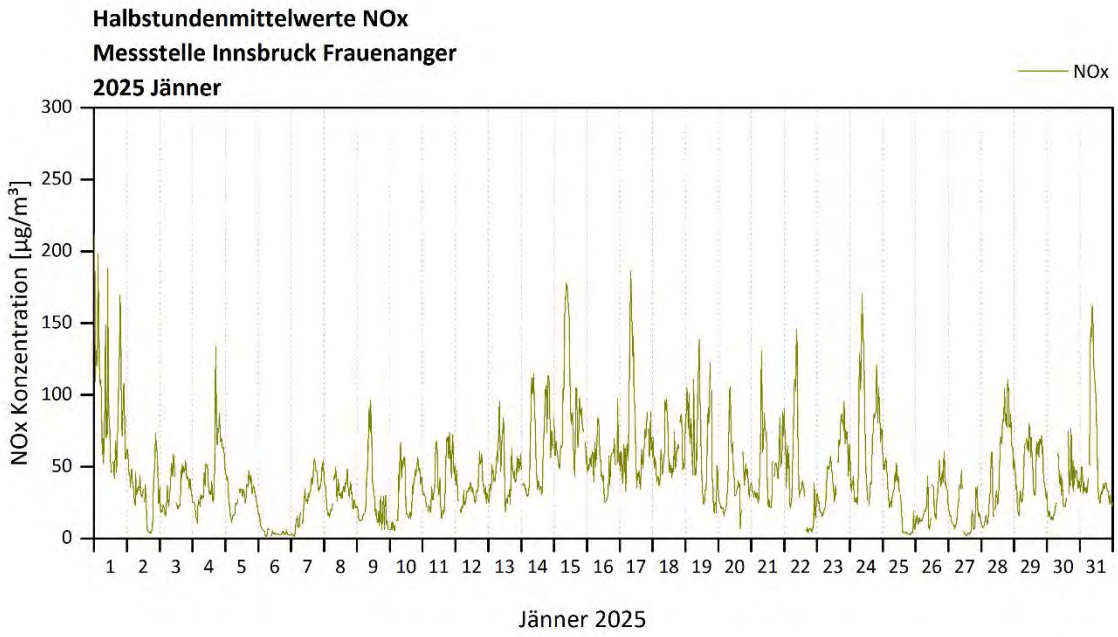
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 e 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	191	15.1	35.6	0		0	
Innsbruck Sillhöfe	302	16.7	48.5	1		1	
Steinach Siegreith	83	9.5	23.9	0		0	
Steinach Saxen	413	16.5	59.1	1		1	
Ampass	188	12.8	34.3	0		0	
Tulfes	66	10.8	26.5	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

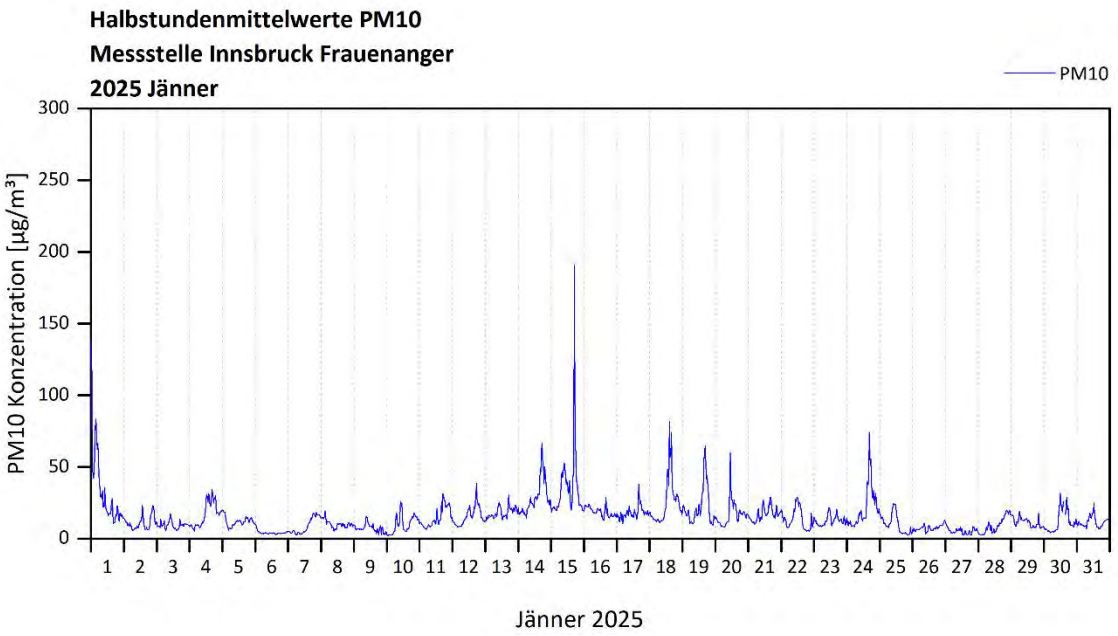
Stickstoffdioxid / Biossido di azoto



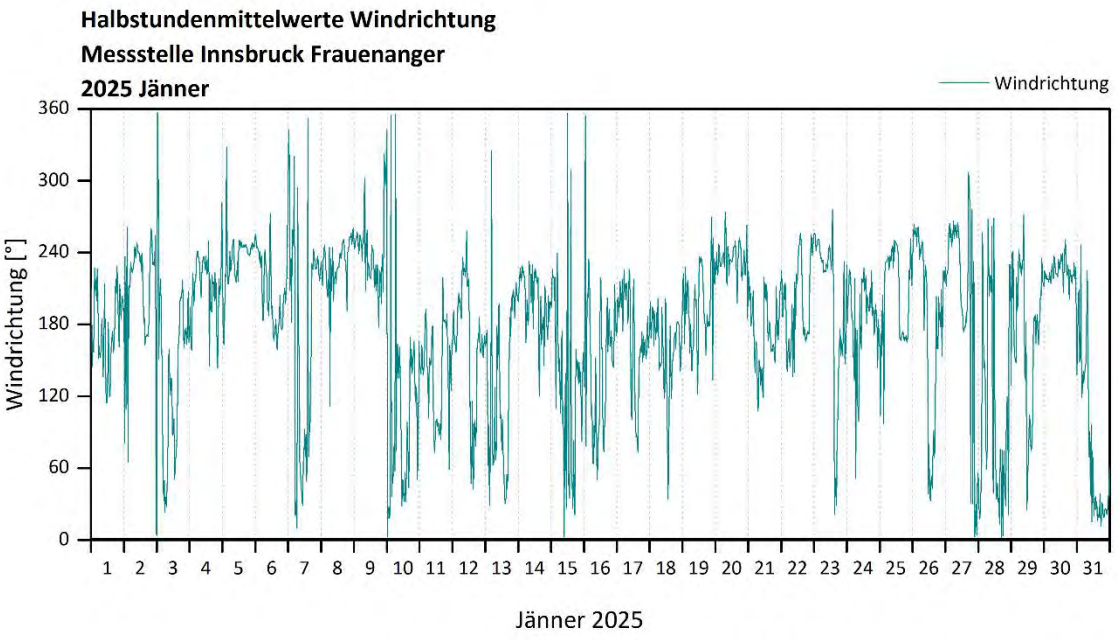
Stickstoffoxide / Ossidi di azoto



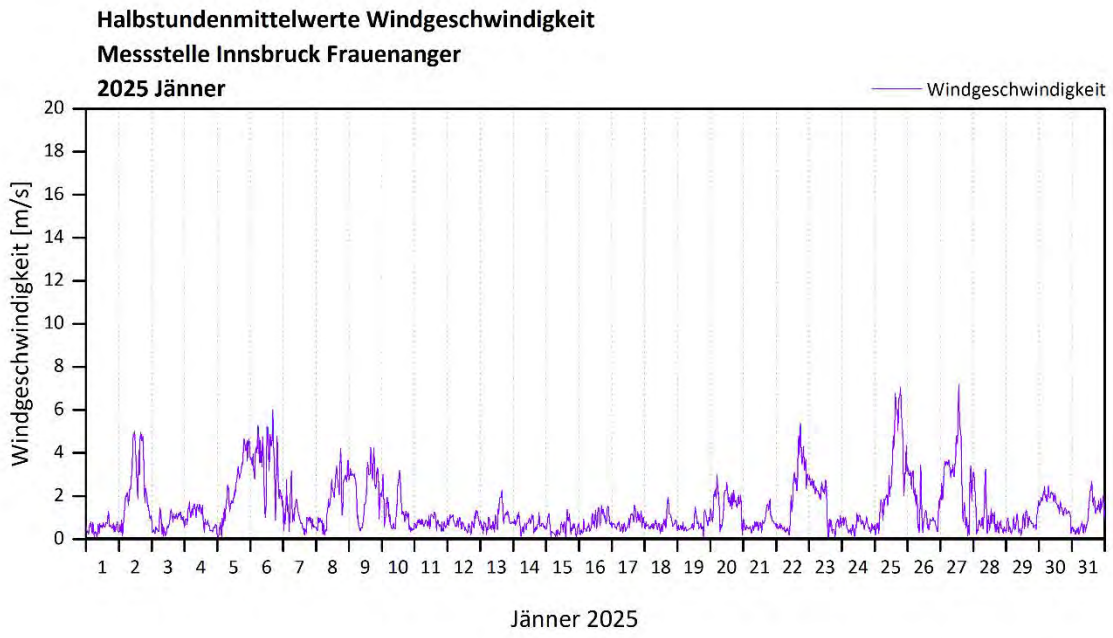
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

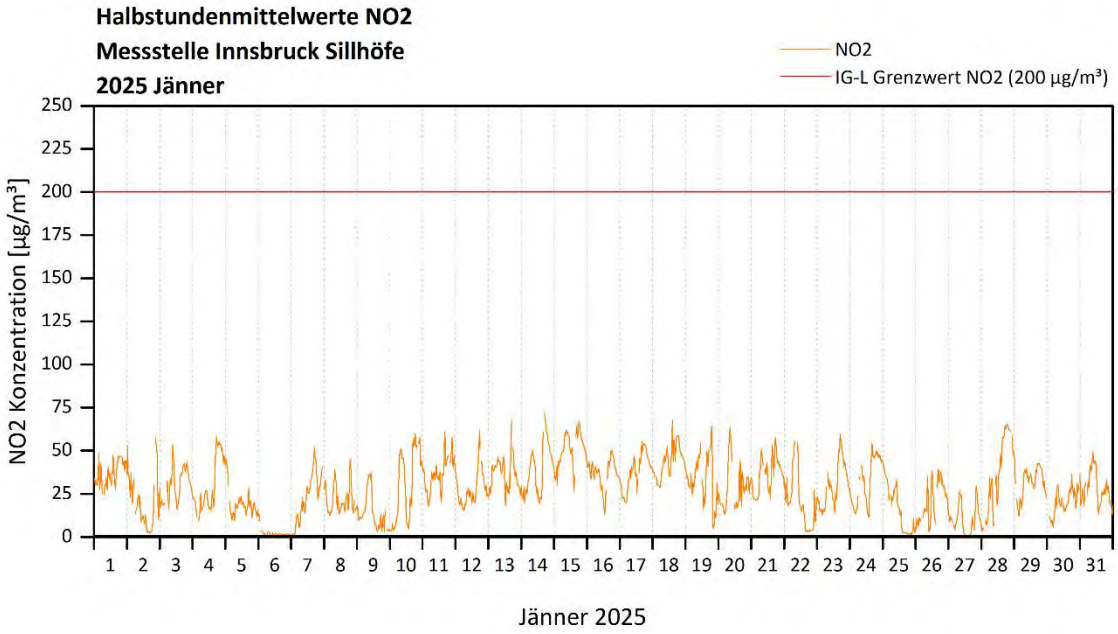


Windgeschwindigkeit / Velocità del vento

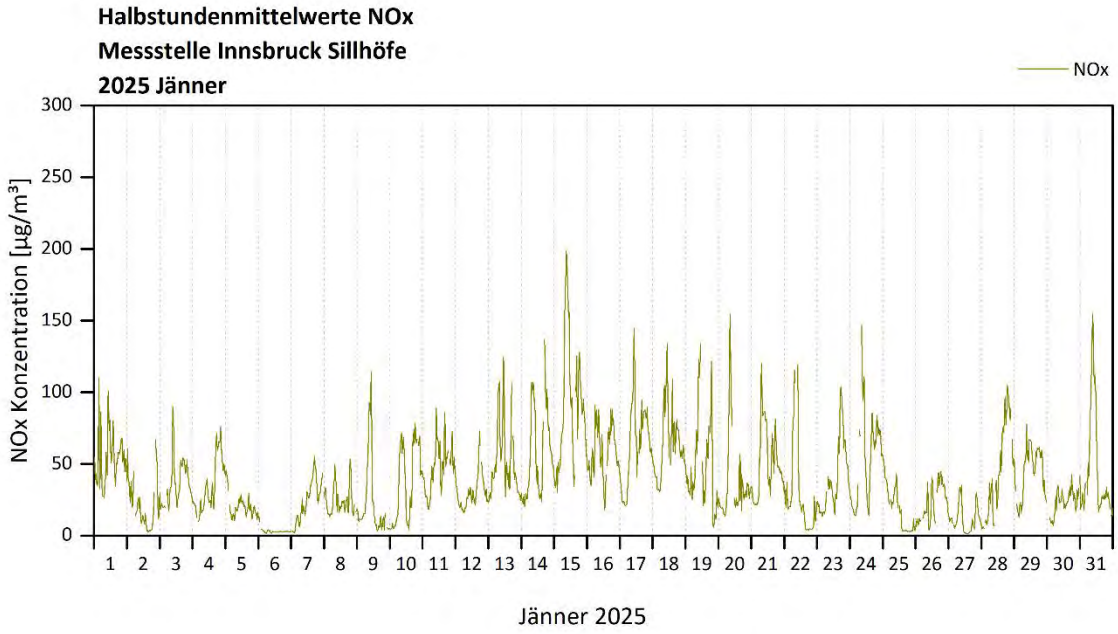


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

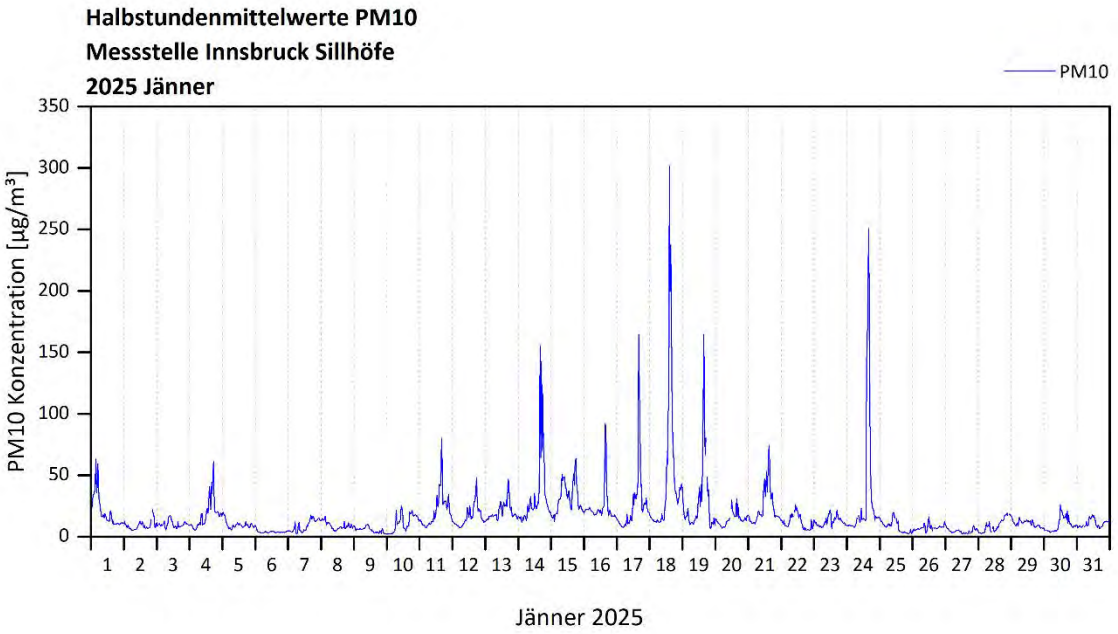
Stickstoffdioxid / Biossido di azoto



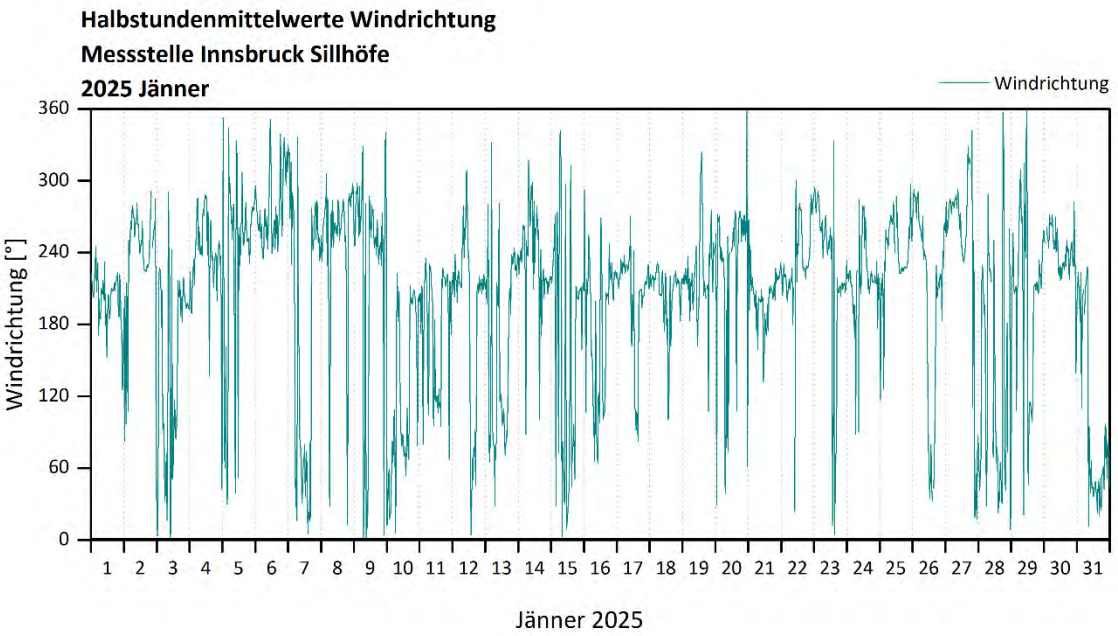
Stickstoffoxide / Ossidi di azoto



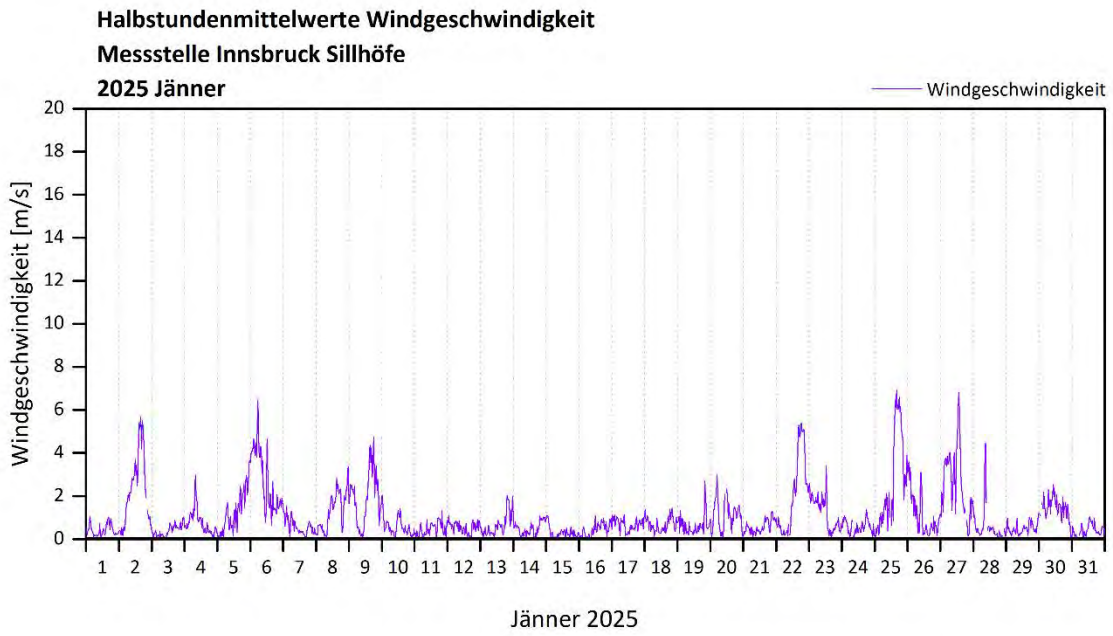
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

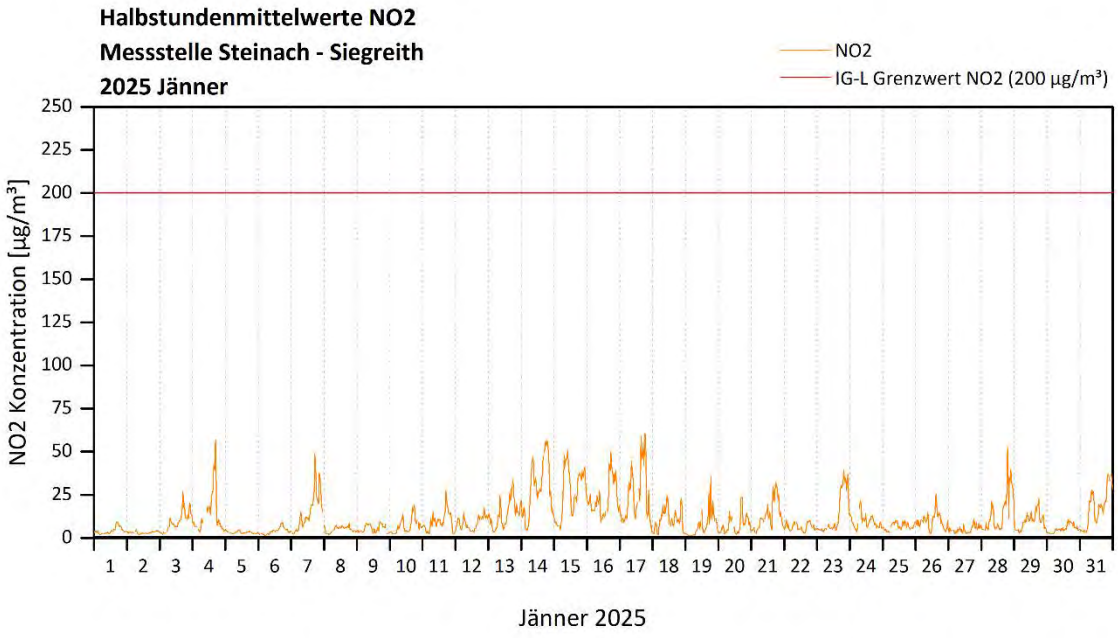


Windgeschwindigkeit / Velocità del vento

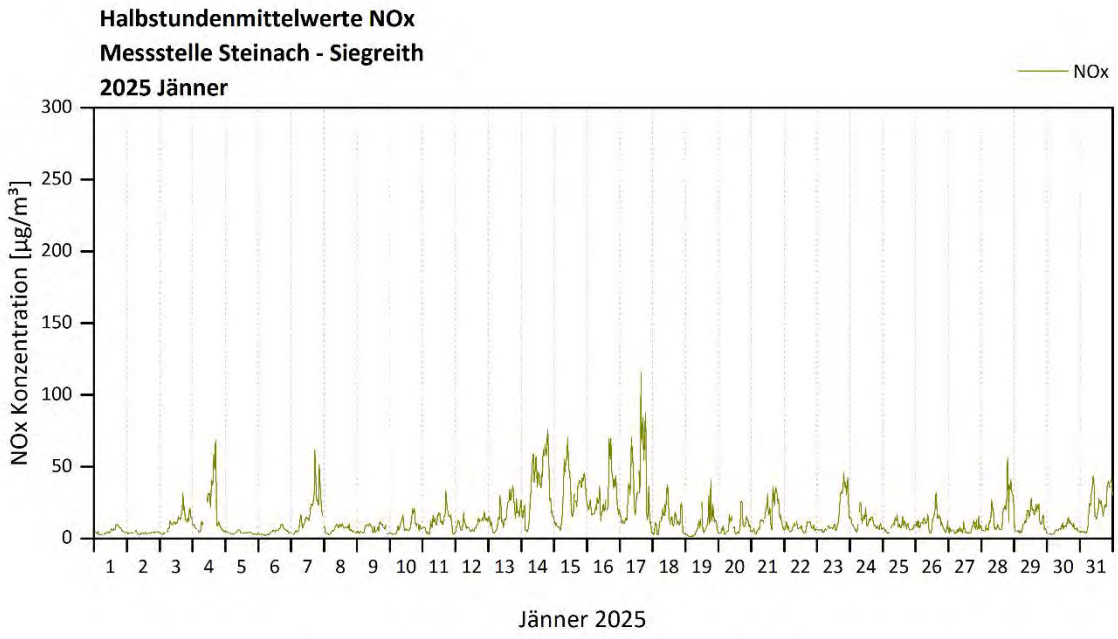


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

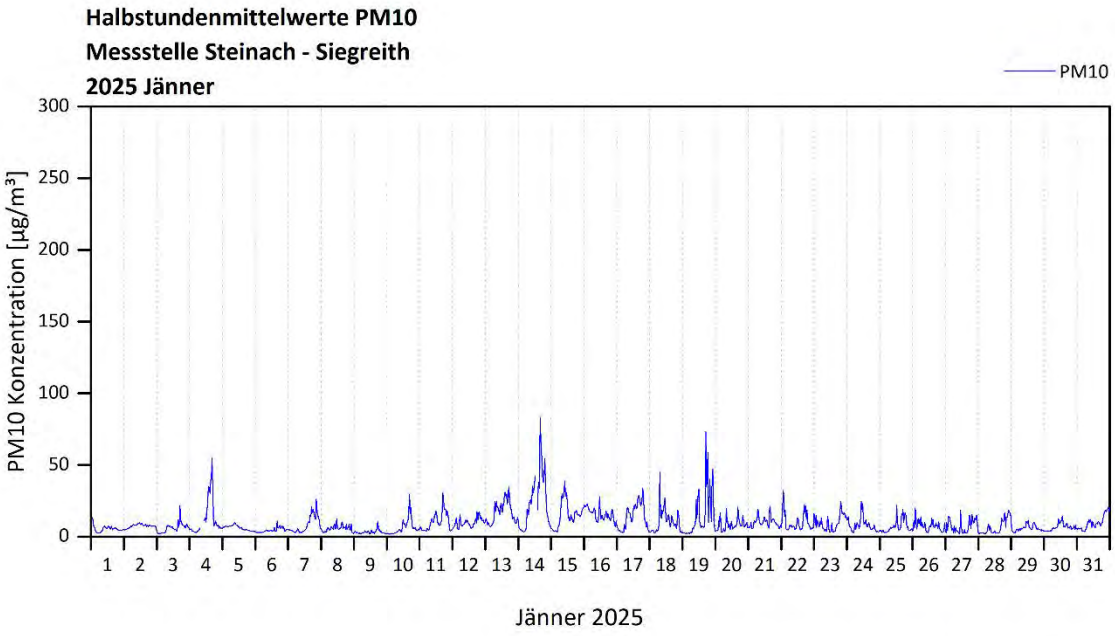
Stickstoffdioxid / Biossido di azoto



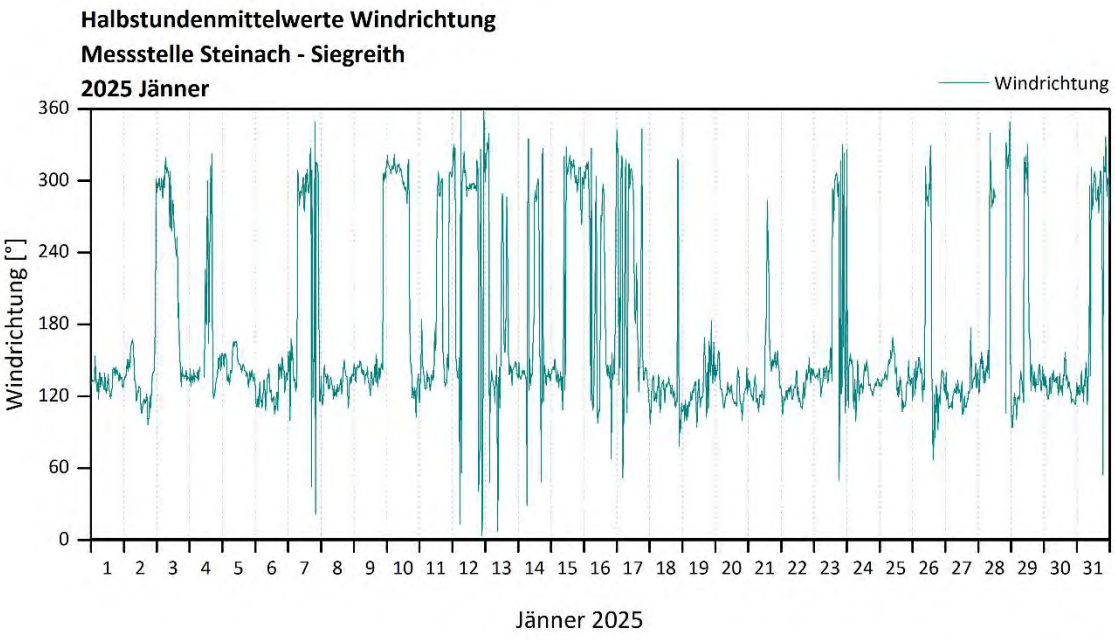
Stickstoffoxide / Ossidi di azoto



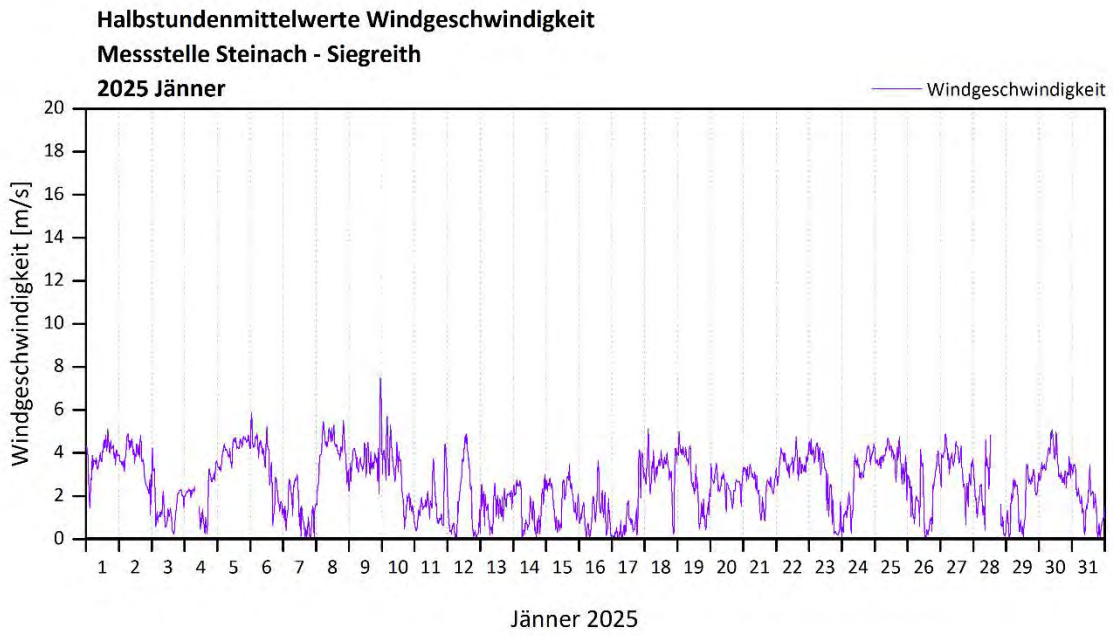
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

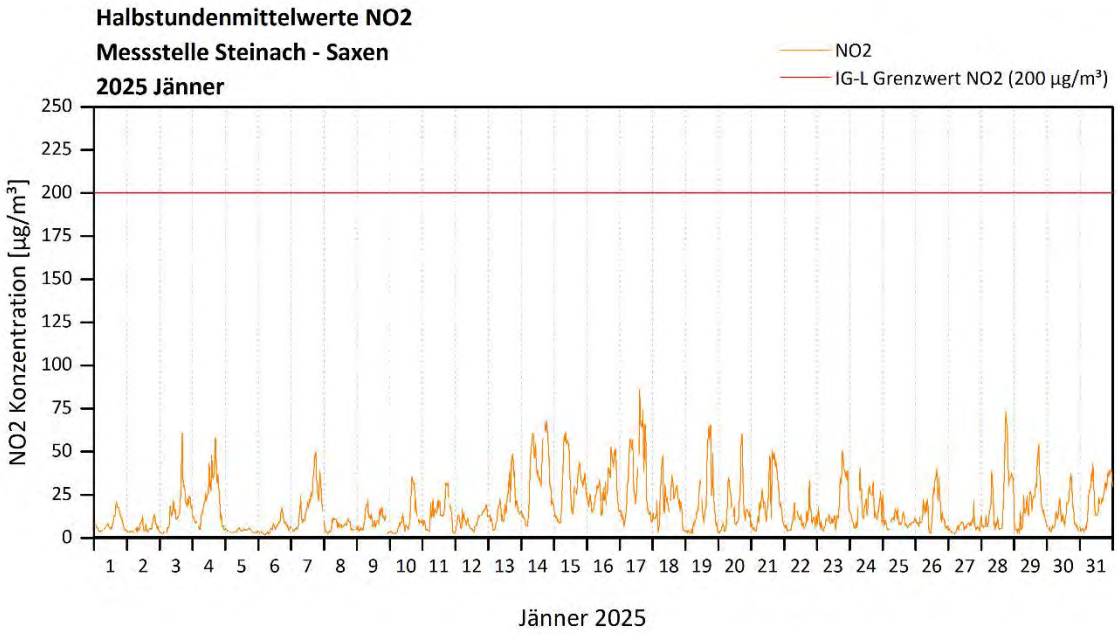


Windgeschwindigkeit / Velocità del vento

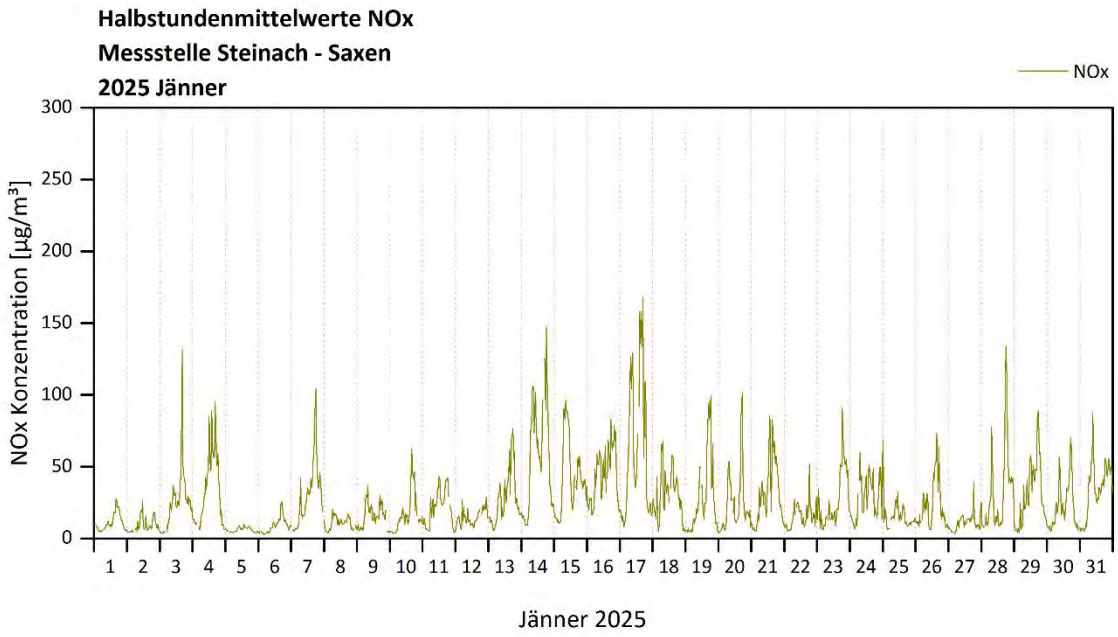


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

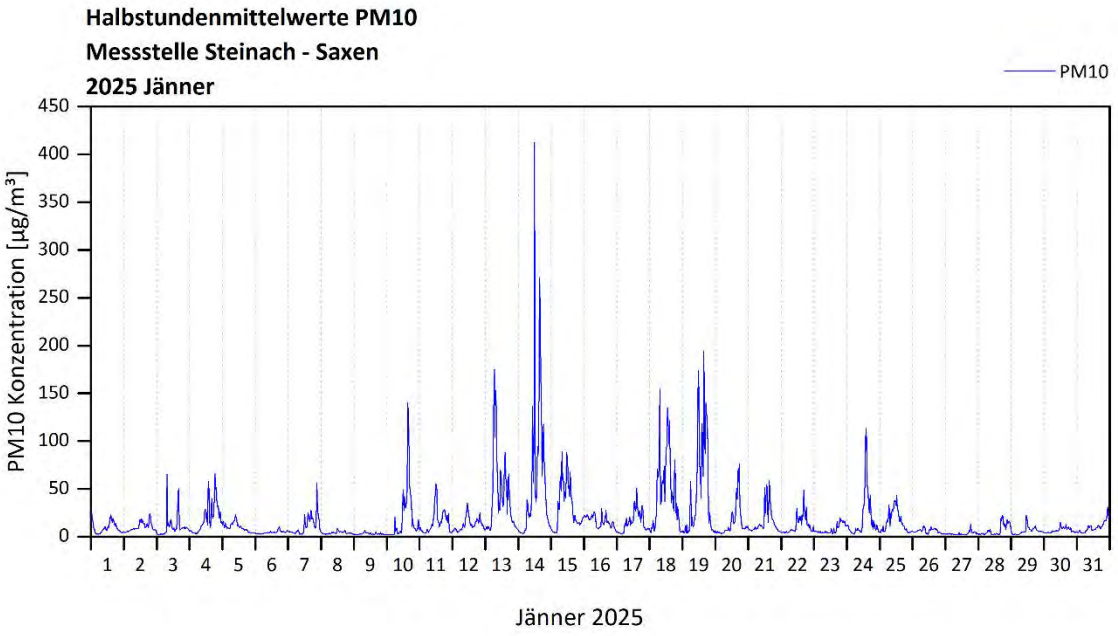
Stickstoffdioxid / Biossido di azoto



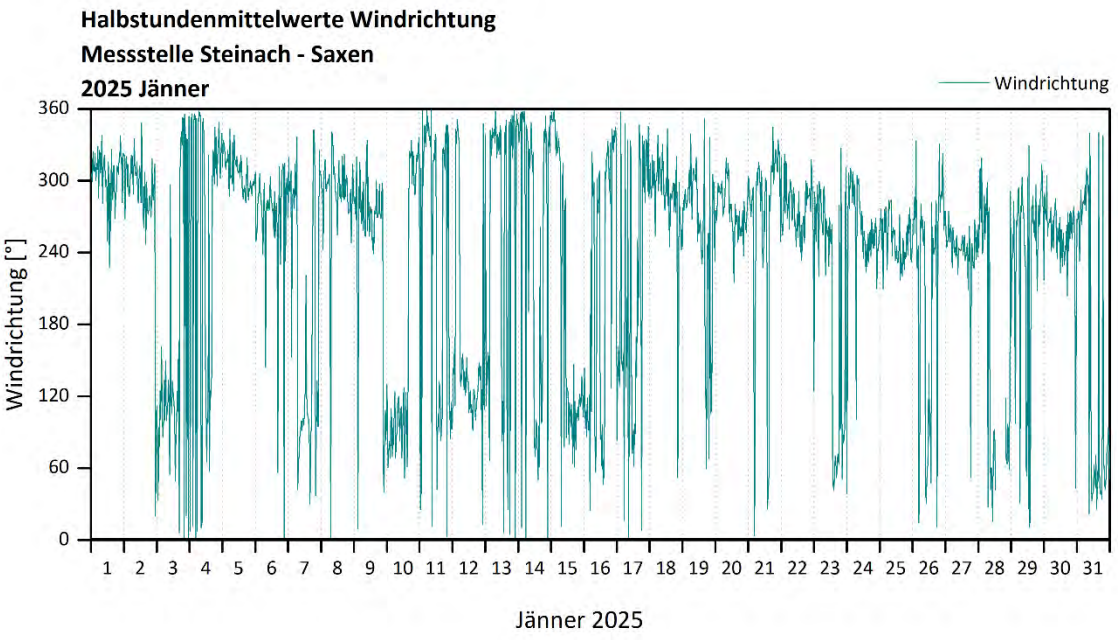
Stickstoffoxide / Ossidi di azoto



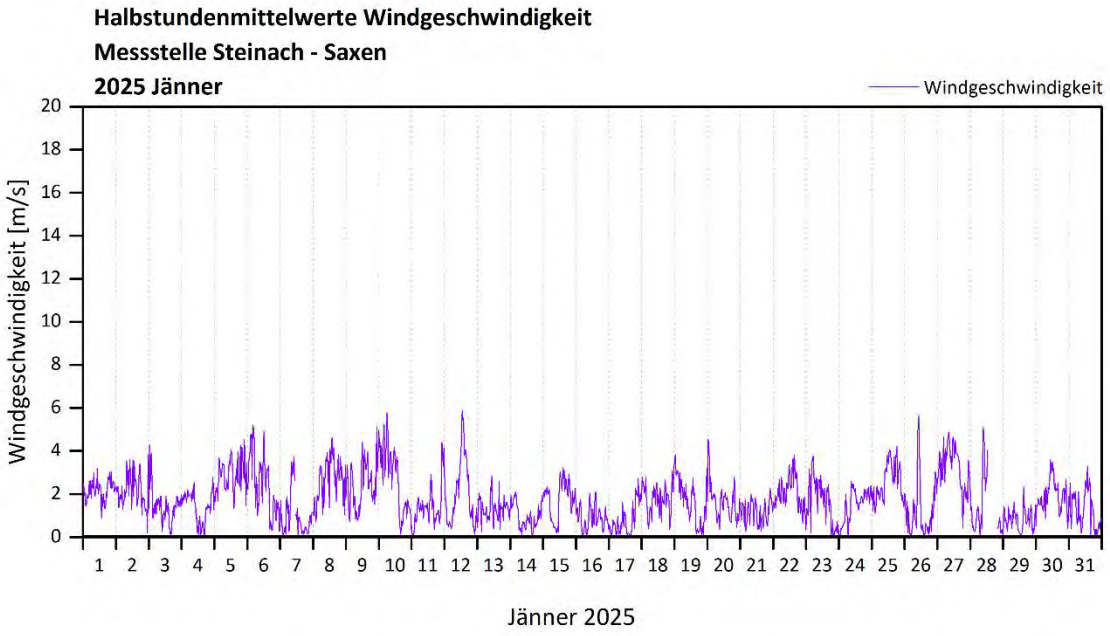
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



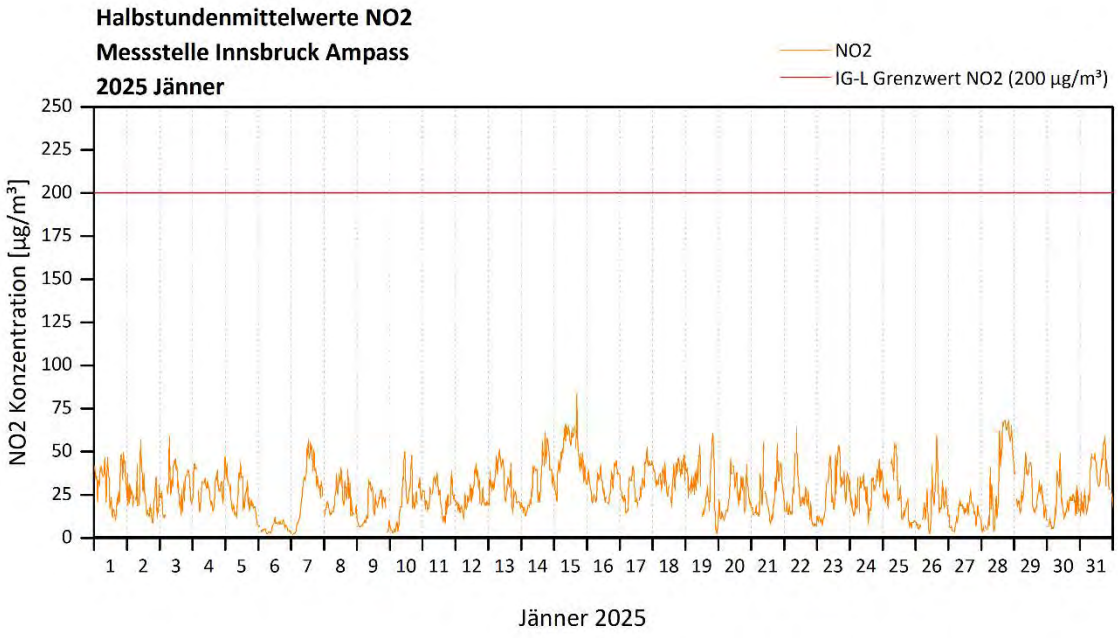
Windgeschwindigkeit / Velocità del vent



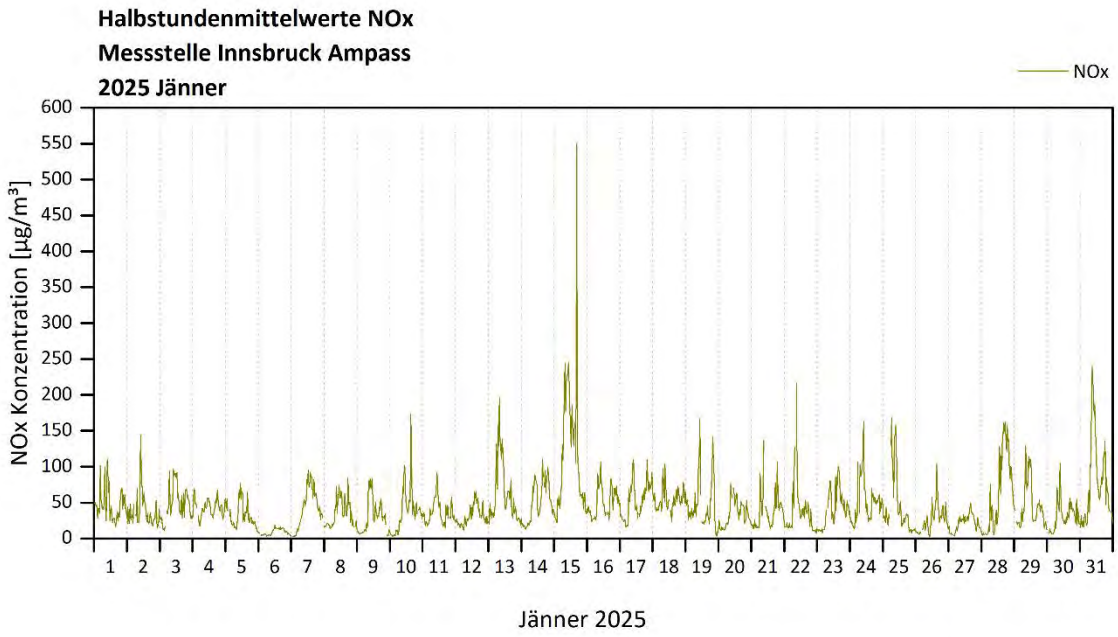
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

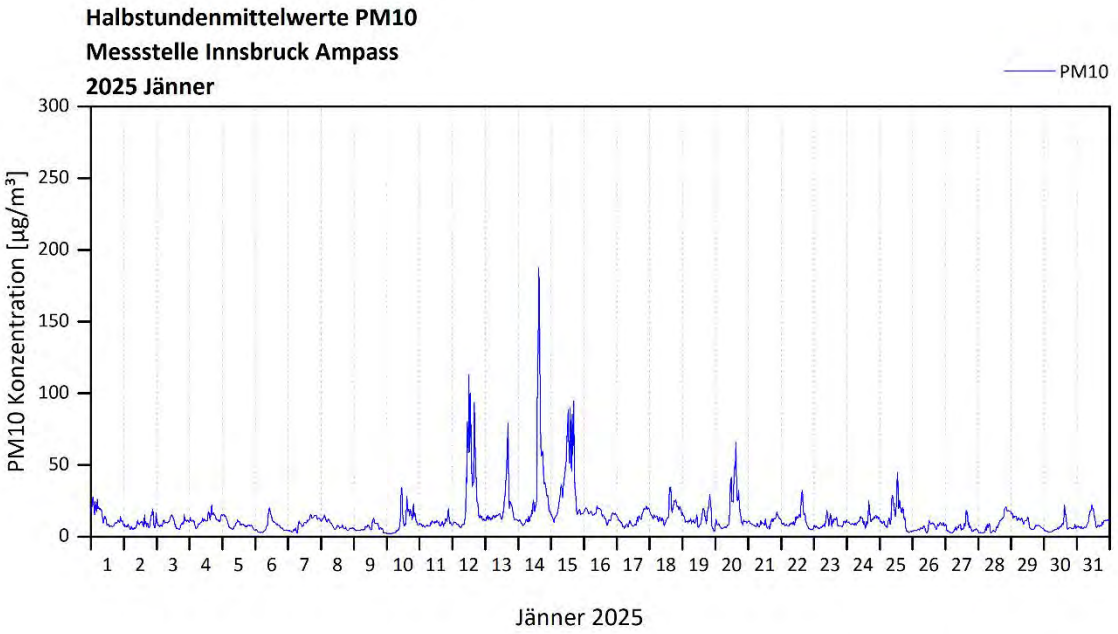
Stickstoffdioxid / Biossido di azoto



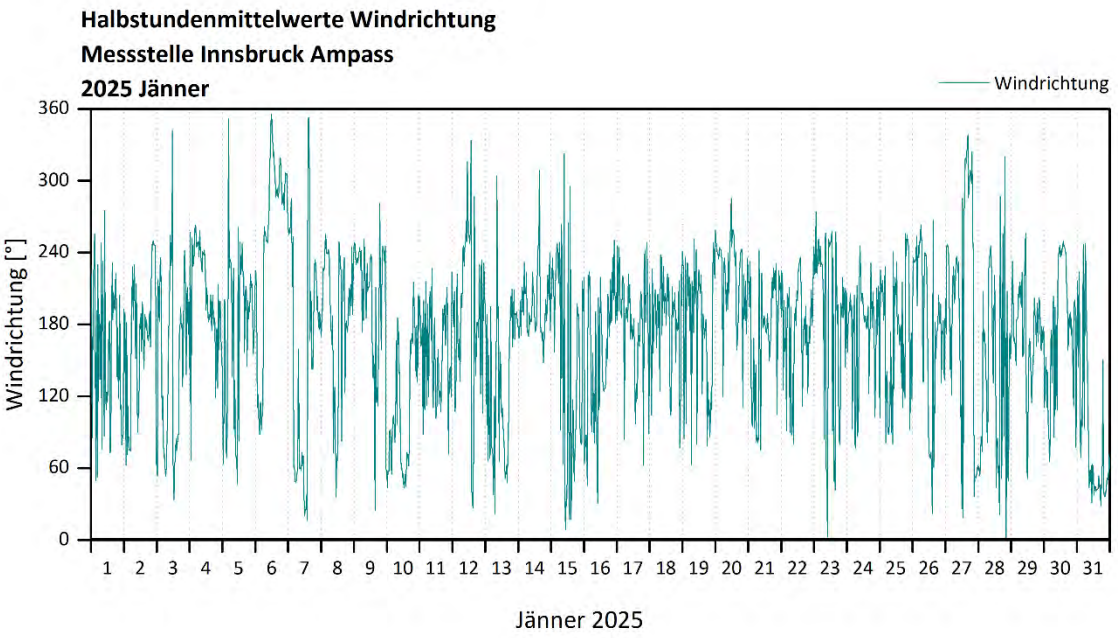
Stickstoffoxide / Ossidi di azoto



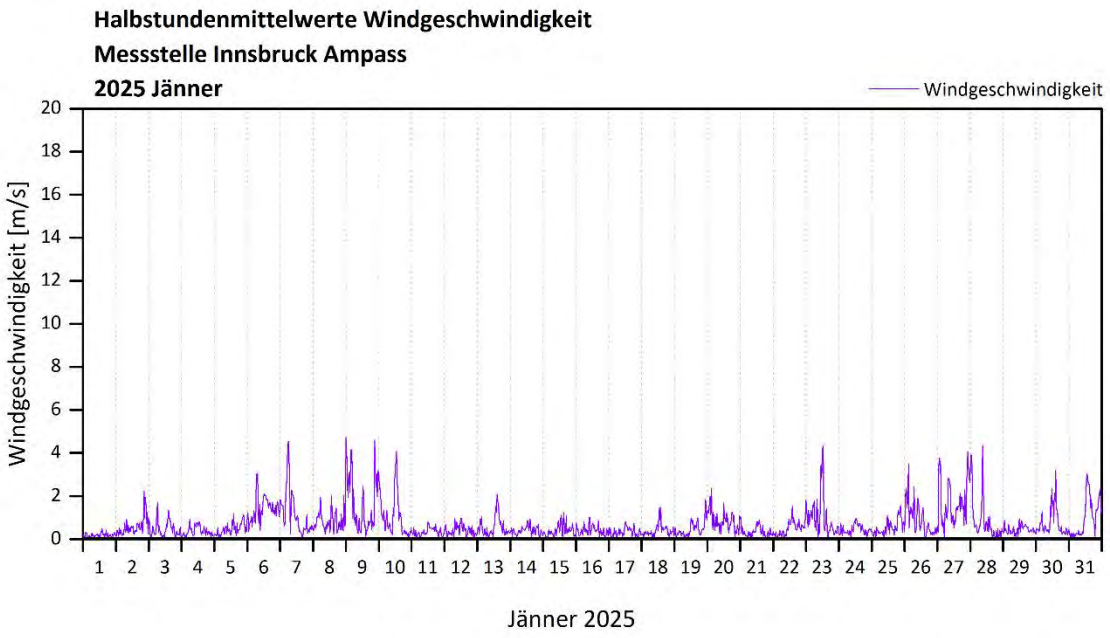
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

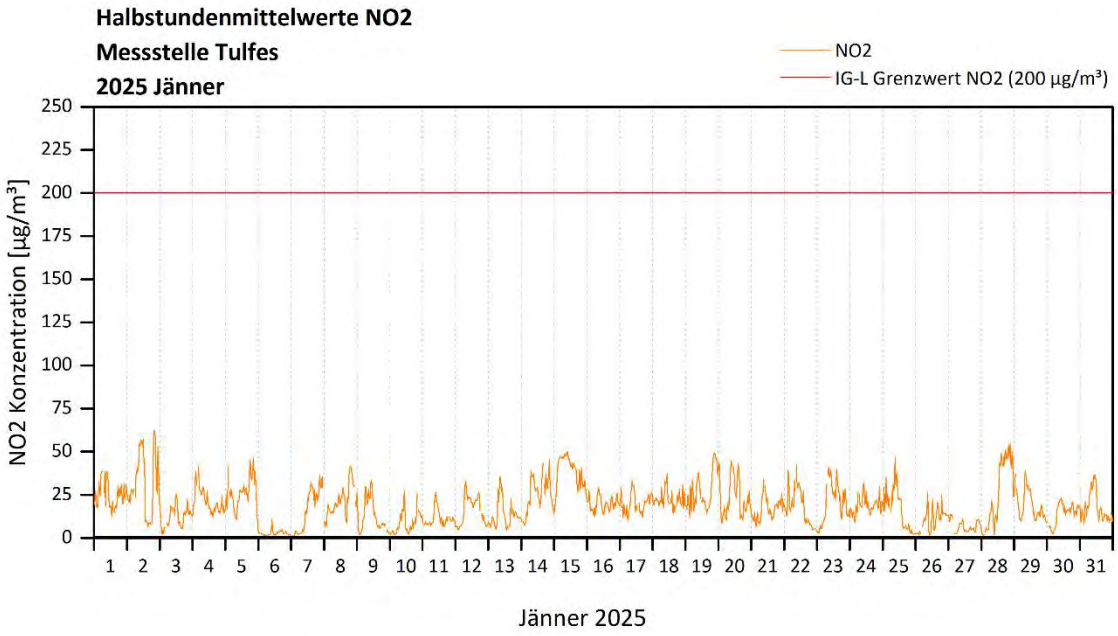


Windgeschwindigkeit / Velocità del vent

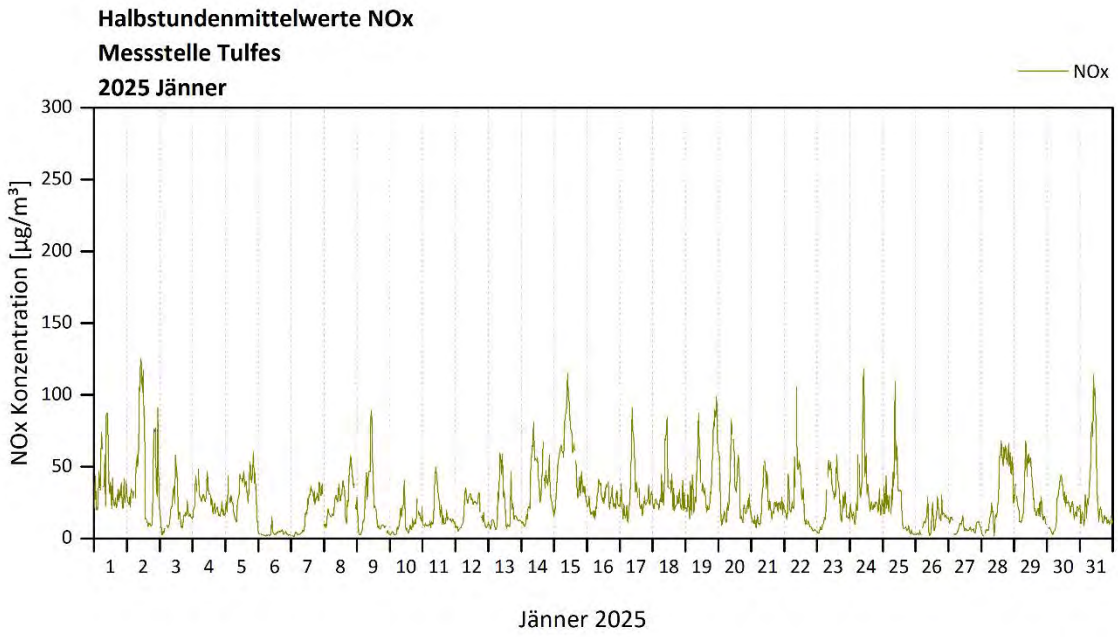


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

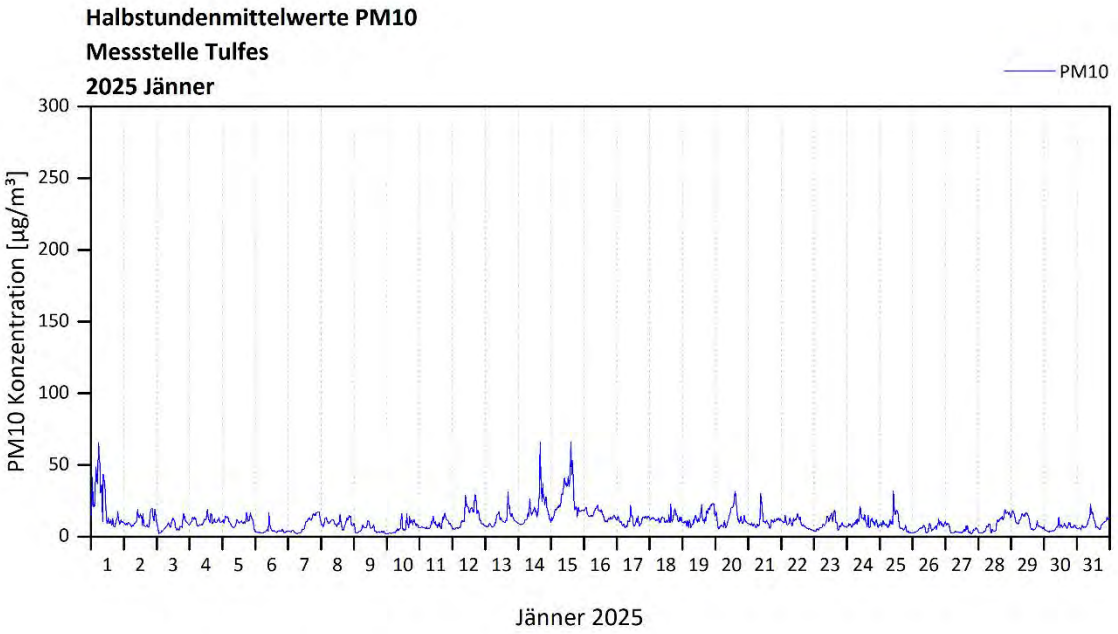
Stickstoffdioxid / Biossido di azoto



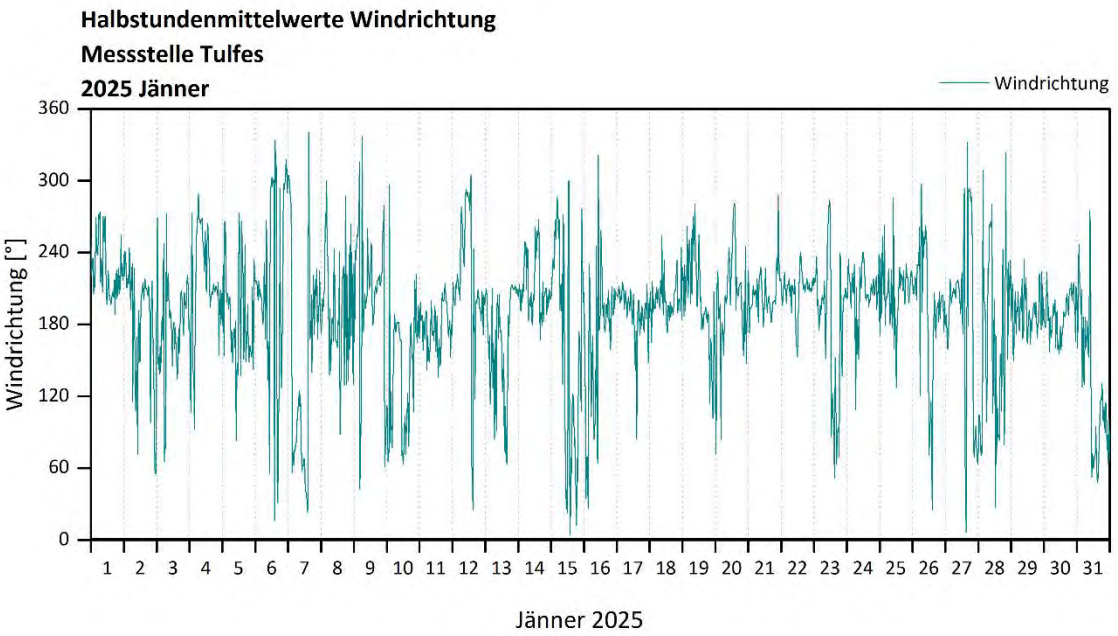
Stickstoffoxide / Ossidi di azoto



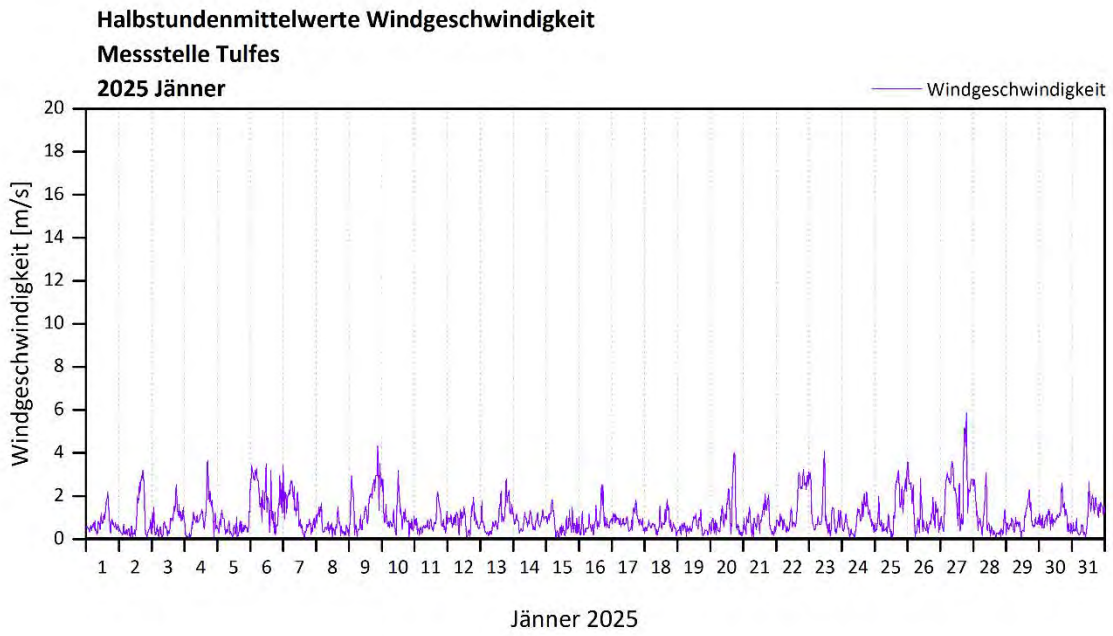
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

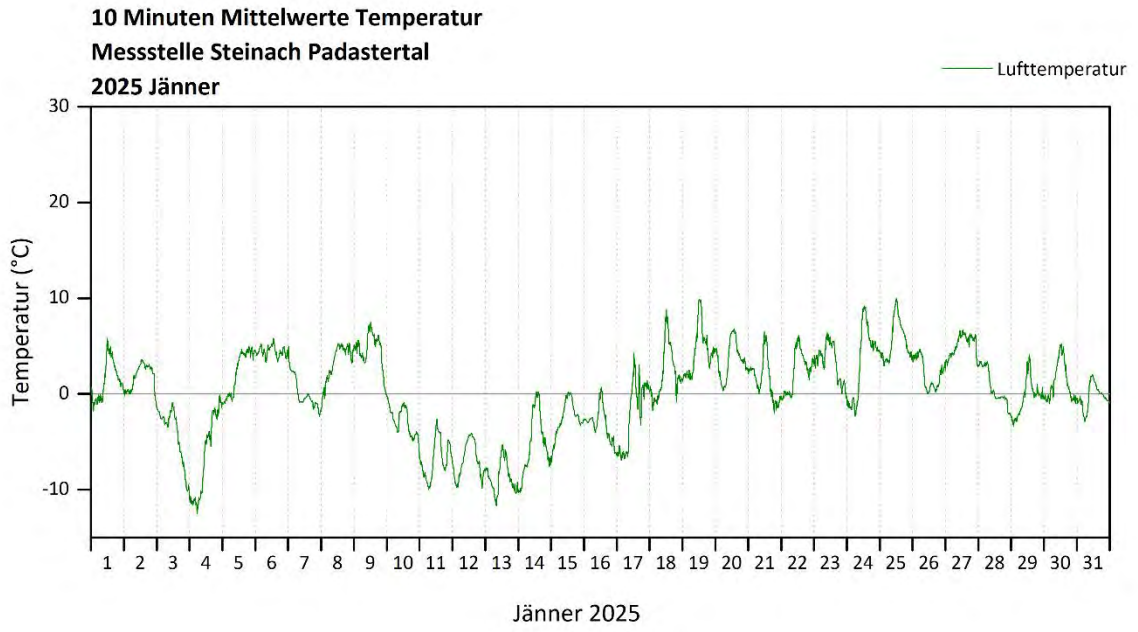


Windgeschwindigkeit / Velocità del vent

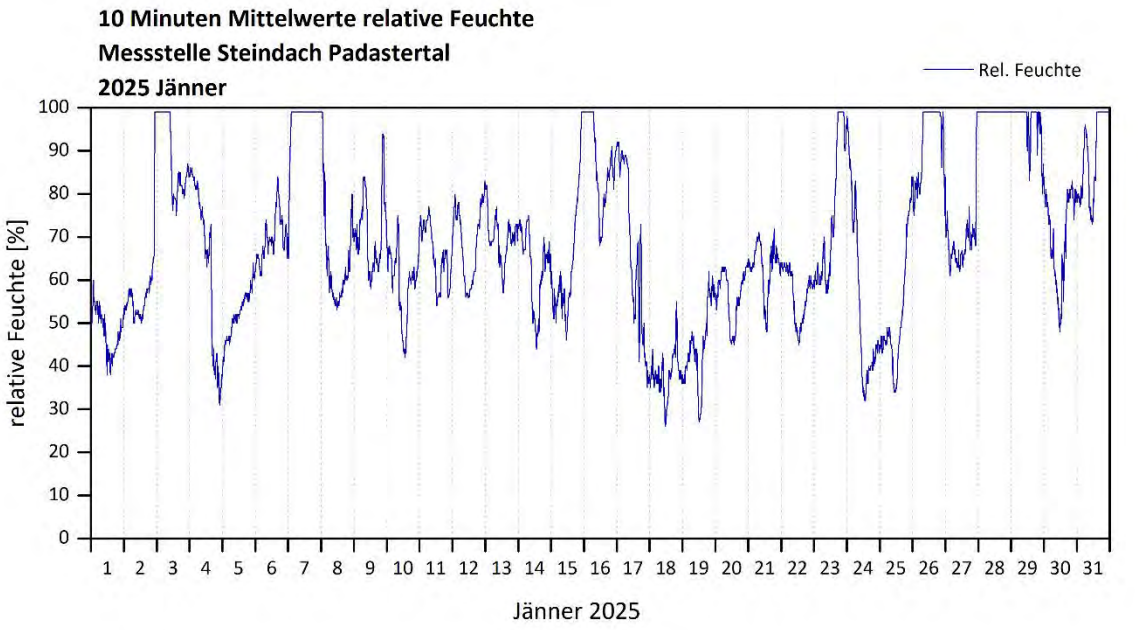


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

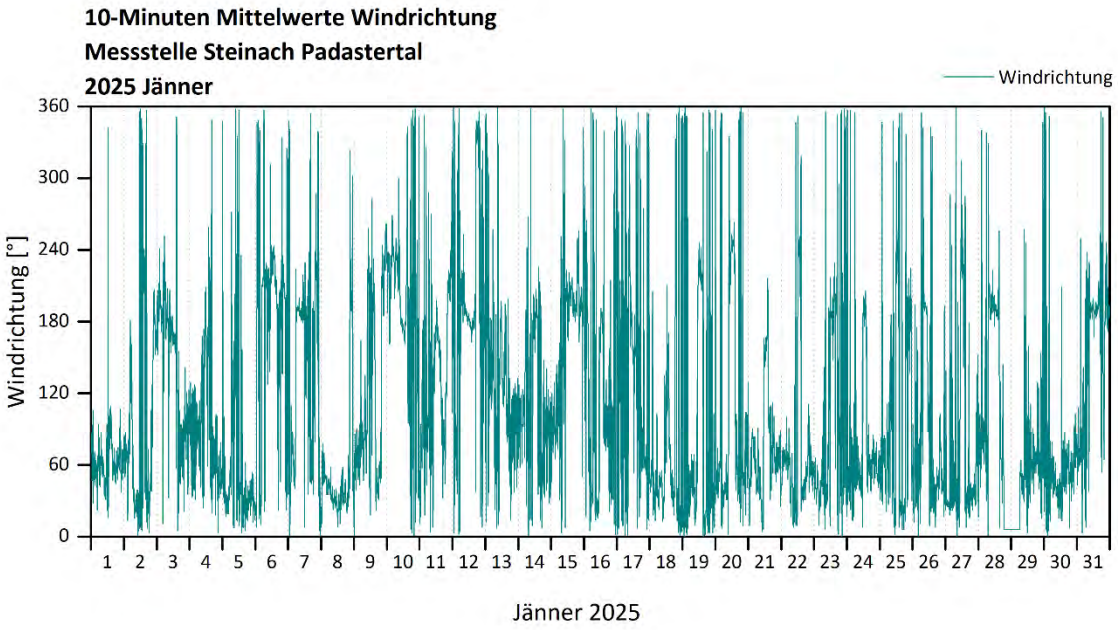
Temperatur / Temeraturà dell'aria



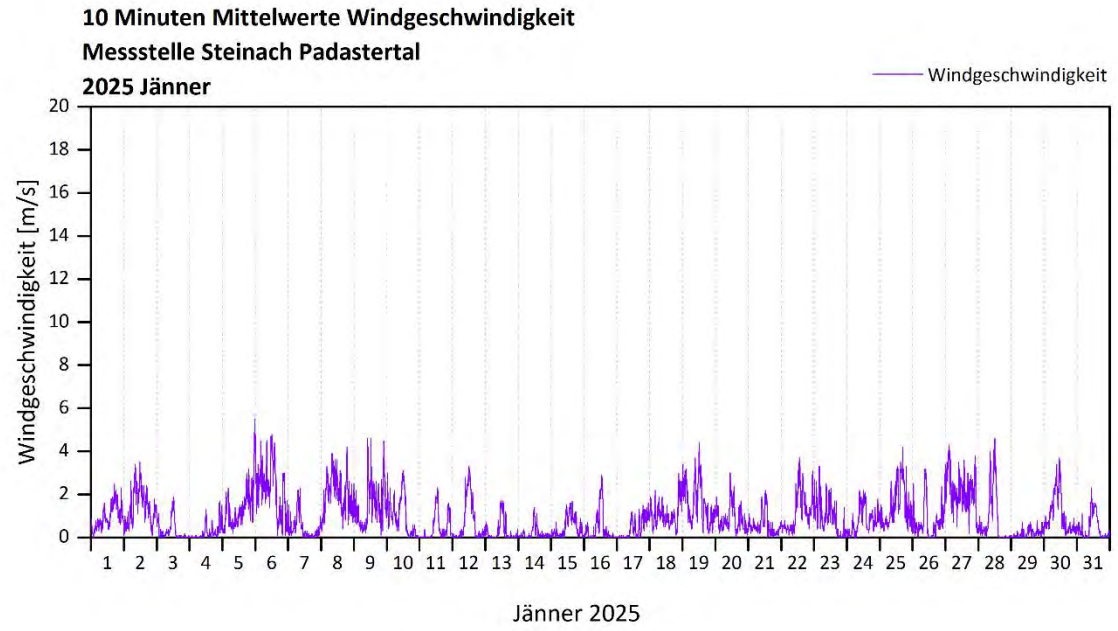
Relative Feuchtigkeit / Umidità relativa



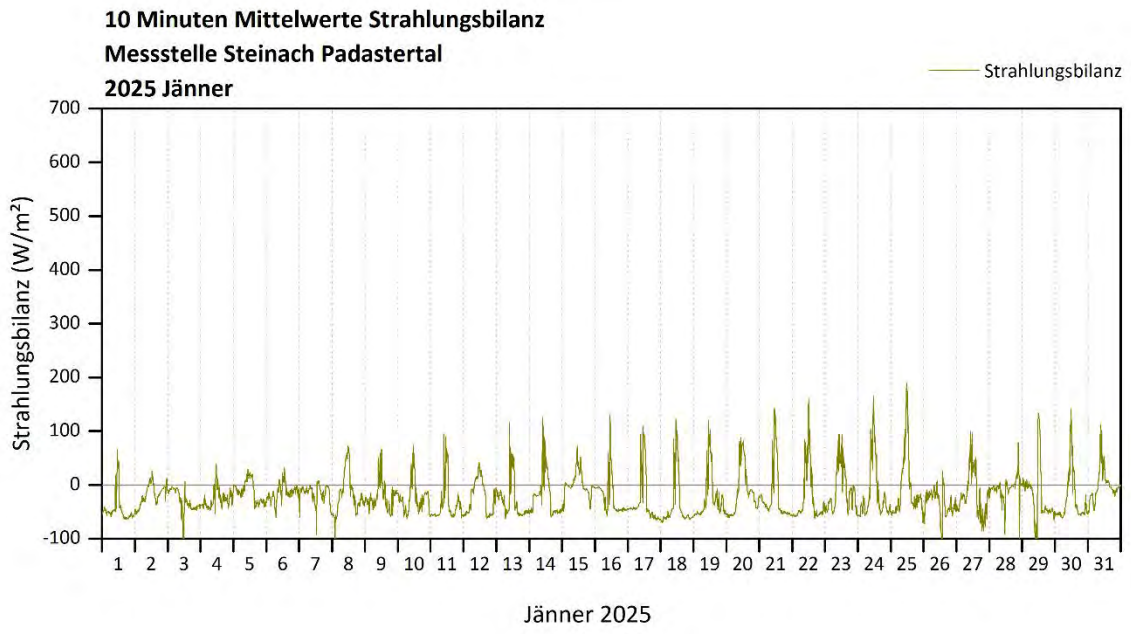
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht Februar 2025 Relazione mensile febbraio 2025

Stickstoffdioxid Biossido di azoto

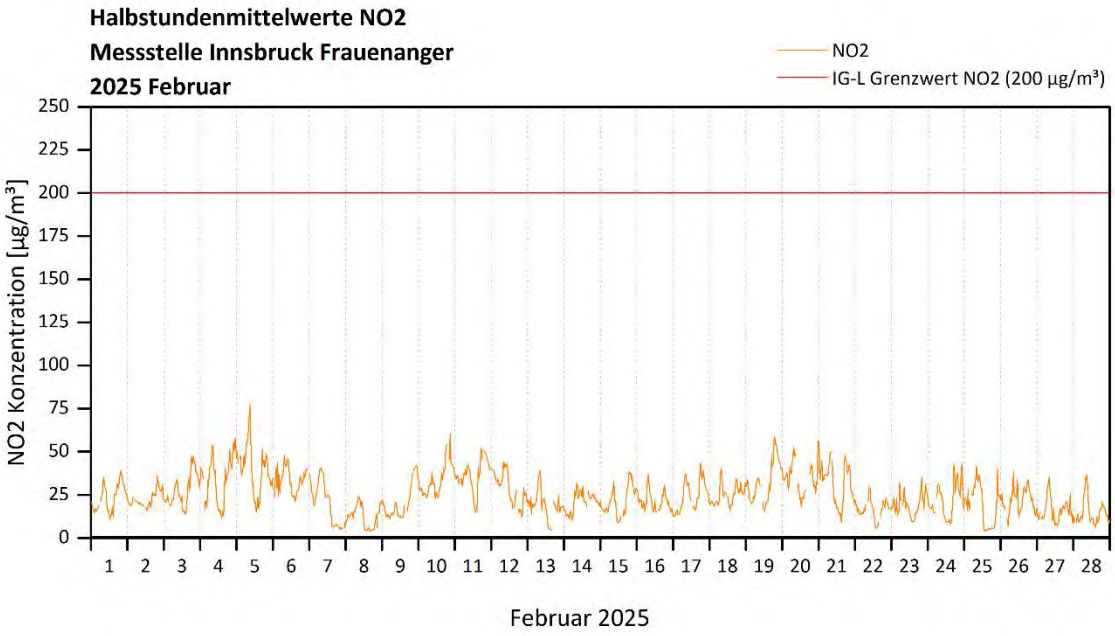
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 e 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	77	24.8	39.6	0		0	
Innsbruck Sillhöfe	58	23.3	36.9	0		0	
Steinach Siegreith	64	13.1	23.8	0		0	
Steinach Saxen	84	18.3	31.3	0		0	
Ampass	59	24.9	39.4	0		0	
Tulfes	47	15.1	26.4	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

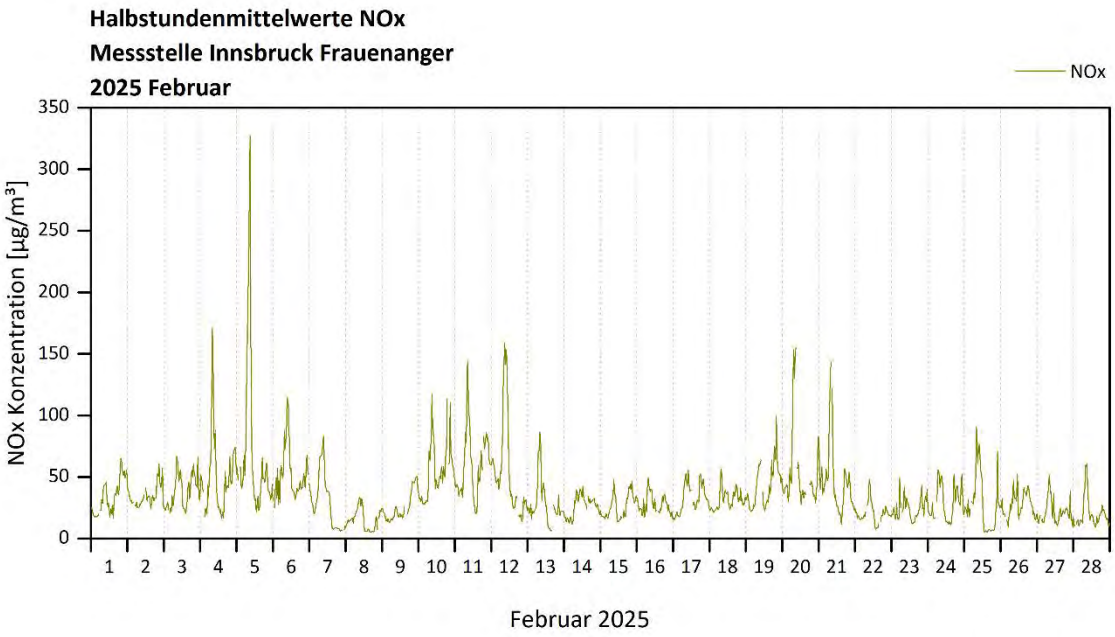
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 e 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	47	16.8	28.3	0		0	
Innsbruck Sillhöfe	119	17.5	29.3	0		0	
Steinach Siegreith	159	12.2	21.7	0		0	
Steinach Saxen	291	19.7	42.9	1		0	
Ampass	128	16.9	29.6	0		0	
Tulfes	53	14.3	26.6	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

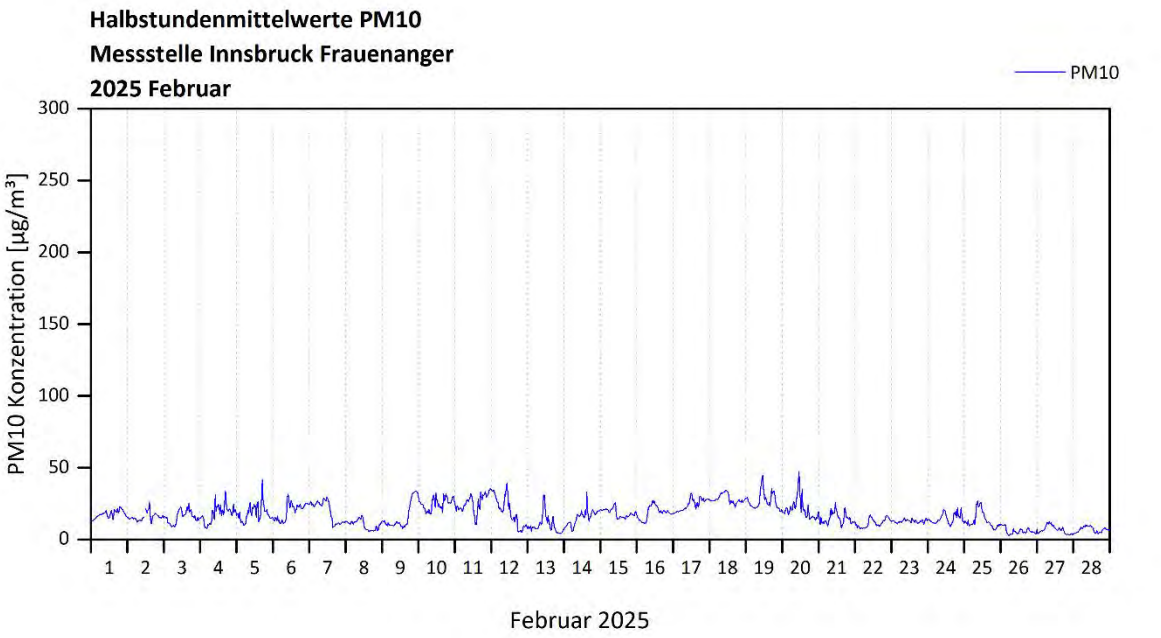
Stickstoffdioxid / Biossido di azoto



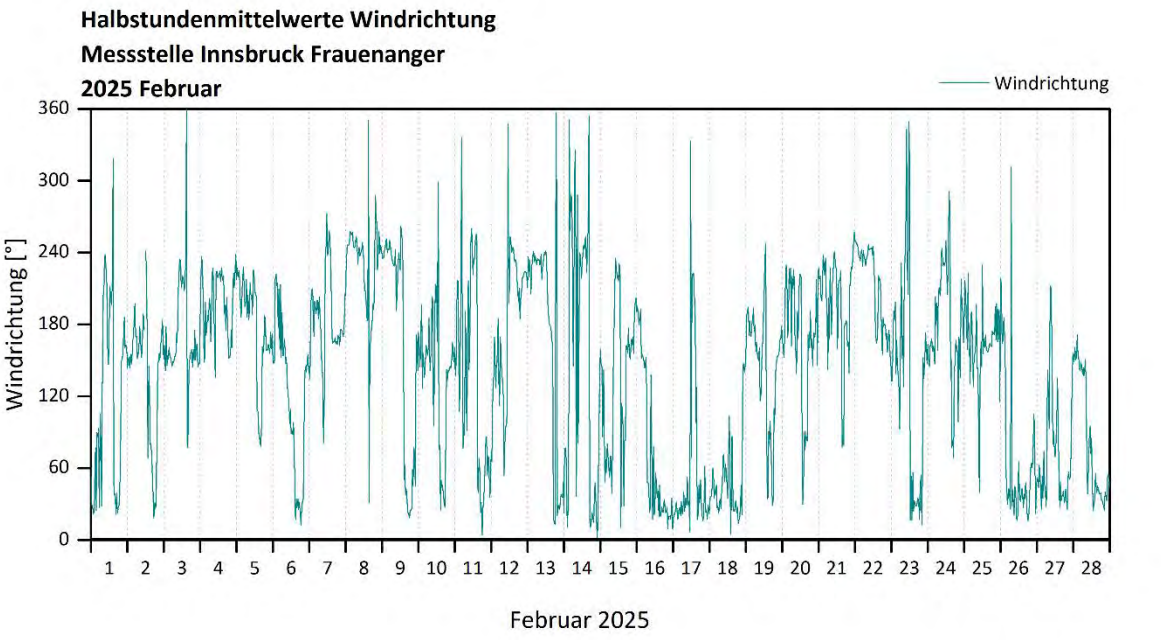
Stickstoffoxide / Ossidi di azoto



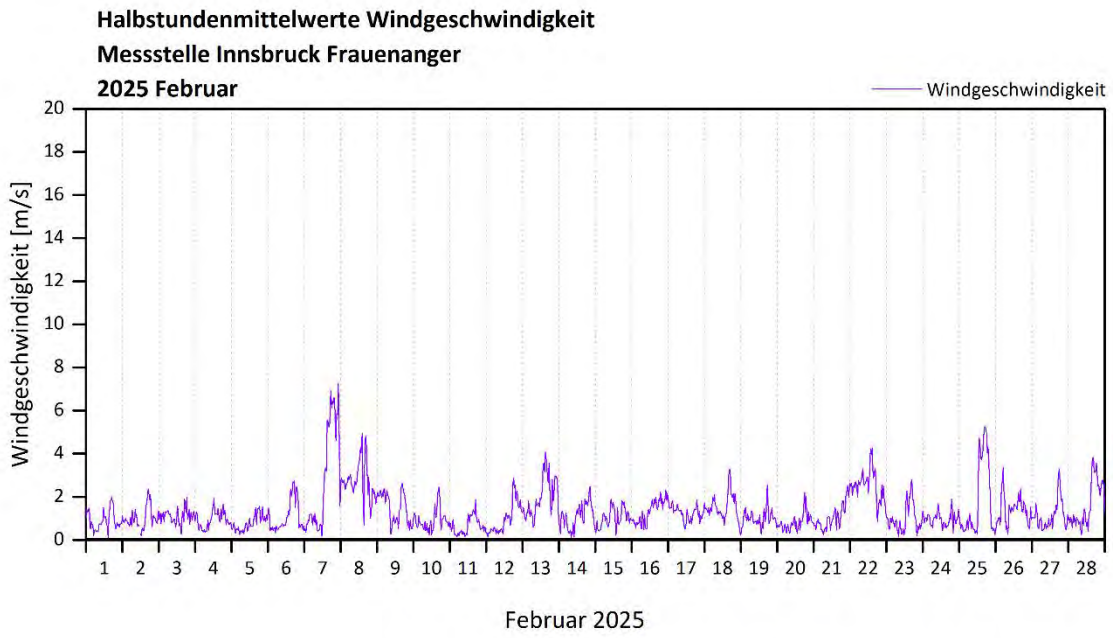
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

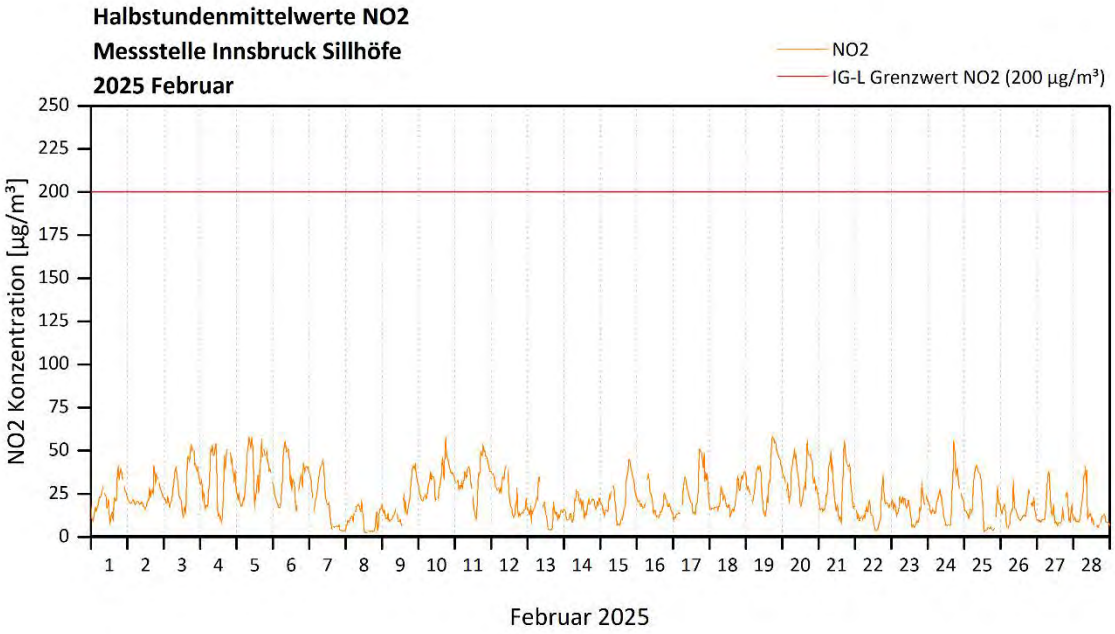


Windgeschwindigkeit / Velocità del vento

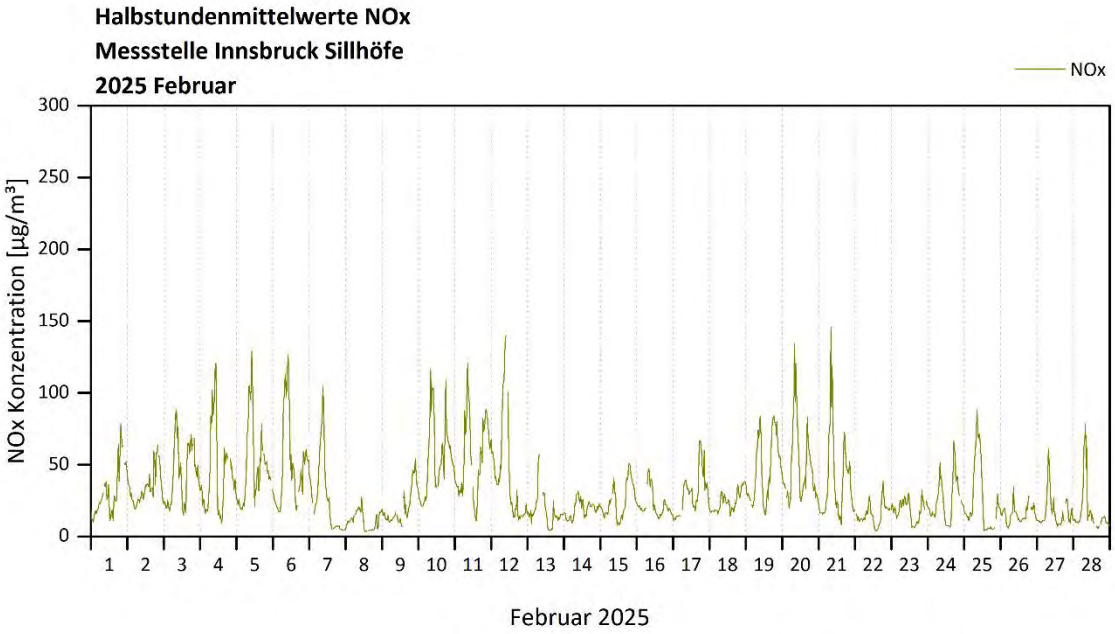


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

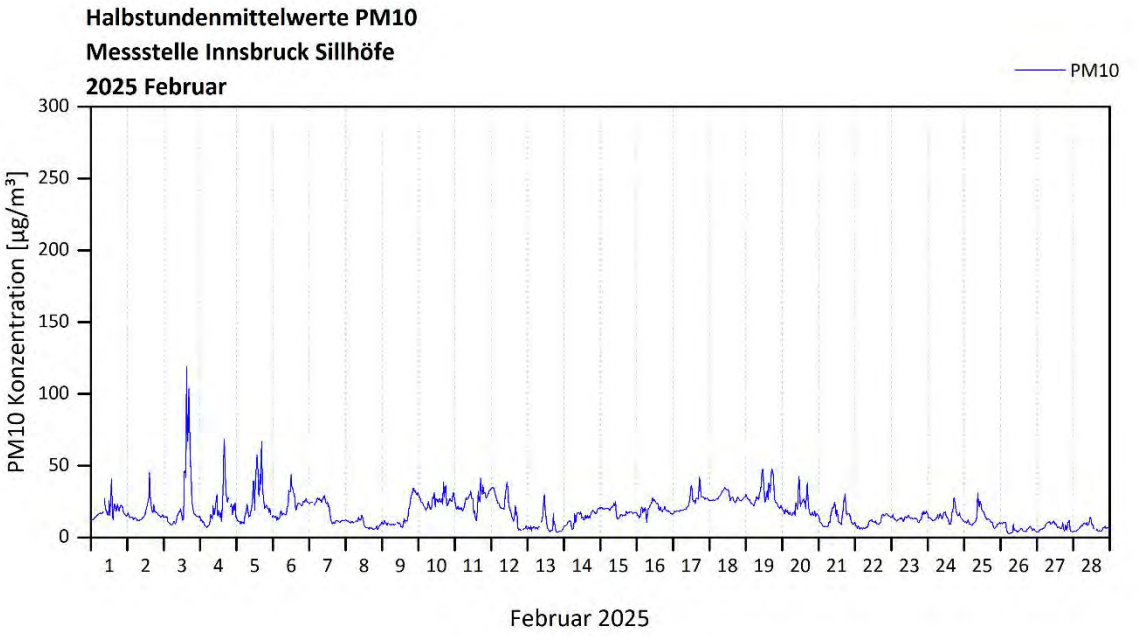
Stickstoffdioxid / Biossido di azoto



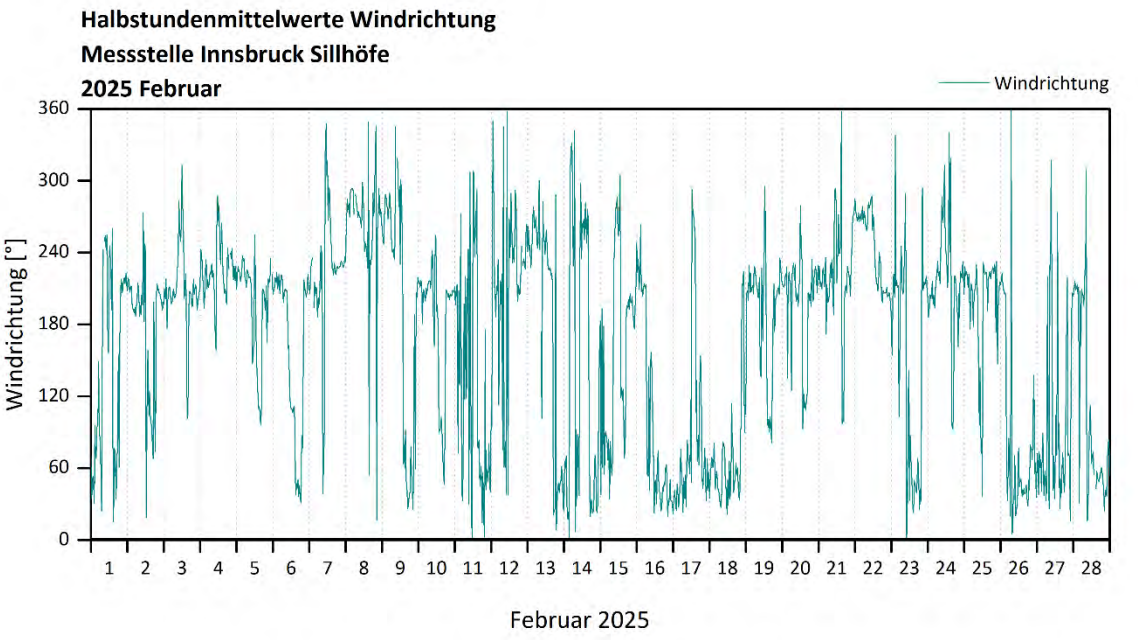
Stickstoffoxide / Ossidi di azoto



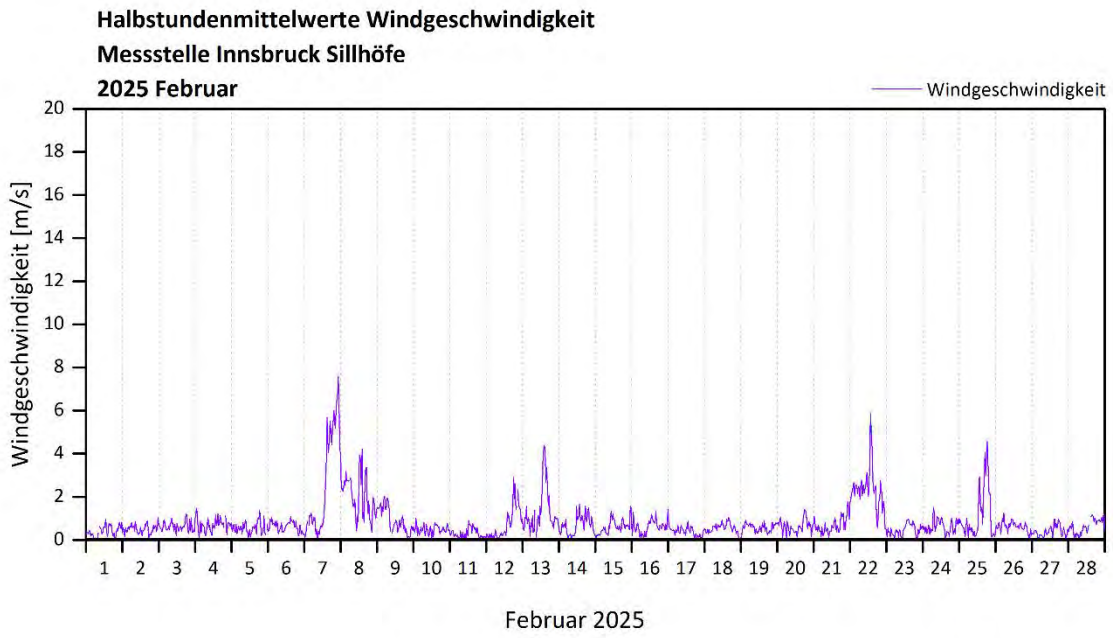
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

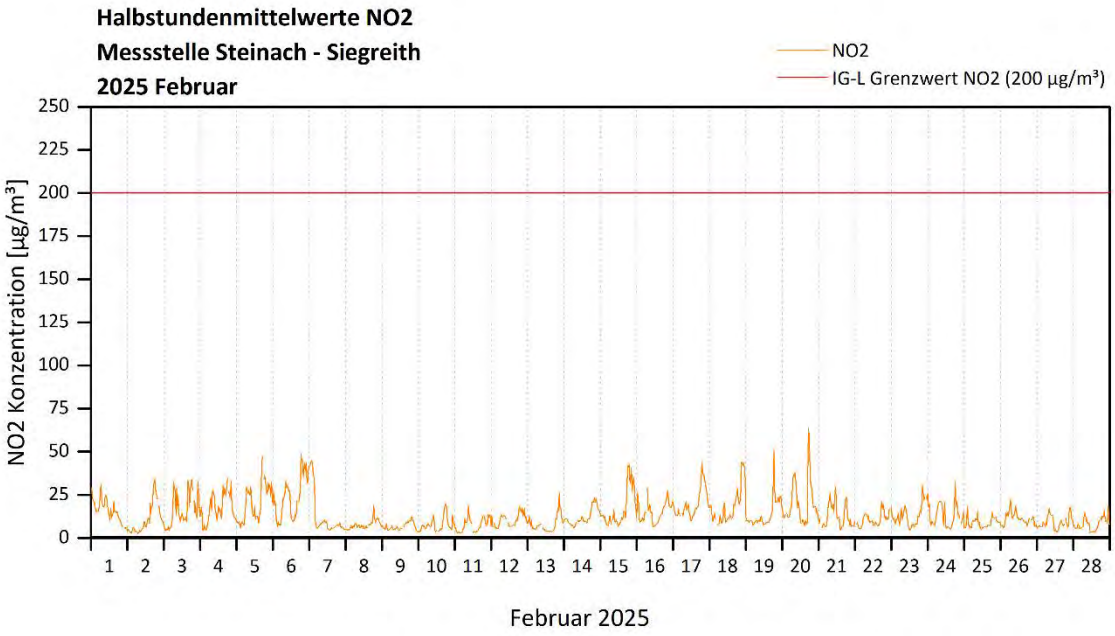


Windgeschwindigkeit / Velocità del vento

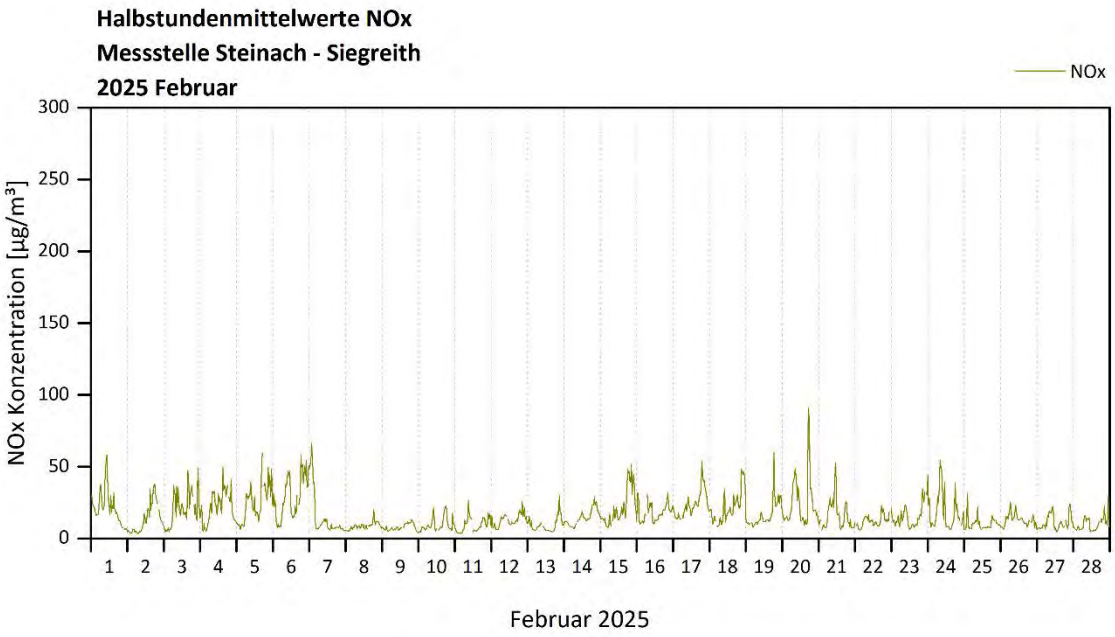


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

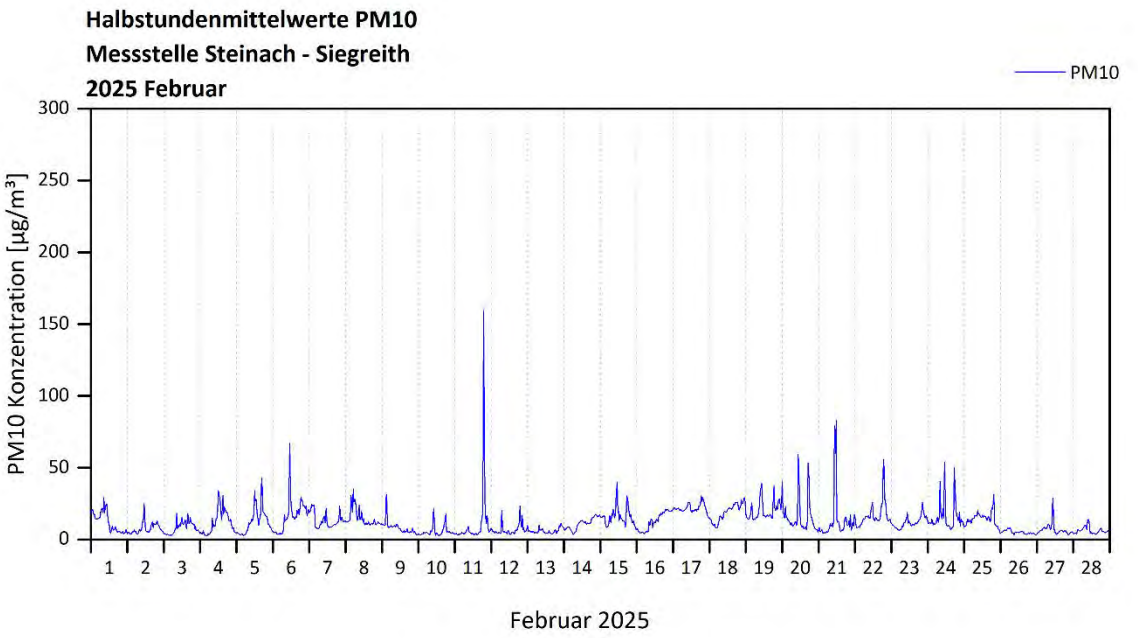
Stickstoffdioxid / Biossido di azoto



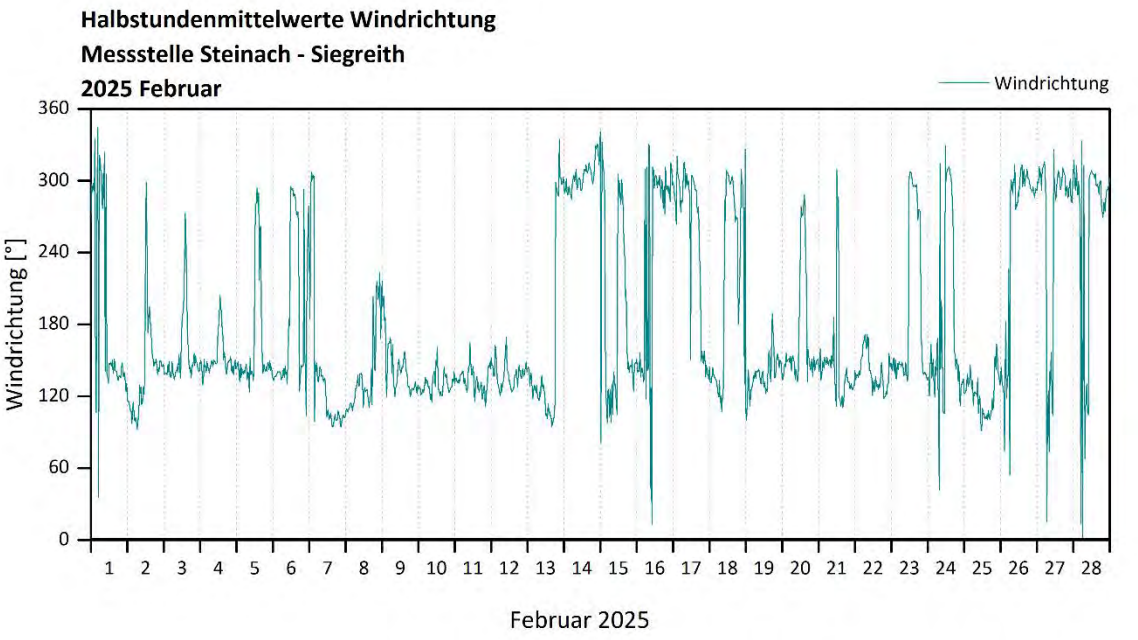
Stickstoffoxide / Ossidi di azoto



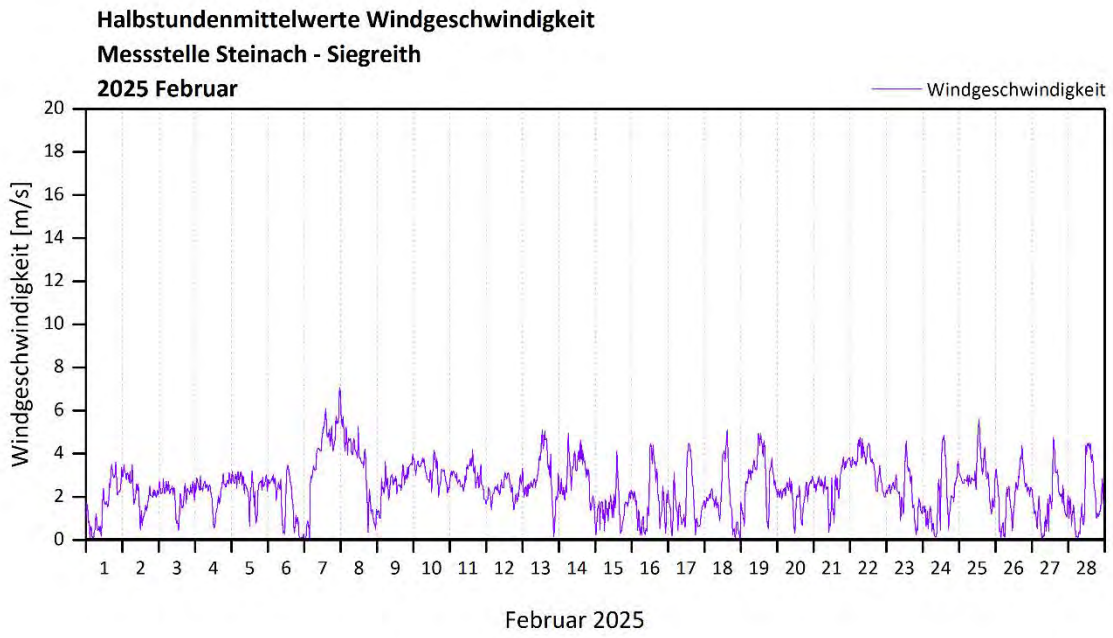
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

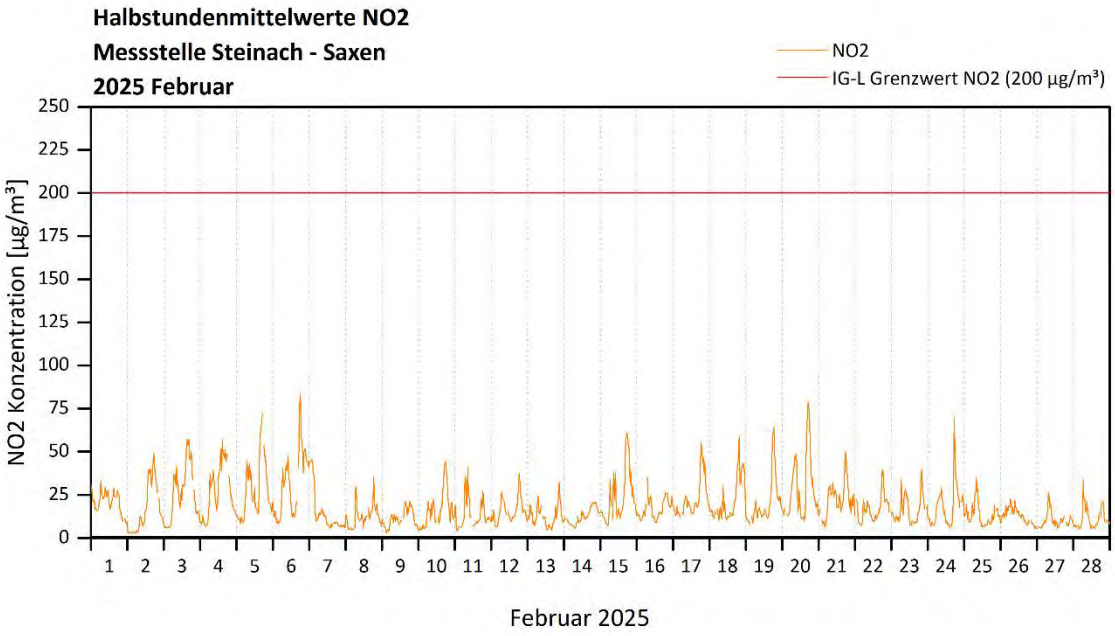


Windgeschwindigkeit / Velocità del vento

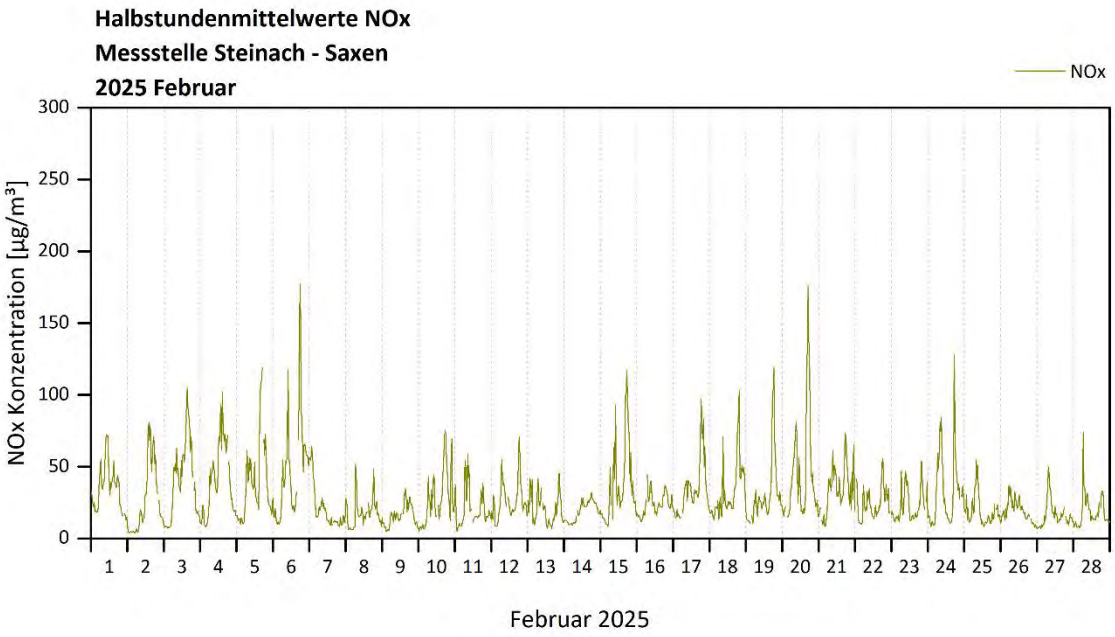


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

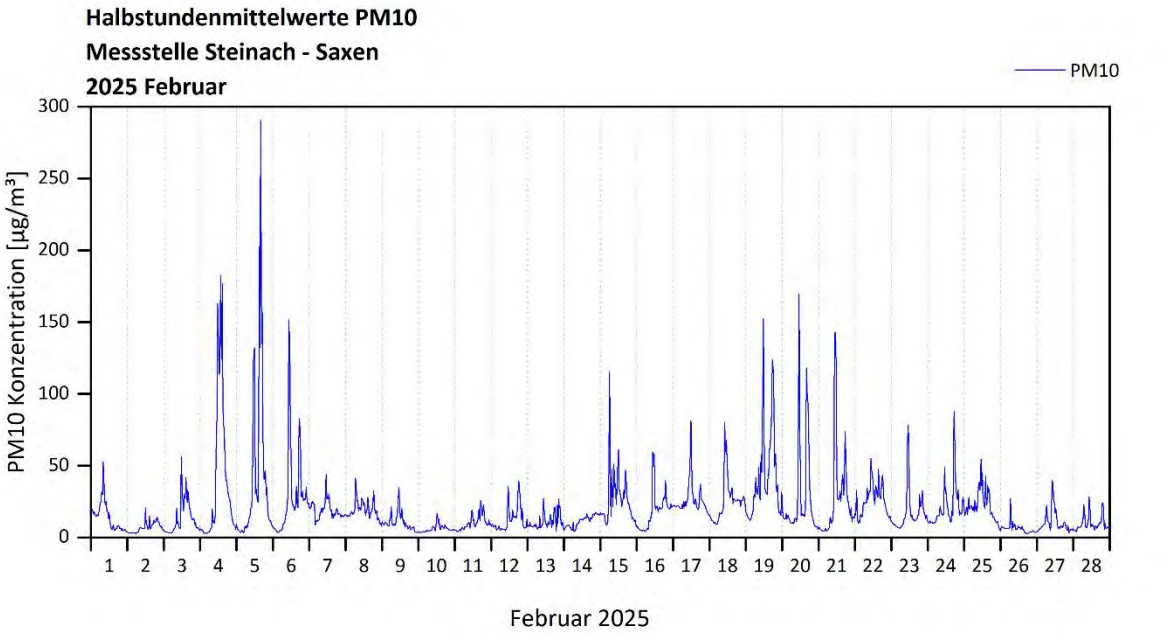
Stickstoffdioxid / Biossido di azoto



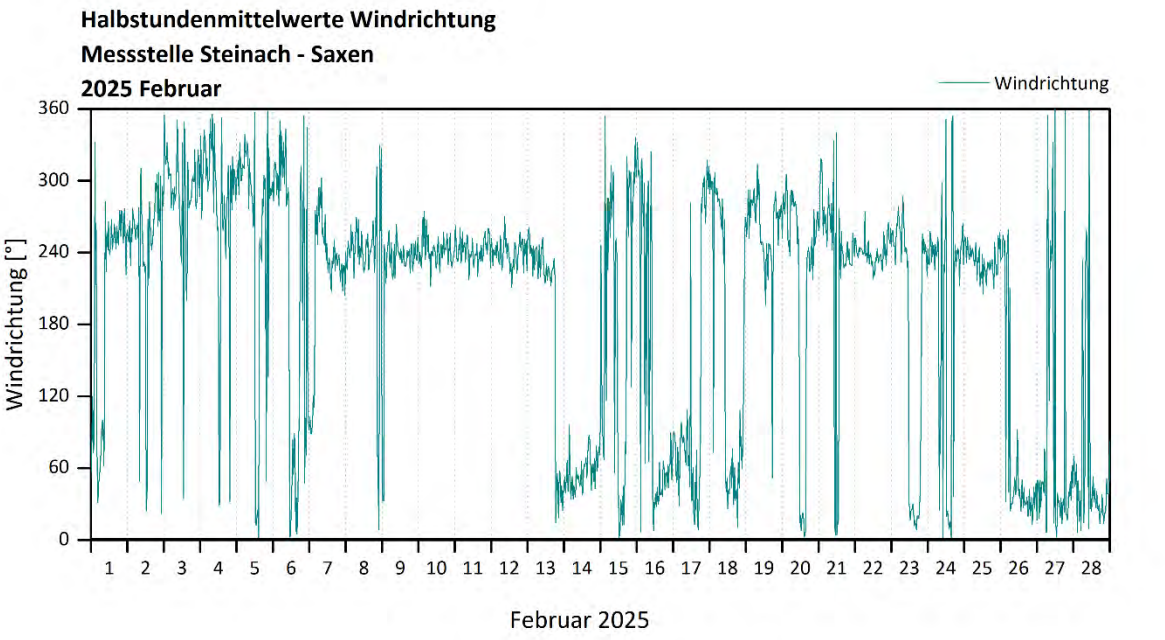
Stickstoffoxide / Ossidi di azoto



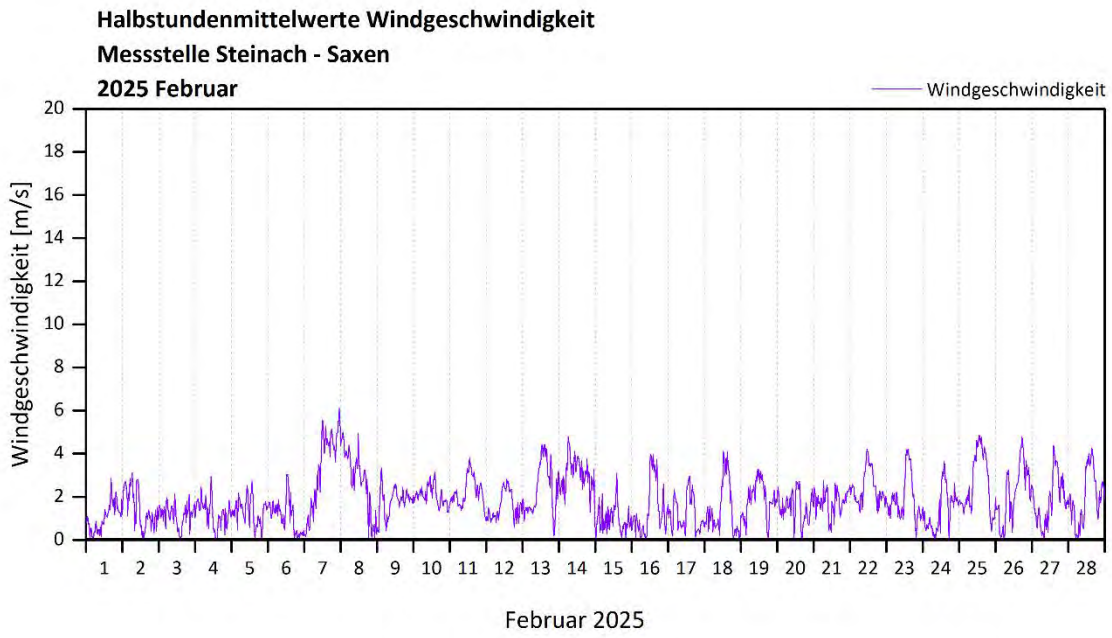
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



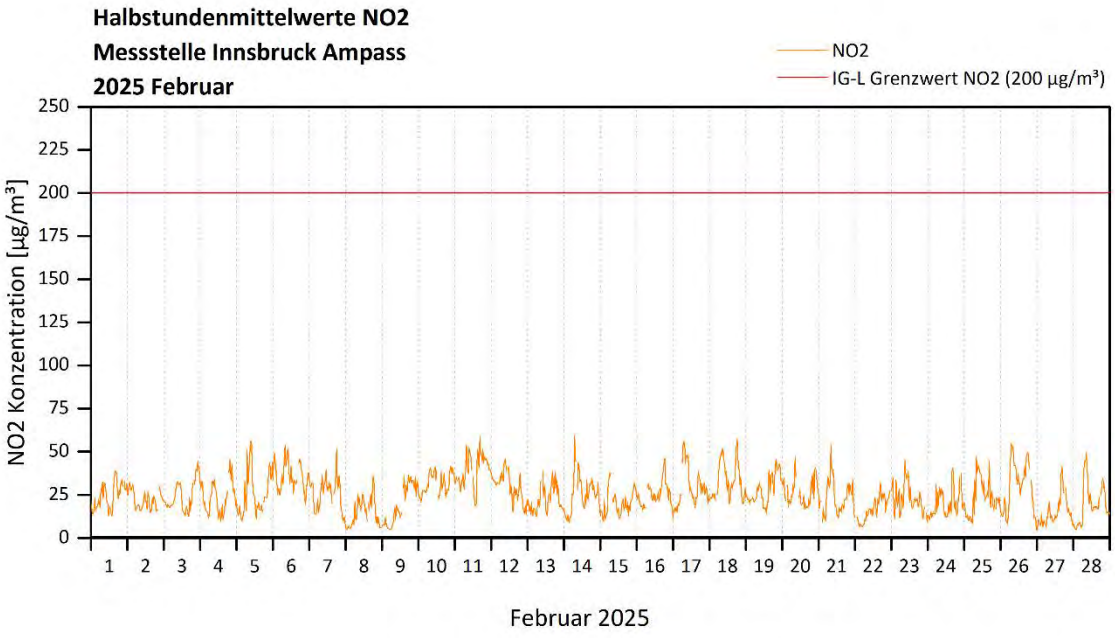
Windgeschwindigkeit / Velocità del vent



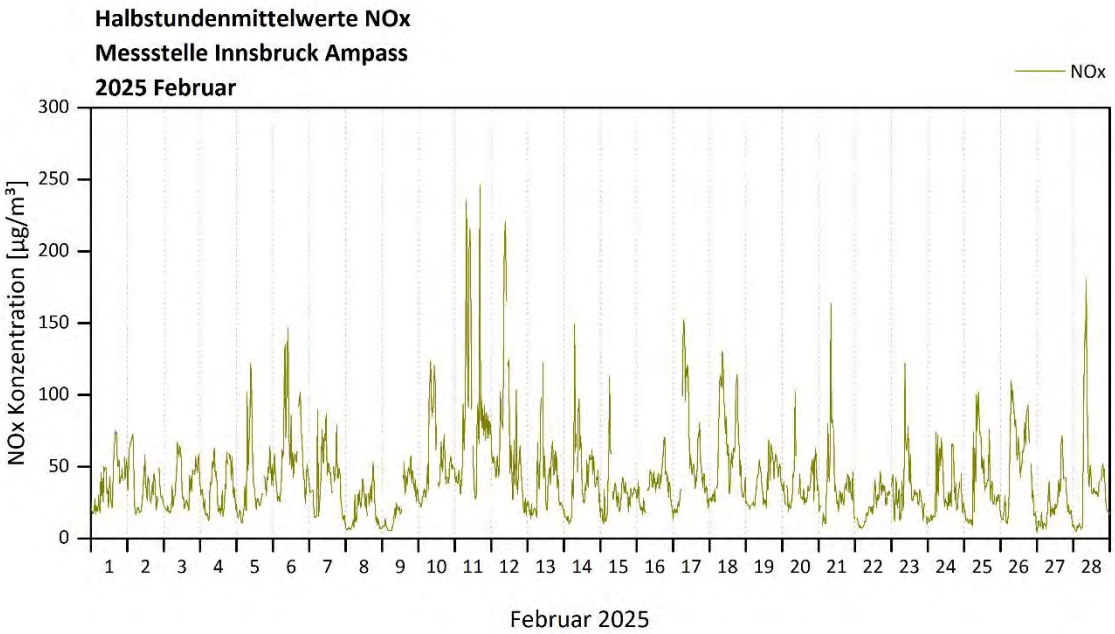
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

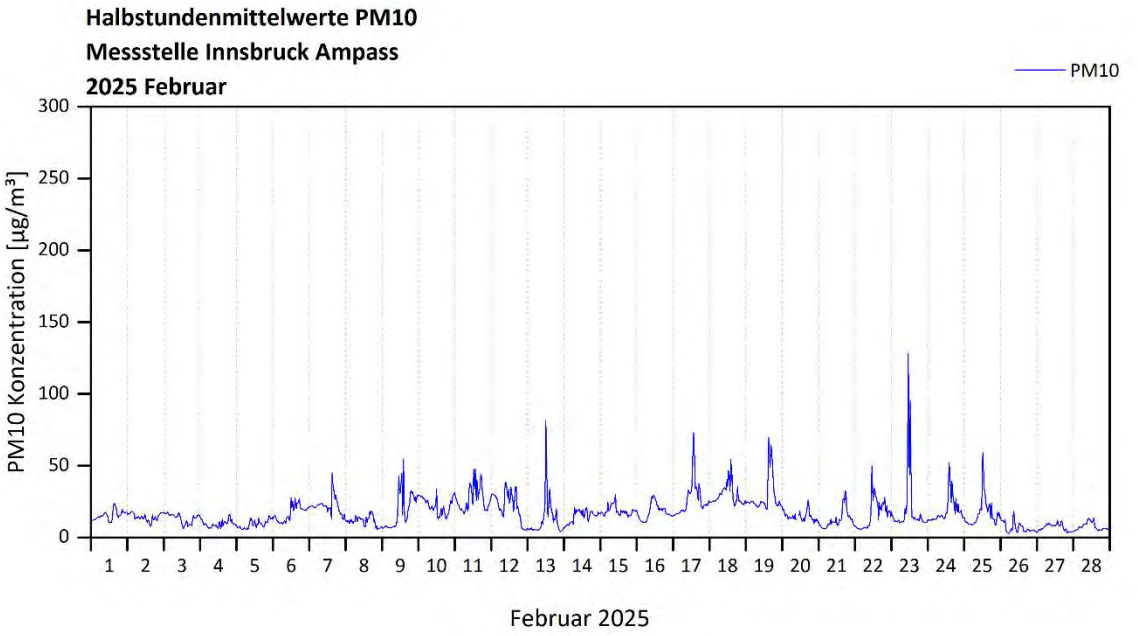
Stickstoffdioxid / Biossido di azoto



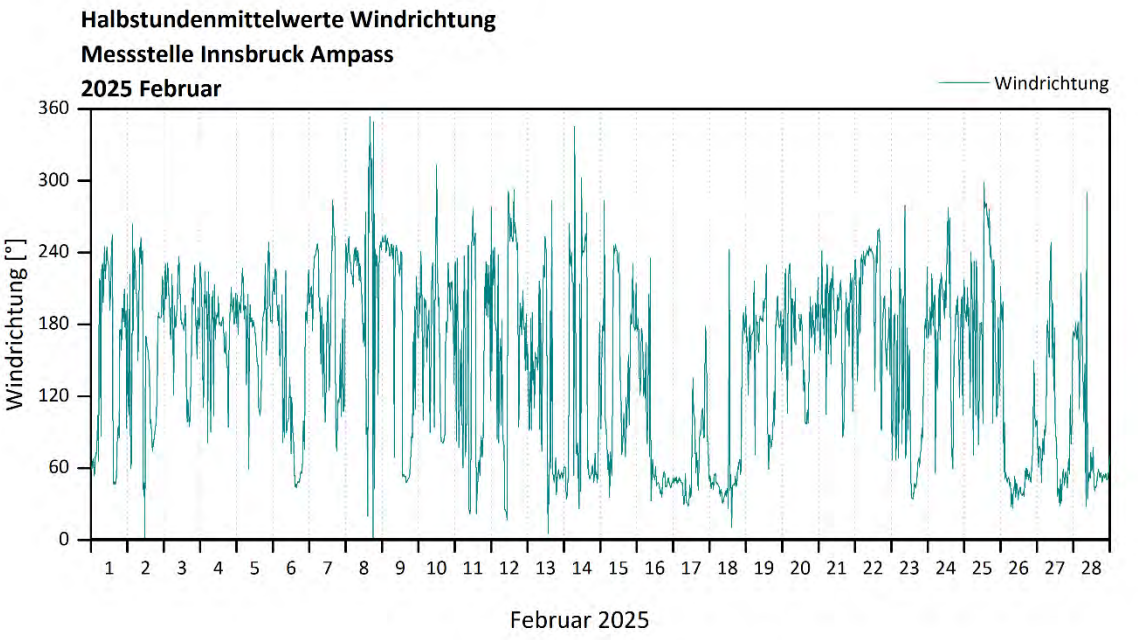
Stickstoffoxide / Ossidi di azoto



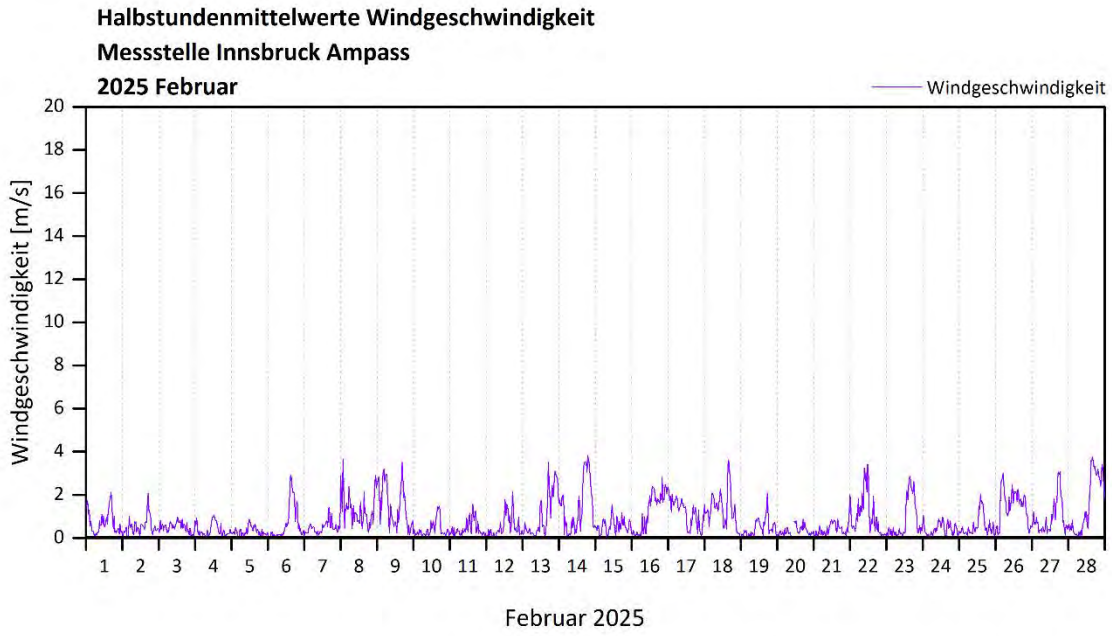
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

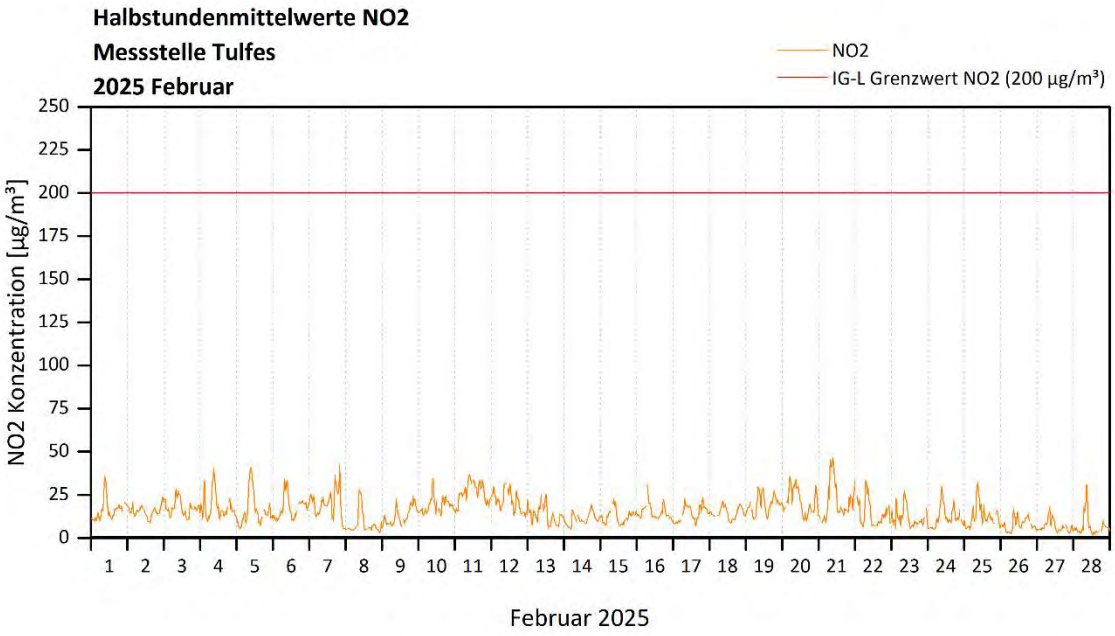


Windgeschwindigkeit / Velocità del vent

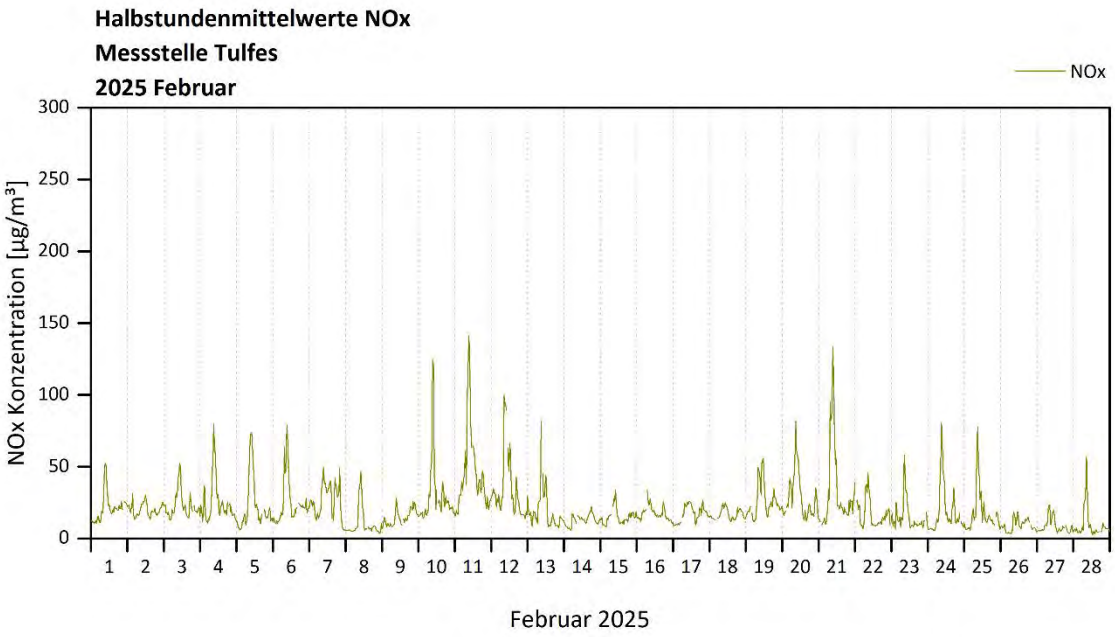


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

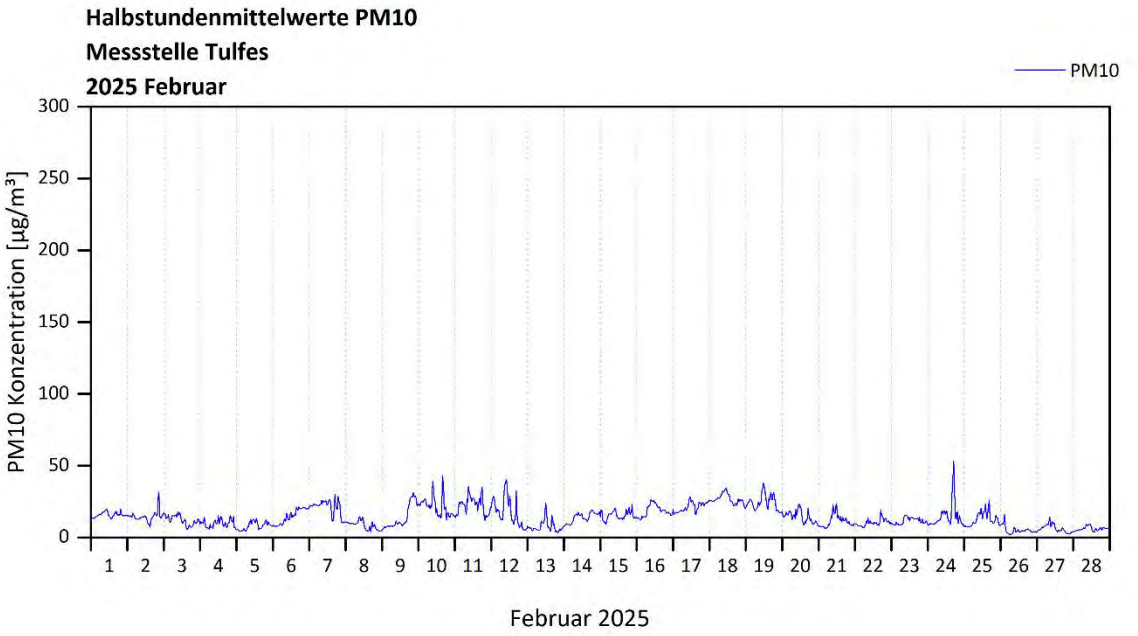
Stickstoffdioxid / Biossido di azoto



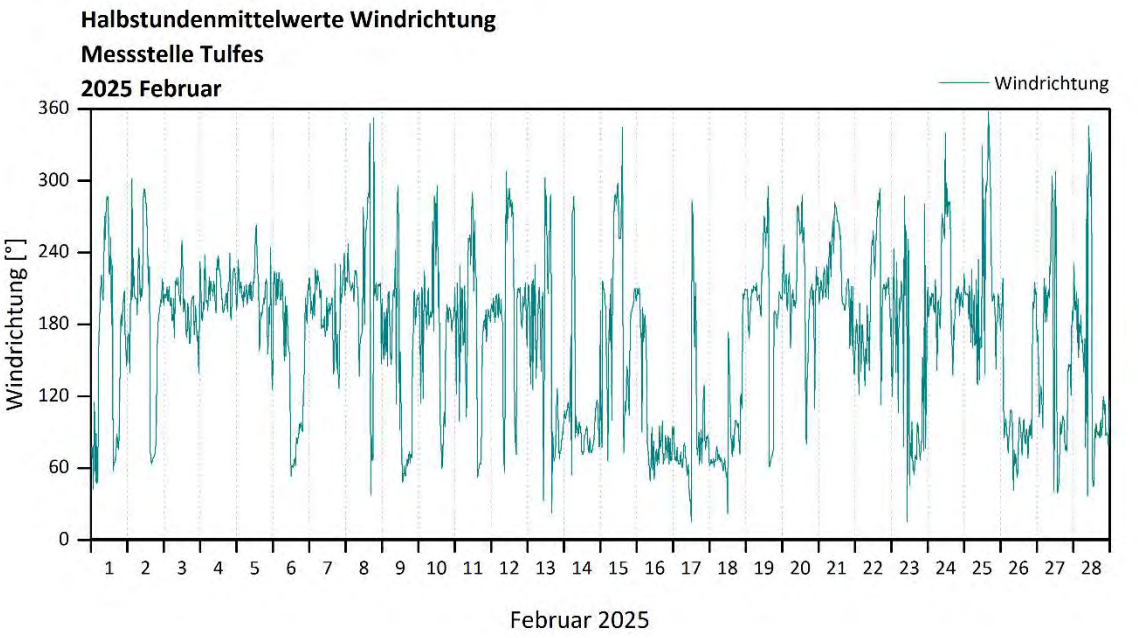
Stickstoffoxide / Ossidi di azoto



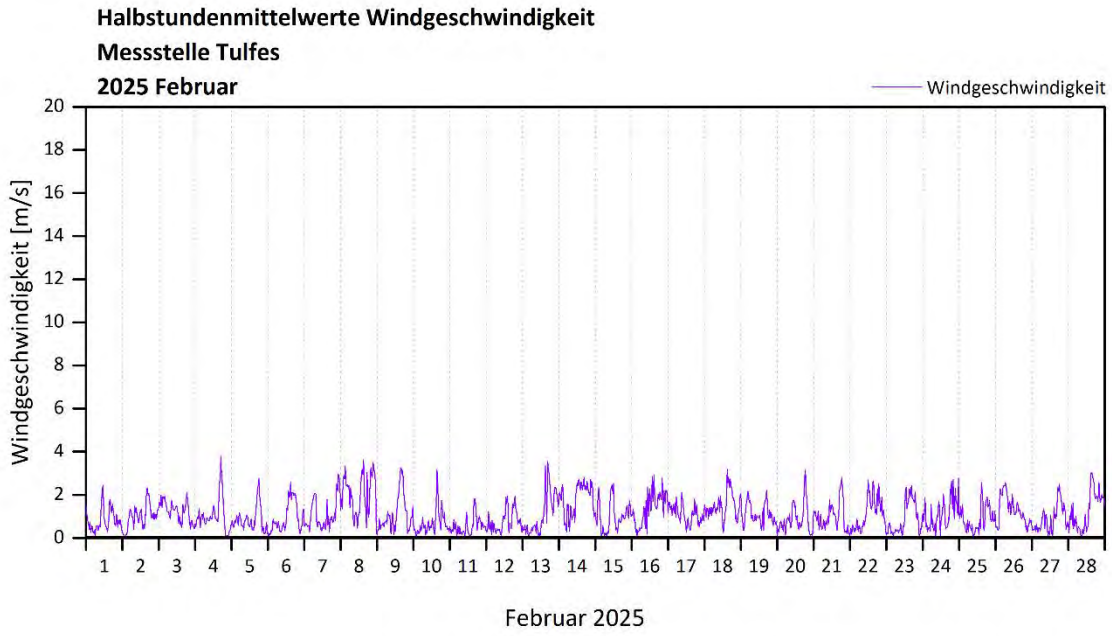
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

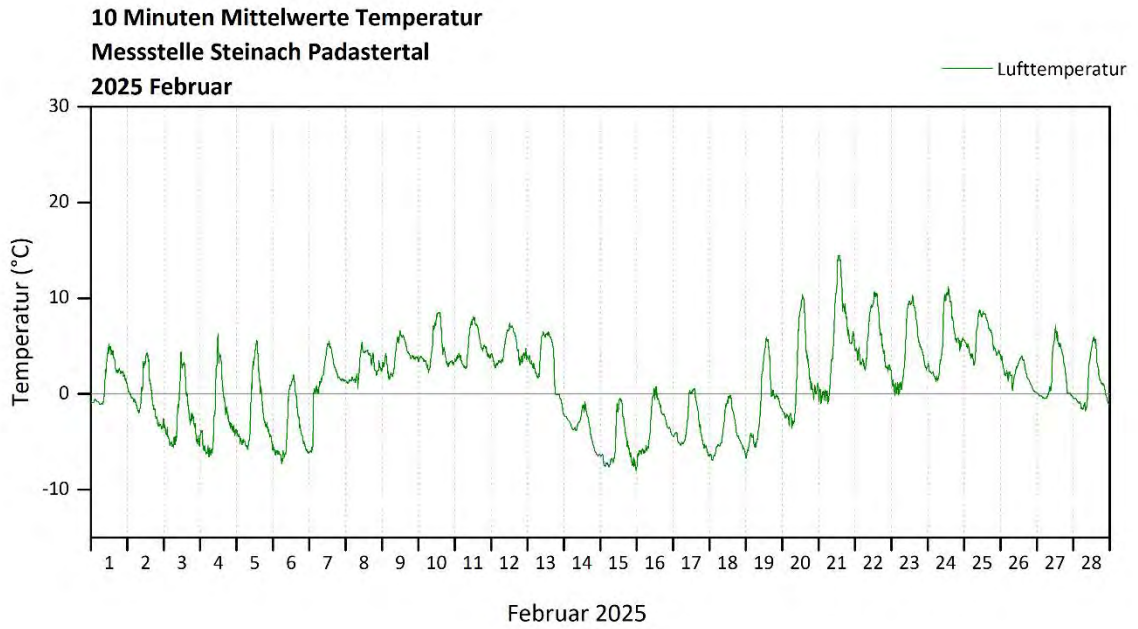


Windgeschwindigkeit / Velocità del vent

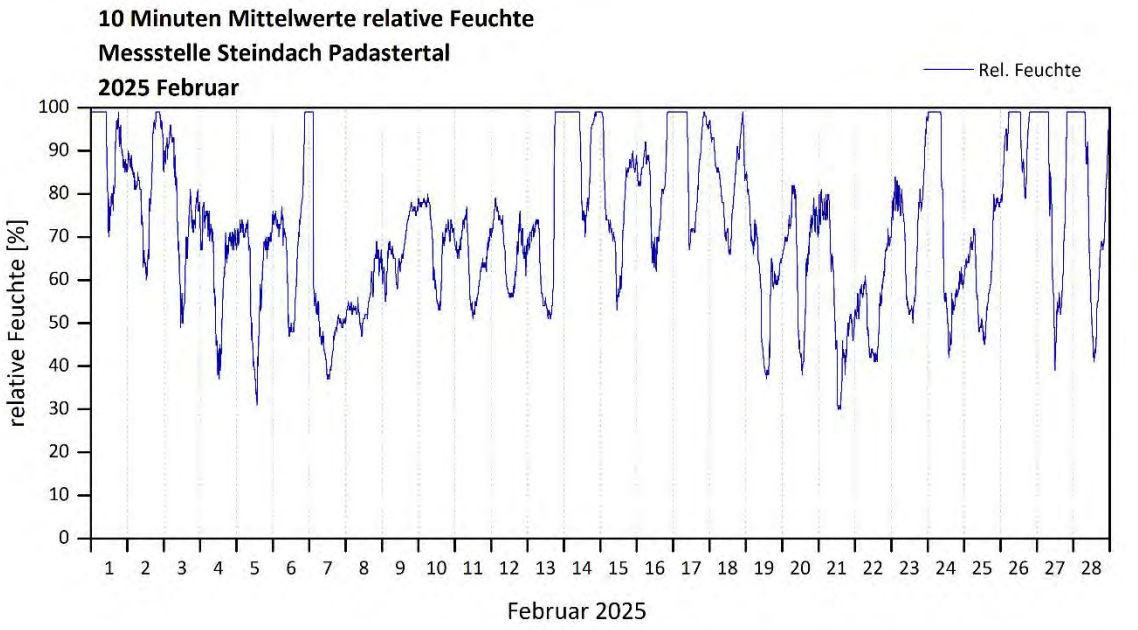


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

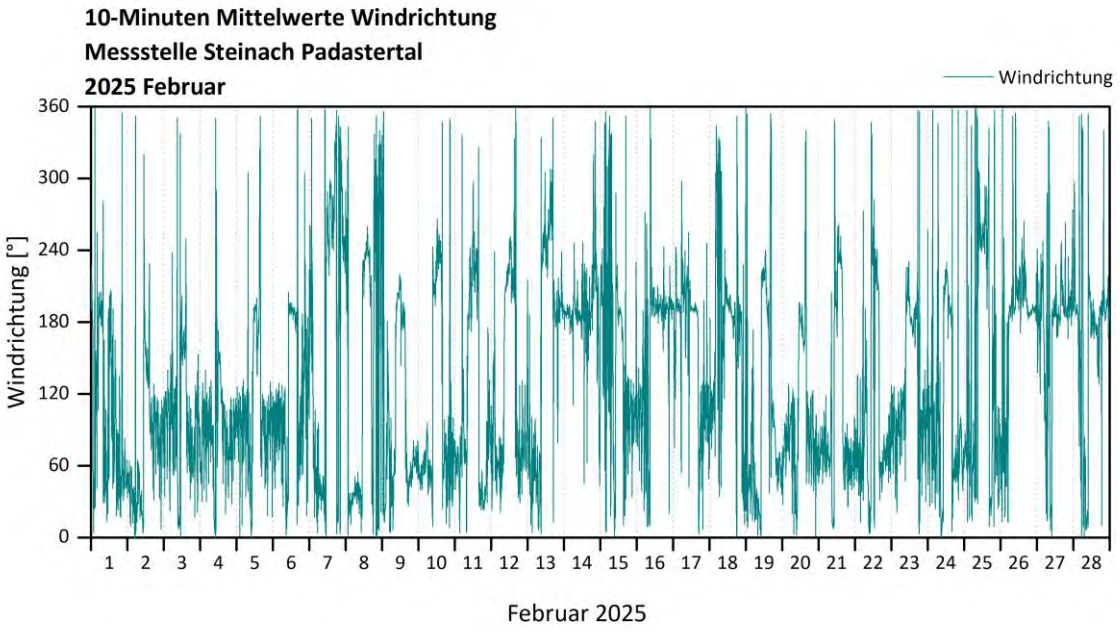
Temperatur / Temeraturà dell'aria



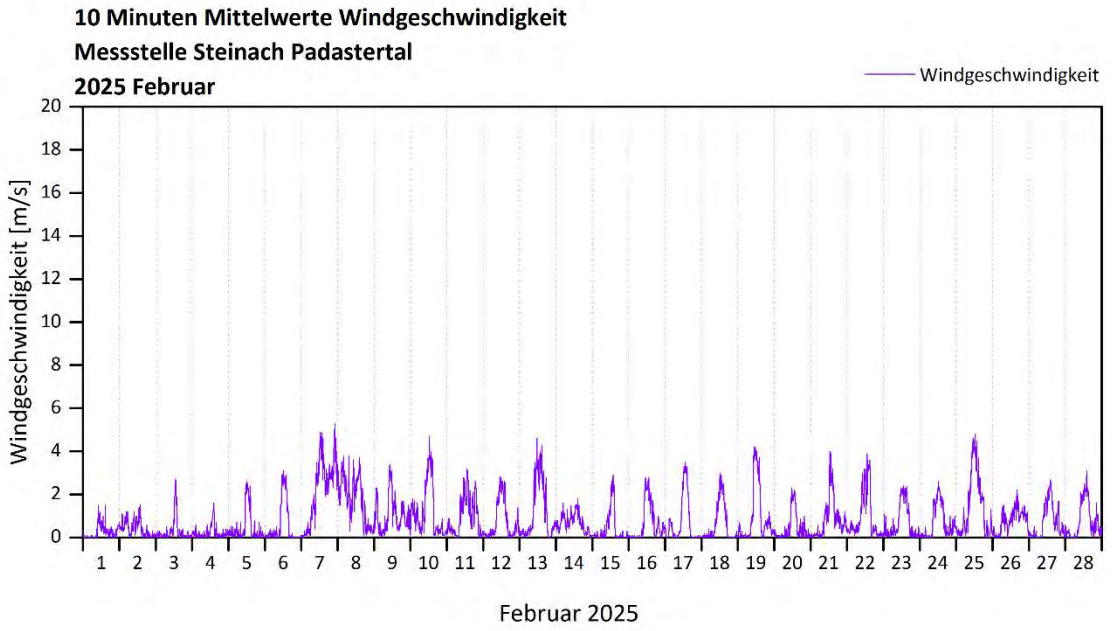
Relative Feuchtigkeit / Umidità relativa



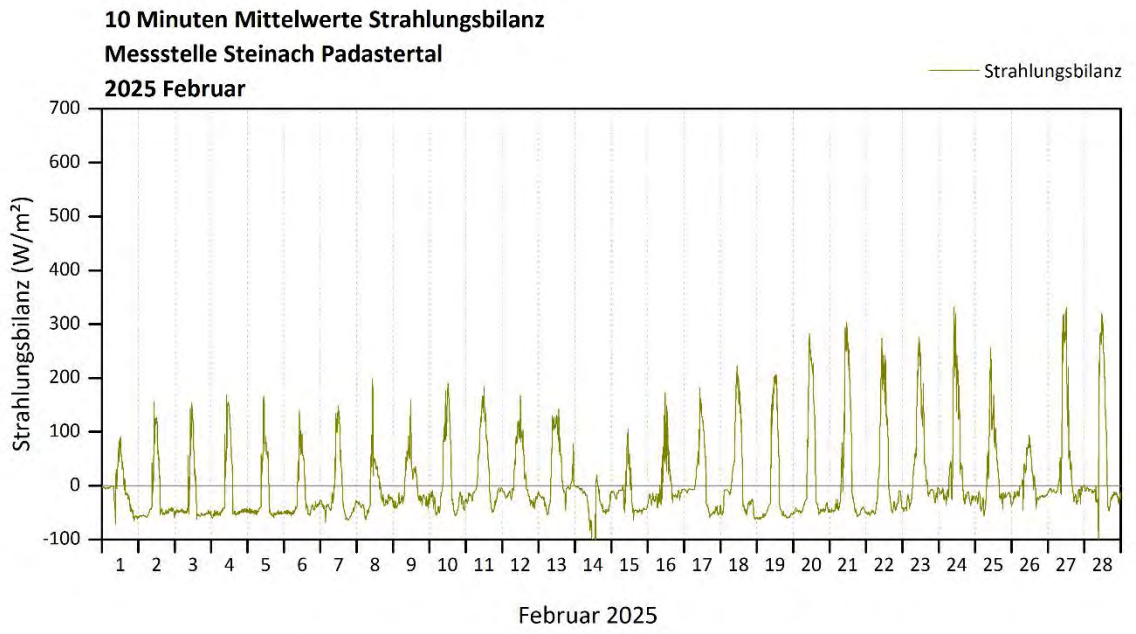
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht März 2025 Relazione mensile marzo 2025

Stickstoffdioxid Biossido di azoto

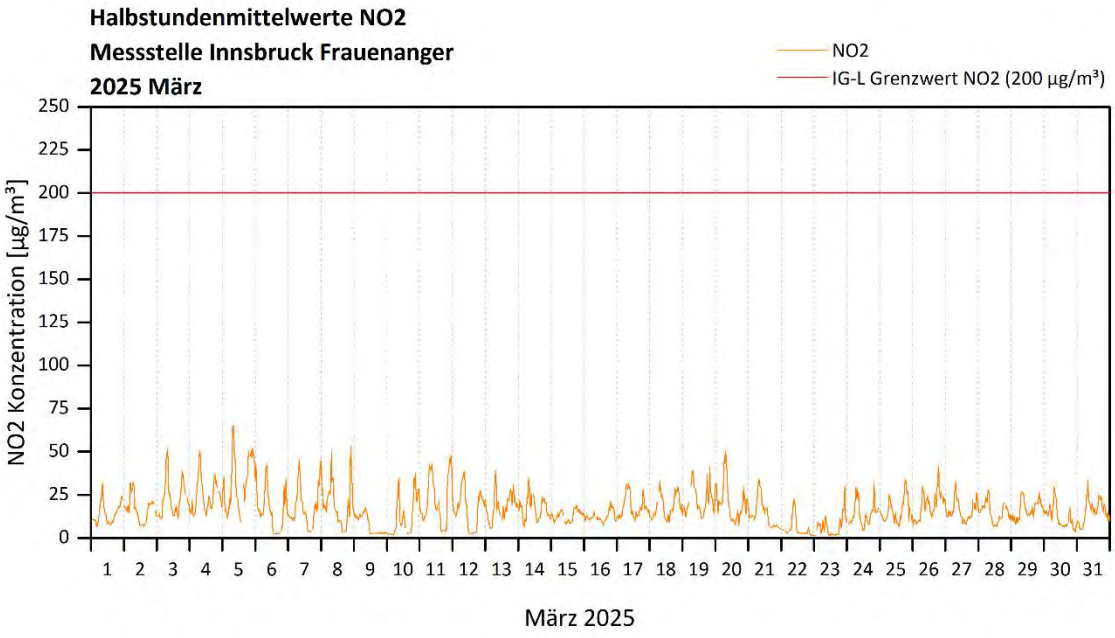
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 und 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	65	16.4	32.0	0		0	
Innsbruck Sillhöfe	70	14.7	29.8	0		0	
Steinach Siegreith	50	8.0	12.0	0		0	
Steinach Saxen	96	12.2	21.5	0		0	
Ampass	60	18.9	27.6	0		0	
Tulfes	45	8.6	14.6	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

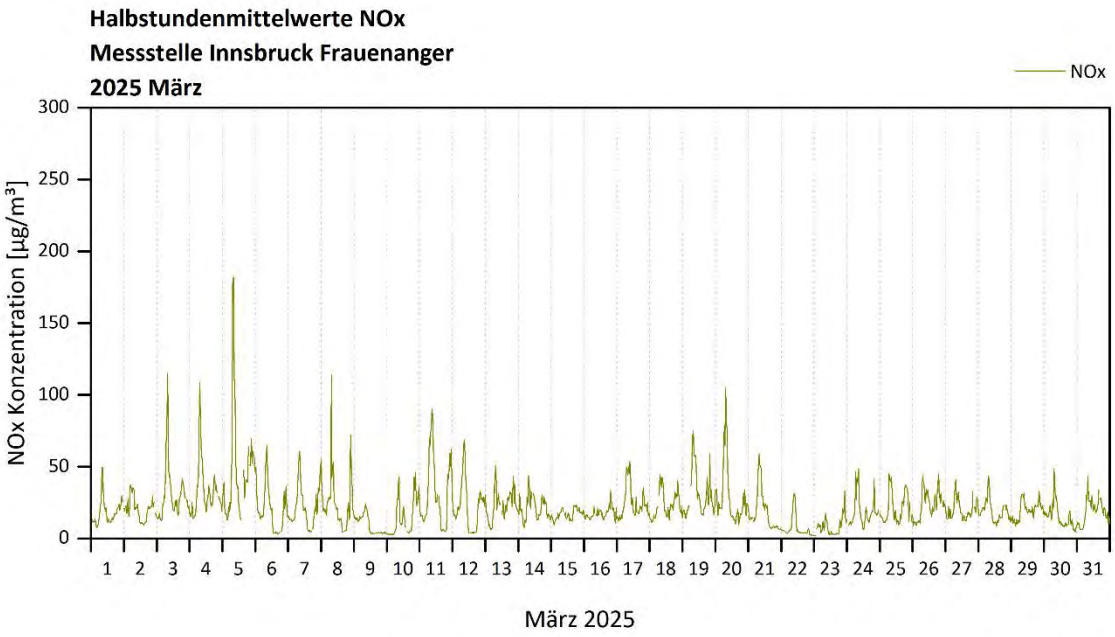
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 und 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	34	10.0	16.7	0		0	
Innsbruck Sillhöfe	51	9.7	15.3	0		0	
Steinach Siegreith	131	10.4	20.6	0		0	
Steinach Saxen	129	17.1	36.5	0		0	
Ampass	272	11.0	21.1	2		0	
Tulfes	91	9.4	15.6	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

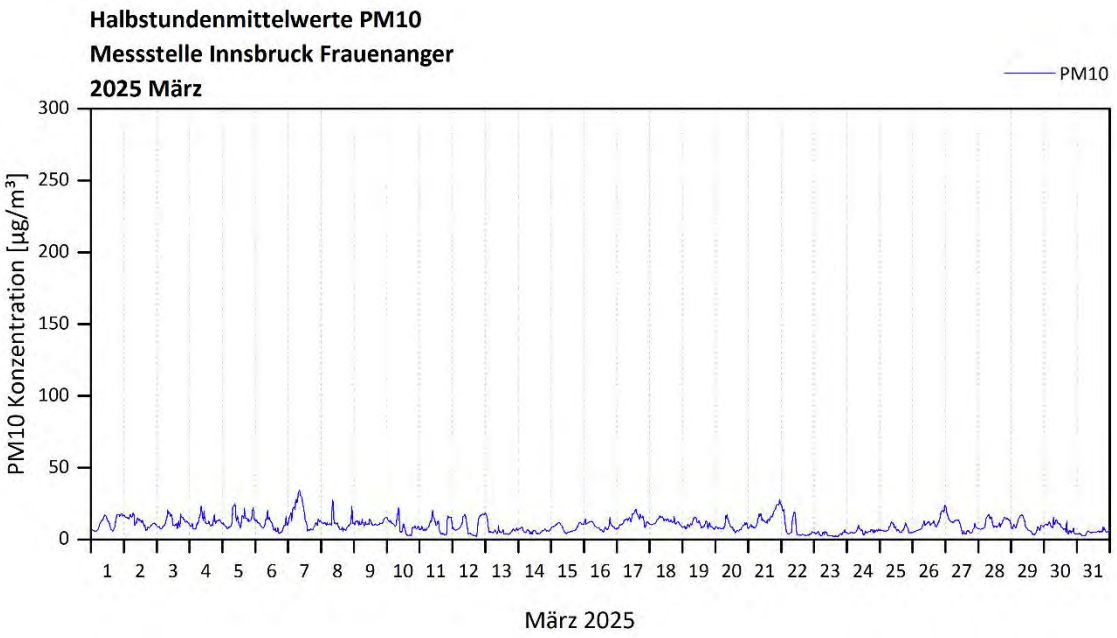
Stickstoffdioxid / Biossido di azoto



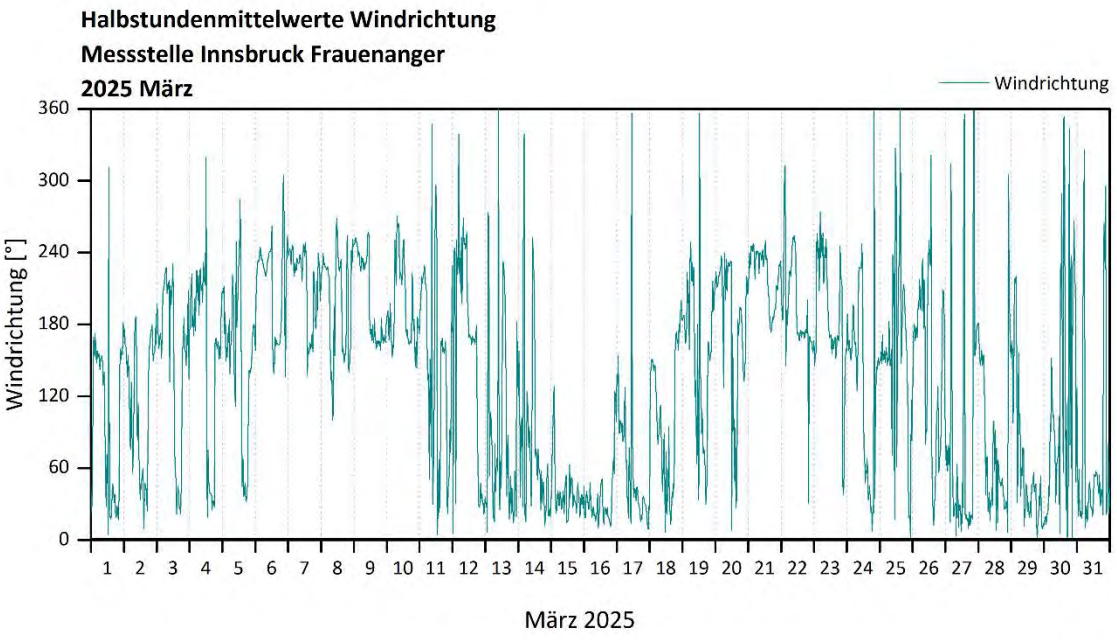
Stickstoffoxide / Ossidi di azoto



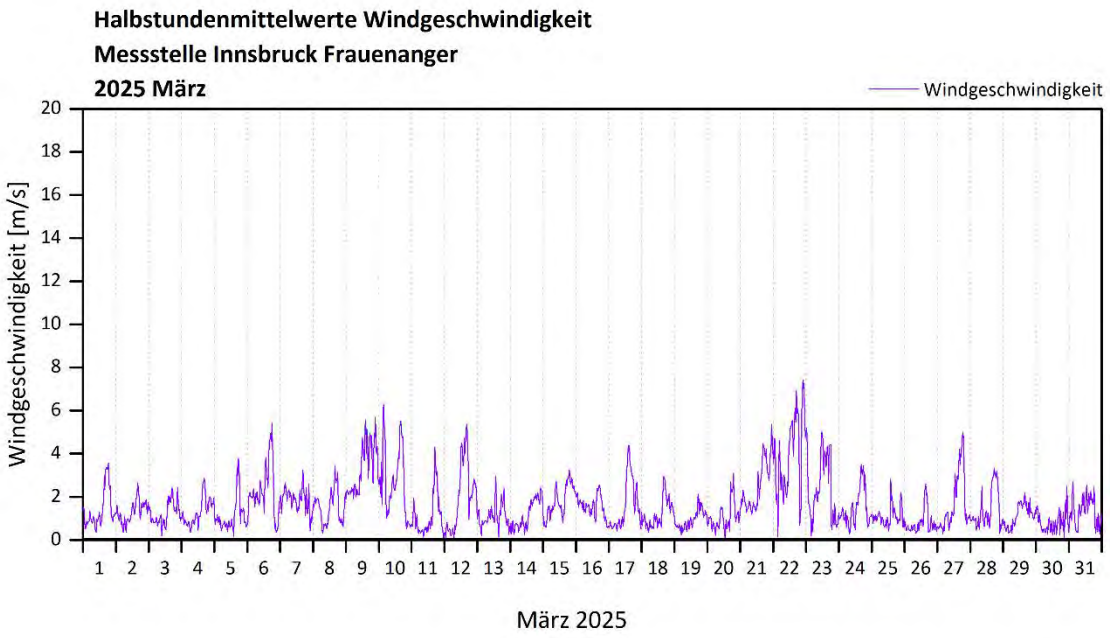
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

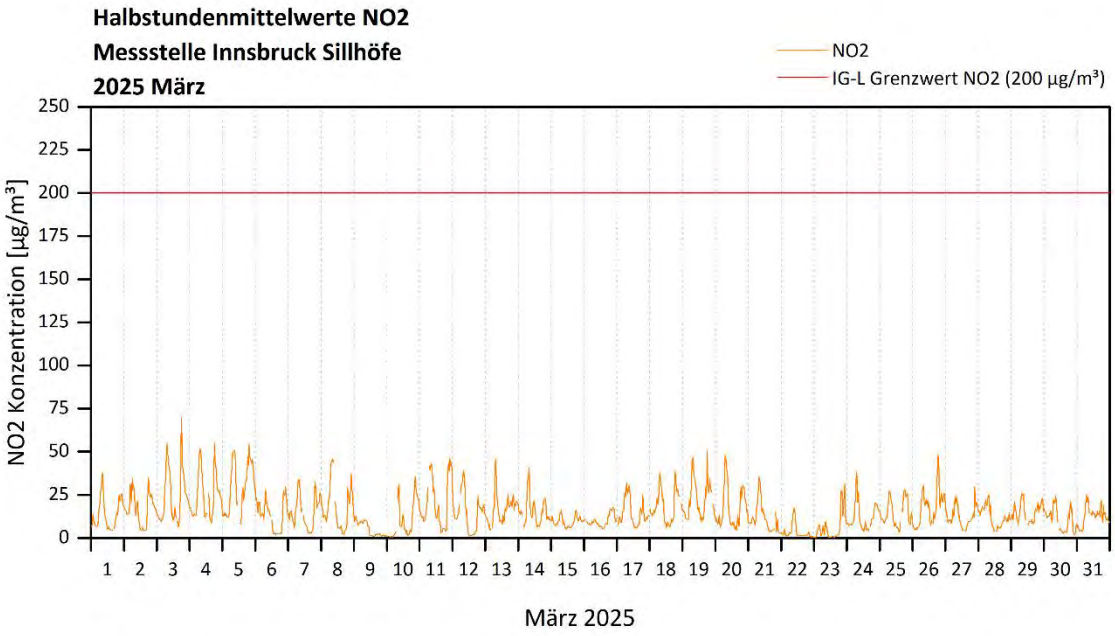


Windgeschwindigkeit / Velocità del vento

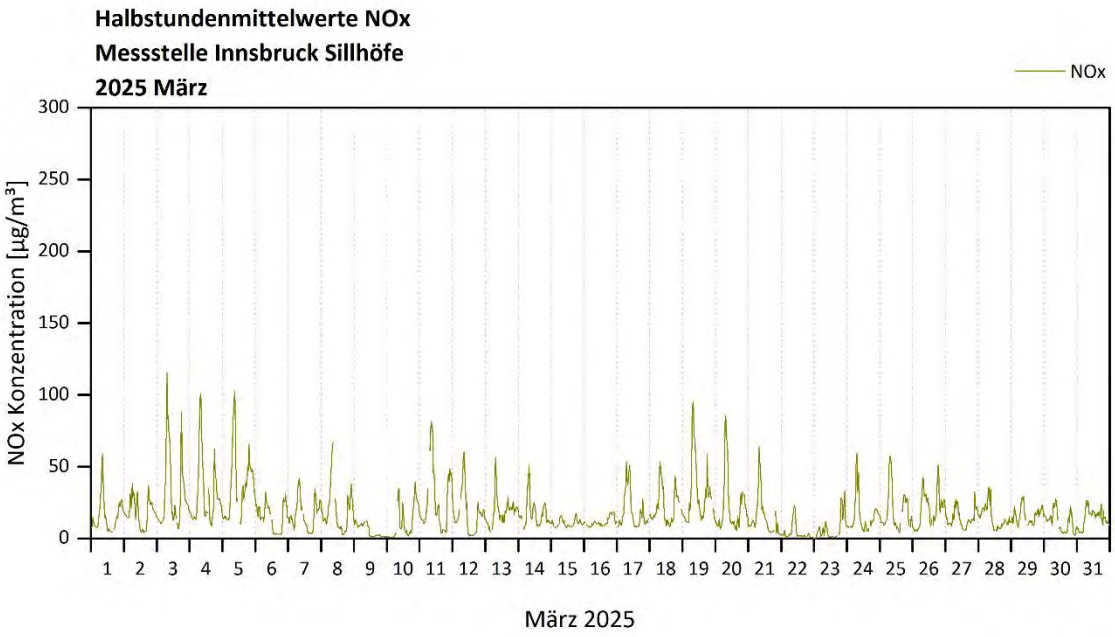


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

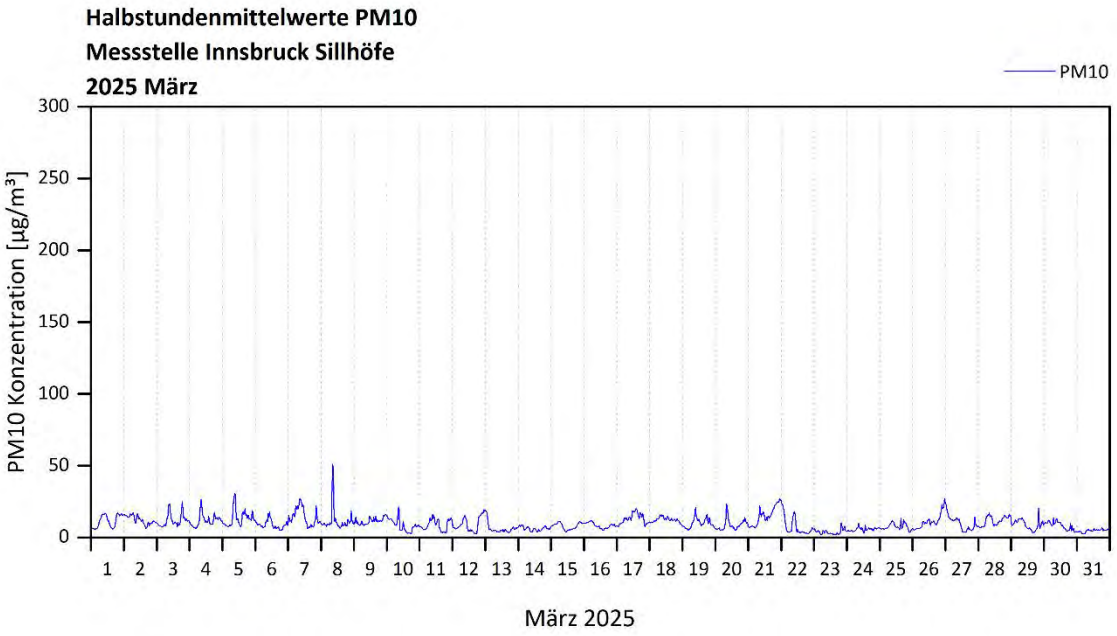
Stickstoffdioxid / Biossido di azoto



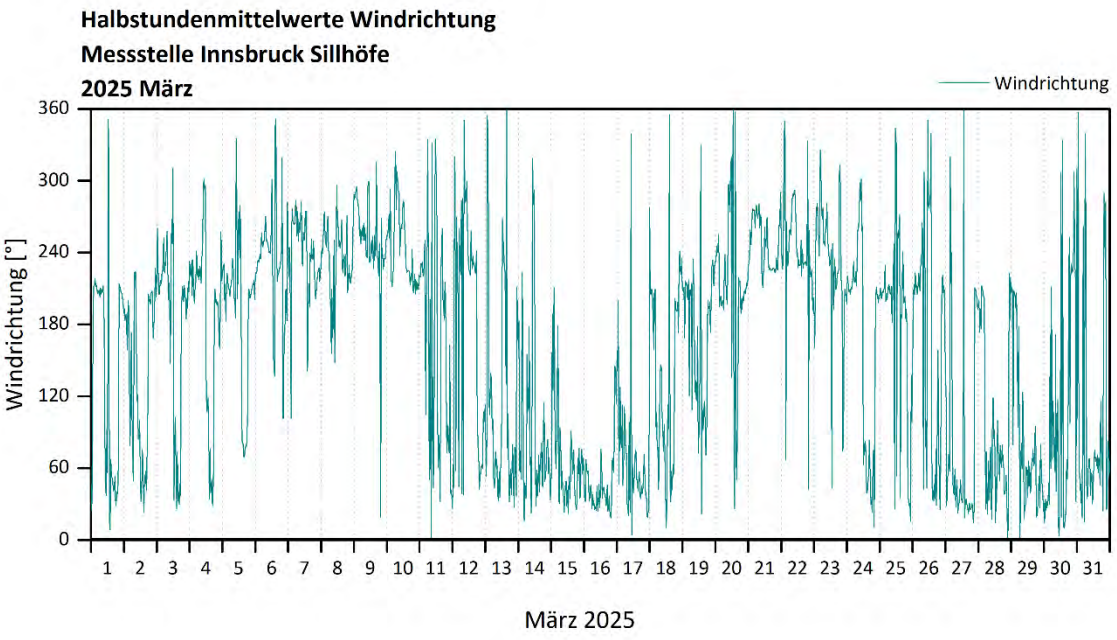
Stickstoffoxide / Ossidi di azoto



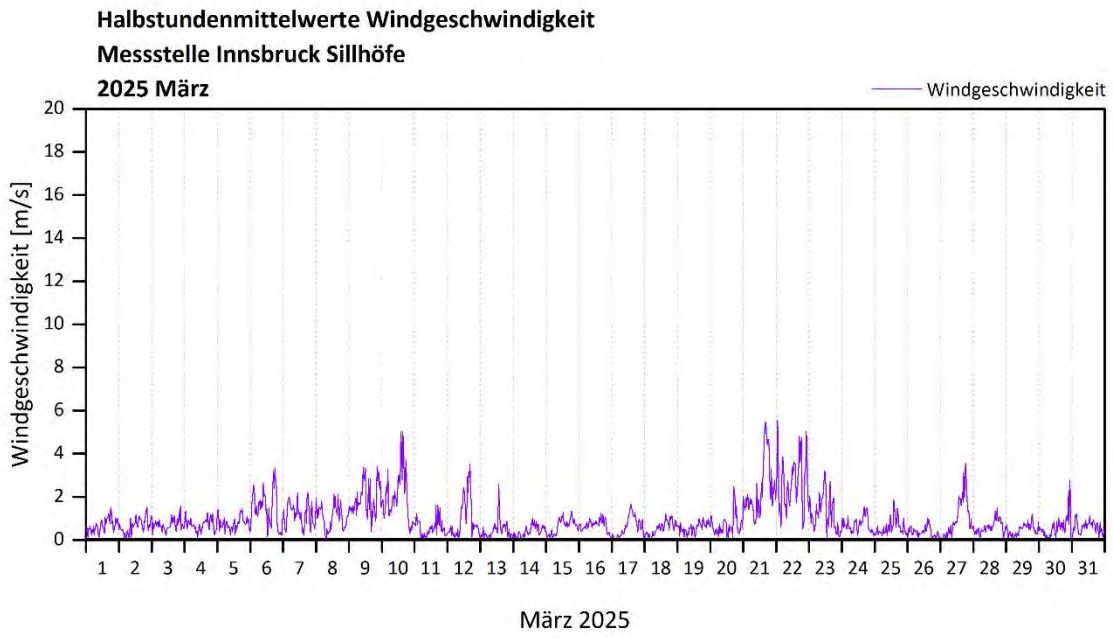
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

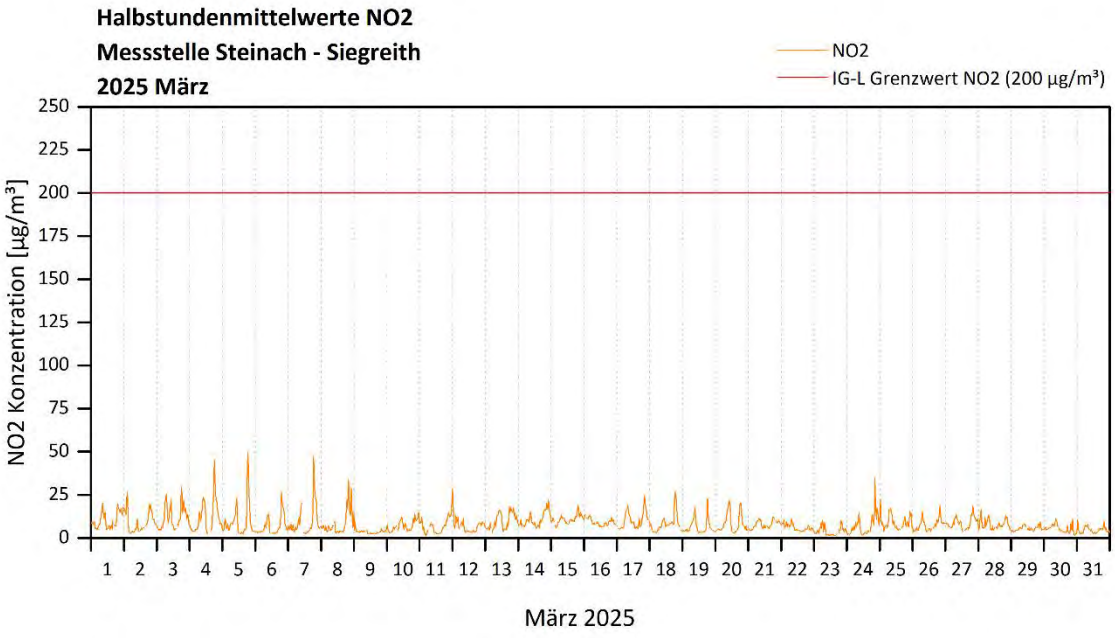


Windgeschwindigkeit / Velocità del vento

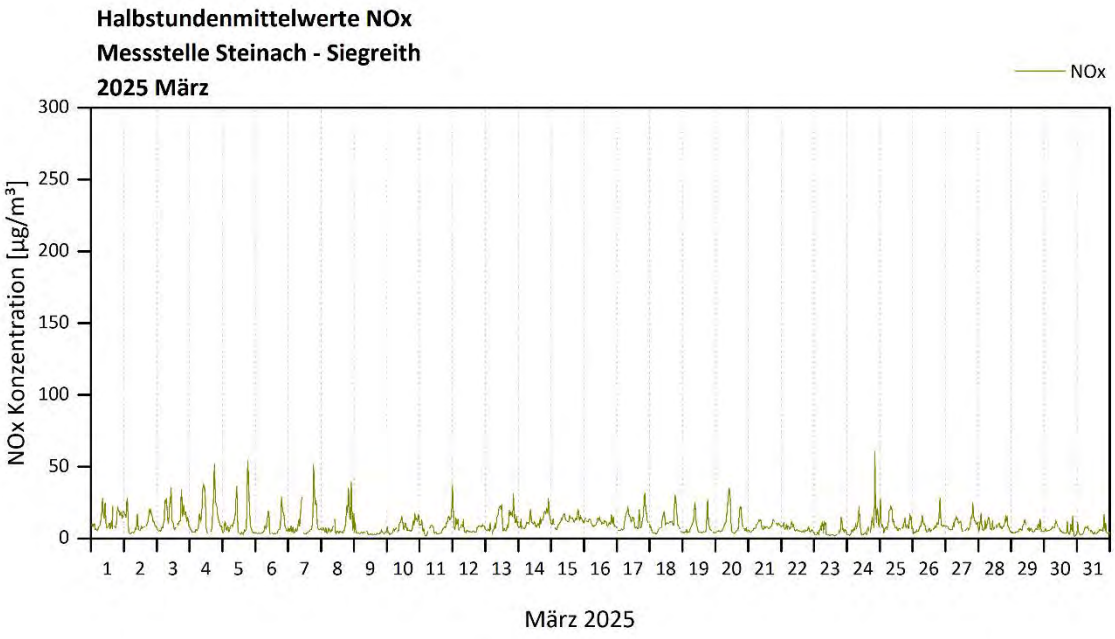


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

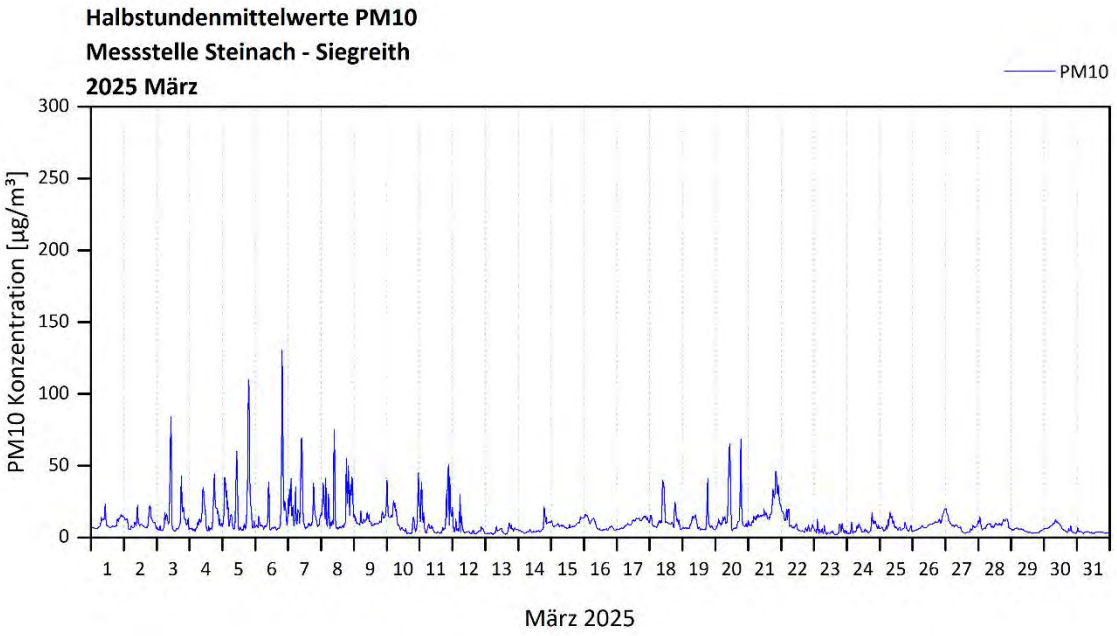
Stickstoffdioxid / Biossido di azoto



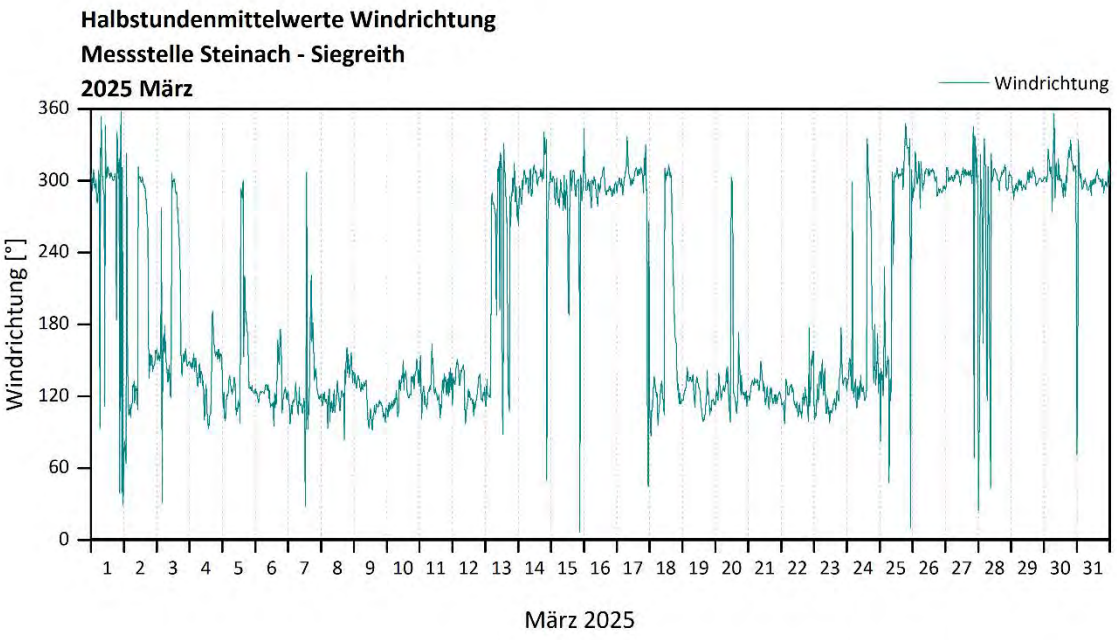
Stickstoffoxide / Ossidi di azoto



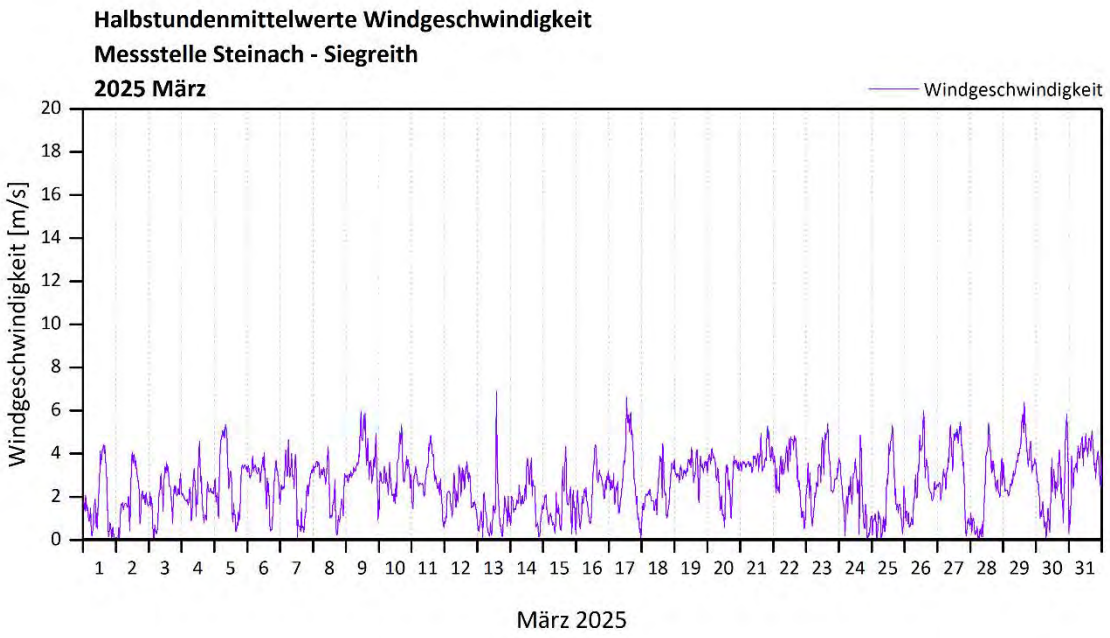
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

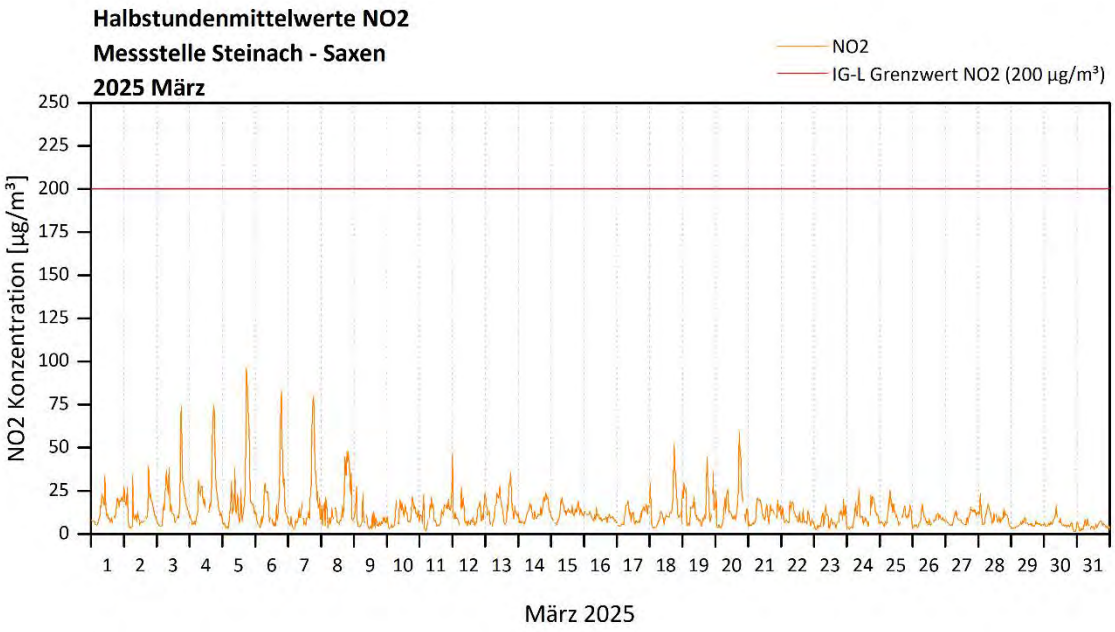


Windgeschwindigkeit / Velocità del vento

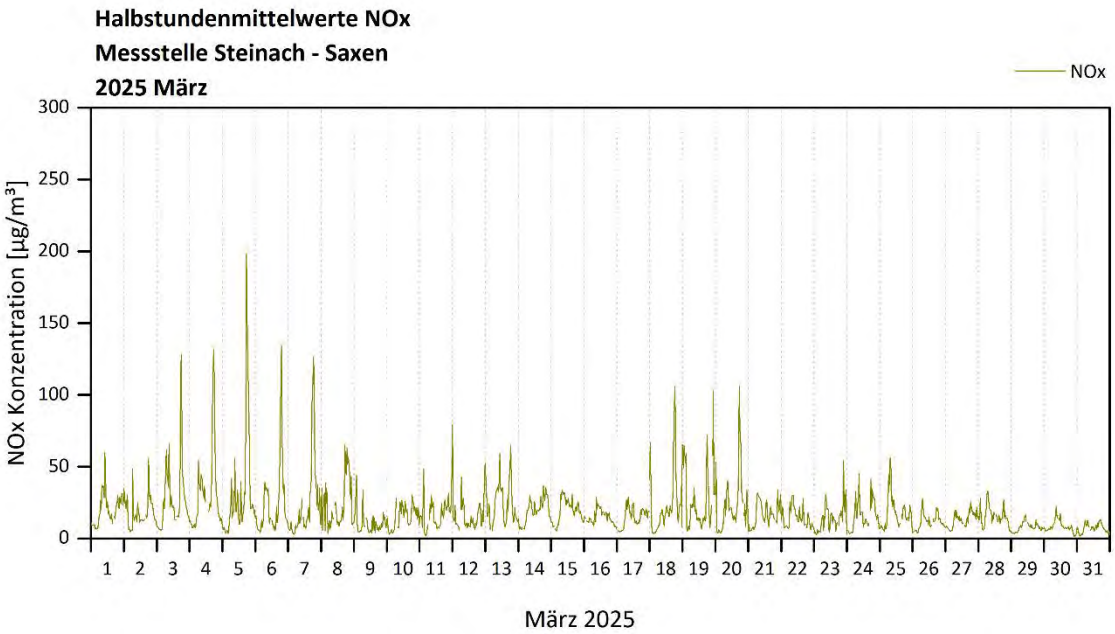


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

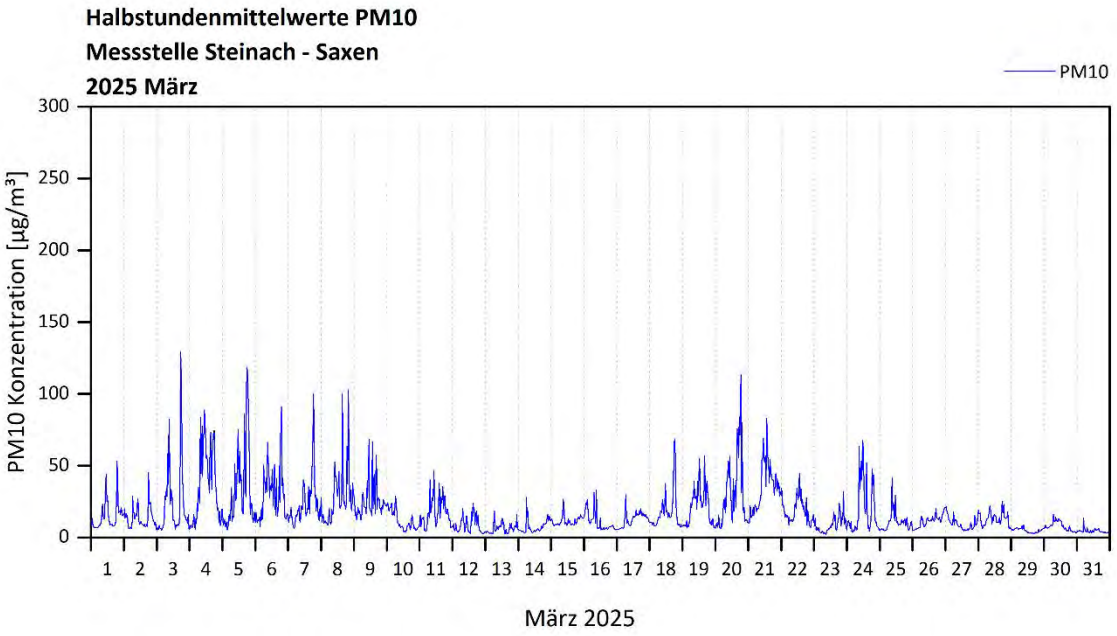
Stickstoffdioxid / Biossido di azoto



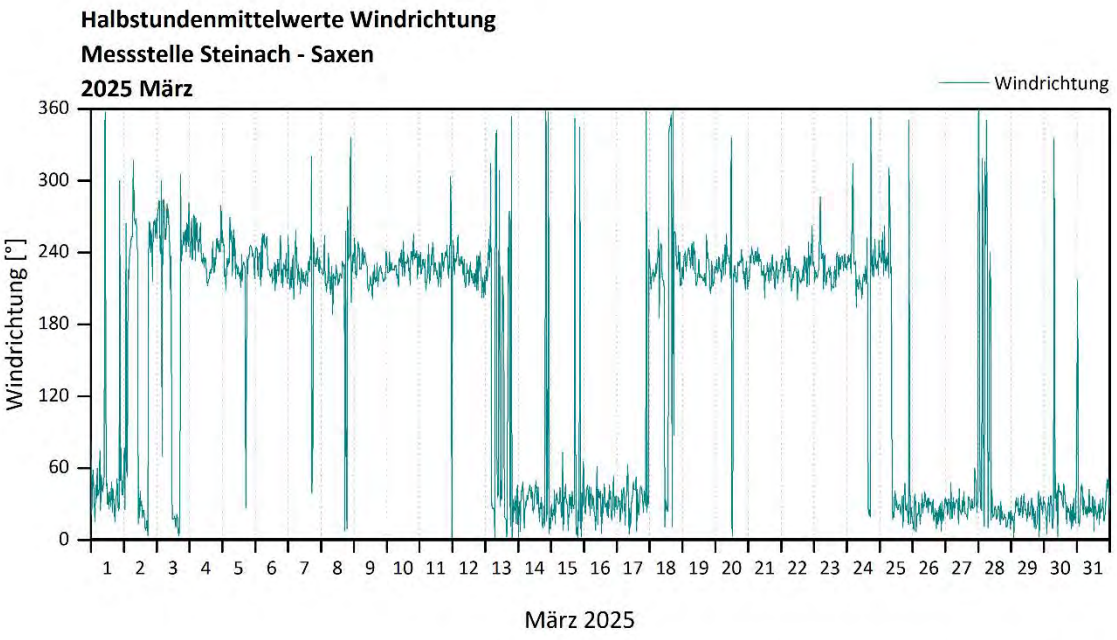
Stickstoffoxide / Ossidi di azoto



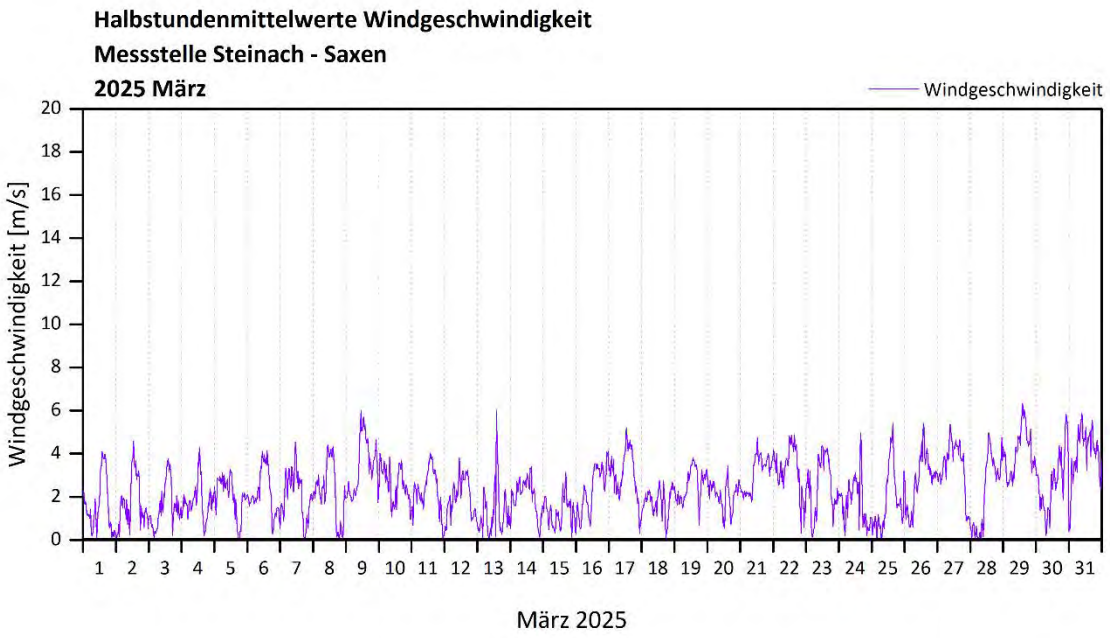
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



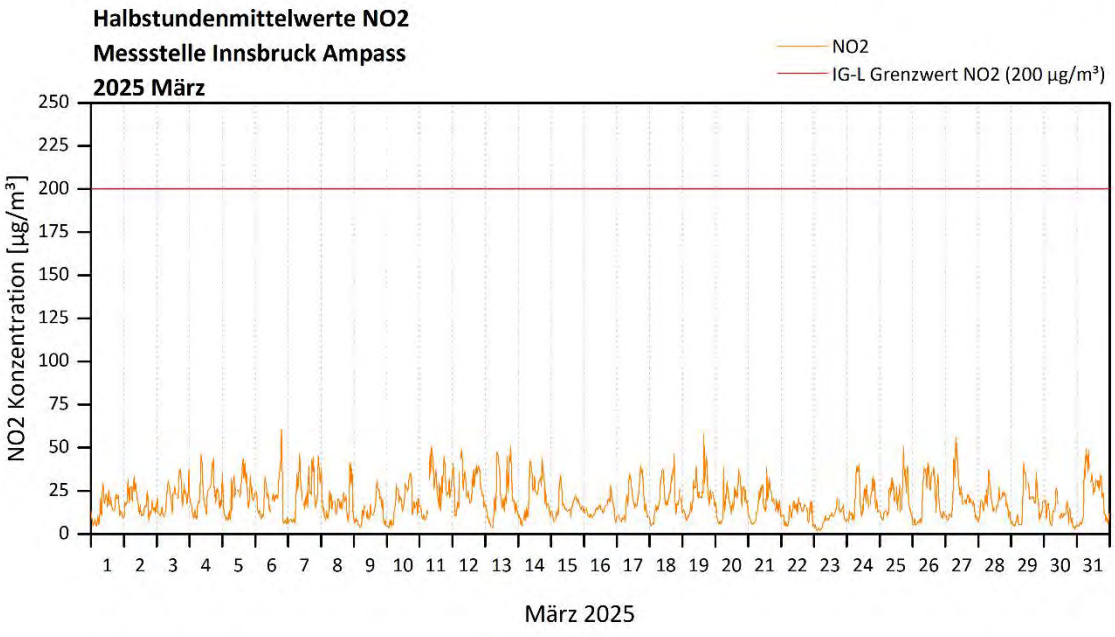
Windgeschwindigkeit / Velocità del vent



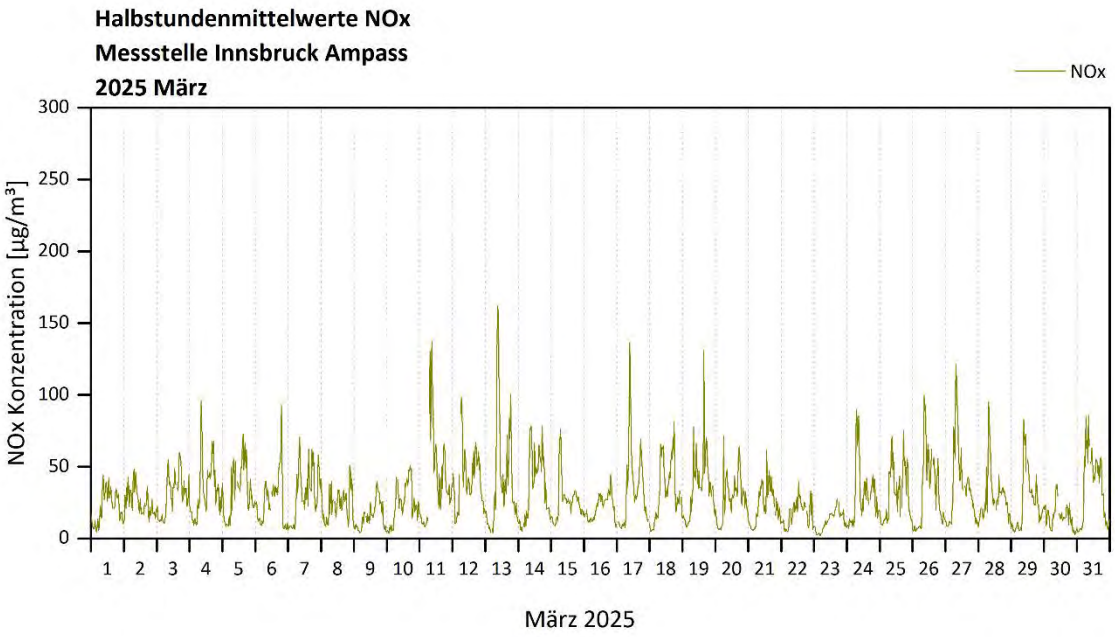
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

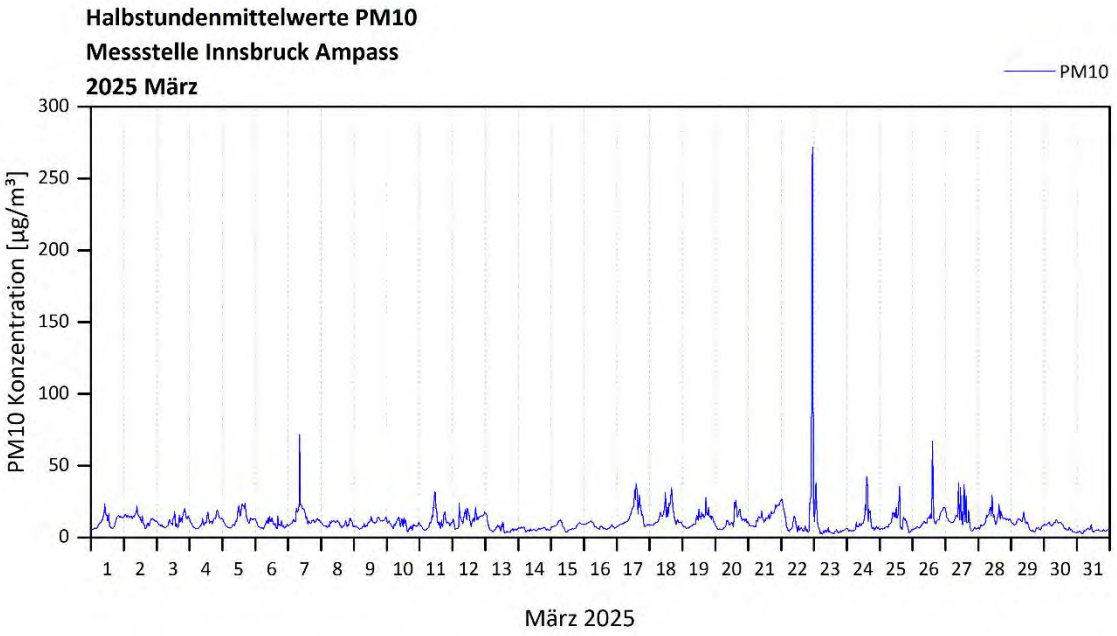
Stickstoffdioxid / Biossido di azoto



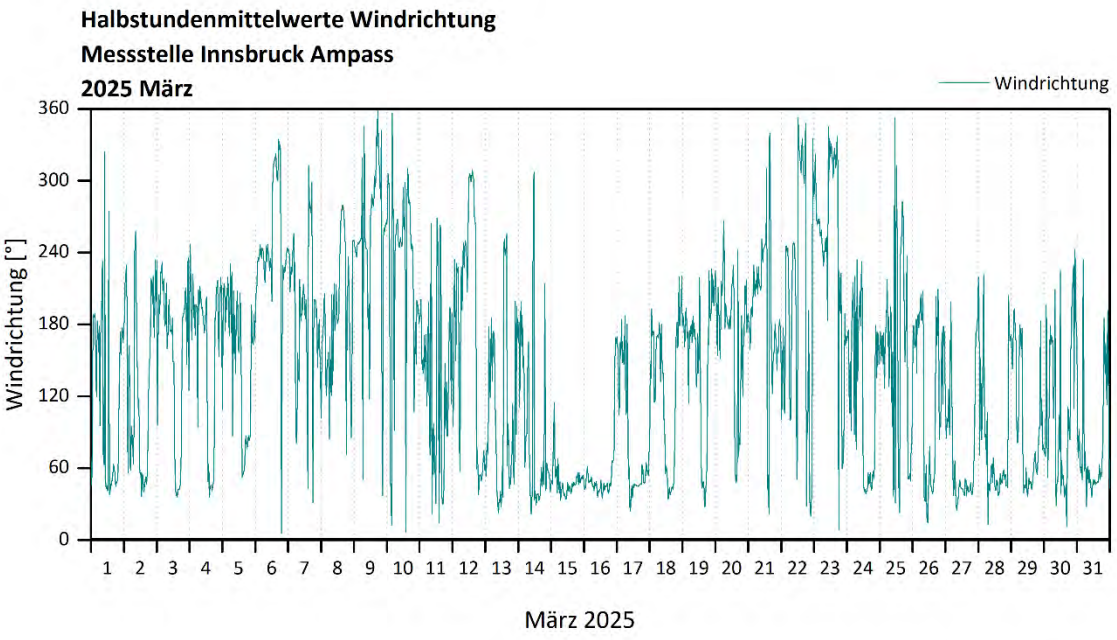
Stickstoffoxide / Ossidi di azoto



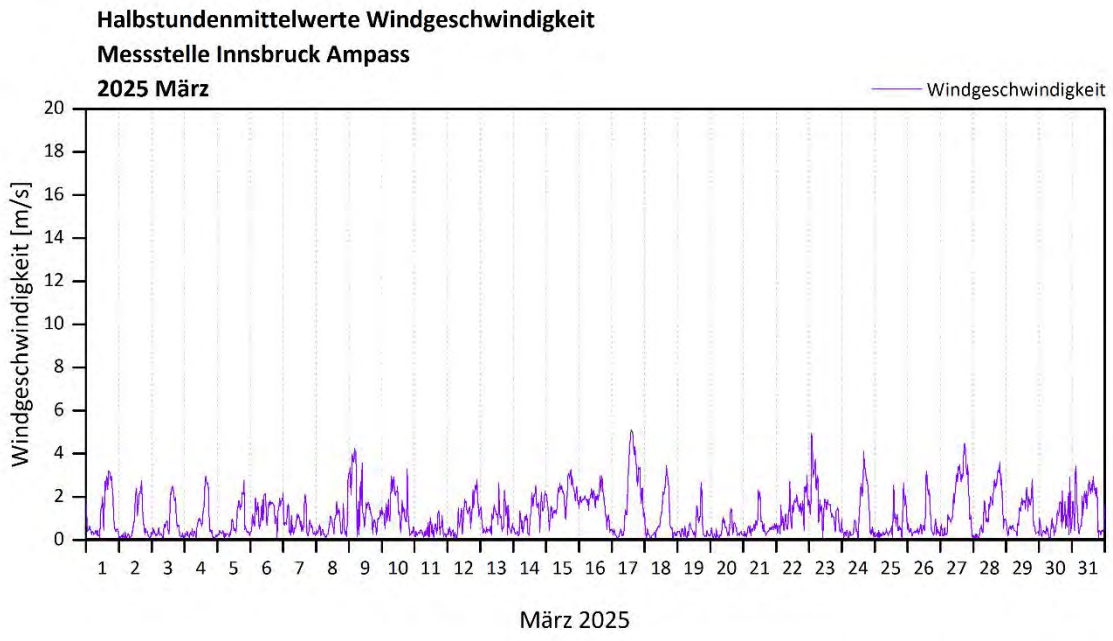
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

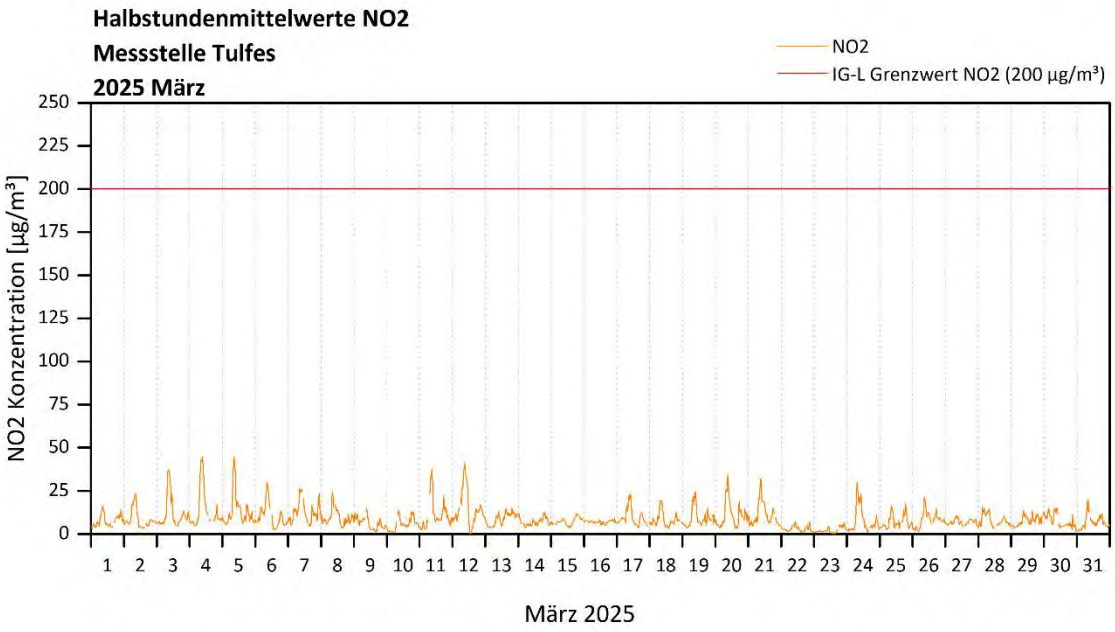


Windgeschwindigkeit / Velocità del vent

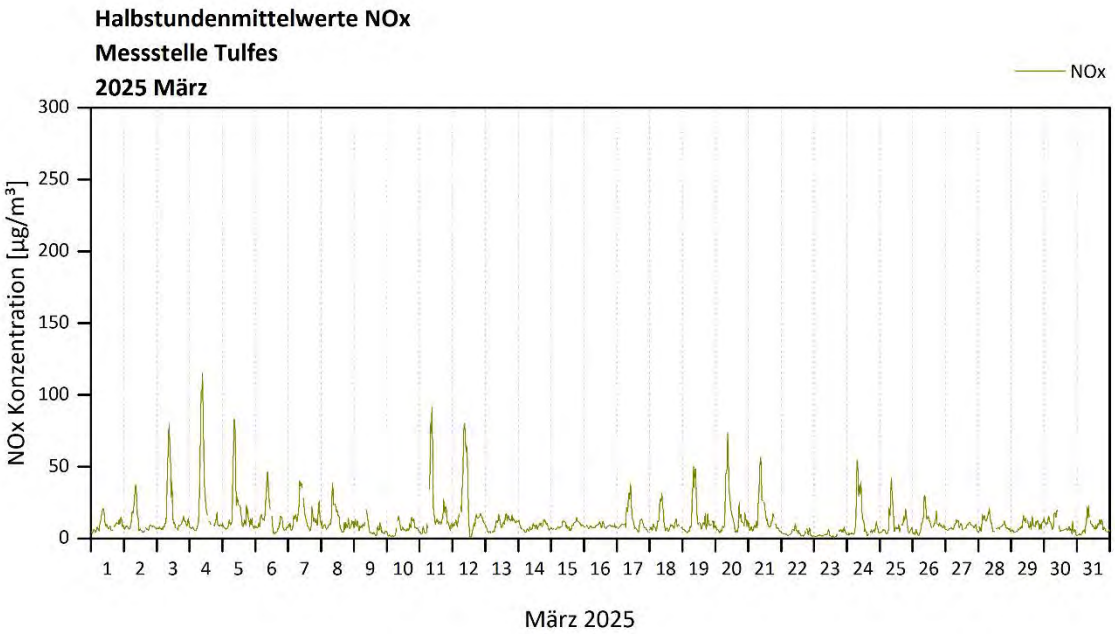


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

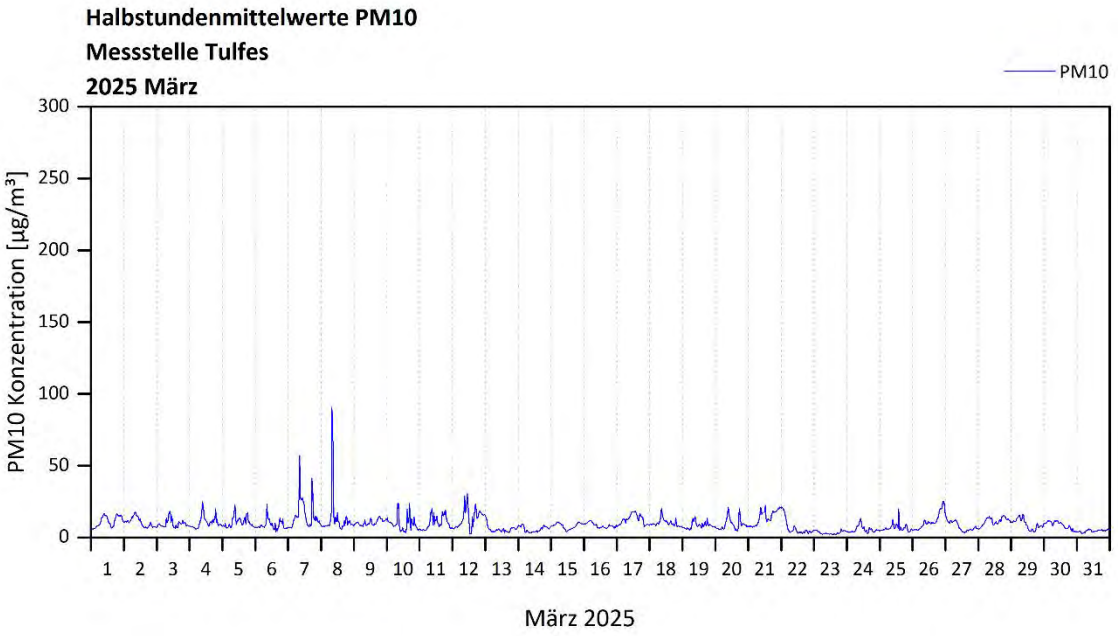
Stickstoffdioxid / Biossido di azoto



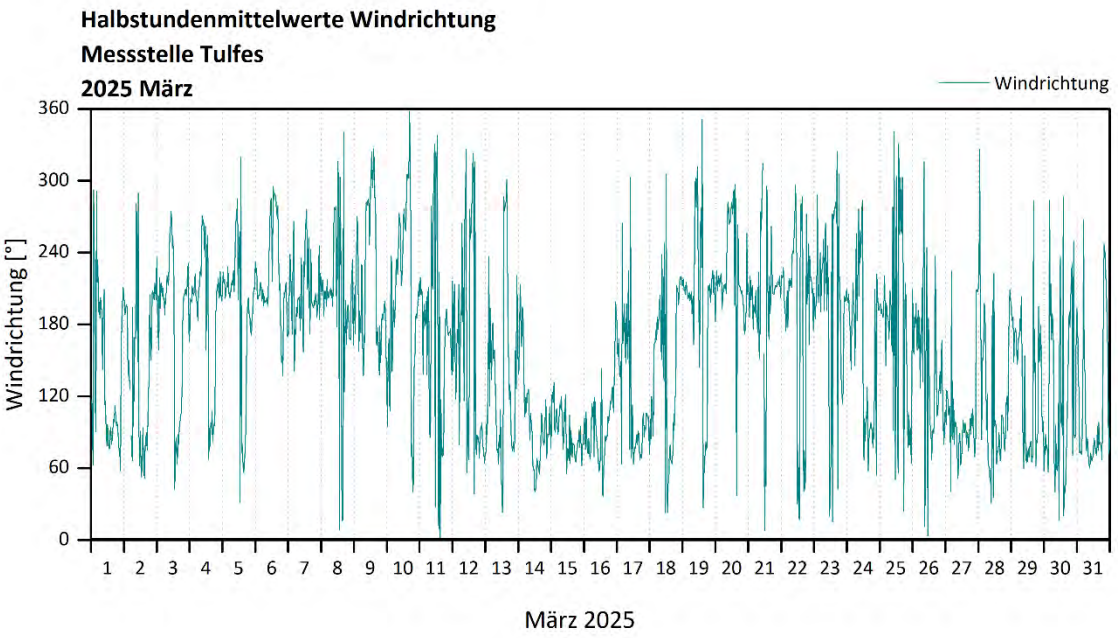
Stickstoffoxide / Ossidi di azoto



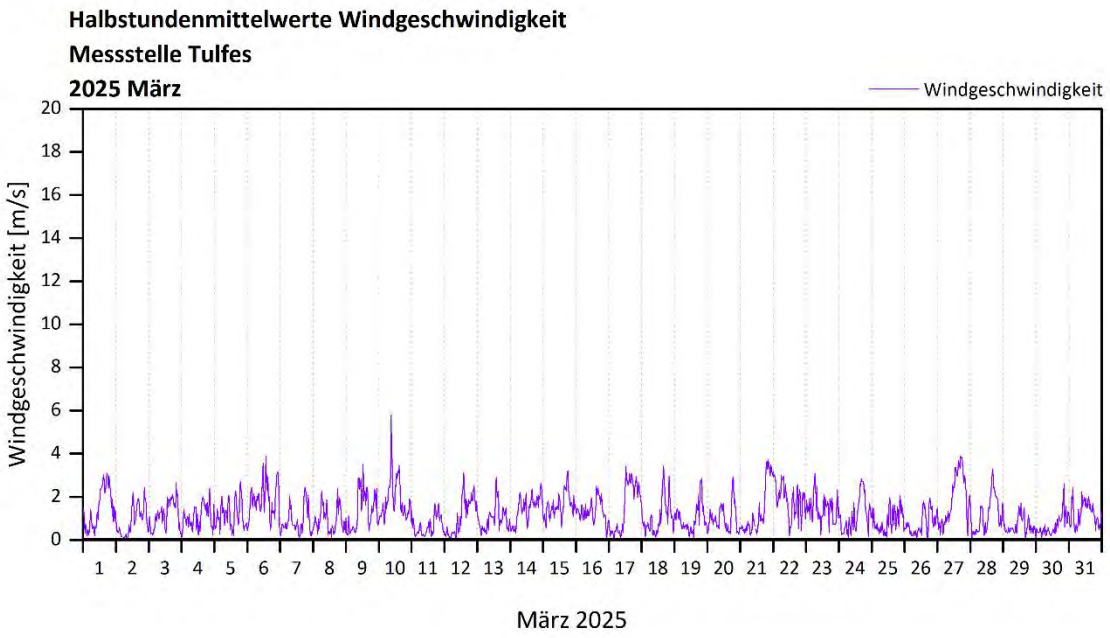
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

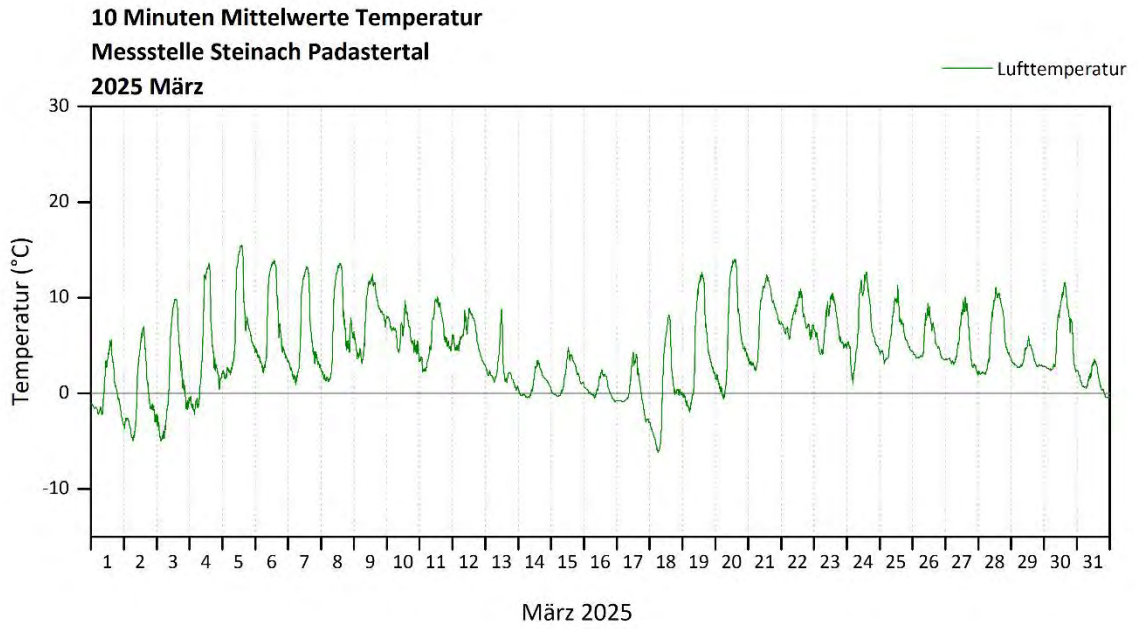


Windgeschwindigkeit / Velocità del vent

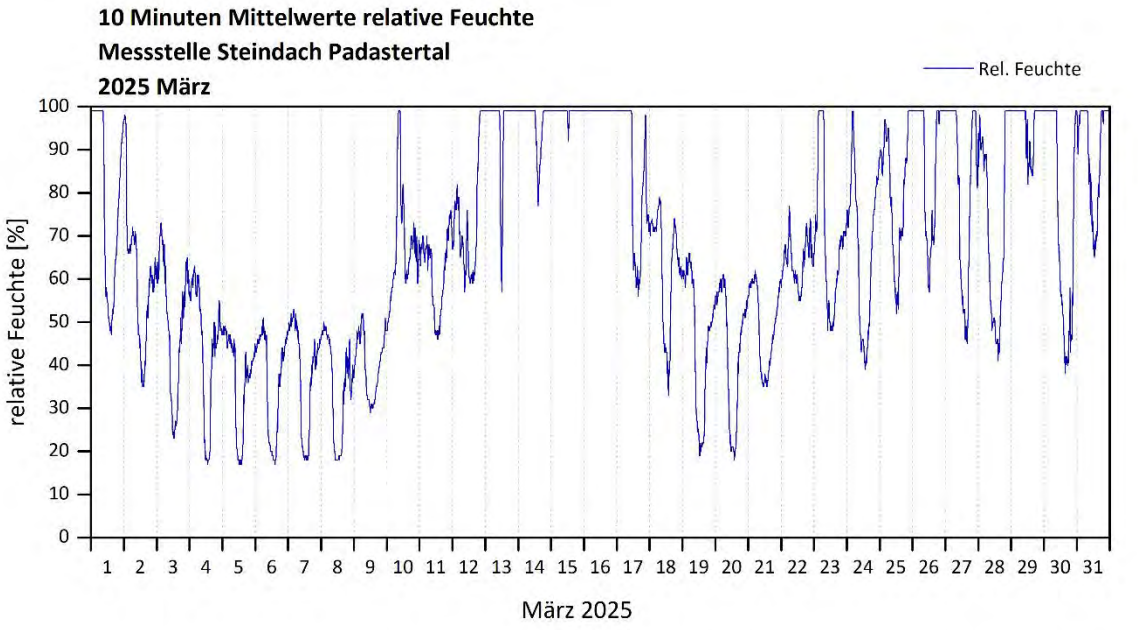


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

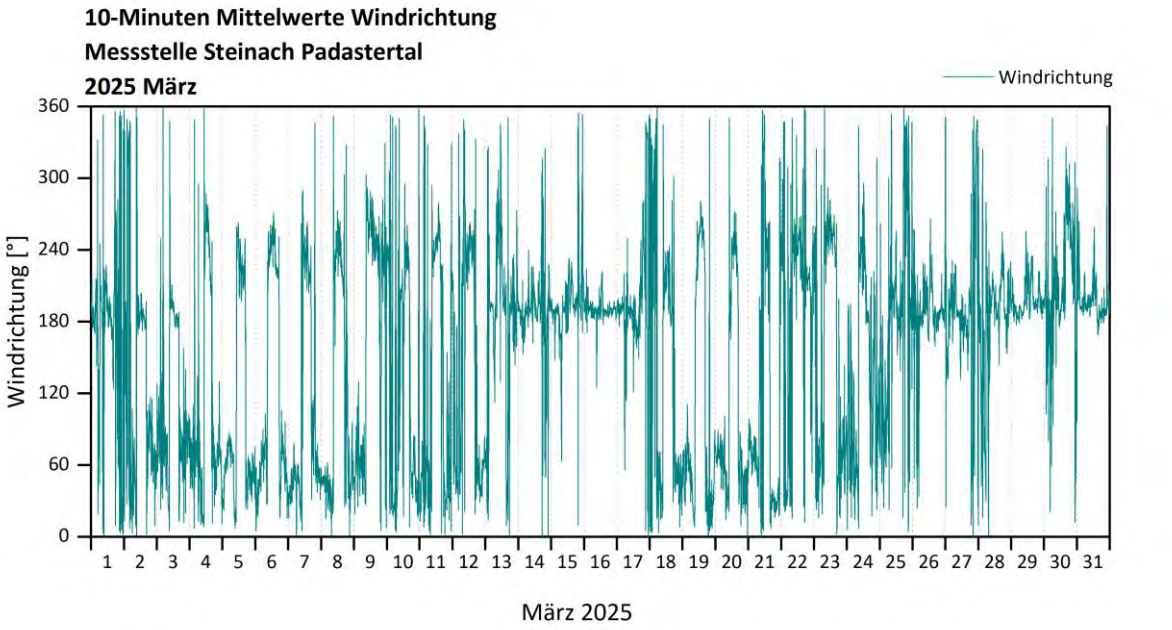
Temperatur / Temeraturà dell'aria



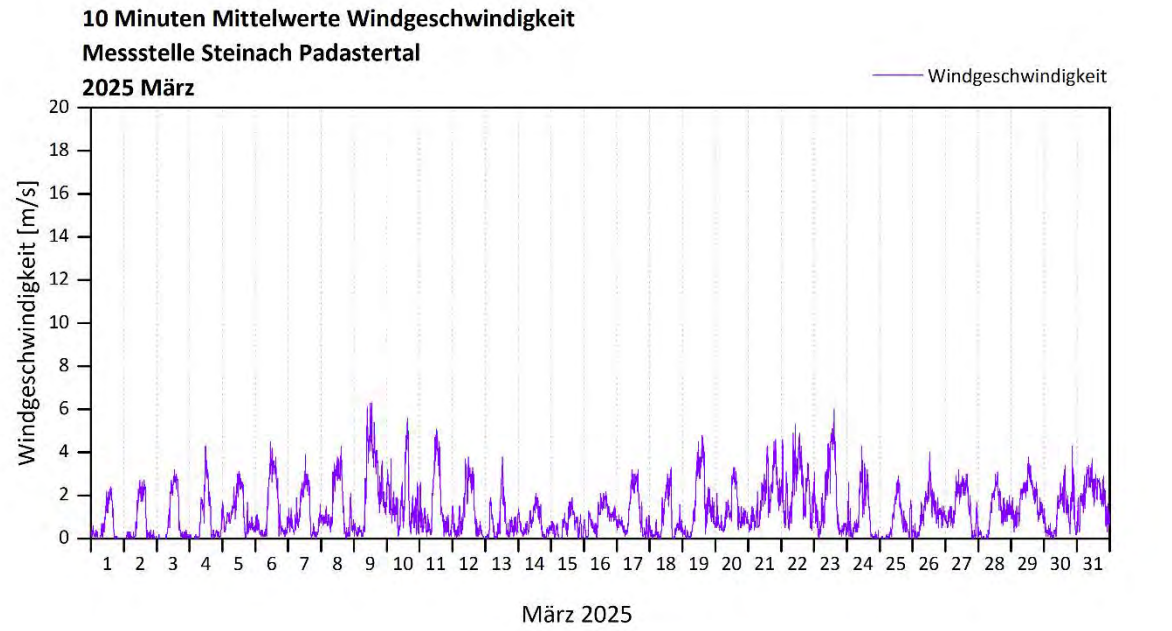
Relative Feuchtigkeit / Umidità relativa



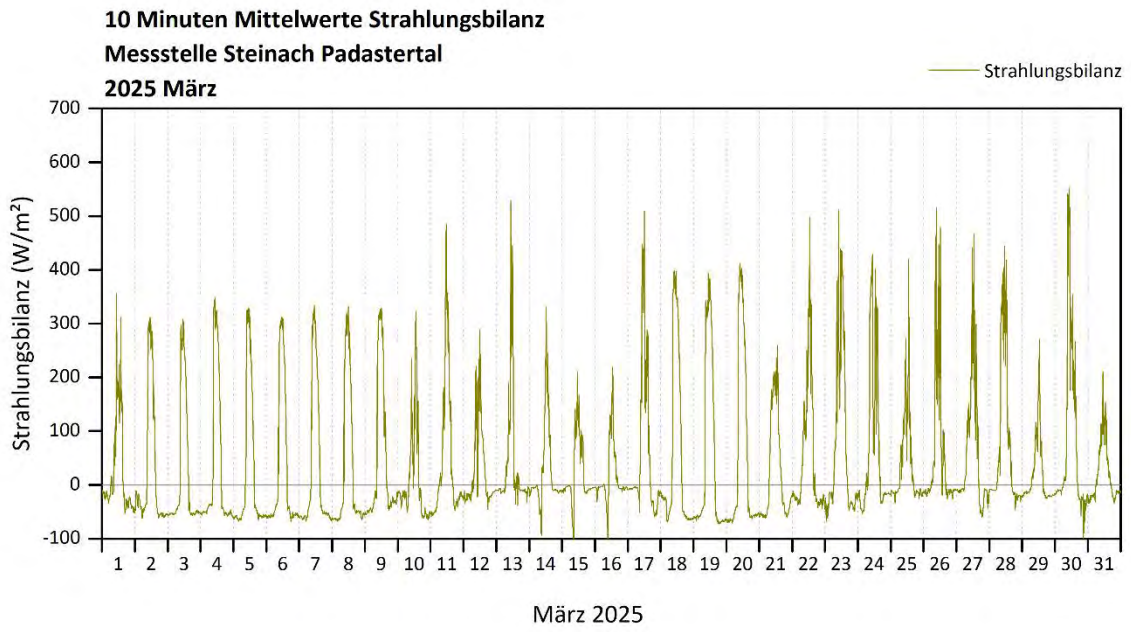
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht April 2025 Relazione mensile aprile 2025

Stickstoffdioxid Biossido di azoto

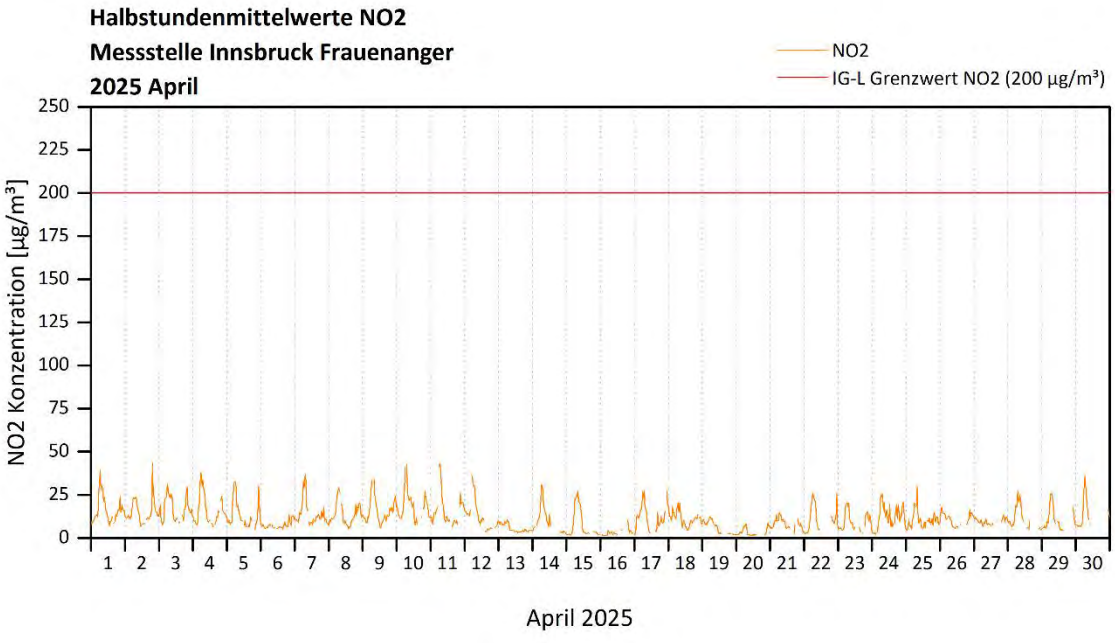
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 e 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	44	11.6	17.9	0		0	
Innsbruck Sillhöfe	59	9.7	16.9	0		0	
Steinach Siegreith	38	6.8	12.9	0		0	
Steinach Saxen	54	9.4	15.2	0		0	
Ampass	56	14.8	22.9	0		0	
Tulfes	43	5.6	9.9	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

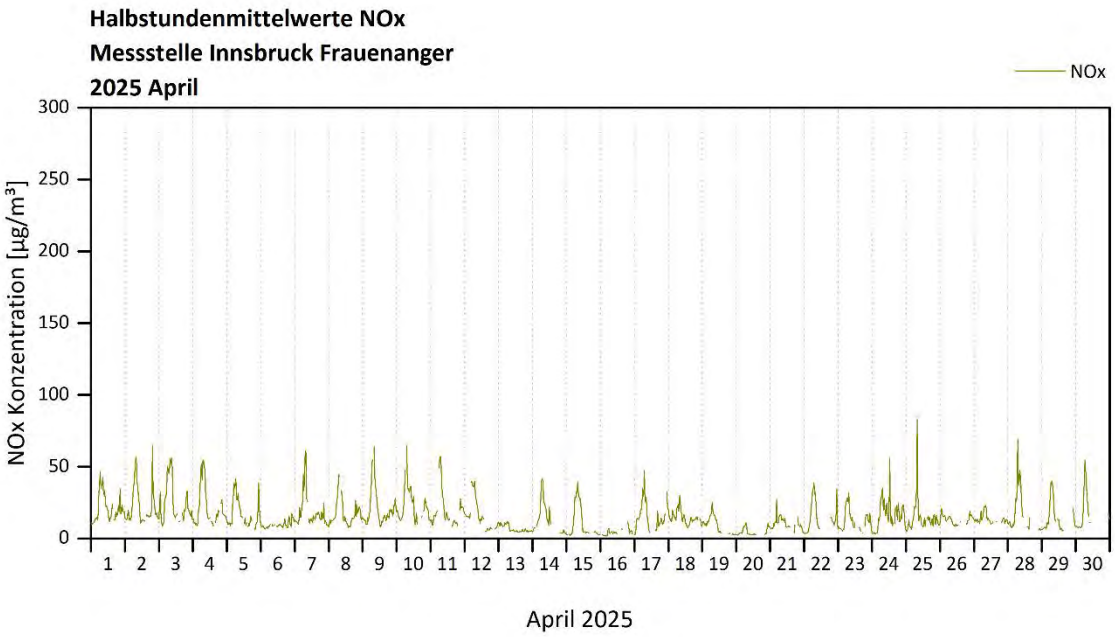
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 e 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	29	8.5	14.0	0		0	
Innsbruck Sillhöfe	33	9.4	15.9	0		0	
Steinach Siegreith	109	8.6	16.5	0		0	
Steinach Saxen	183	12.8	31.2	0		0	
Ampass	123	13.0	27.8	0		0	
Tulfes	37	8.4	14.6	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

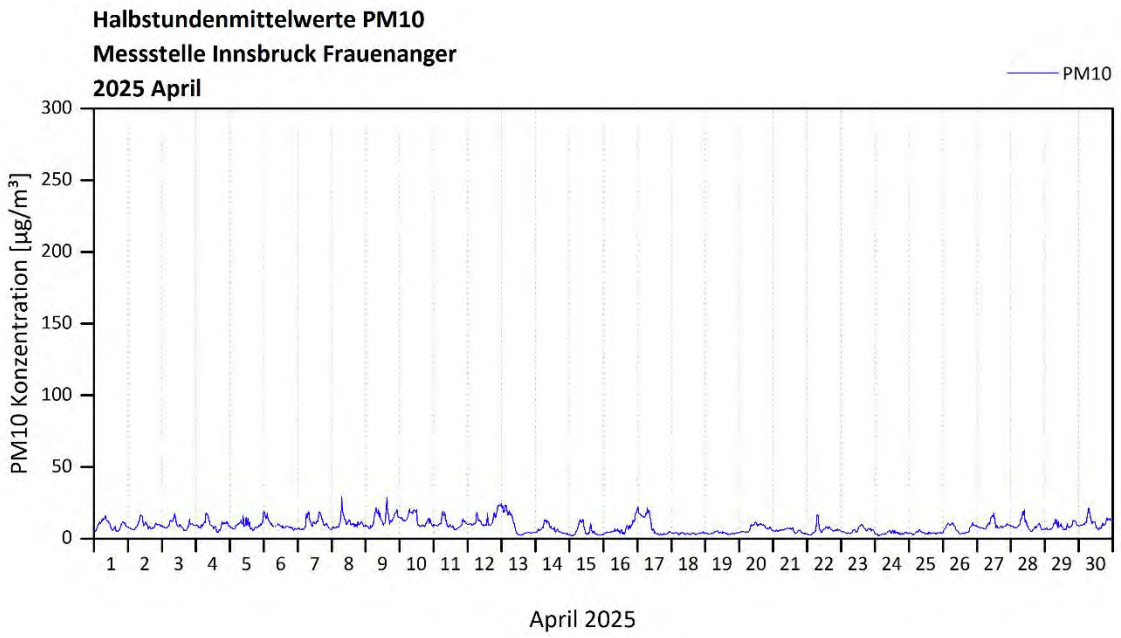
Stickstoffdioxid / Biossido di azoto



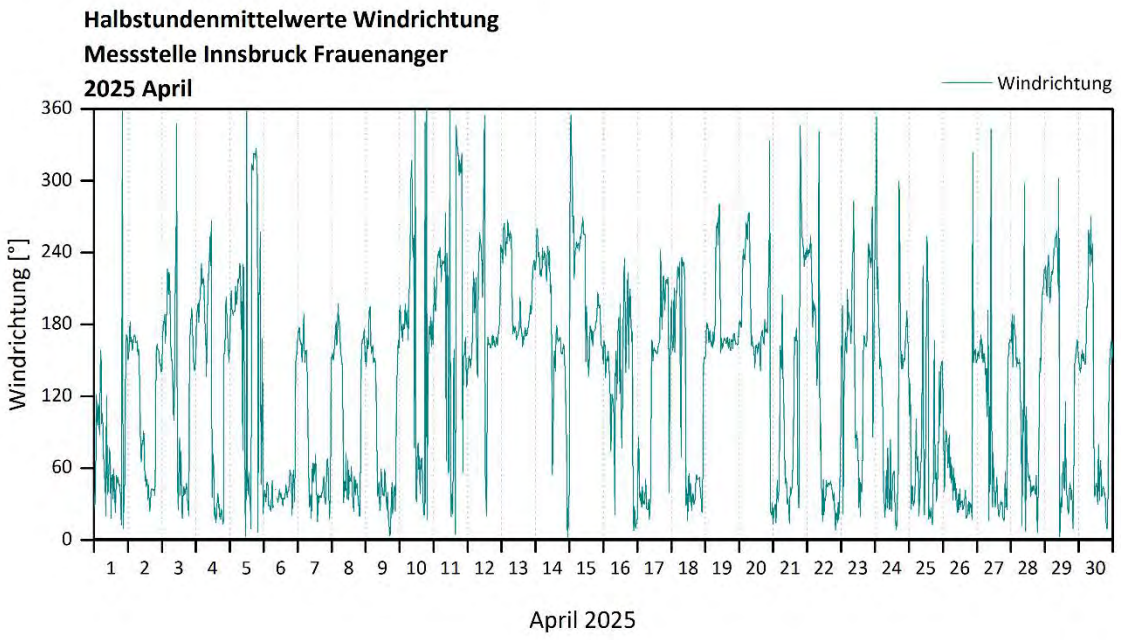
Stickstoffoxide / Ossidi di azoto



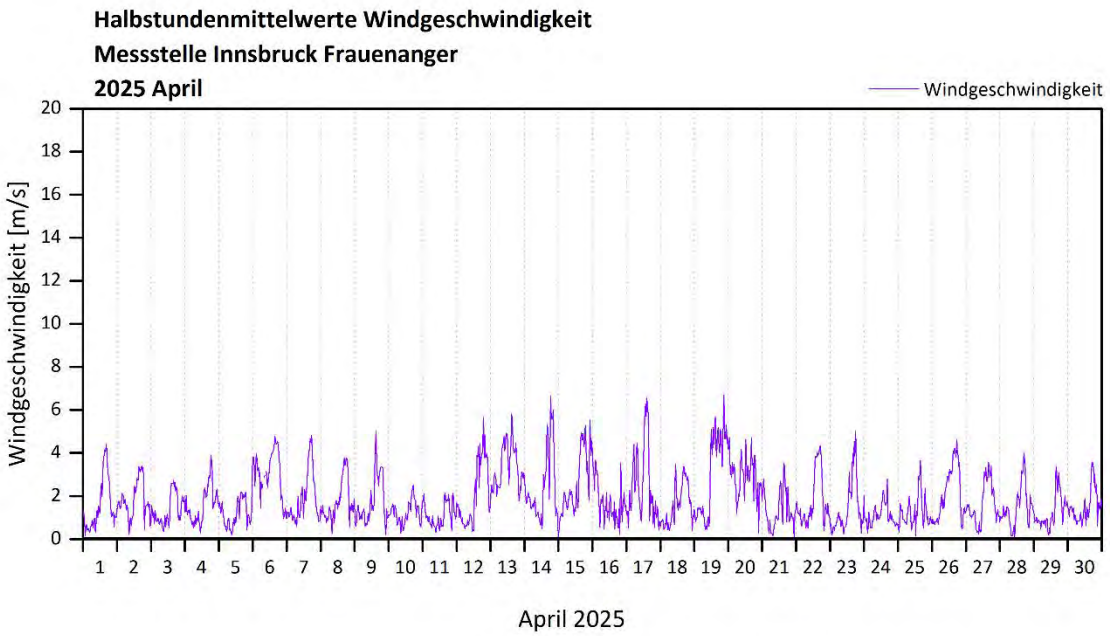
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

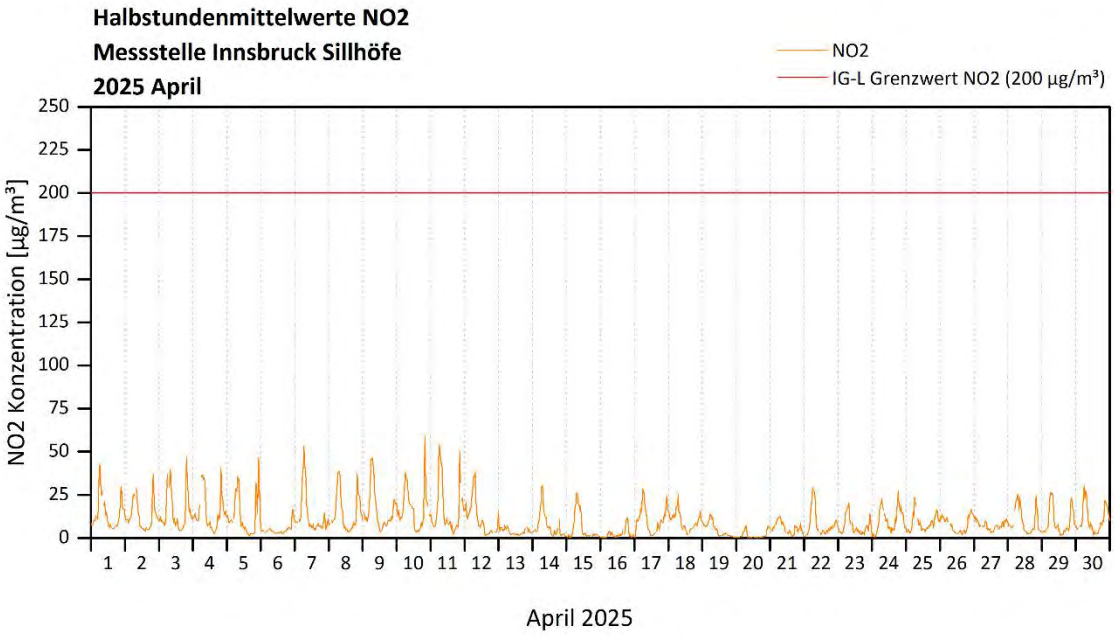


Windgeschwindigkeit / Velocità del vento

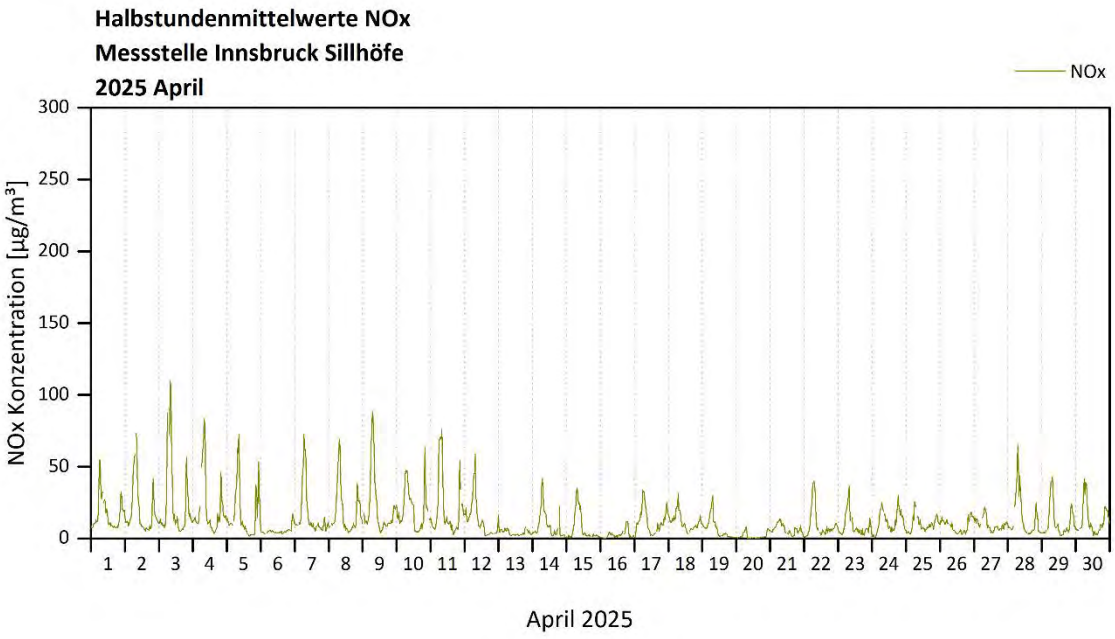


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

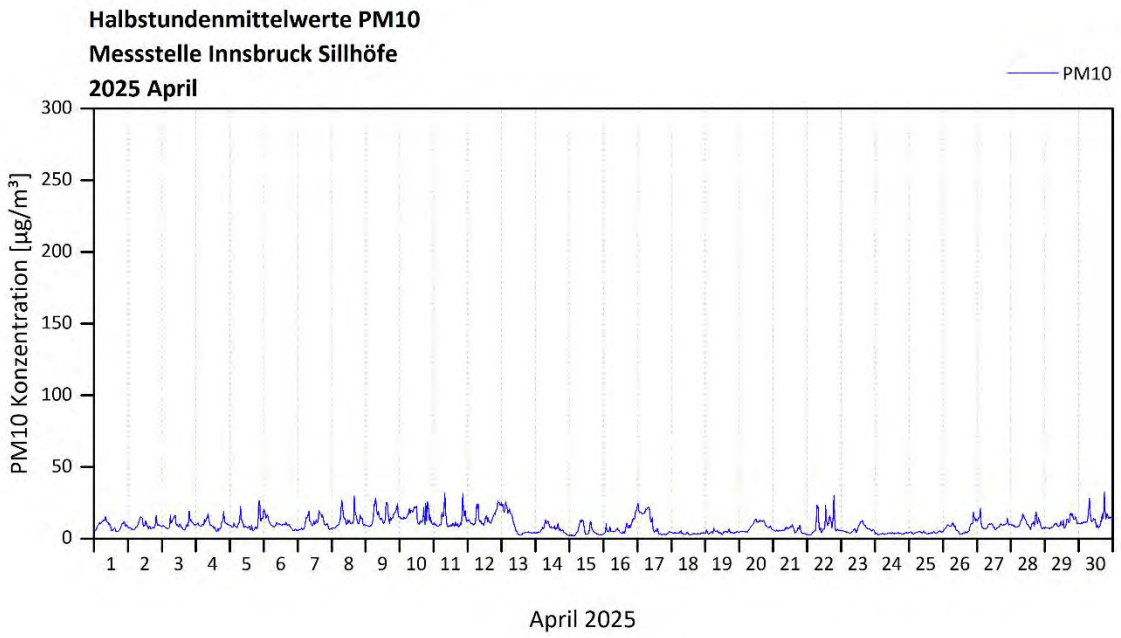
Stickstoffdioxid / Biossido di azoto



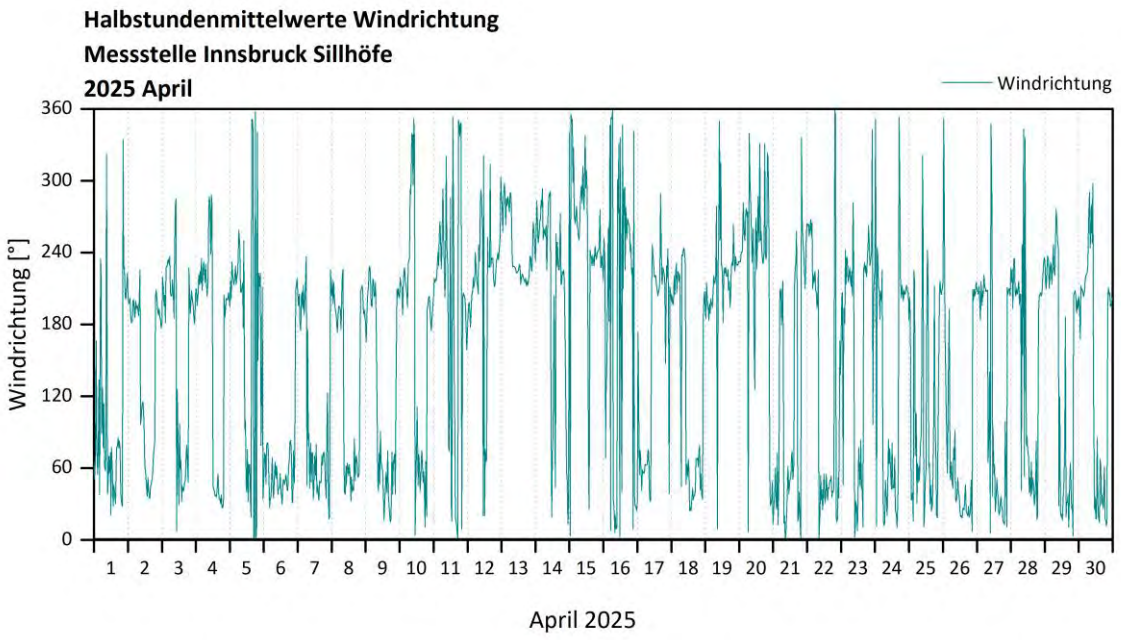
Stickstoffoxide / Ossidi di azoto



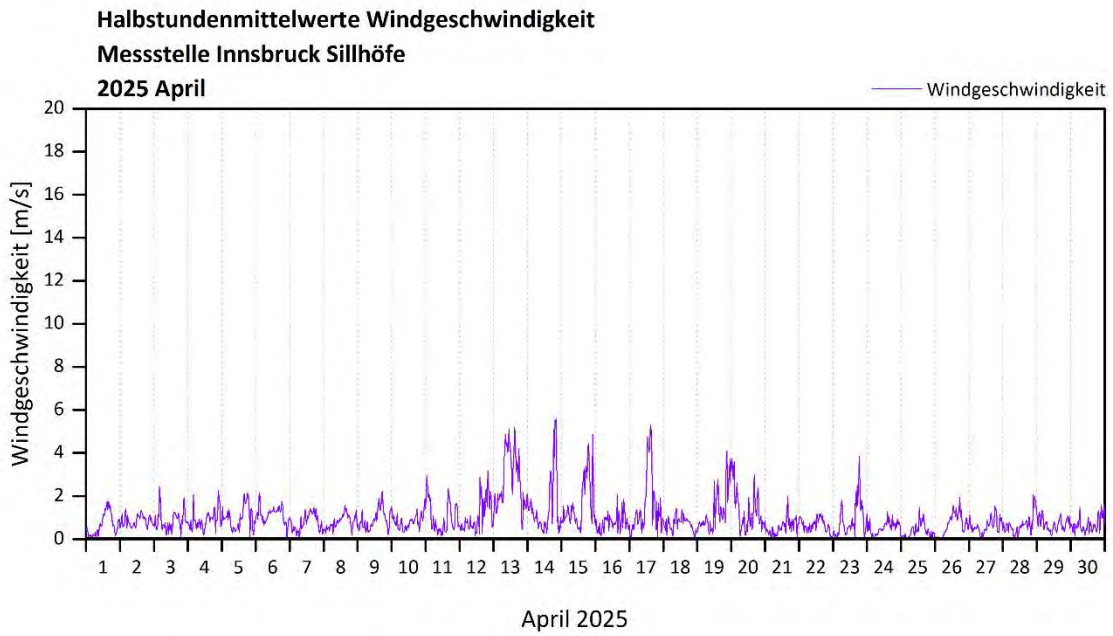
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

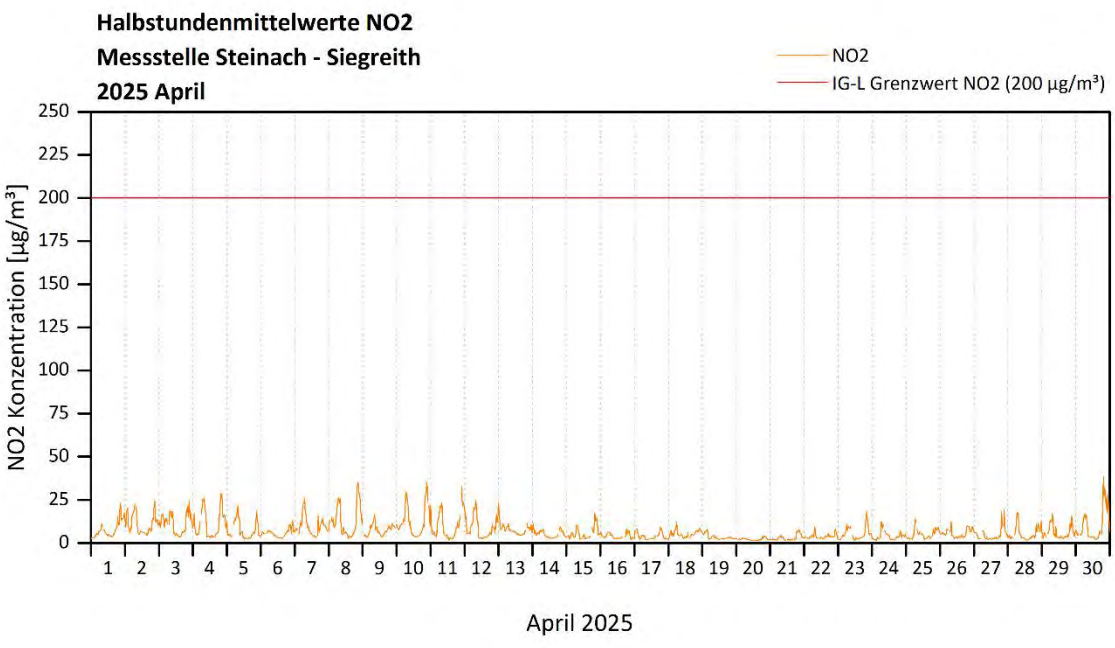


Windgeschwindigkeit / Velocità del vento

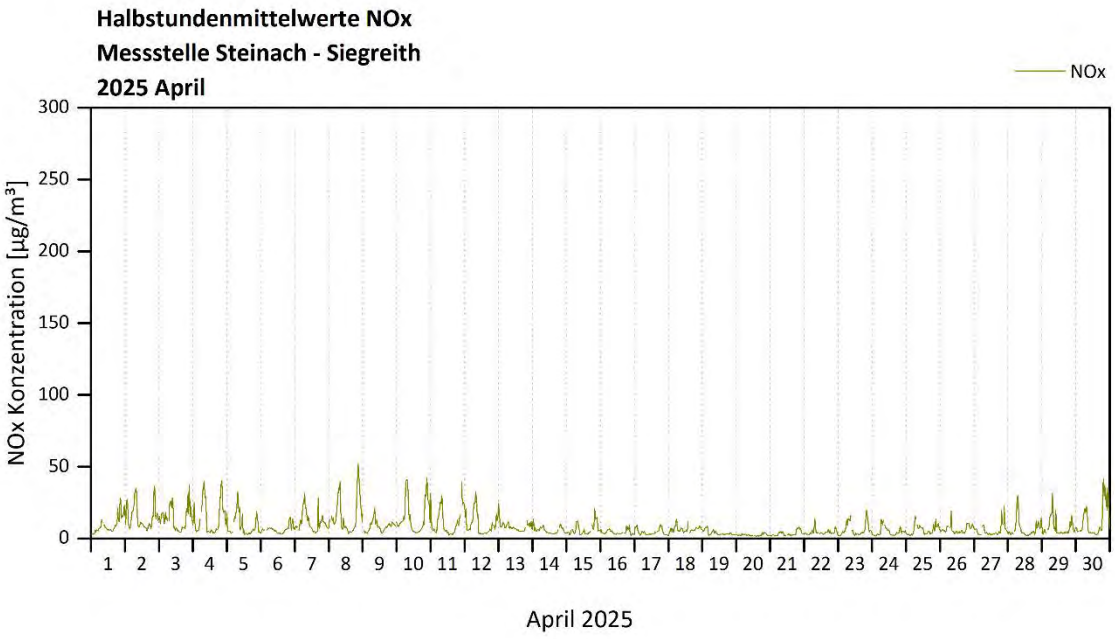


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

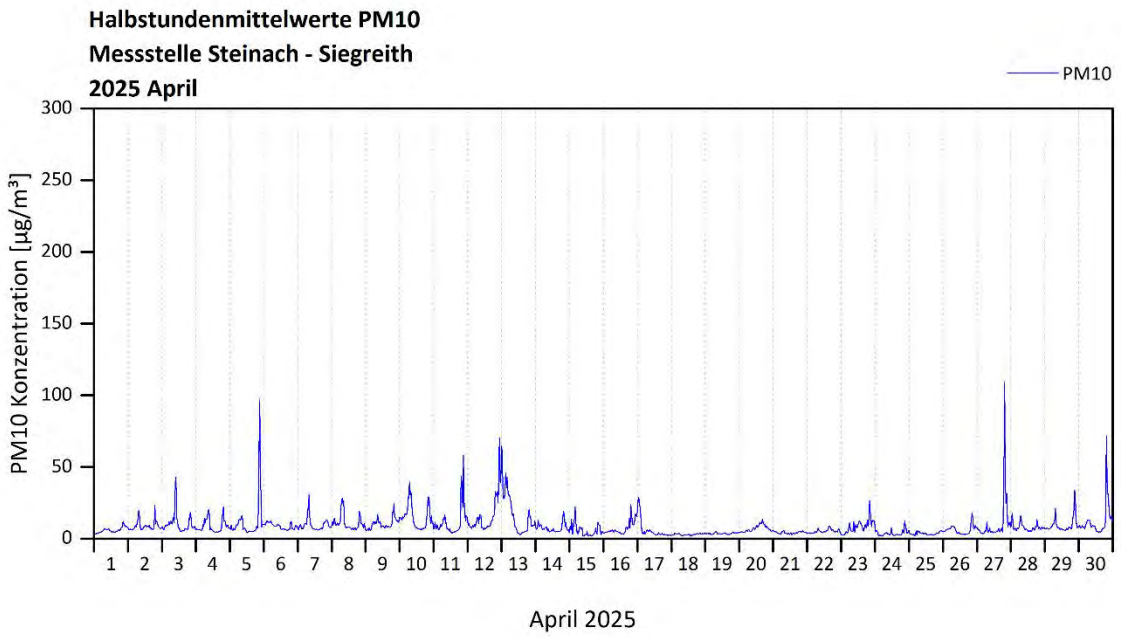
Stickstoffdioxid / Biossido di azoto



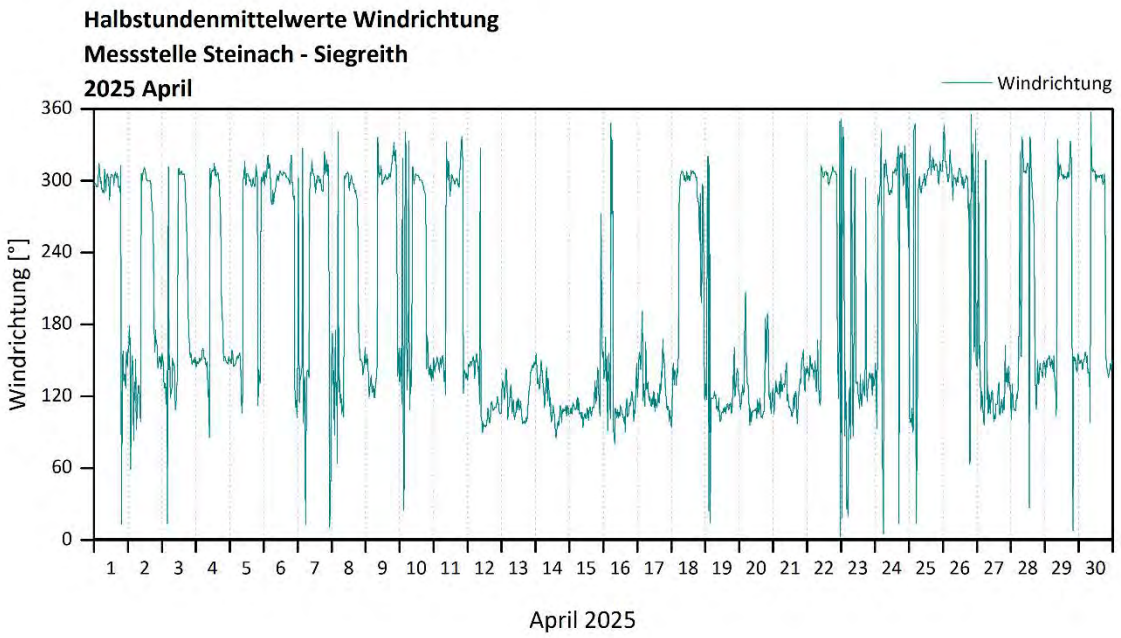
Stickstoffoxide / Ossidi di azoto



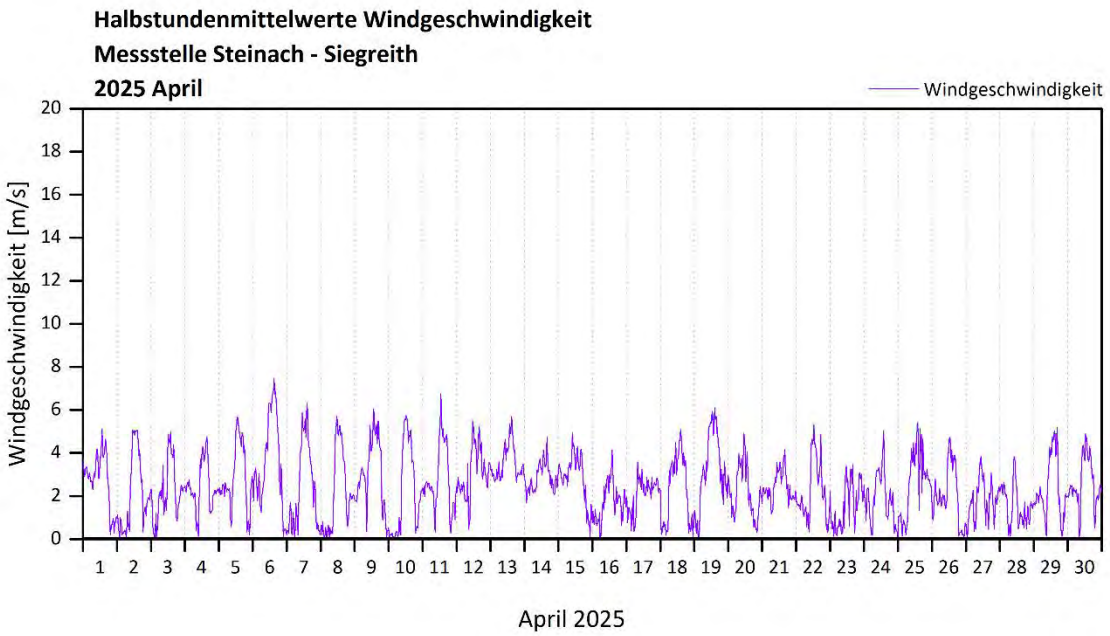
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

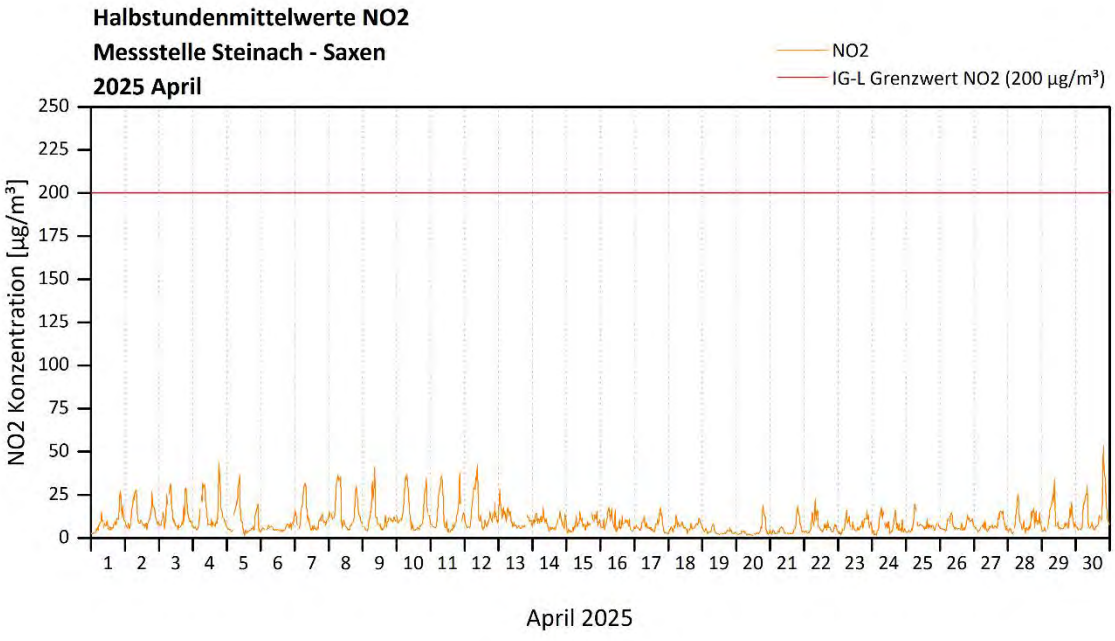


Windgeschwindigkeit / Velocità del vento

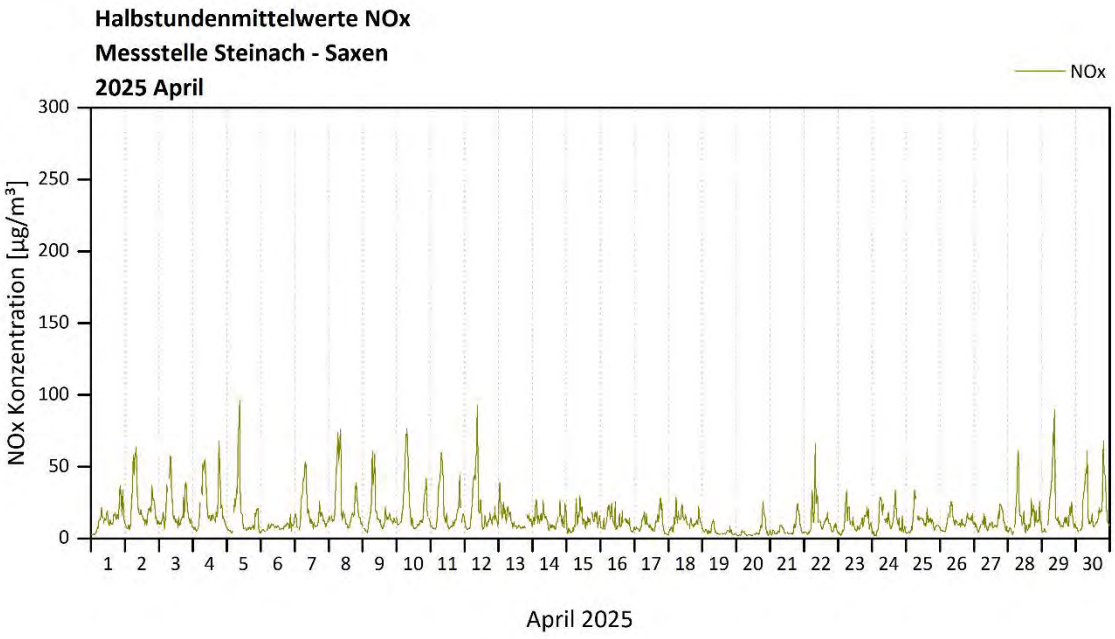


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

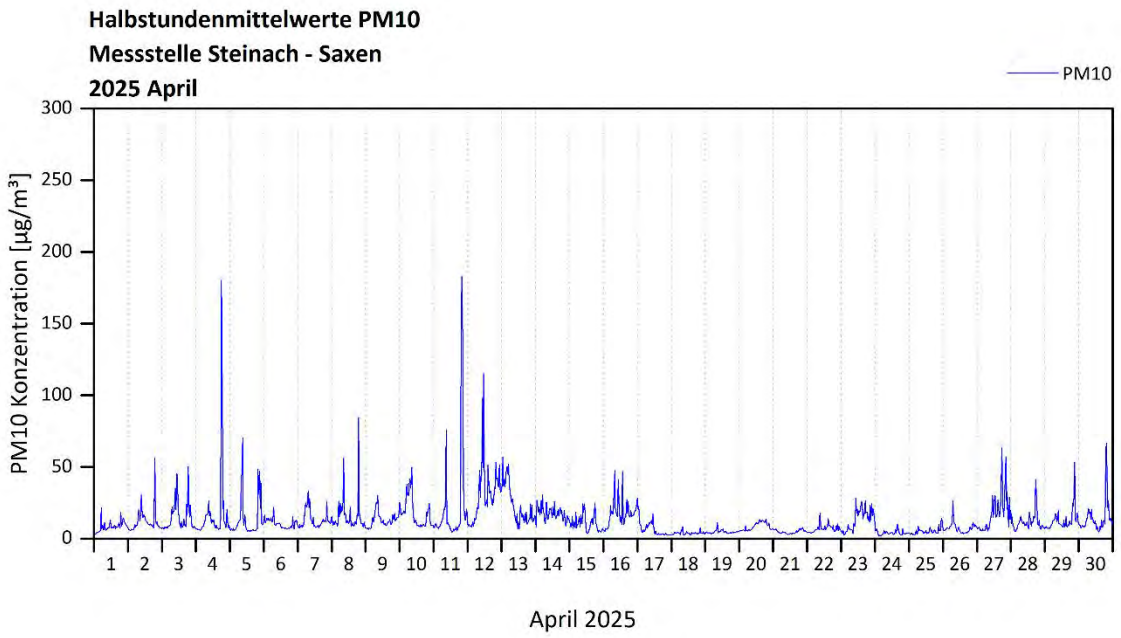
Stickstoffdioxid / Biossido di azoto



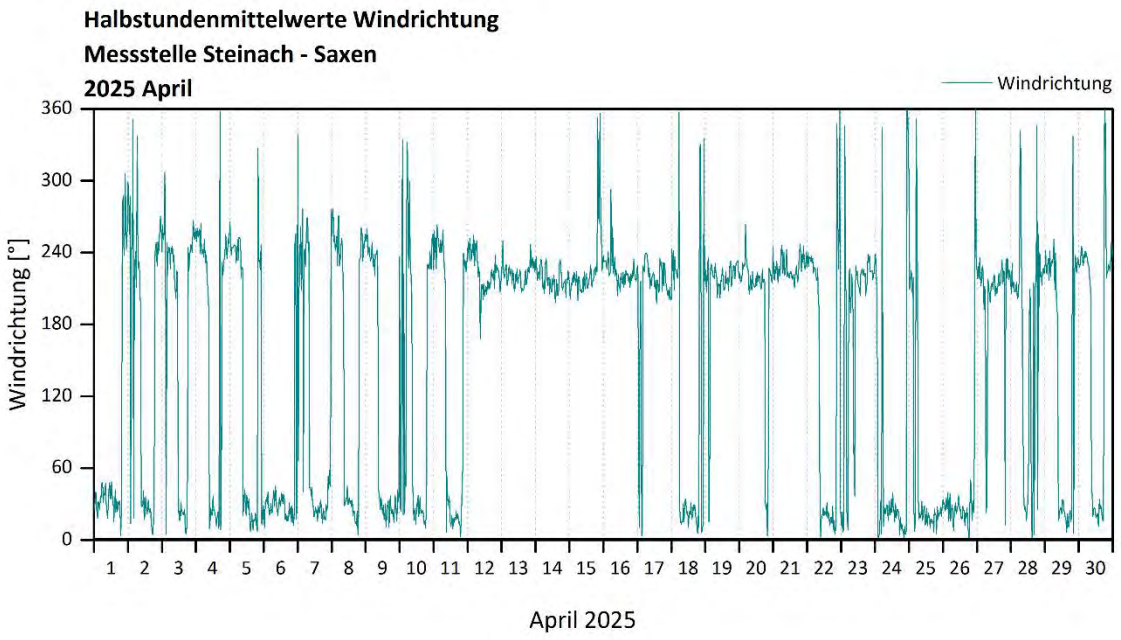
Stickstoffoxide / Ossidi di azoto



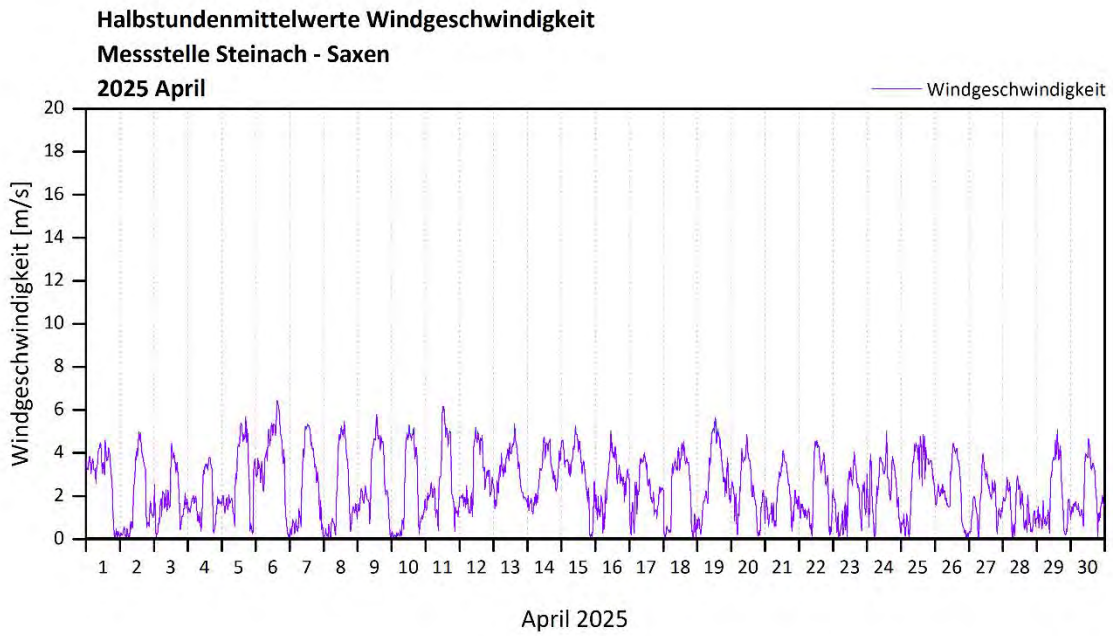
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



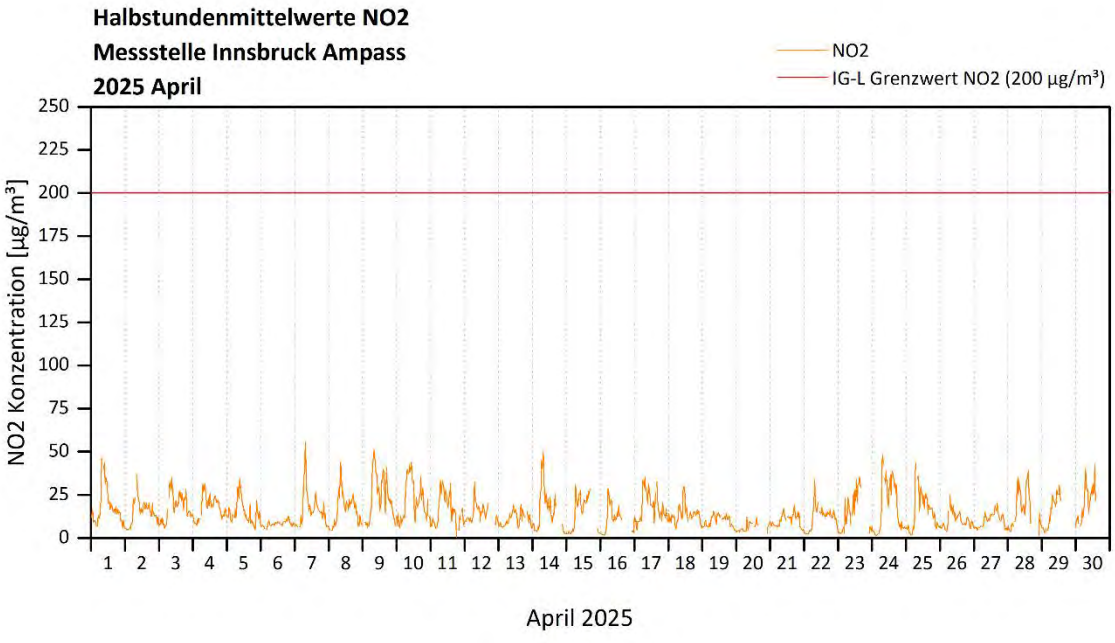
Windgeschwindigkeit / Velocità del vent



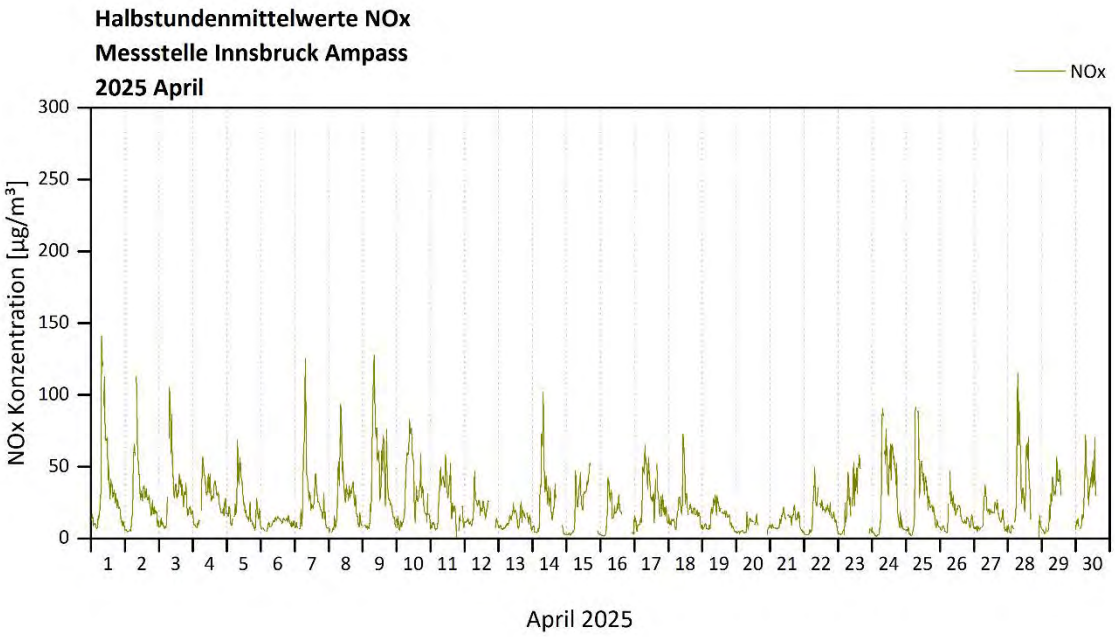
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

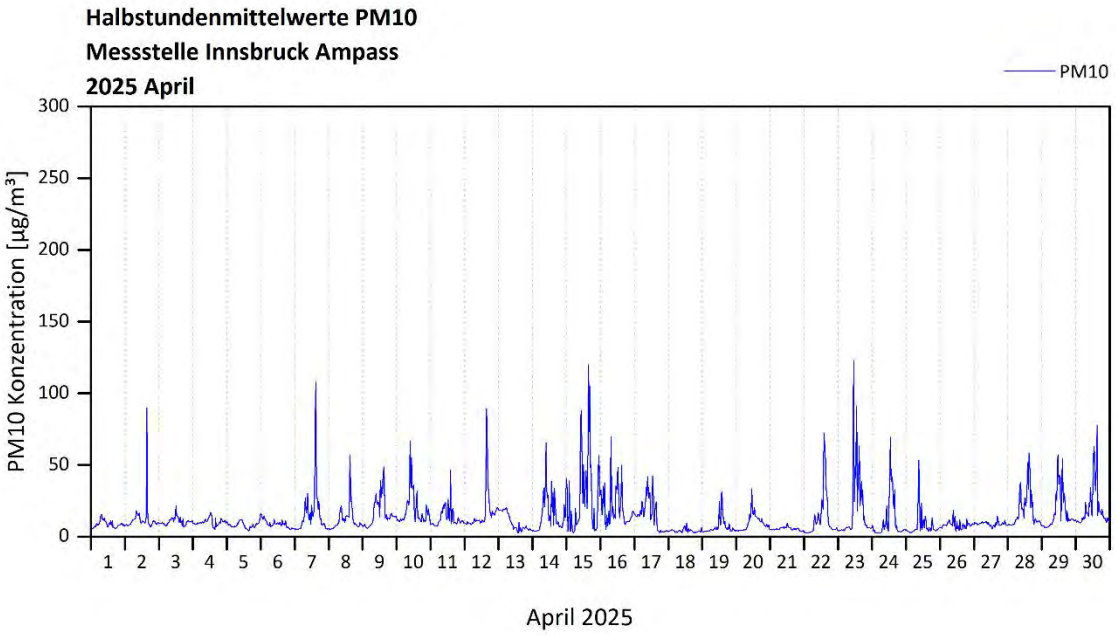
Stickstoffdioxid / Biossido di azoto



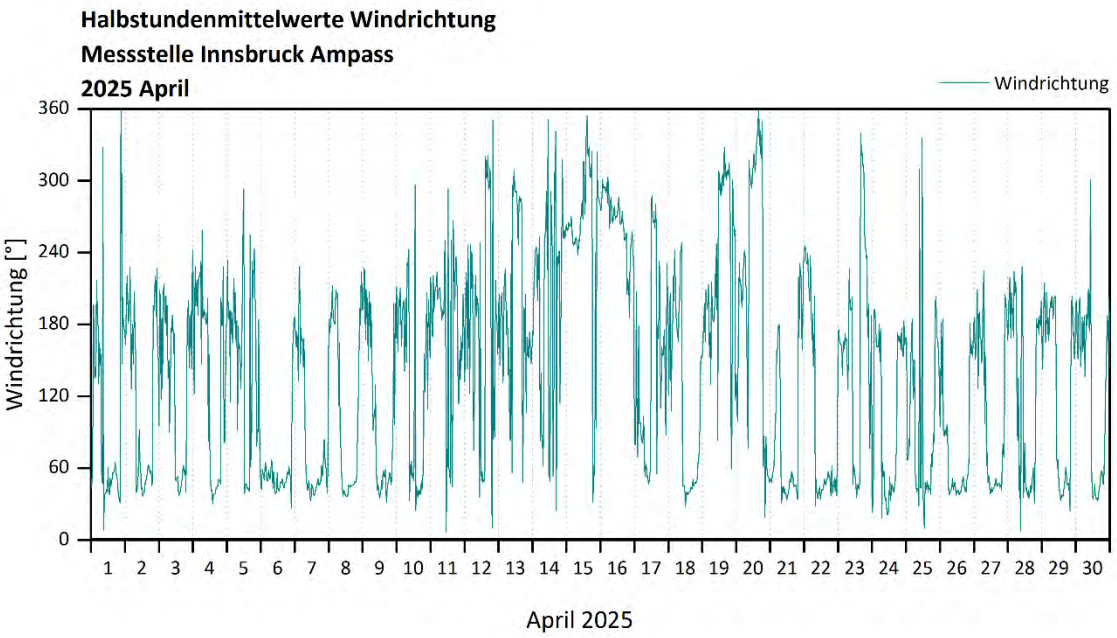
Stickstoffoxide / Ossidi di azoto



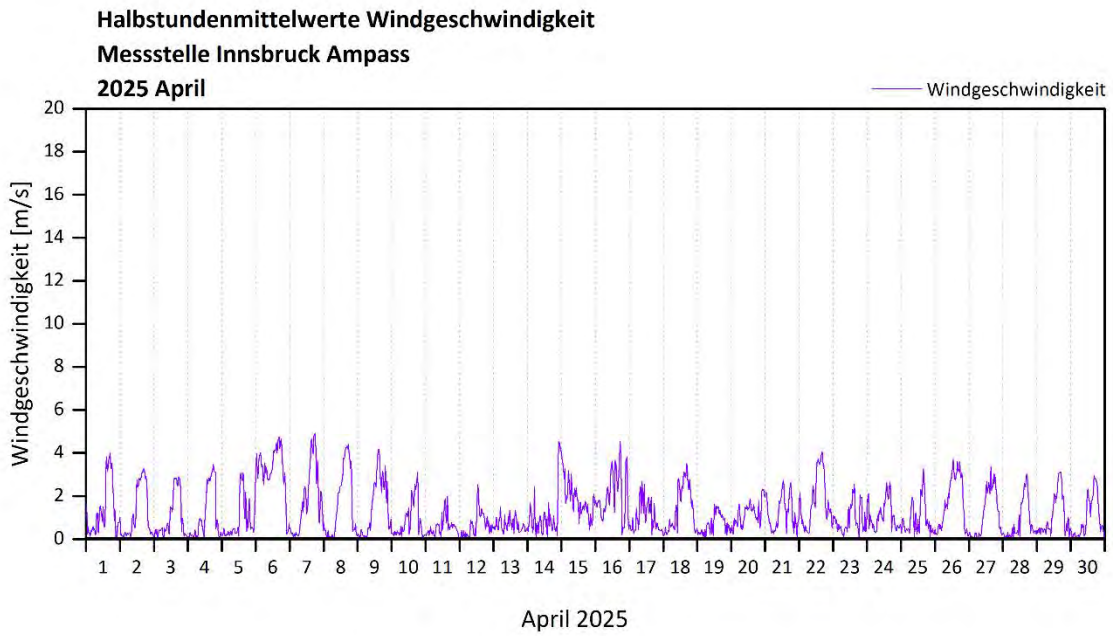
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

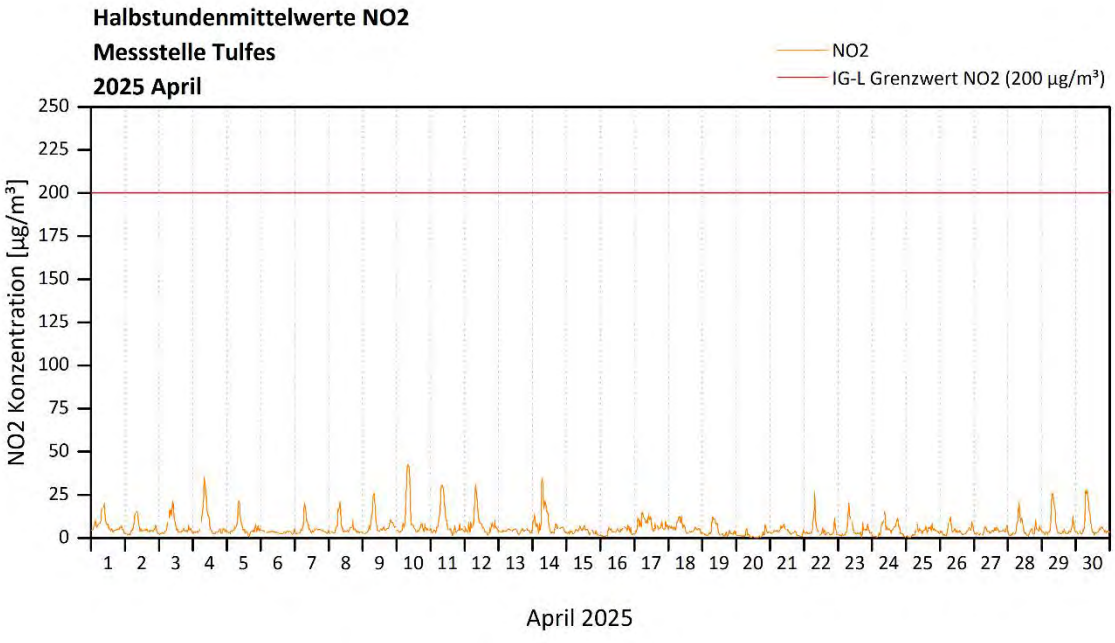


Windgeschwindigkeit / Velocità del vent

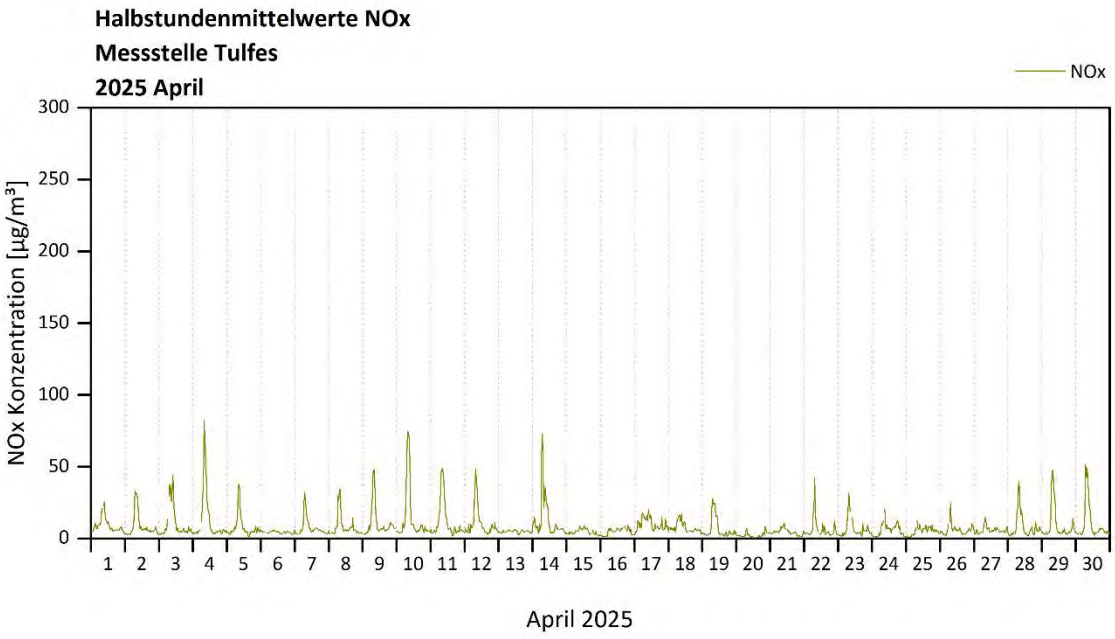


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

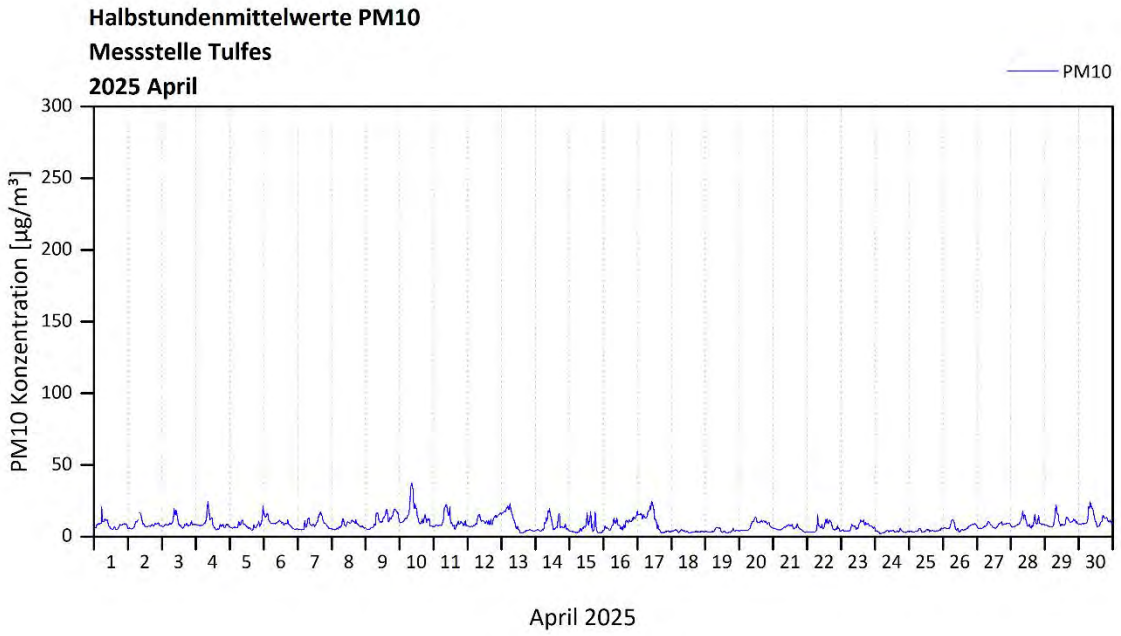
Stickstoffdioxid / Biossido di azoto



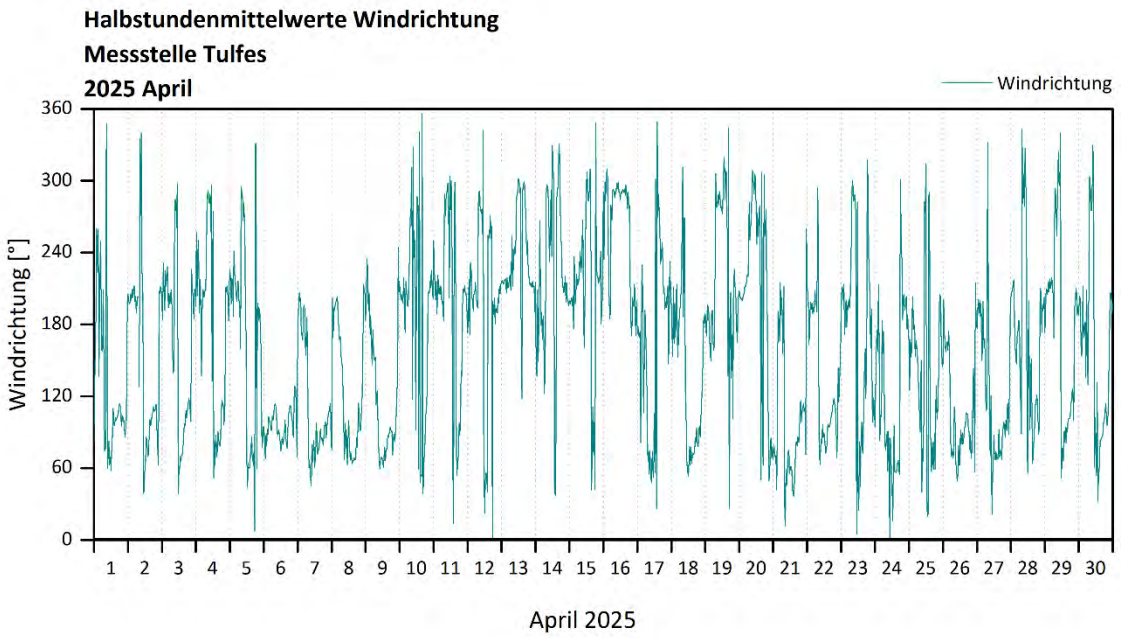
Stickstoffoxide / Ossidi di azoto



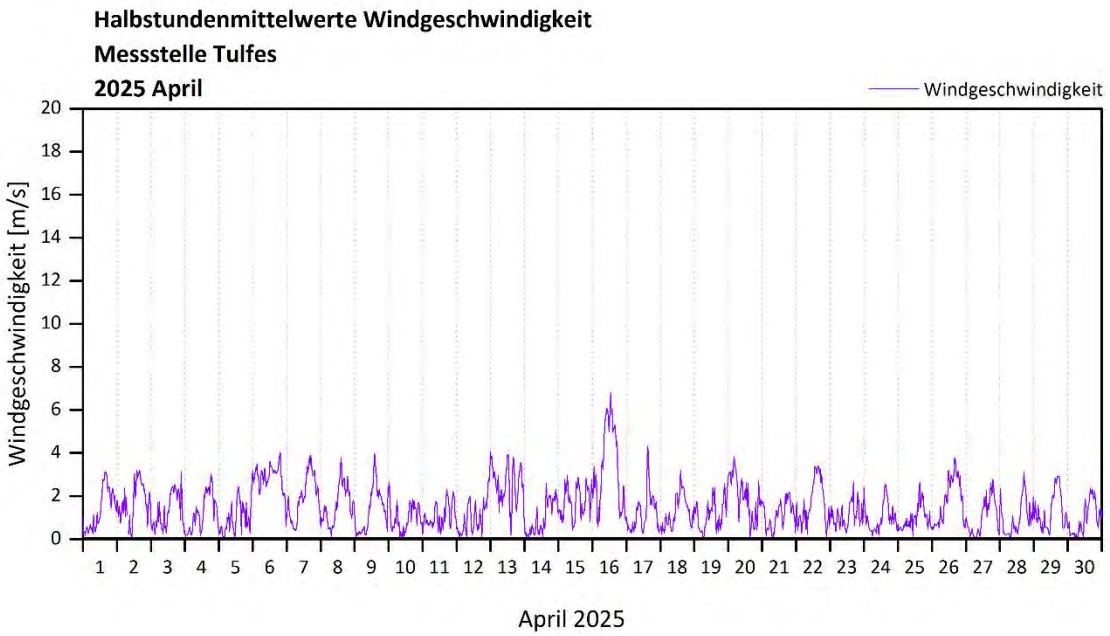
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

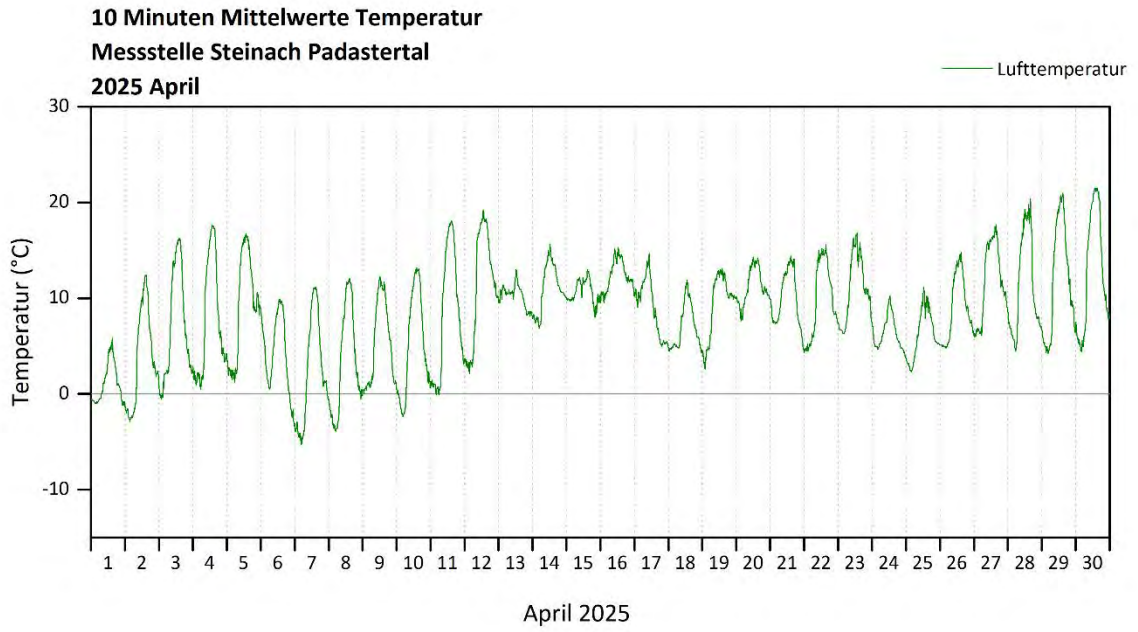


Windgeschwindigkeit / Velocità del vent

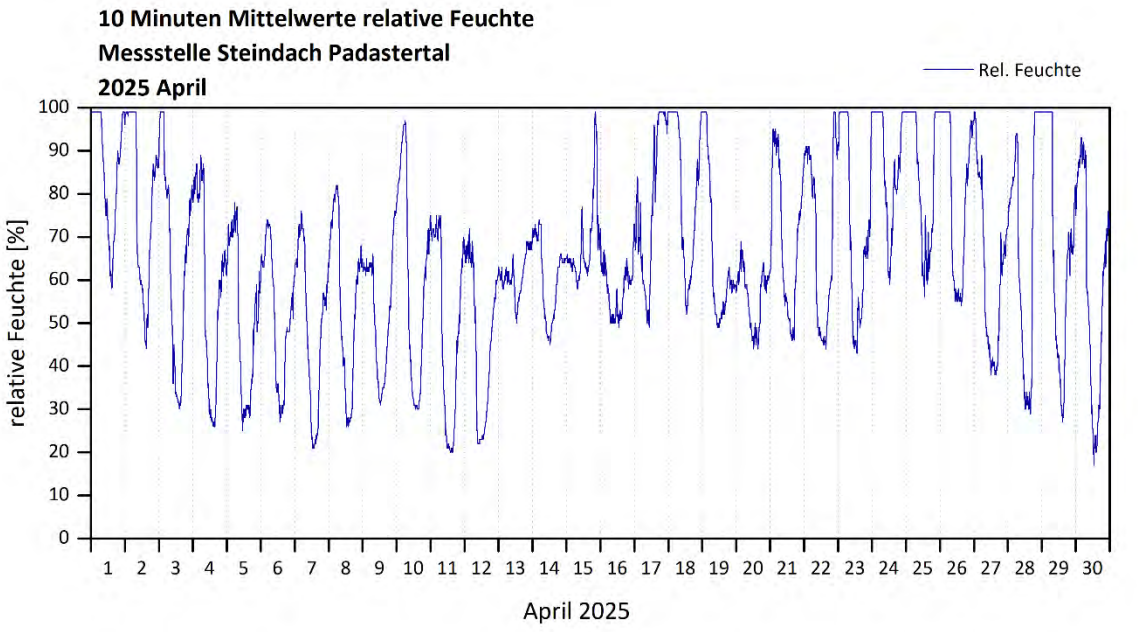


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

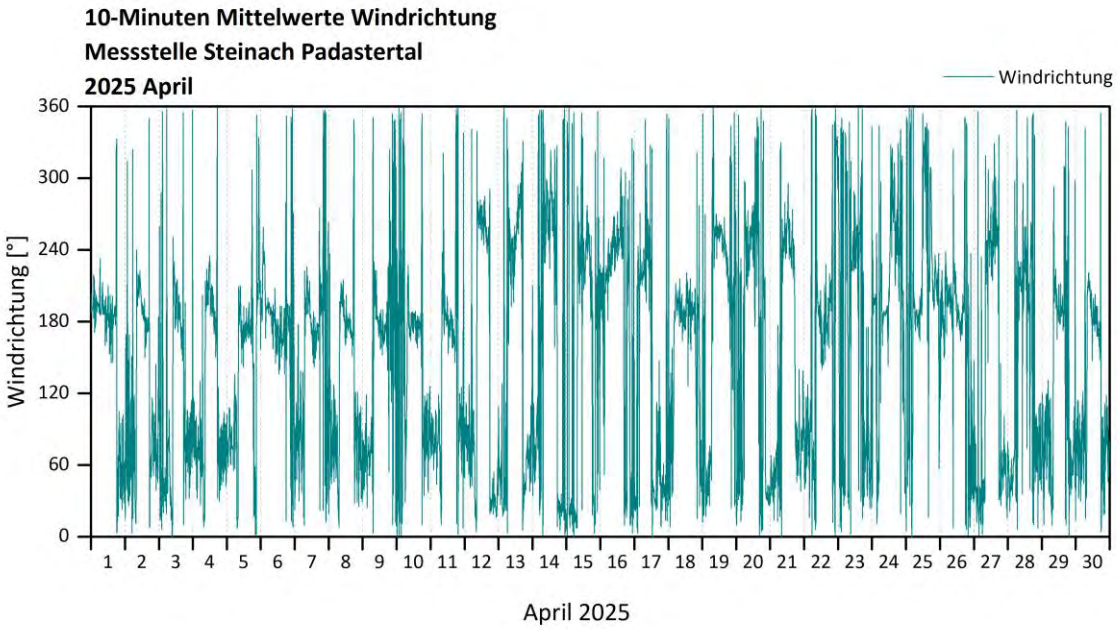
Temperatur / Temeraturà dell'aria



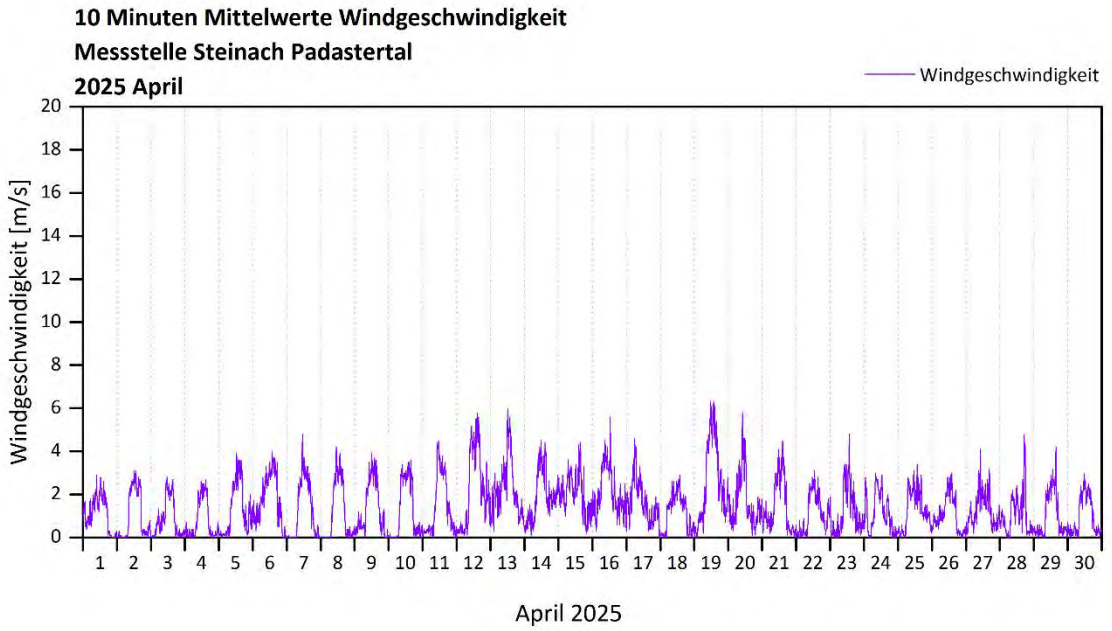
Relative Feuchtigkeit / Umidità relativa



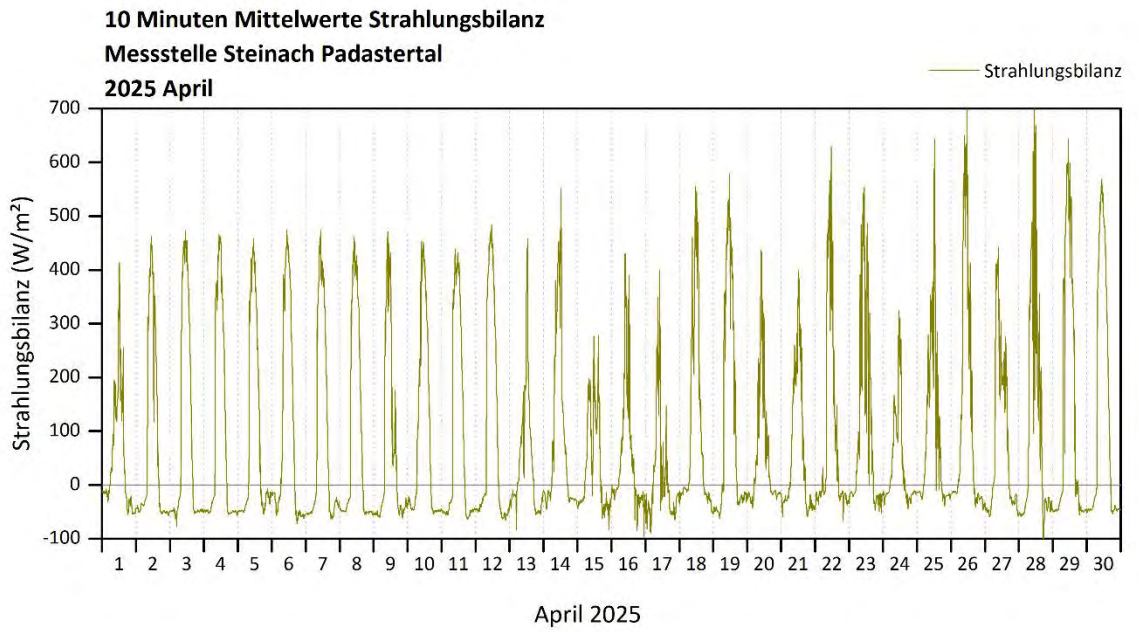
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht Mai 2025 Relazione mensile maggio 2025

Stickstoffdioxid Biossido di azoto

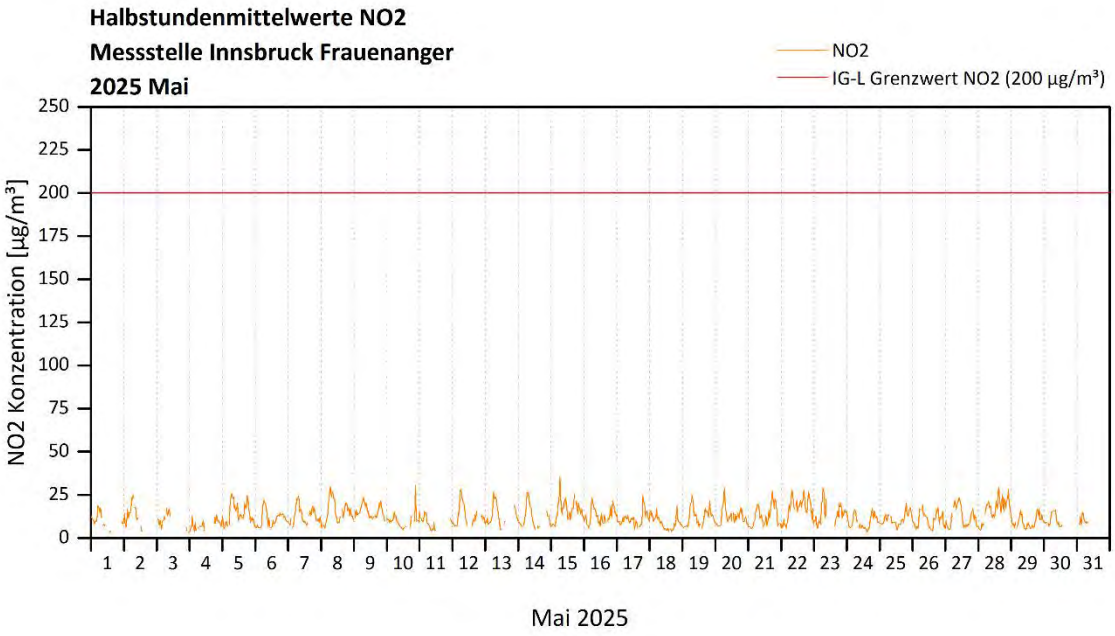
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 e 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	36	12.2	16.8	0		0	
Innsbruck Sillhöfe	81	10.1	16.0	0		0	
Steinach Siegreith	46	6.7	8.8	0		0	
Steinach Saxen	50	9.1	13.7	0		0	
Ampass	77	16.4	25.6	0		0	
Tulfes	38	5.7	10.0	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

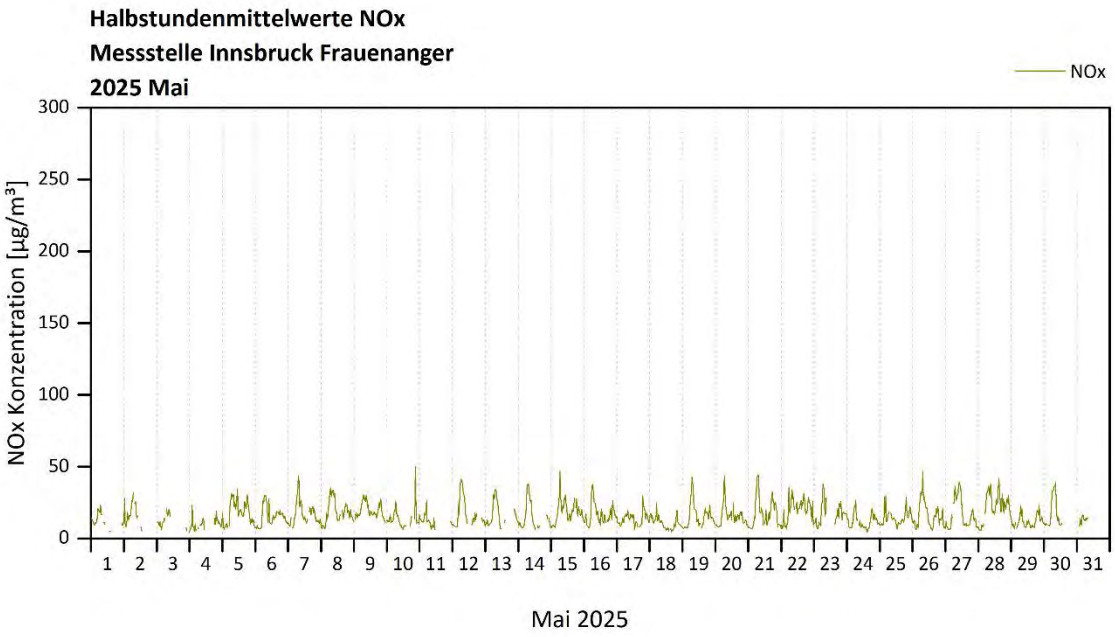
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 e 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	25	9.0	16.3	0		0	
Innsbruck Sillhöfe	48	10.0	17.1	0		0	
Steinach Siegreith	95	8.7	23.9	0		0	
Steinach Saxen	85	11.4	28.8	0		0	
Ampass	140	12.5	23.6	0		0	
Tulfes	27	9.0	14.7	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

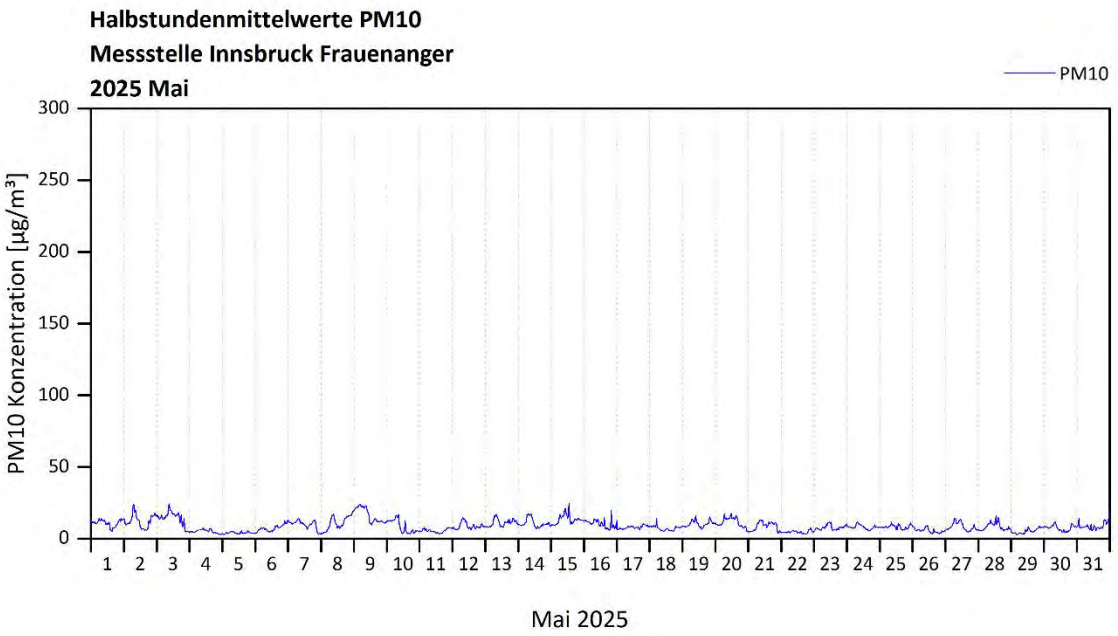
Stickstoffdioxid / Biossido di azoto



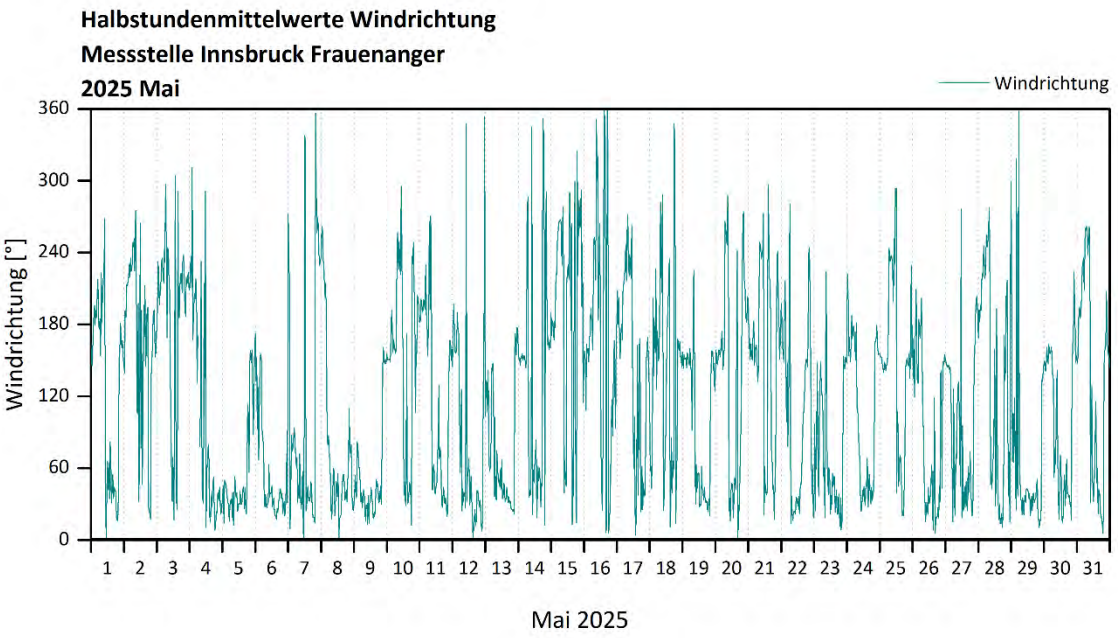
Stickstoffoxide / Ossidi di azoto



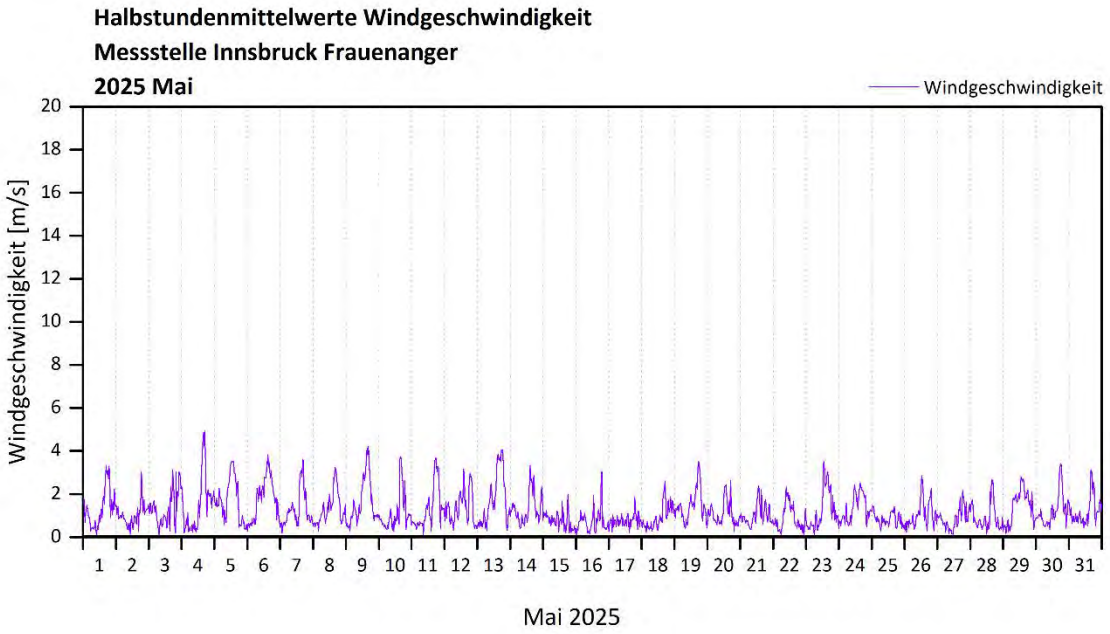
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

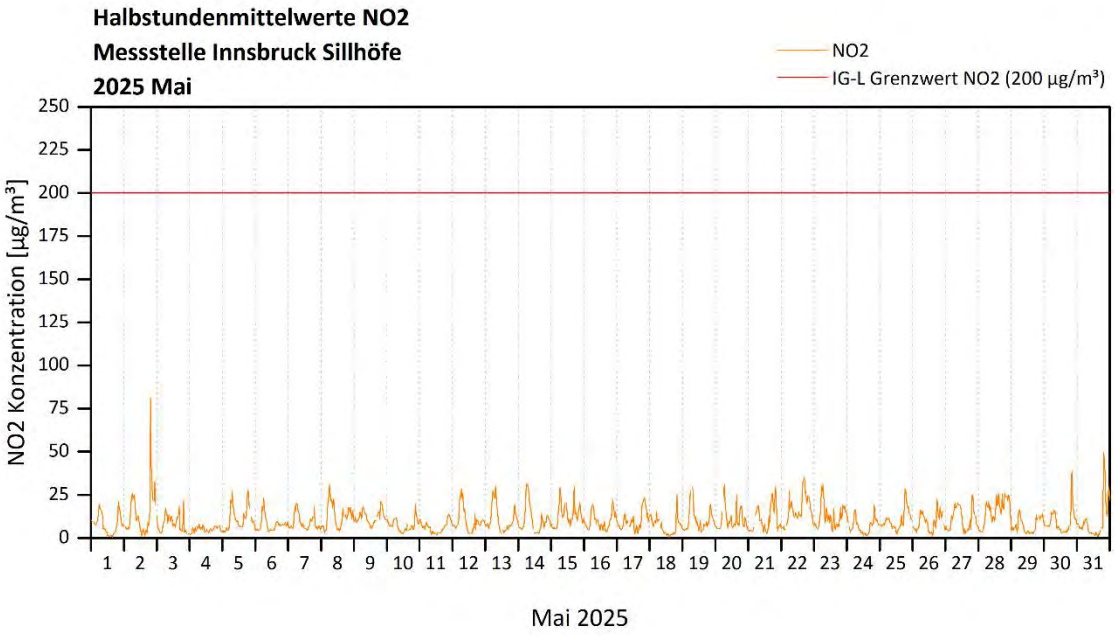


Windgeschwindigkeit / Velocità del vento

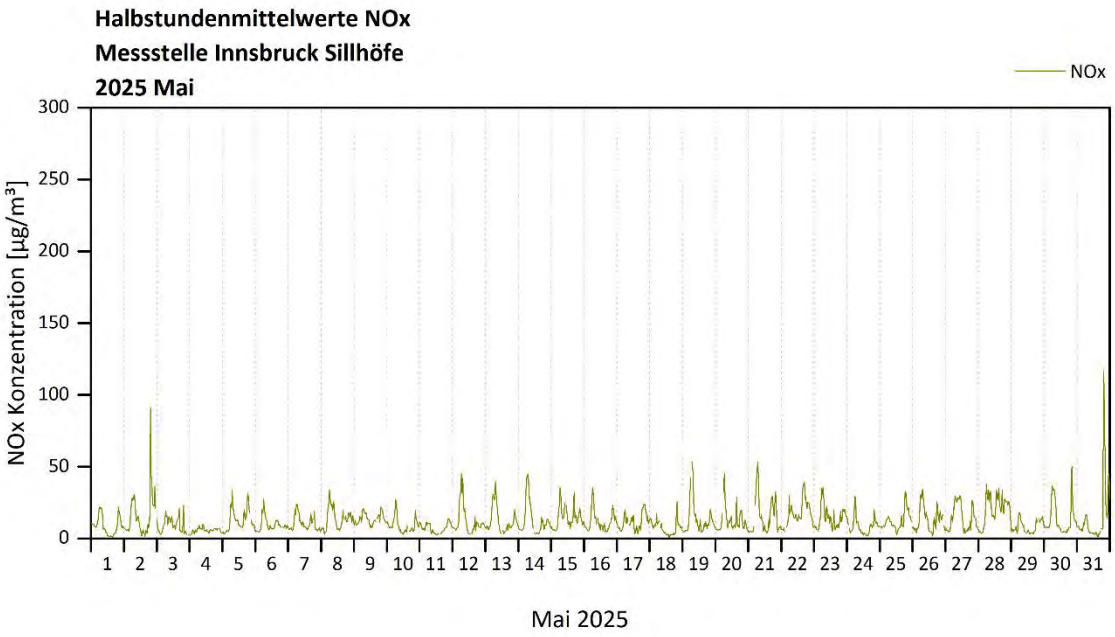


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

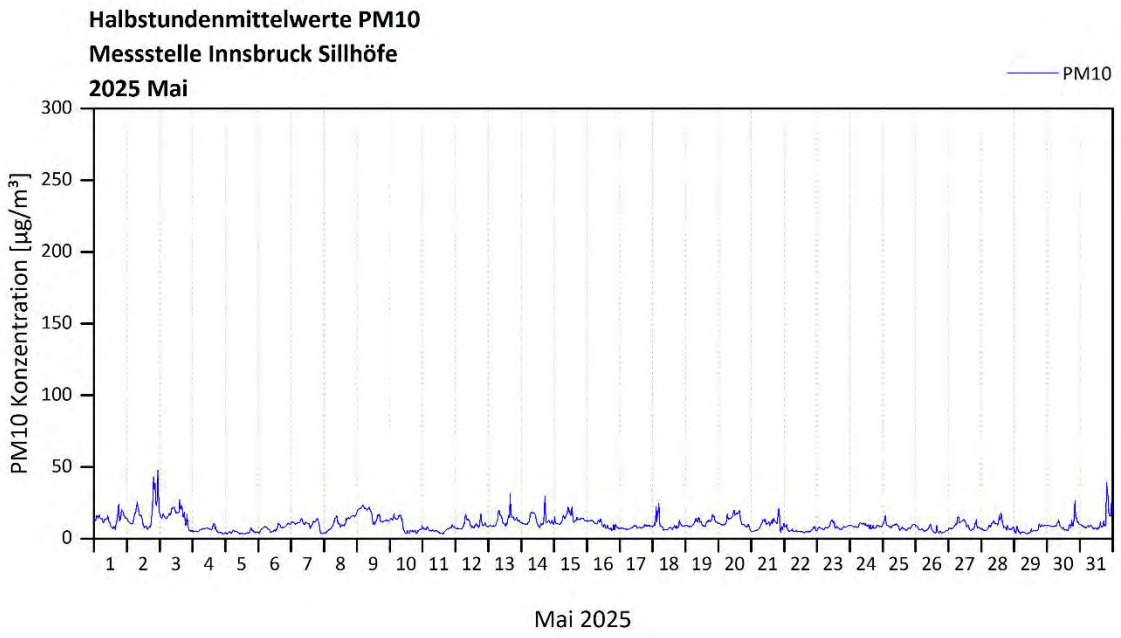
Stickstoffdioxid / Biossido di azoto



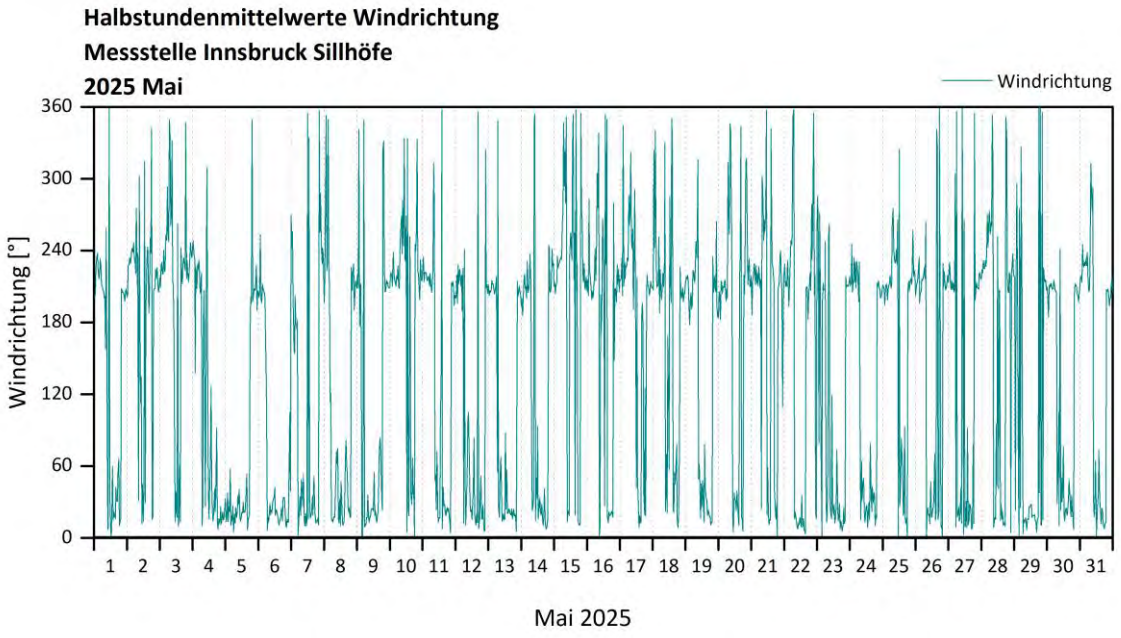
Stickstoffoxide / Ossidi di azoto



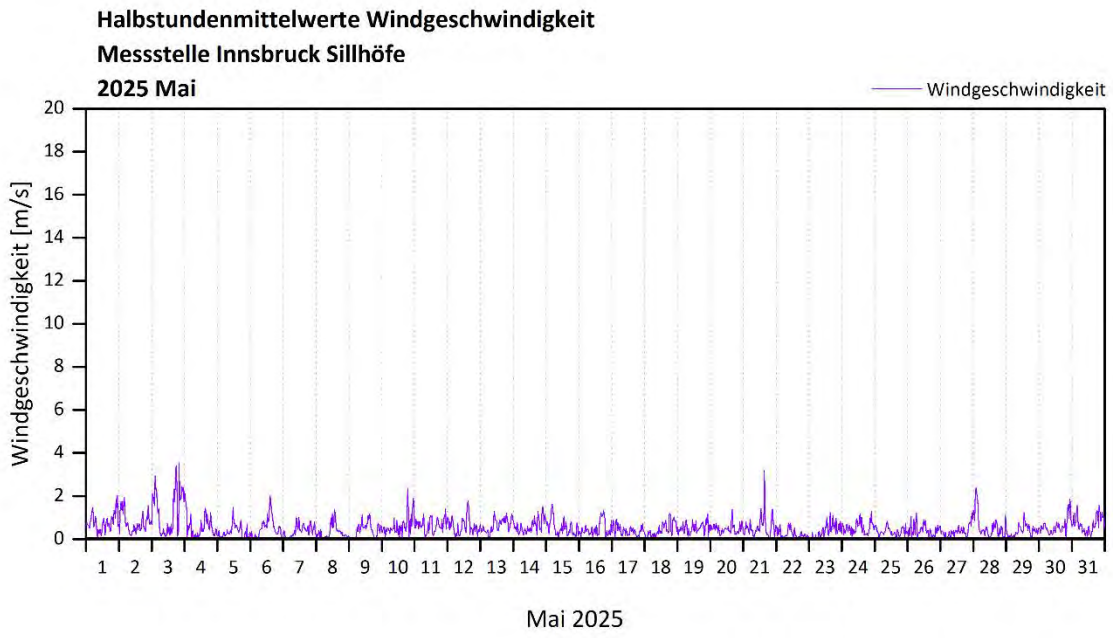
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

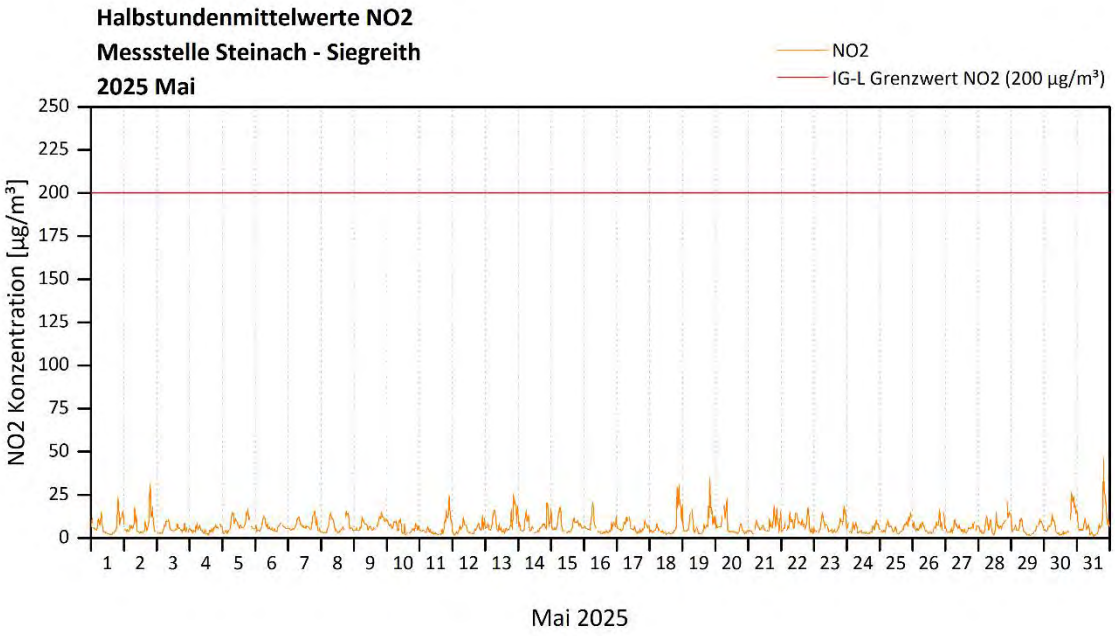


Windgeschwindigkeit / Velocità del vento

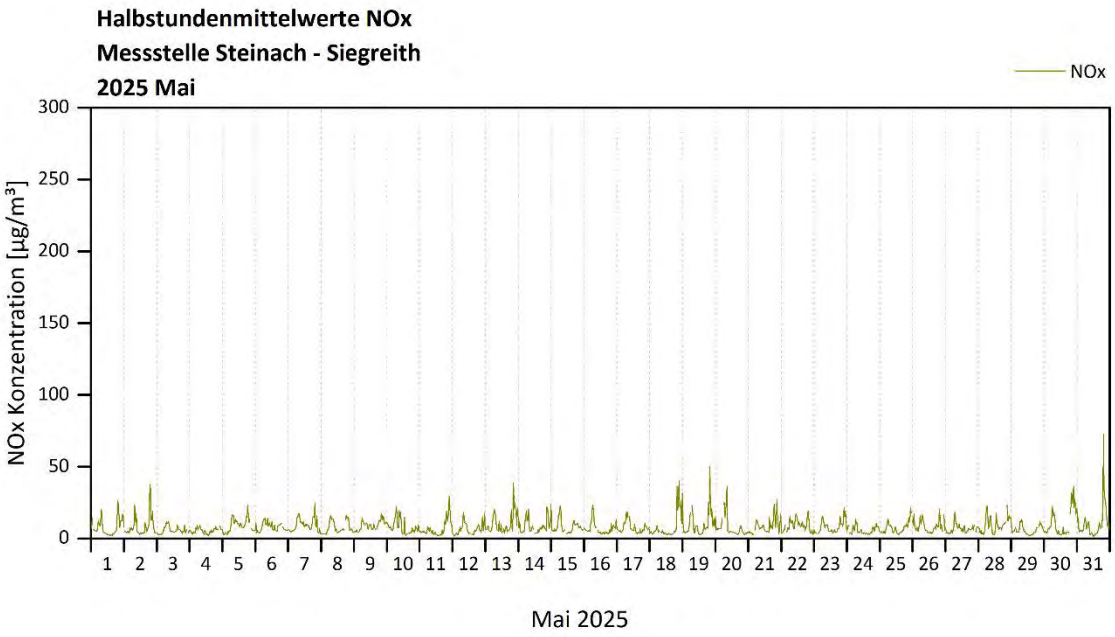


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

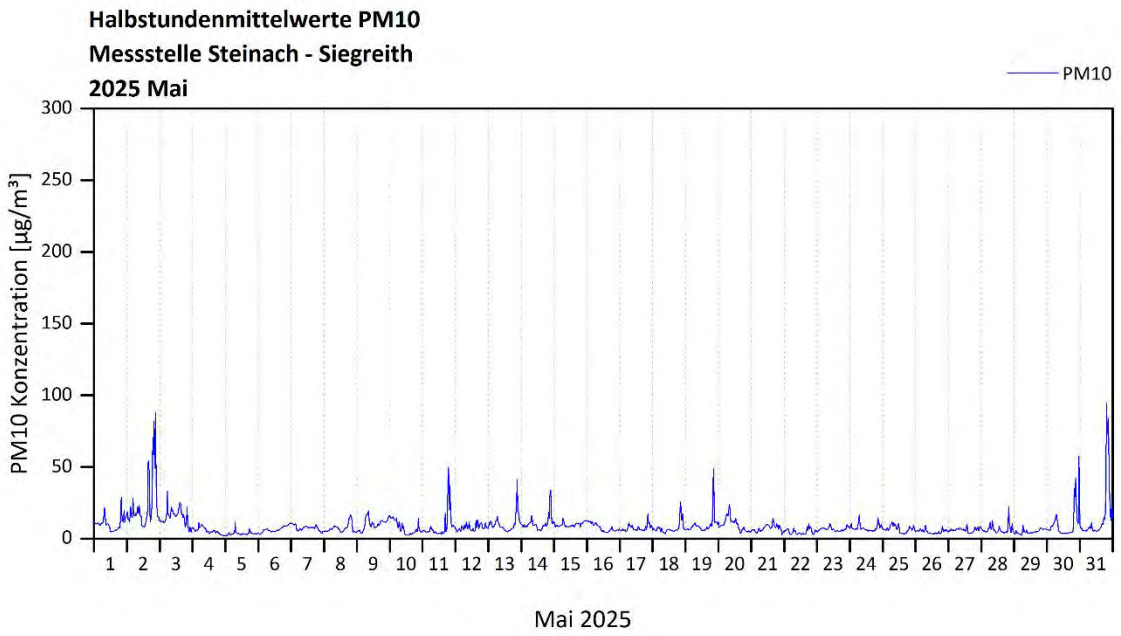
Stickstoffdioxid / Biossido di azoto



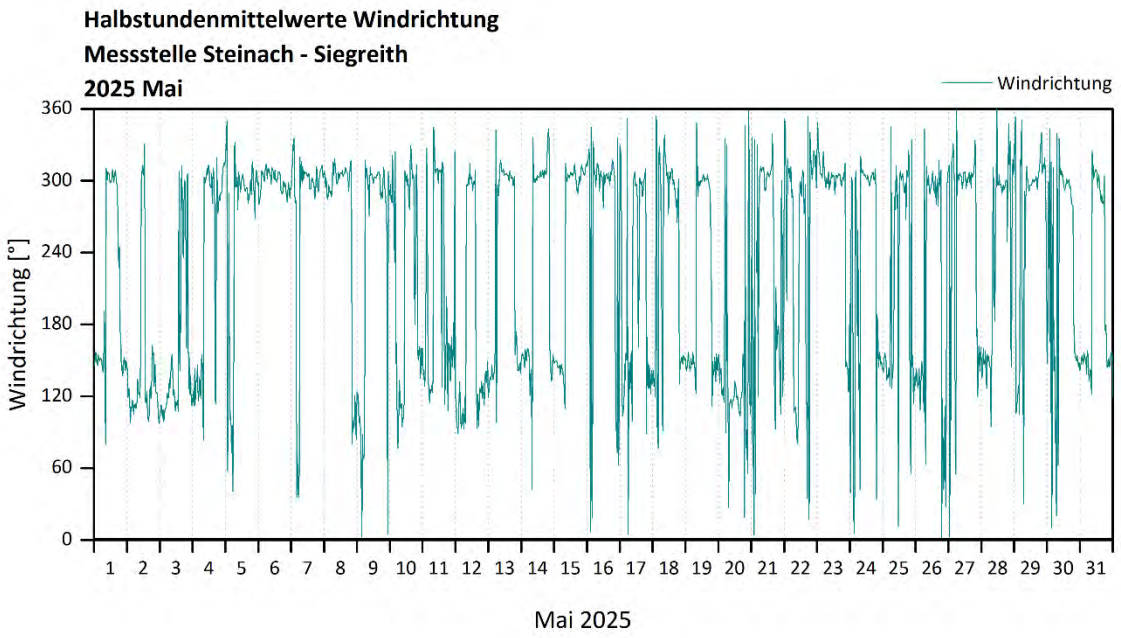
Stickstoffoxide / Ossidi di azoto



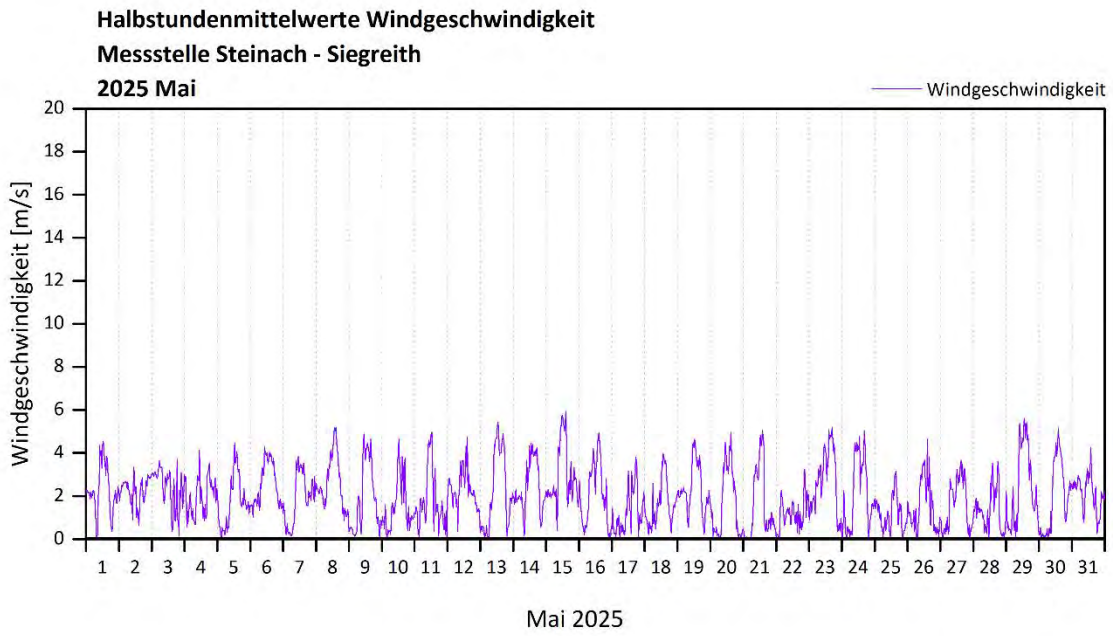
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

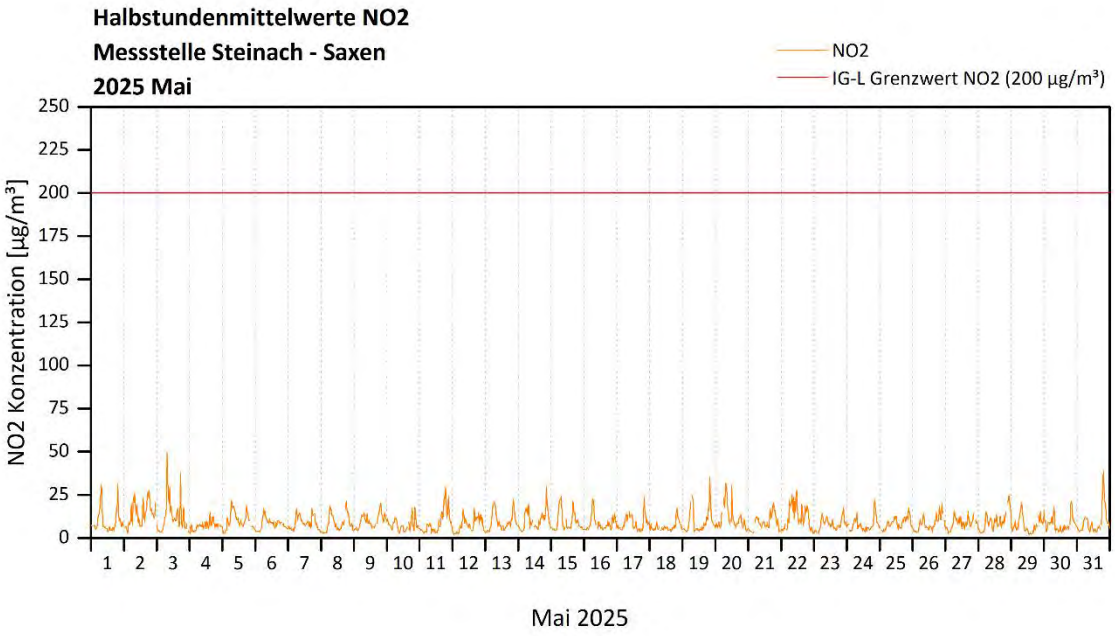


Windgeschwindigkeit / Velocità del vento

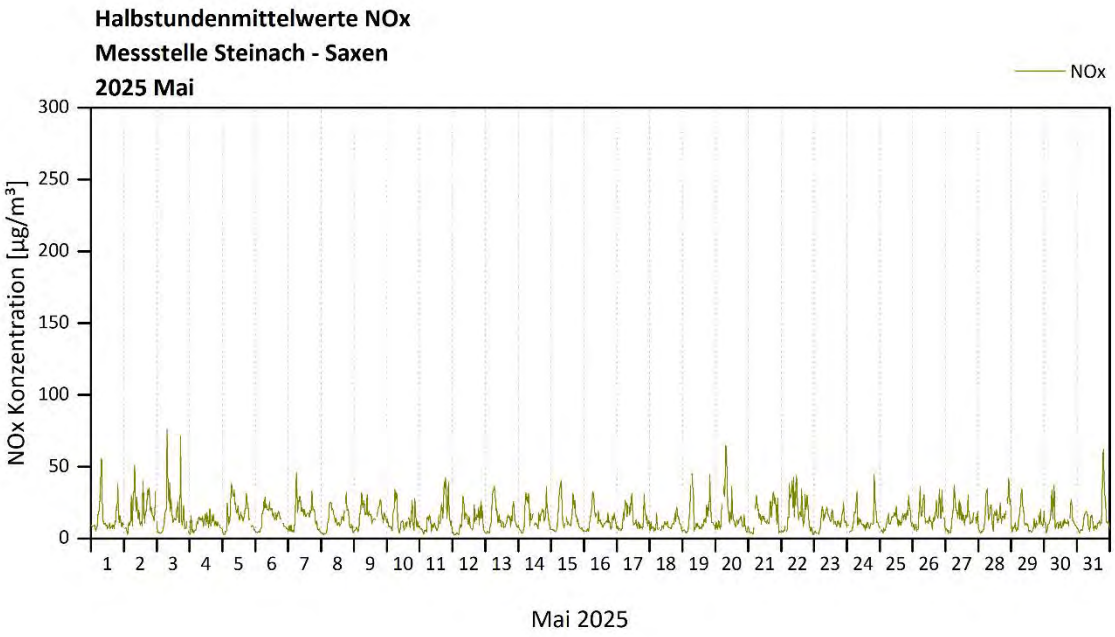


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

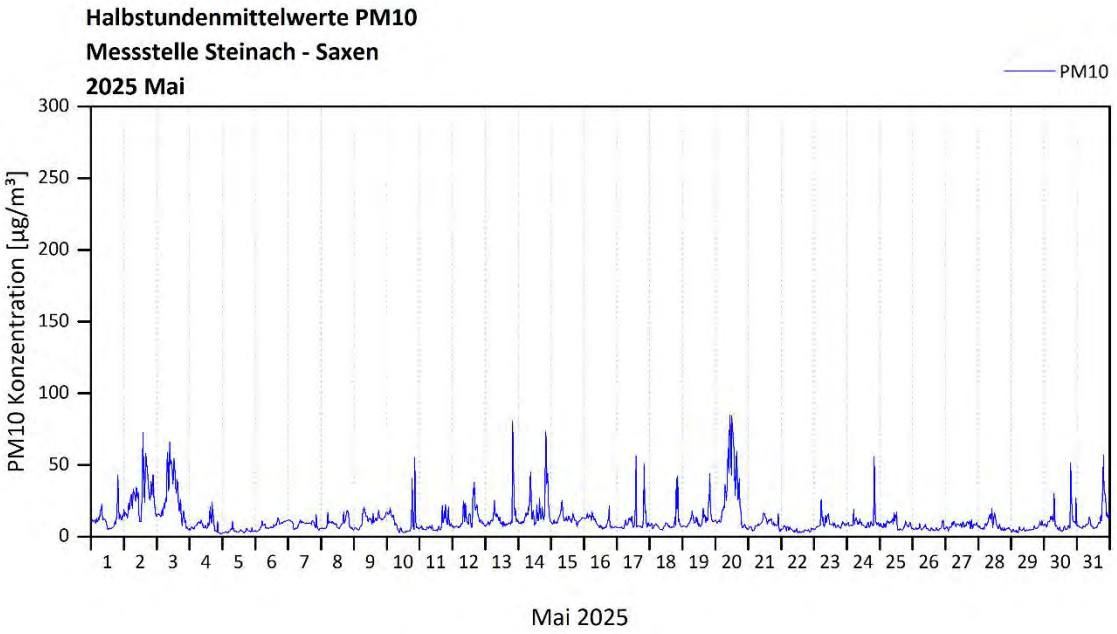
Stickstoffdioxid / Biossido di azoto



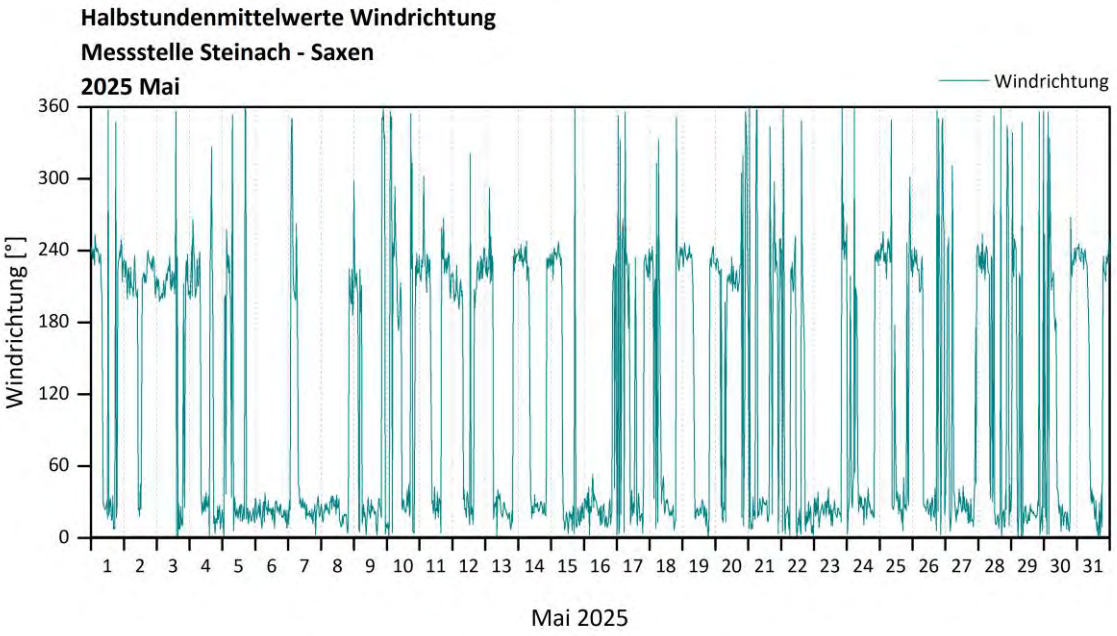
Stickstoffoxide / Ossidi di azoto



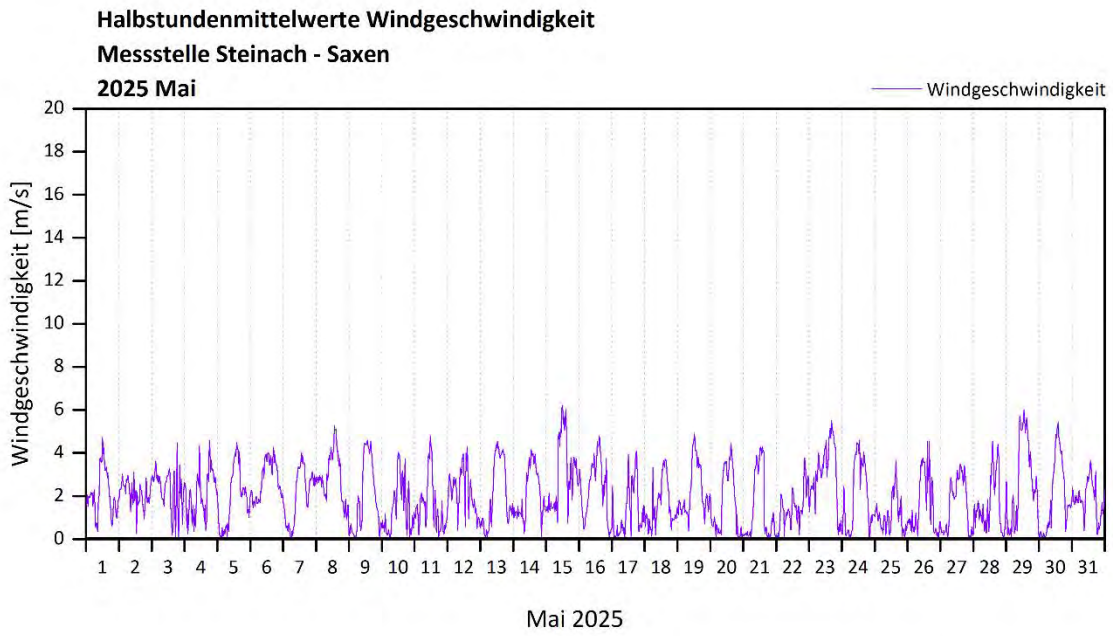
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



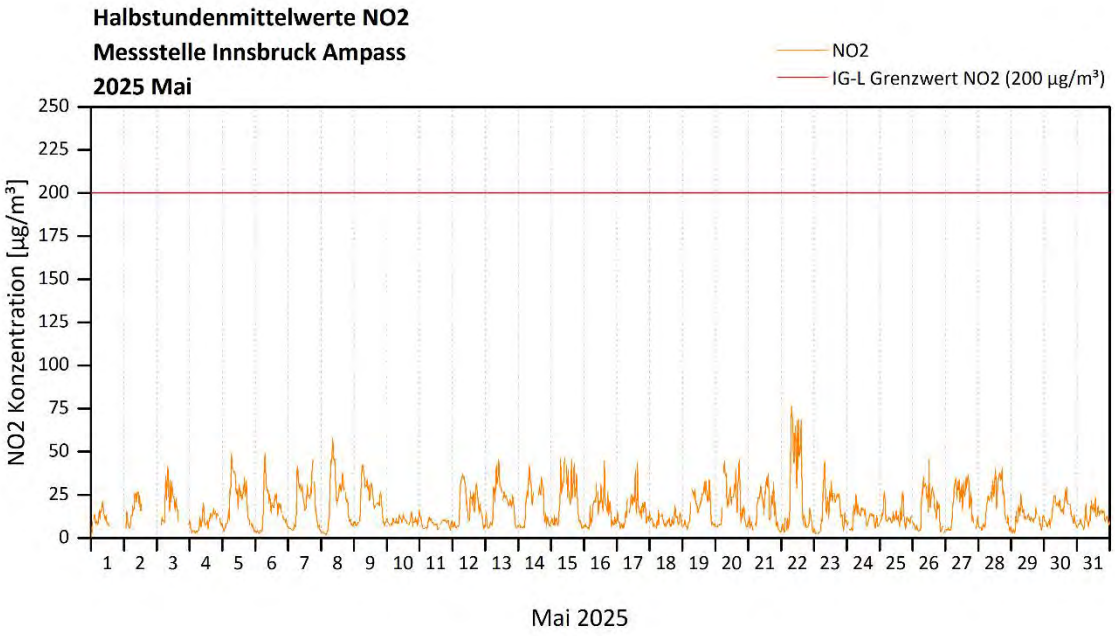
Windgeschwindigkeit / Velocità del vent



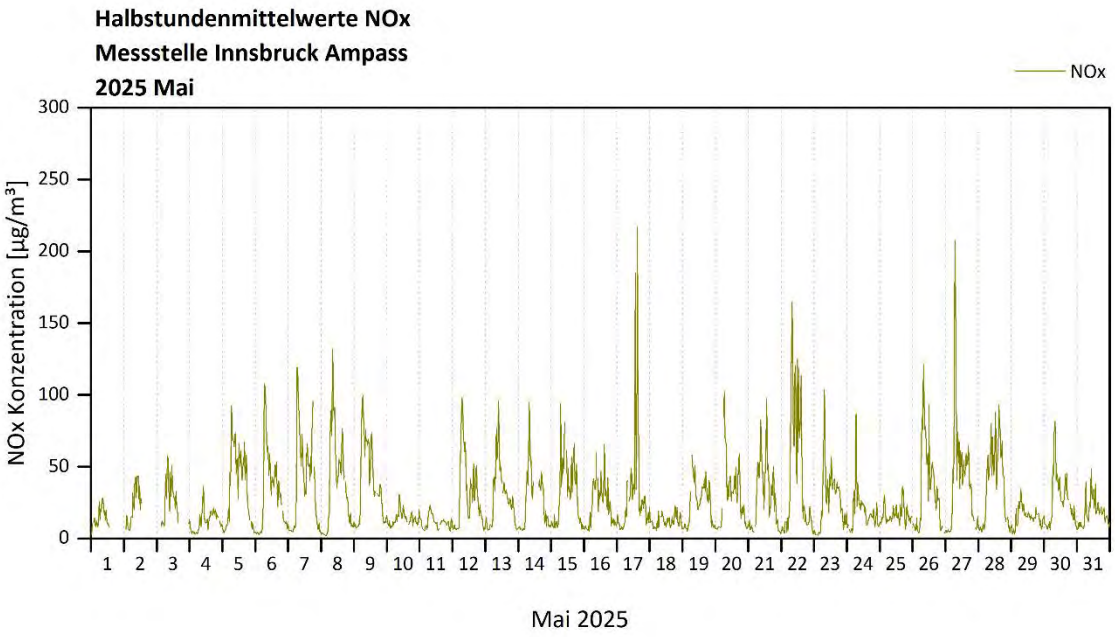
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

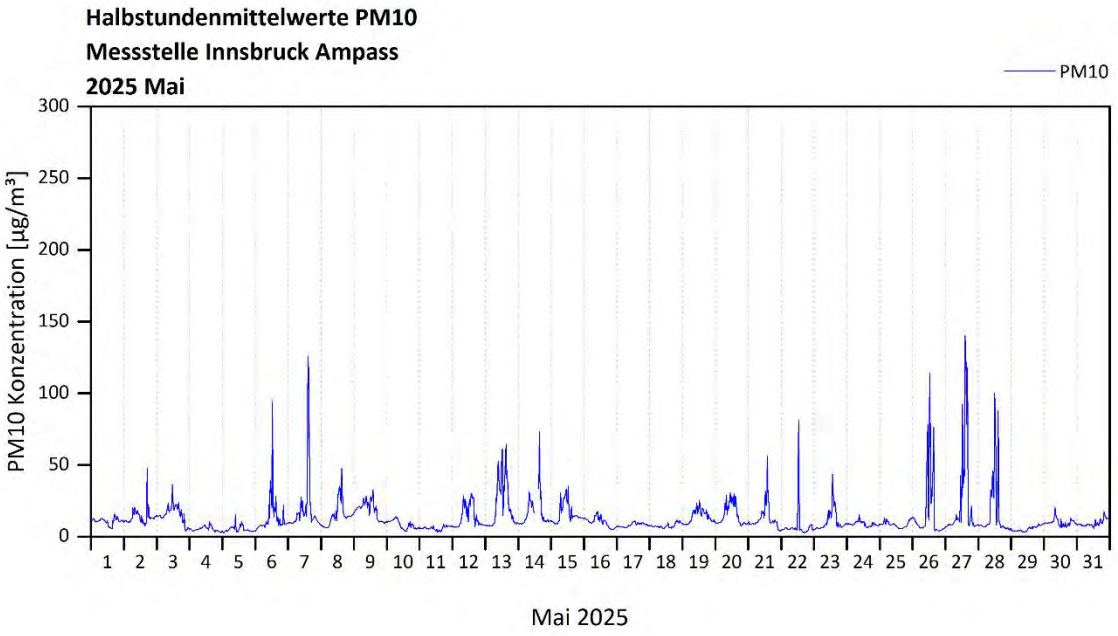
Stickstoffdioxid / Biossido di azoto



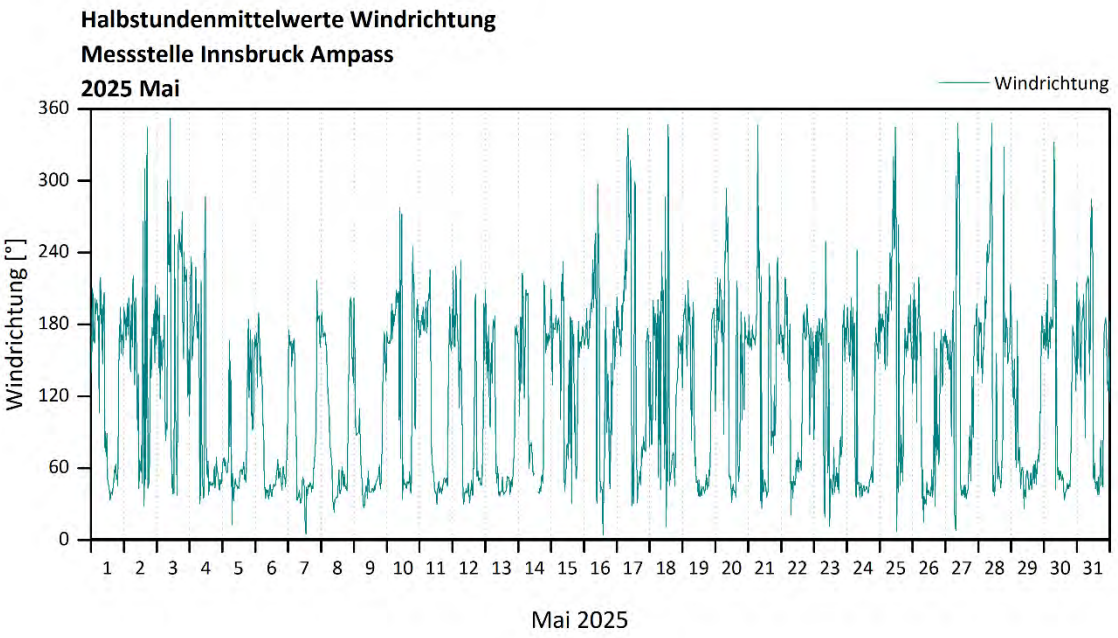
Stickstoffoxide / Ossidi di azoto



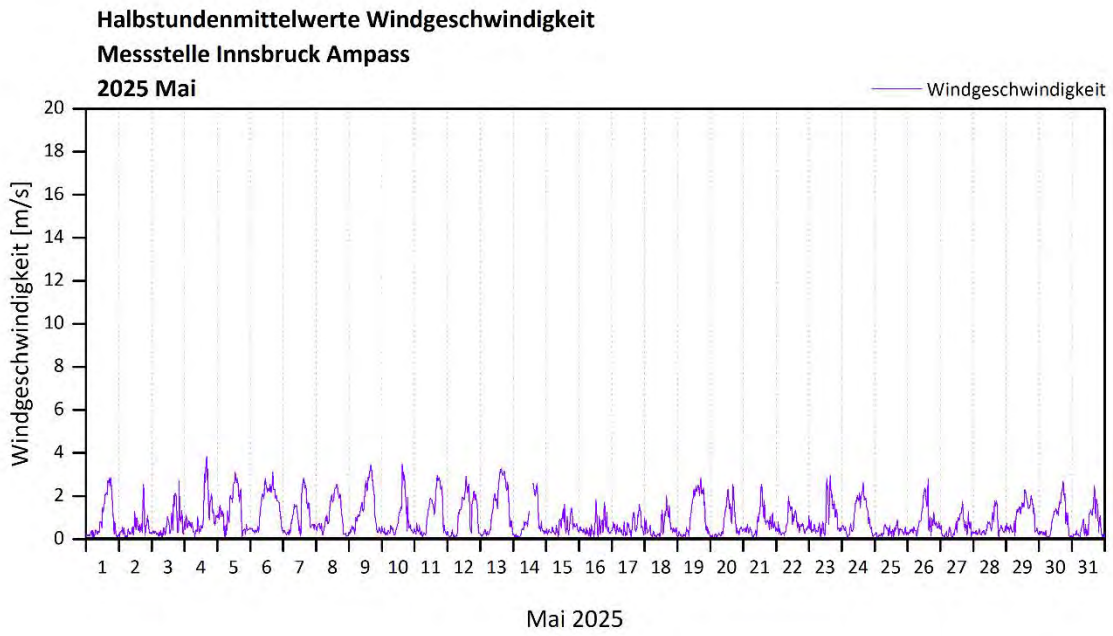
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

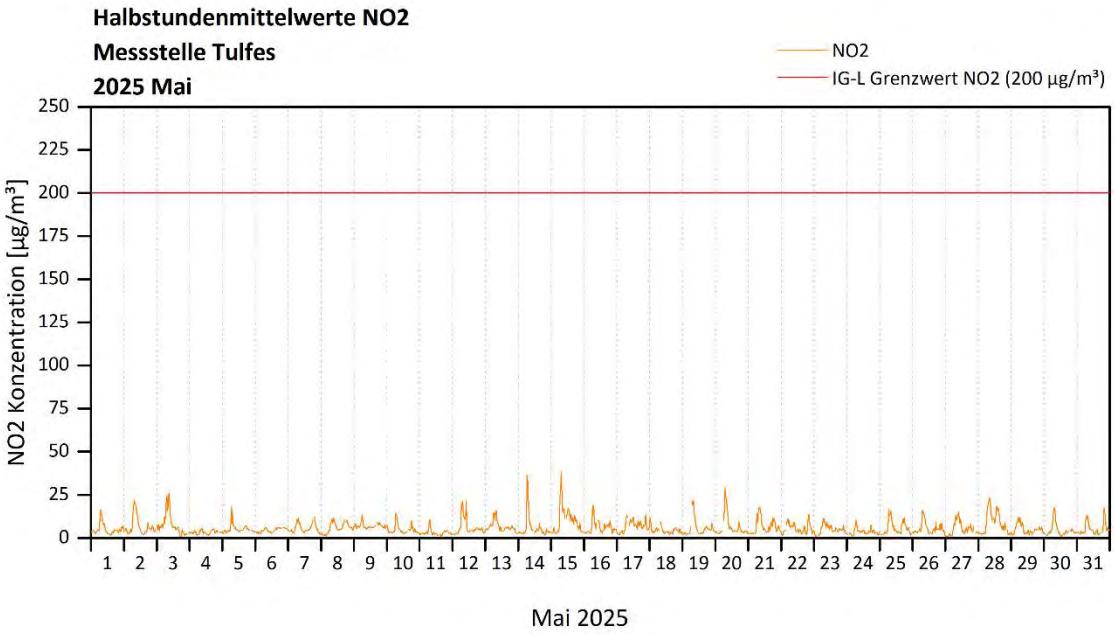


Windgeschwindigkeit / Velocità del vent

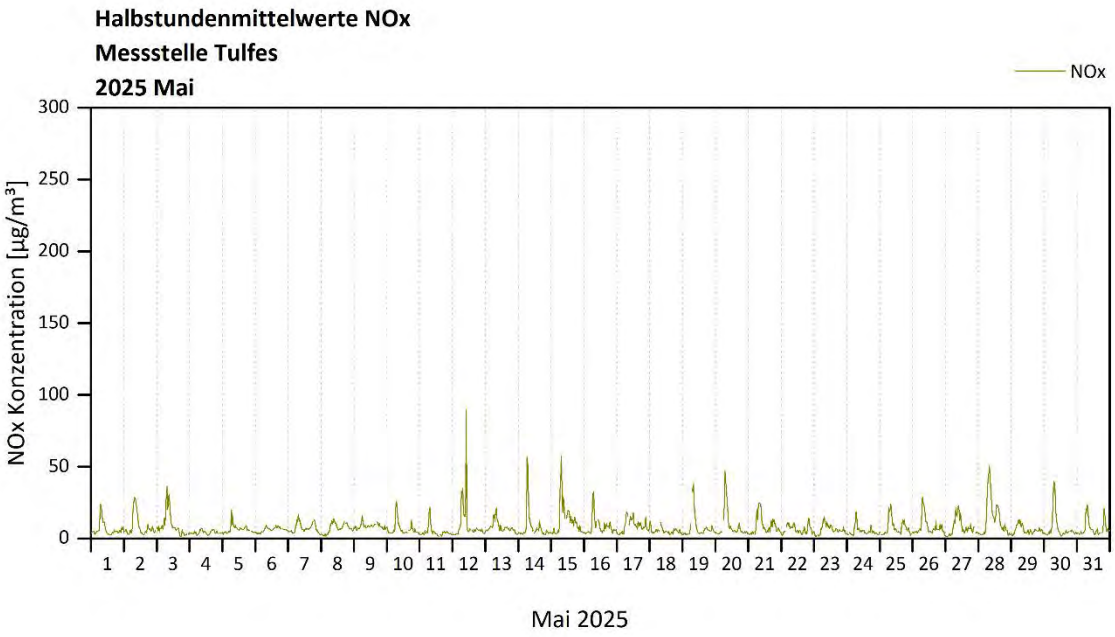


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

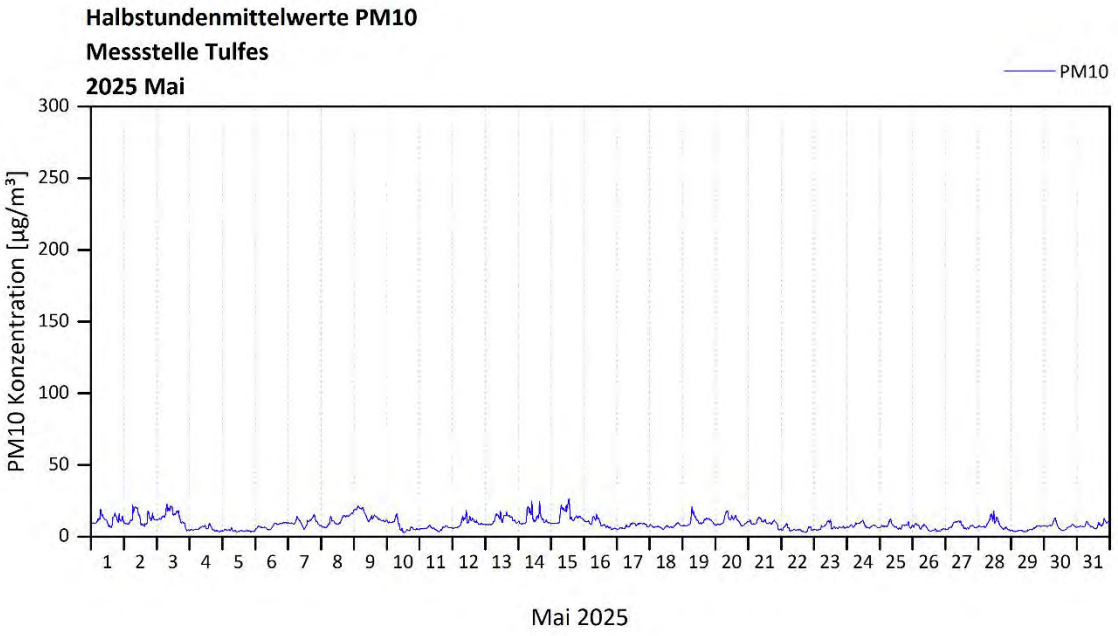
Stickstoffdioxid / Biossido di azoto



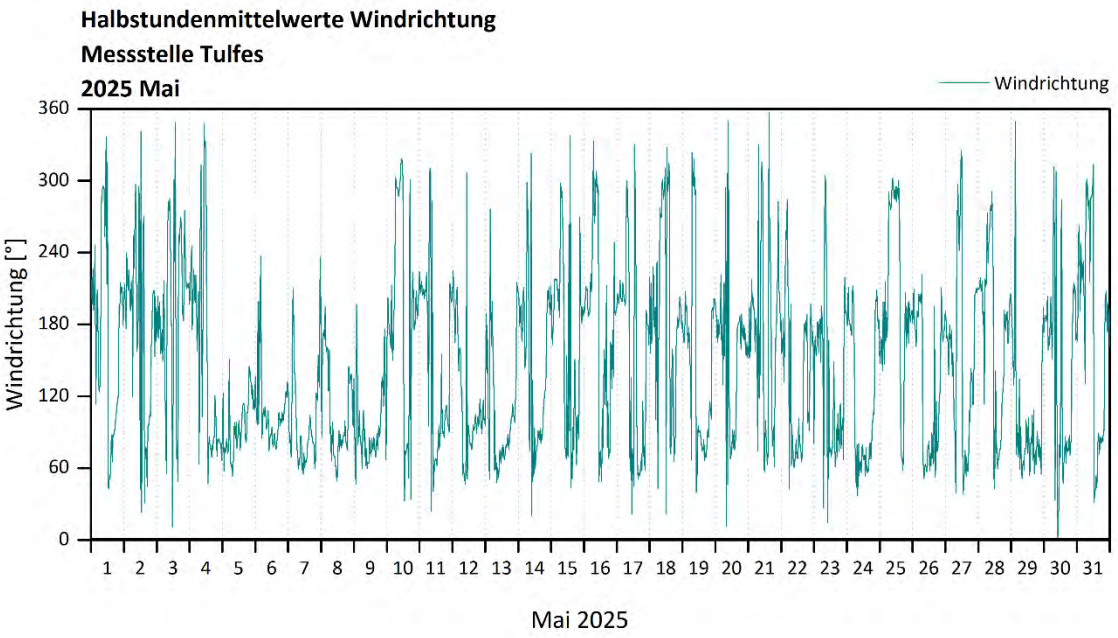
Stickstoffoxide / Ossidi di azoto



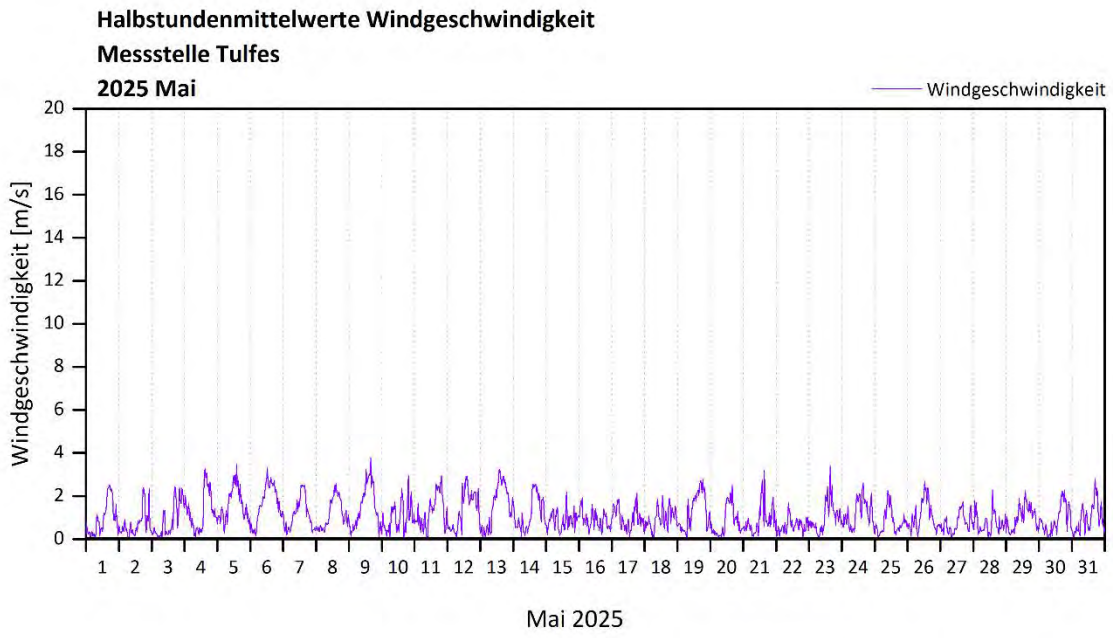
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

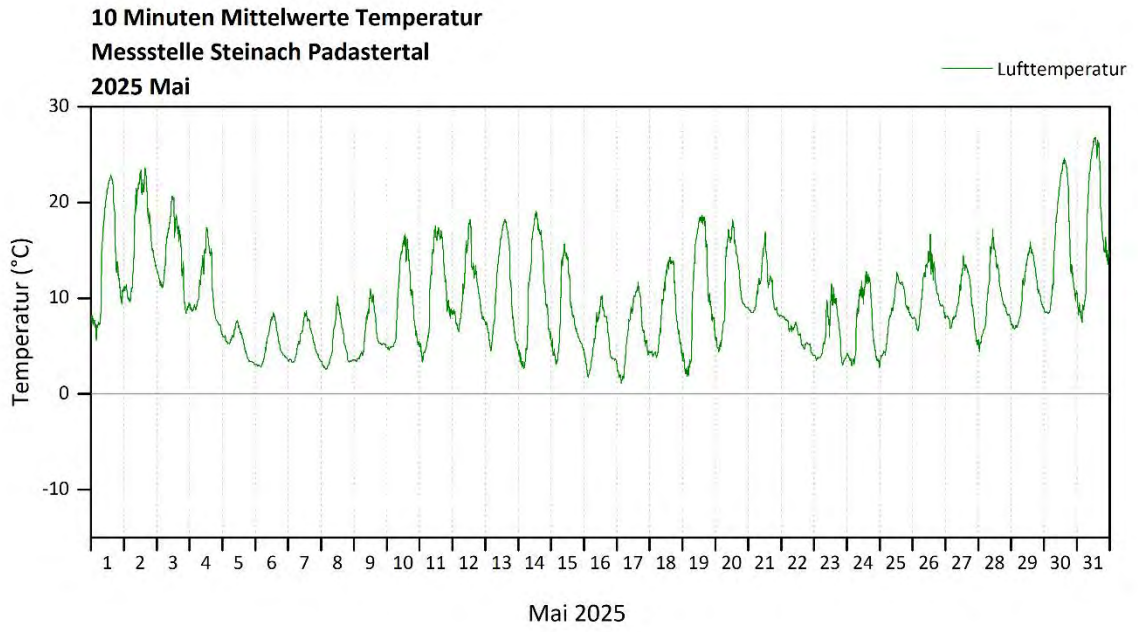


Windgeschwindigkeit / Velocità del vent

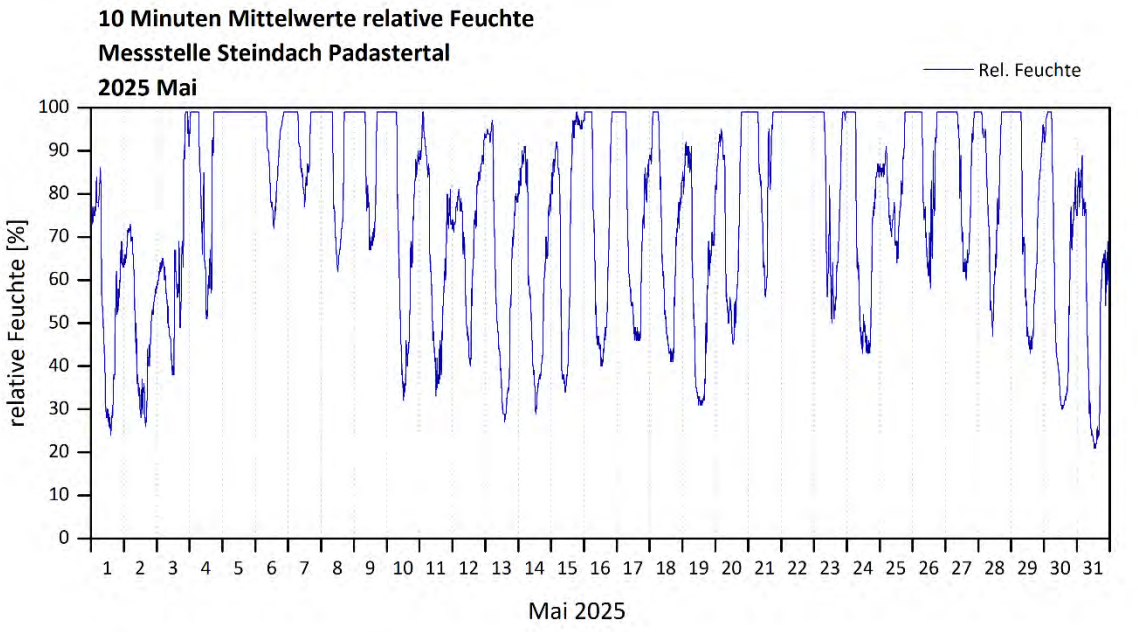


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

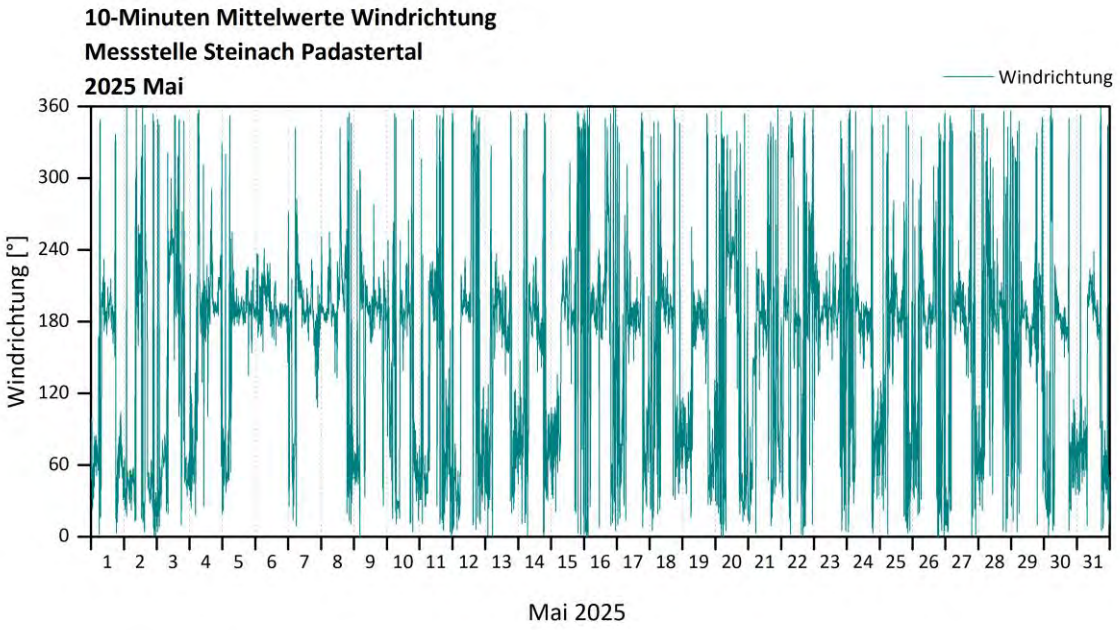
Temperatur / Temeraturà dell'aria



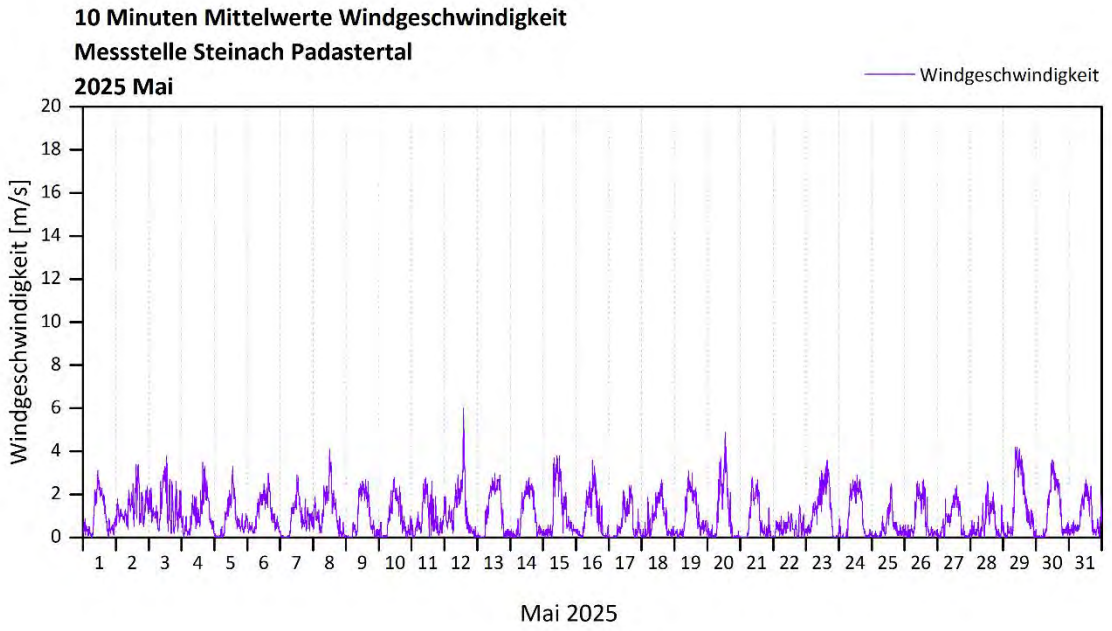
Relative Feuchtigkeit / Umidità relativa



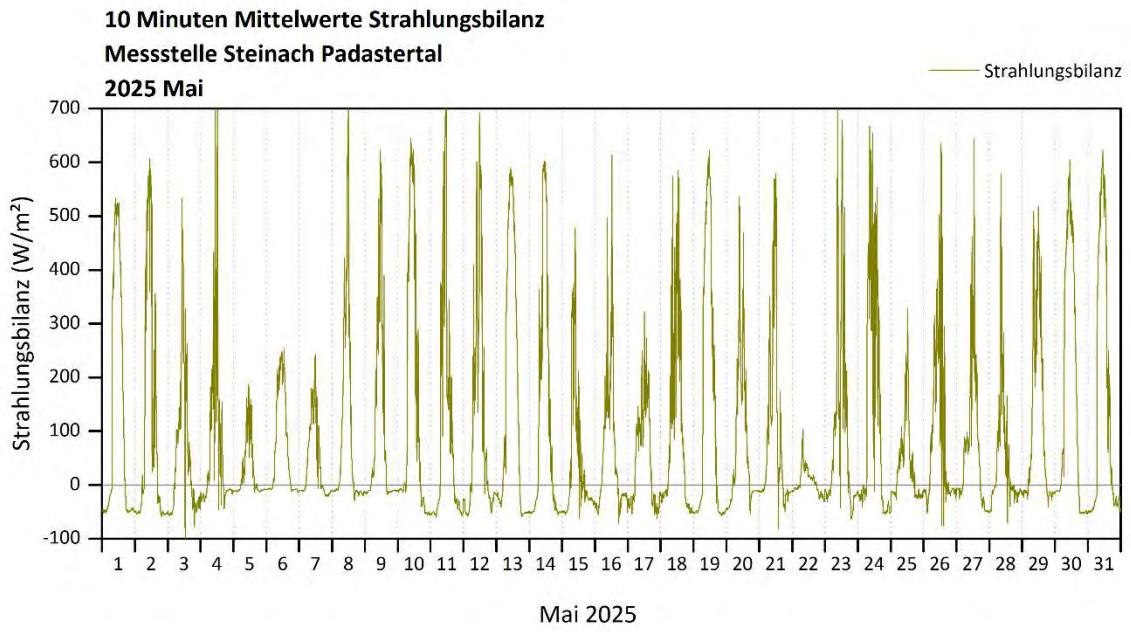
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht Juni 2025 Relazione mensile giugno 2025

Stickstoffdioxid Biossido di azoto

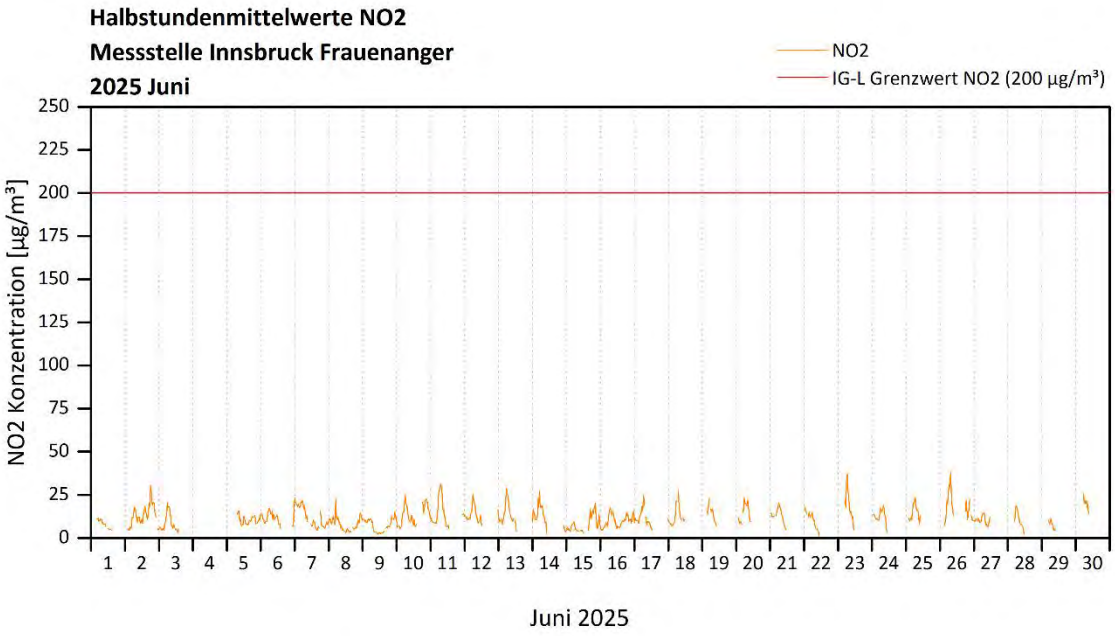
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 und 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	38	11.6	12.9	0		0	
Innsbruck Sillhöfe	93	13.1	22.1	0		0	
Steinach Siegreith	44	6.6	10.5	0		0	
Steinach Saxen	44	9.2	15.6	0		0	
Ampass	54	15.1	21.6	0		0	
Tulfes	32	5.7	9.3	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

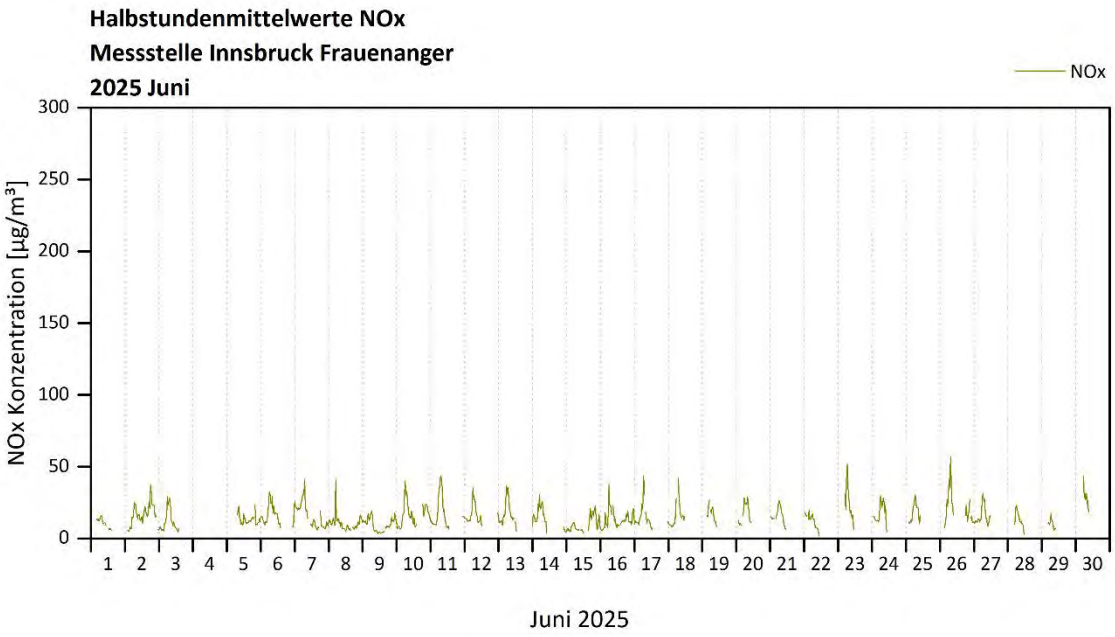
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 und 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	48	12.6	26.7	0		0	
Innsbruck Sillhöfe	213	16.5	30.4	0		0	
Steinach Siegreith	242	17.8	33.5	0		0	
Steinach Saxen	352	17.9	33.9	0		1	
Ampass	246	18.5	50.0	0		0	
Tulfes	51	13.1	28.9	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

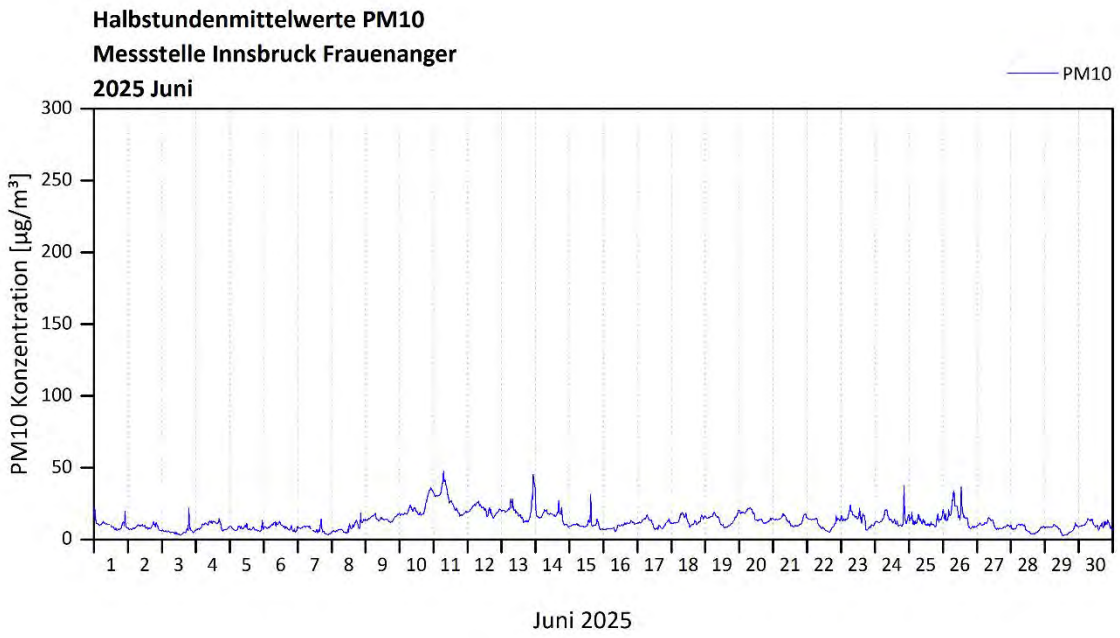
Stickstoffdioxid / Biossido di azoto



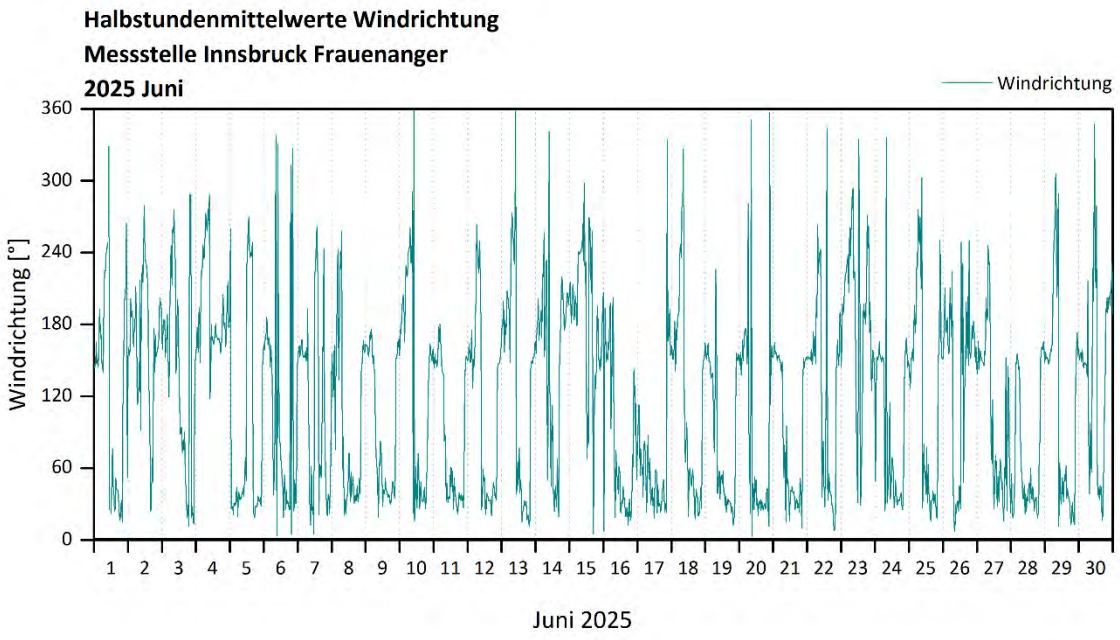
Stickstoffoxide / Ossidi di azoto



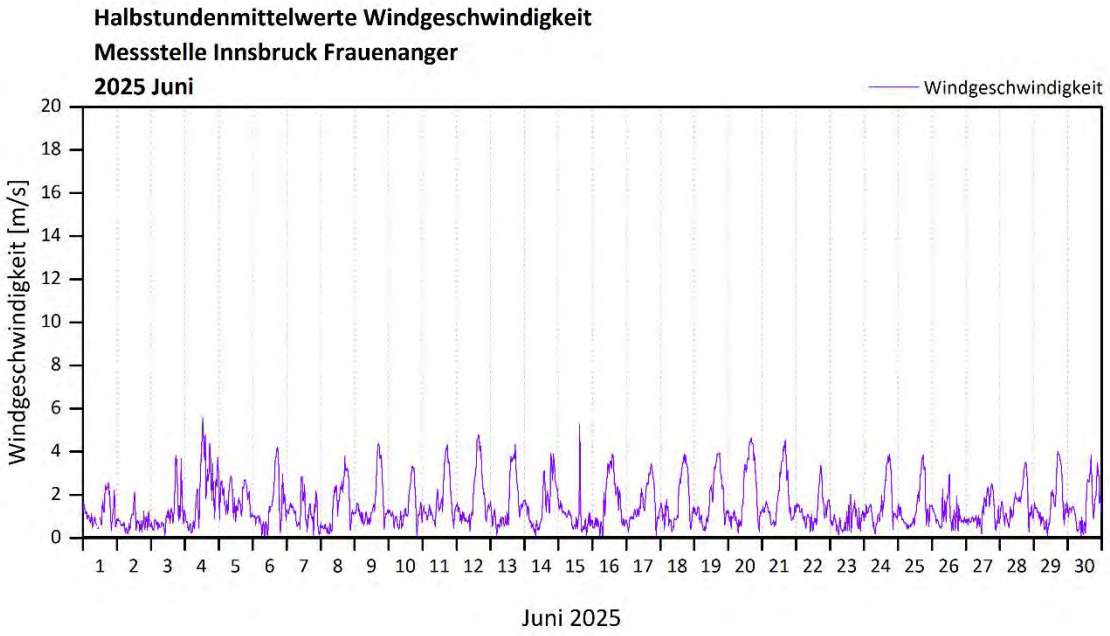
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

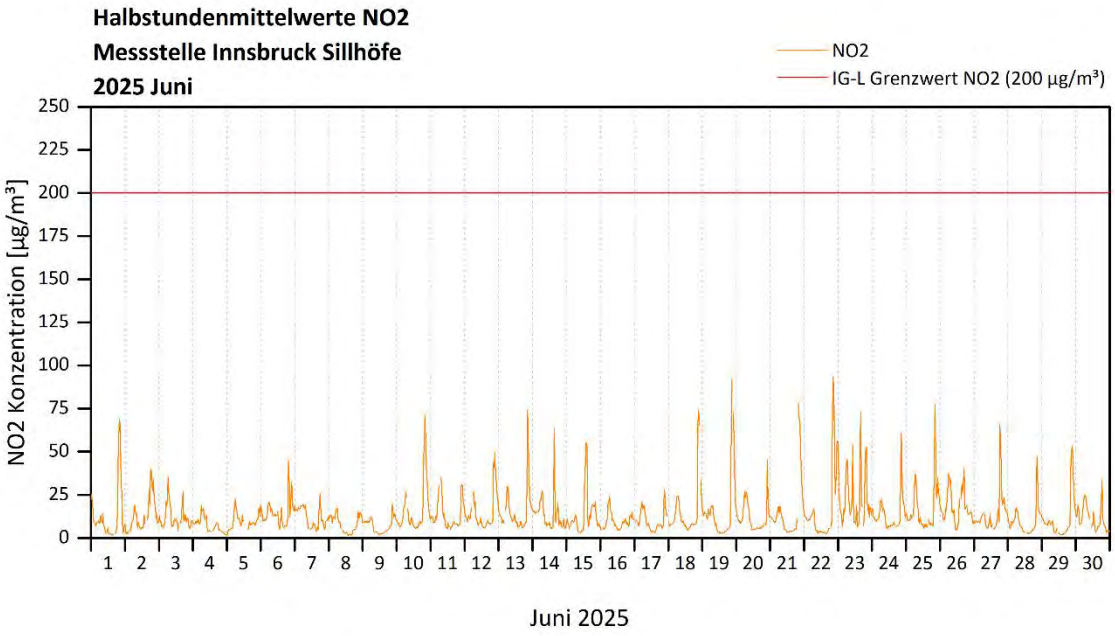


Windgeschwindigkeit / Velocità del vento

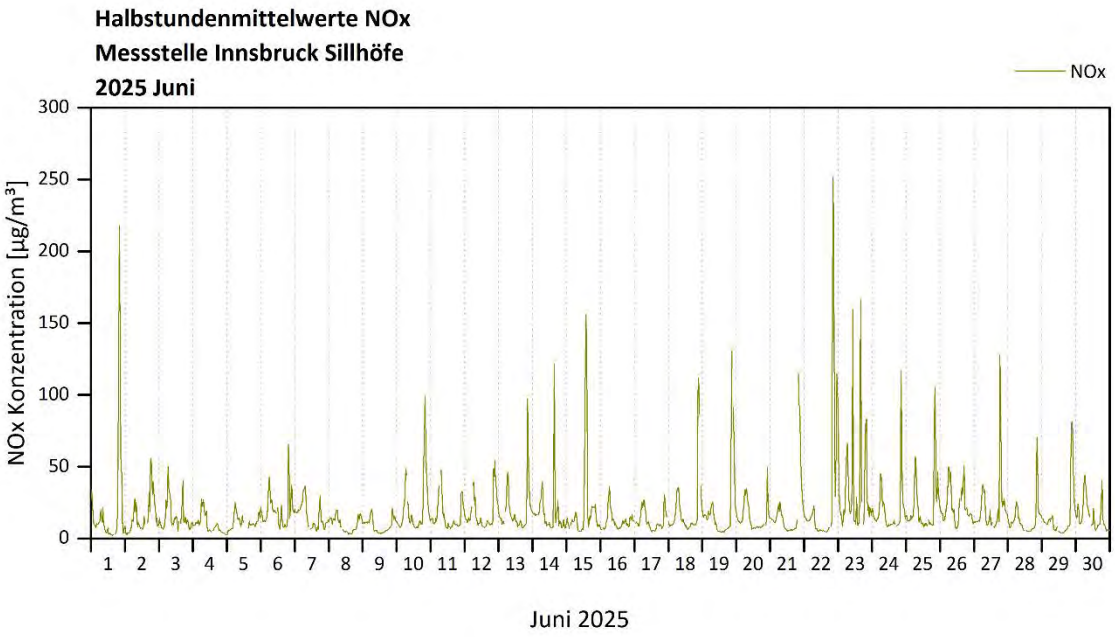


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

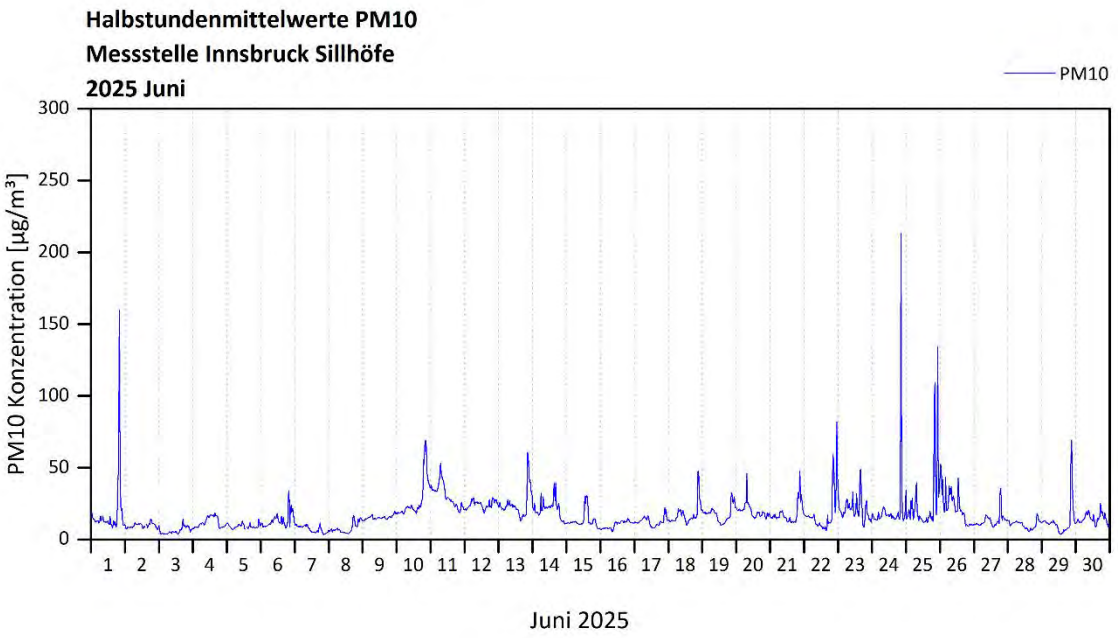
Stickstoffdioxid / Biossido di azoto



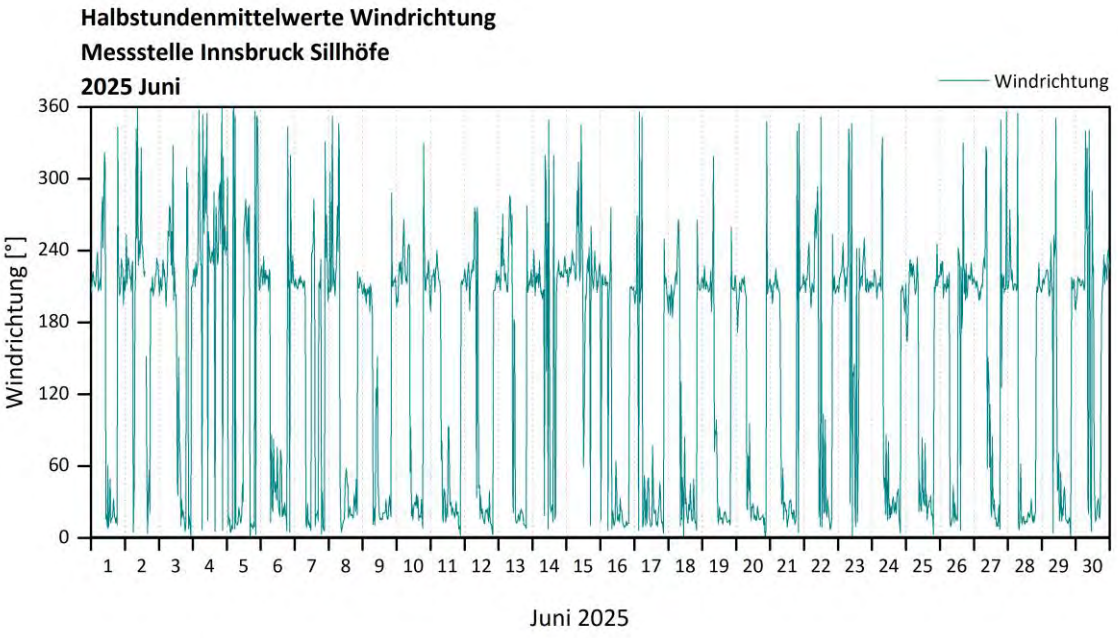
Stickstoffoxide / Ossidi di azoto



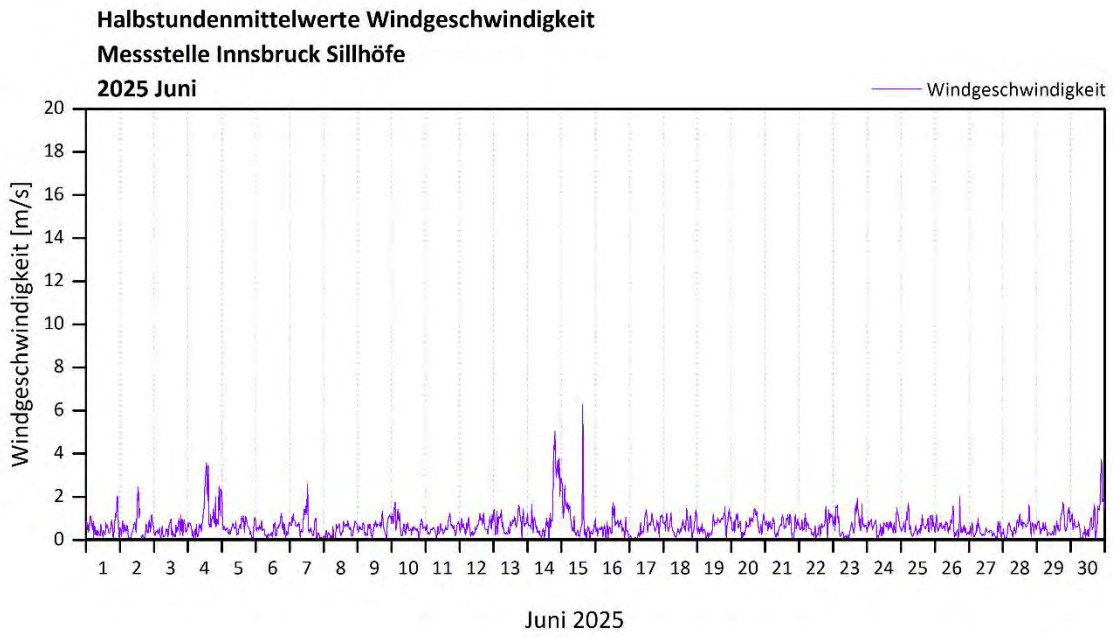
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

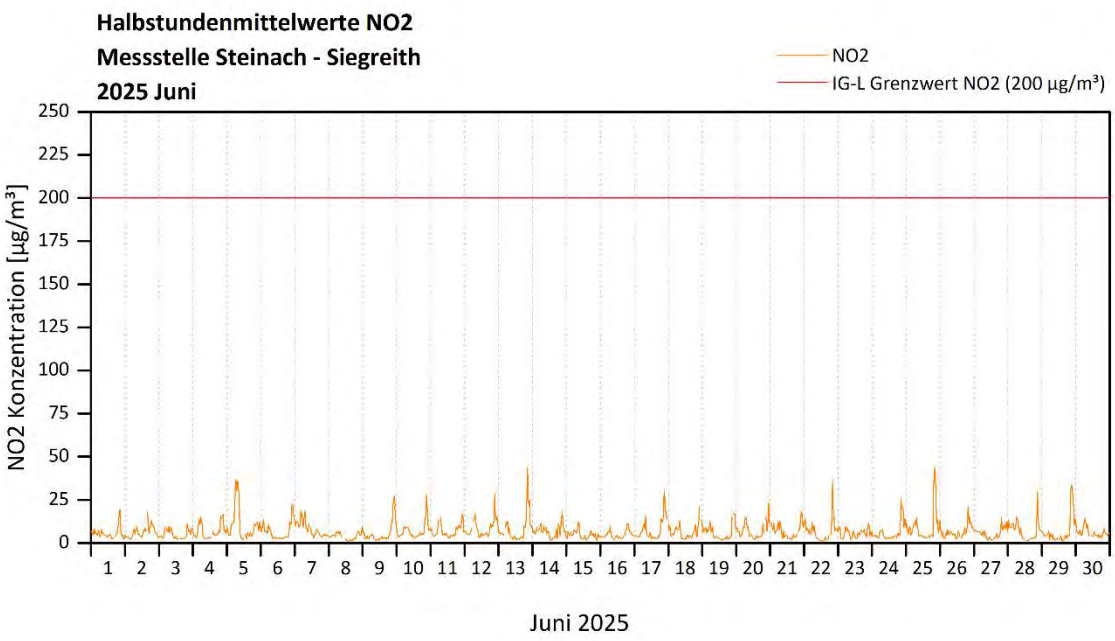


Windgeschwindigkeit / Velocità del vento

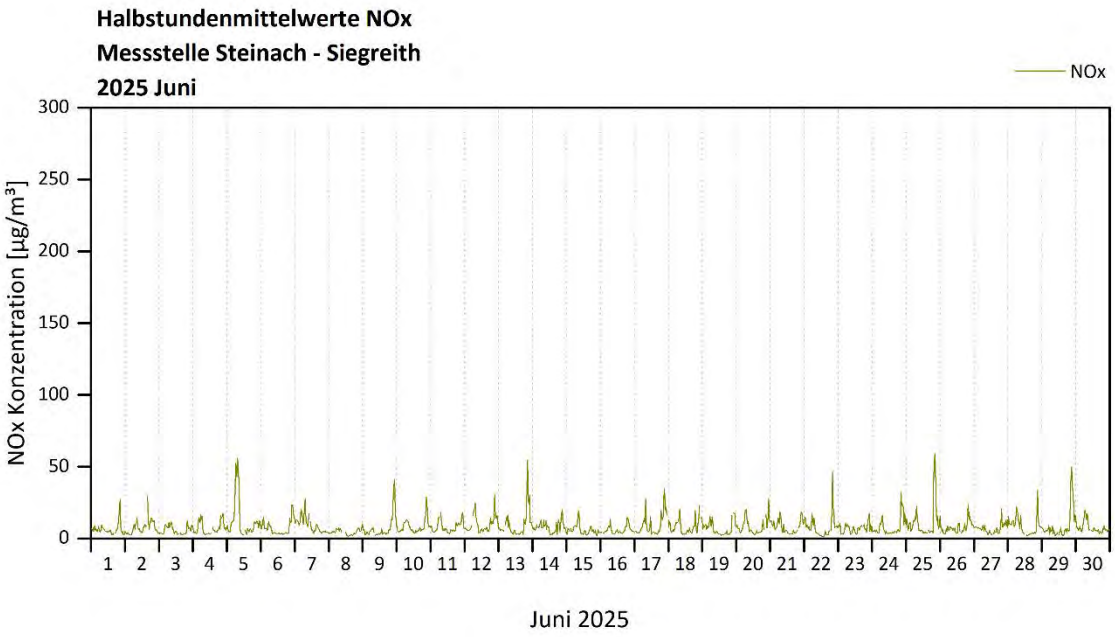


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

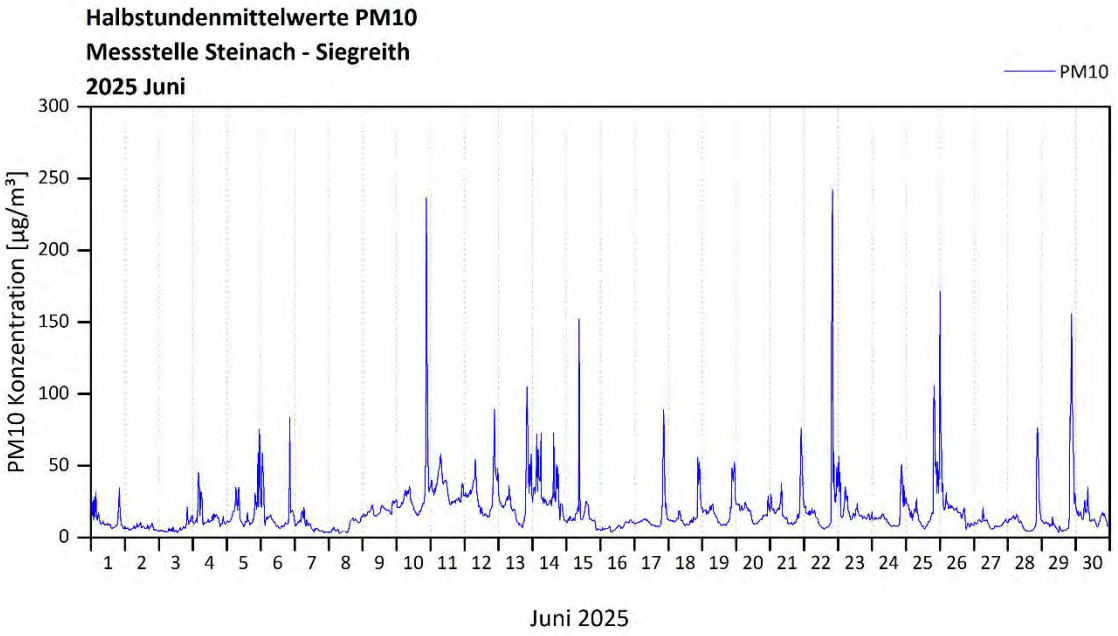
Stickstoffdioxid / Biossido di azoto



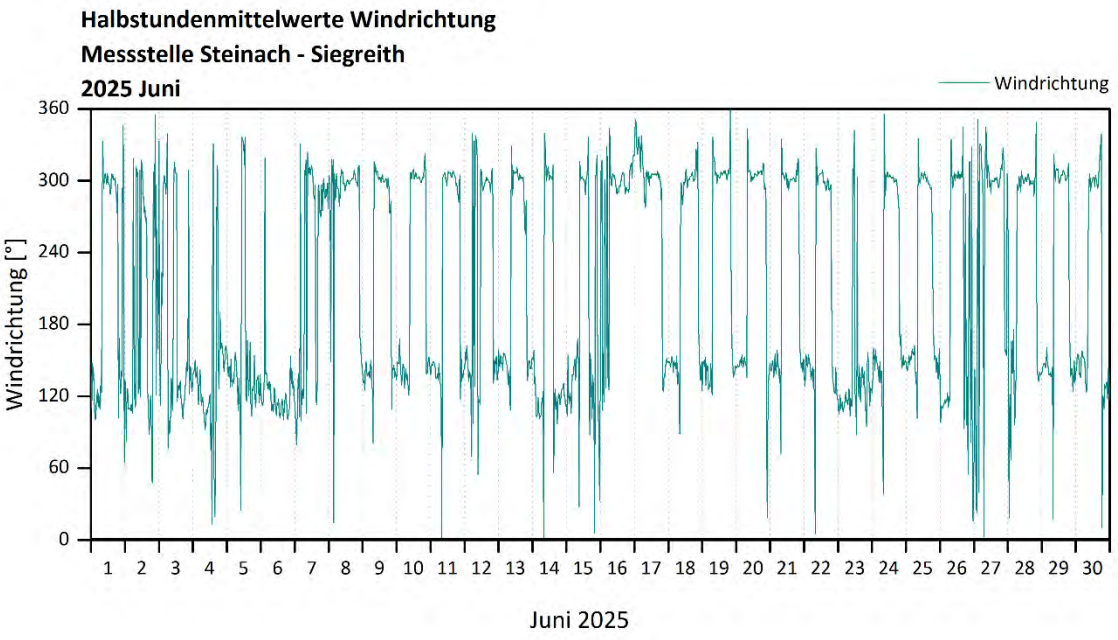
Stickstoffoxide / Ossidi di azoto



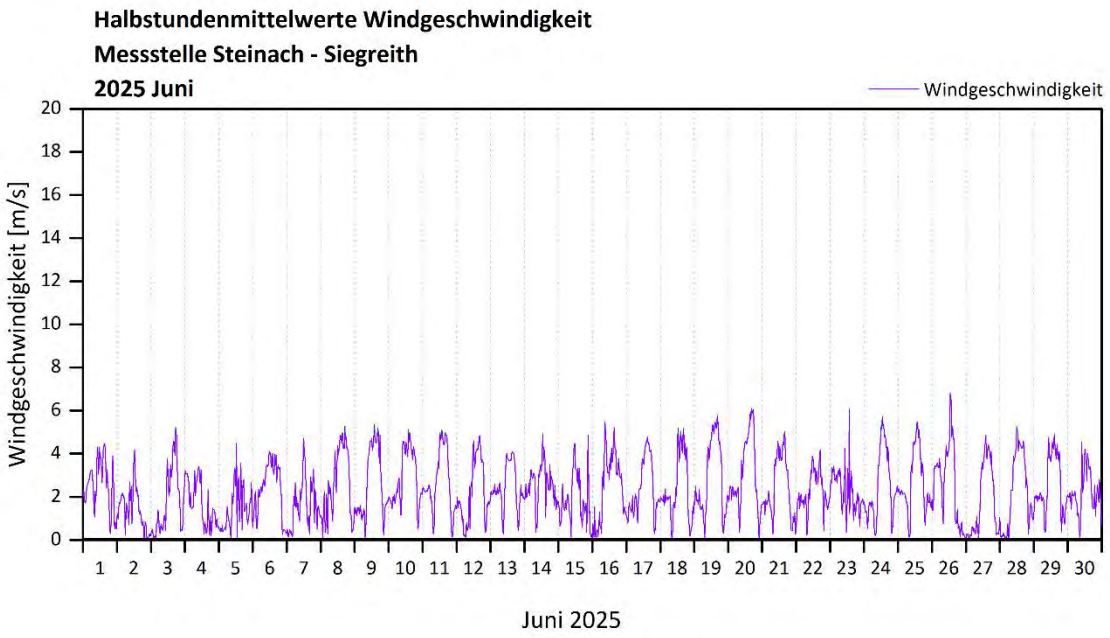
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

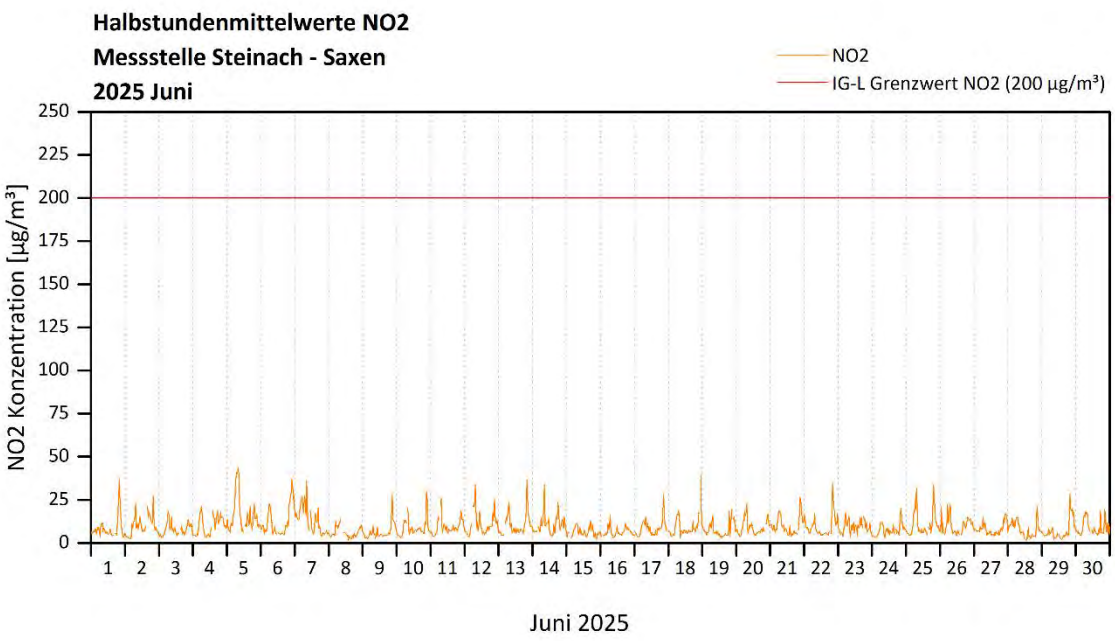


Windgeschwindigkeit / Velocità del vento

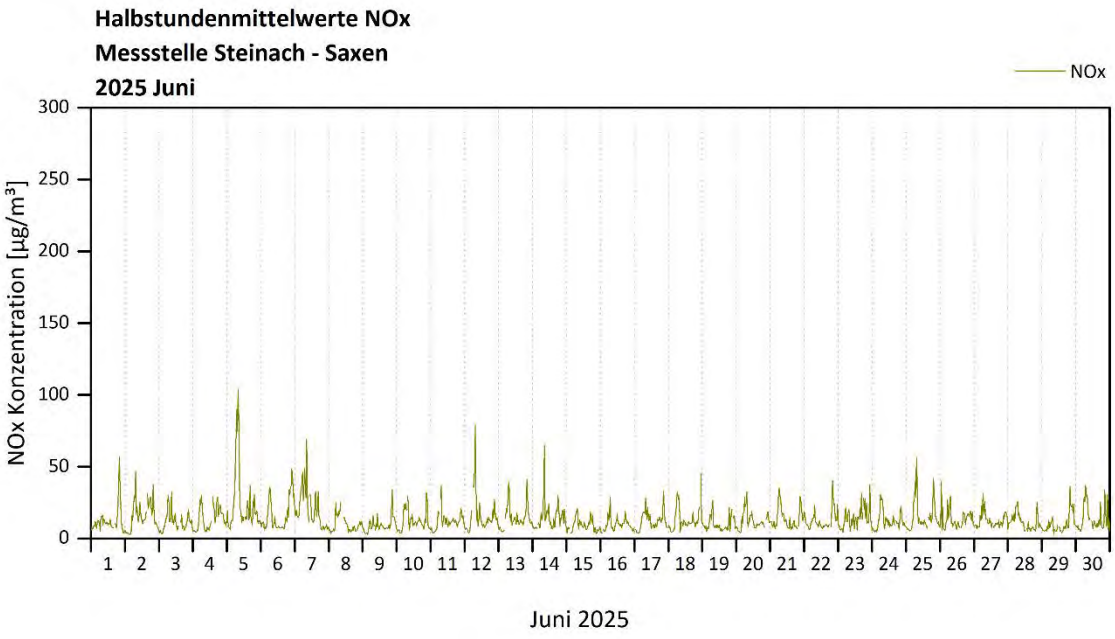


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

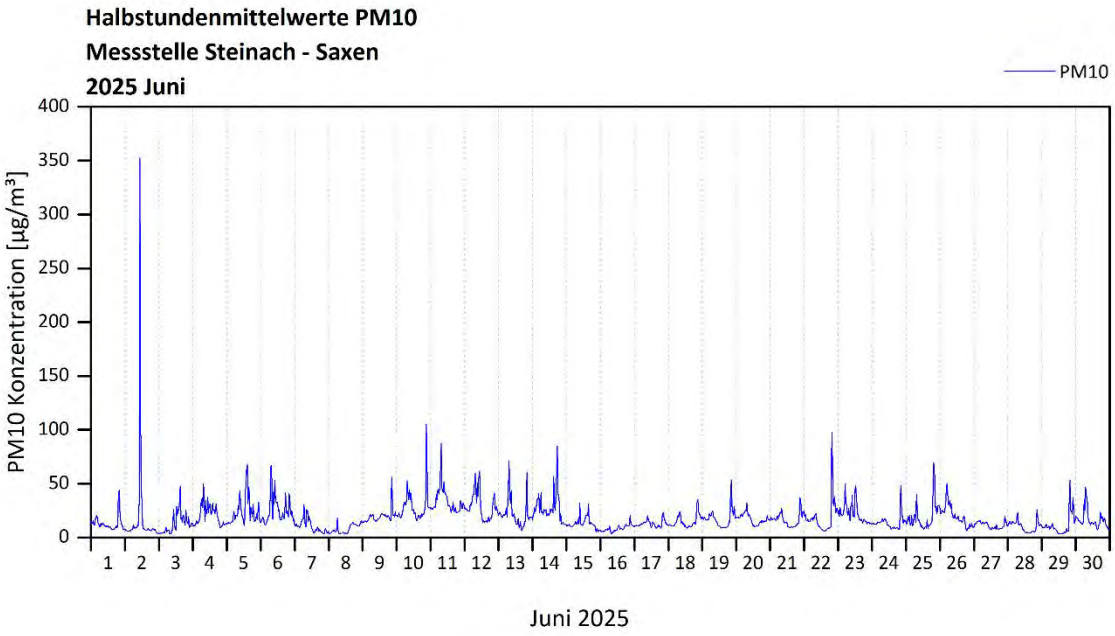
Stickstoffdioxid / Biossido di azoto



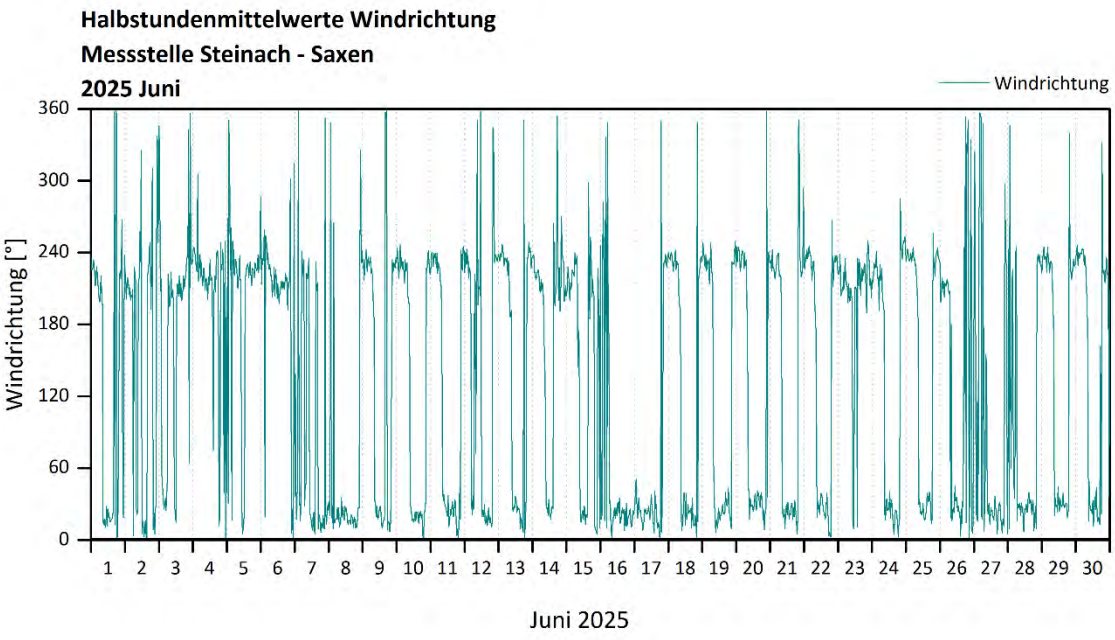
Stickstoffoxide / Ossidi di azoto



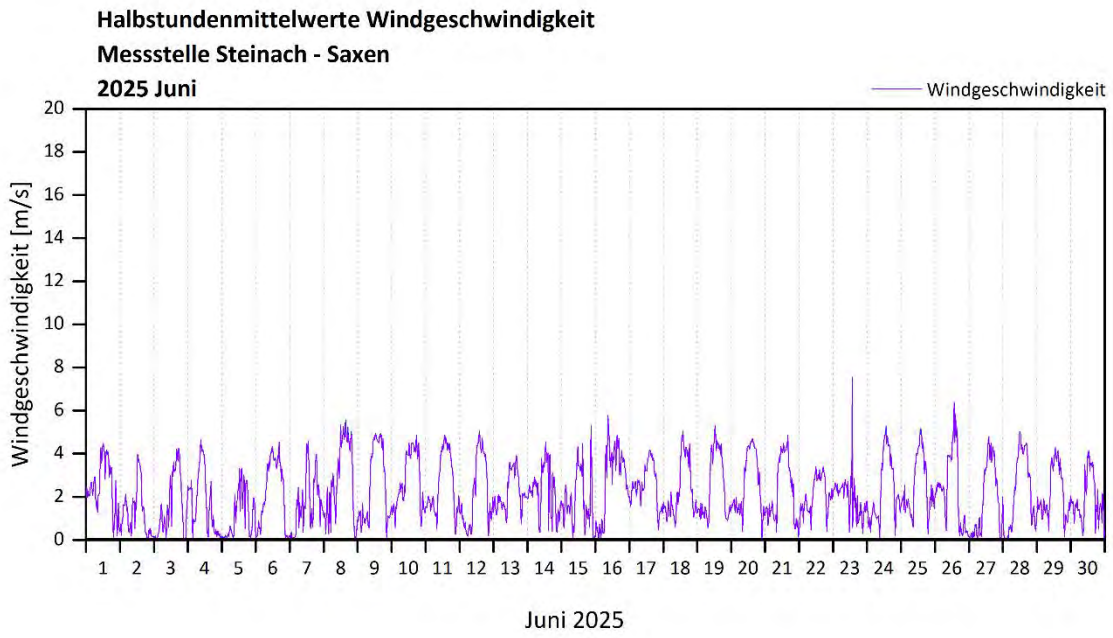
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



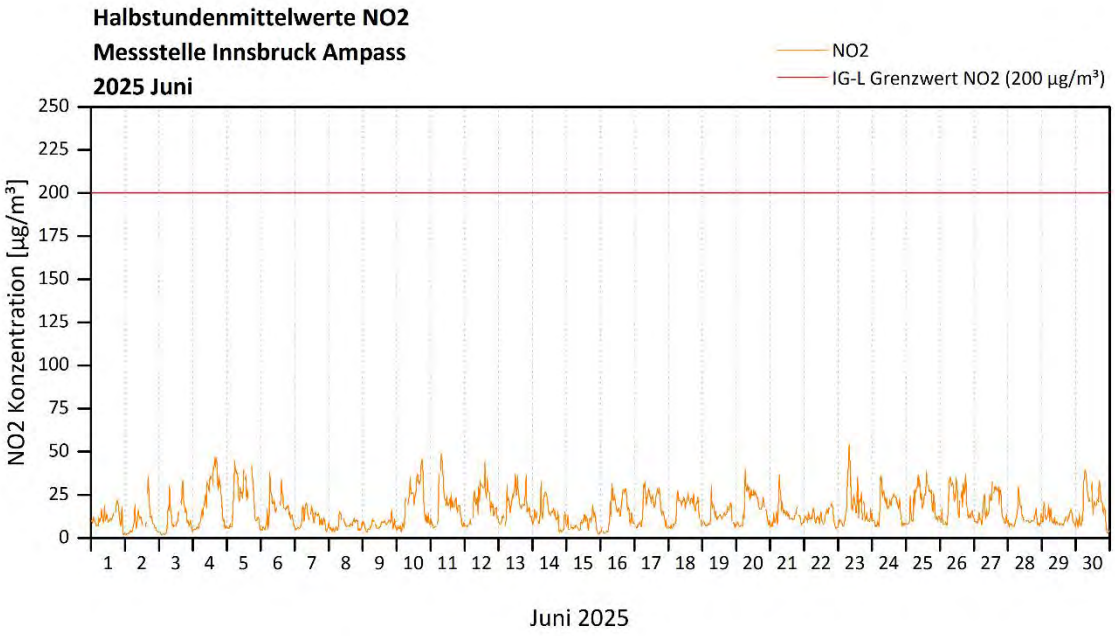
Windgeschwindigkeit / Velocità del vent



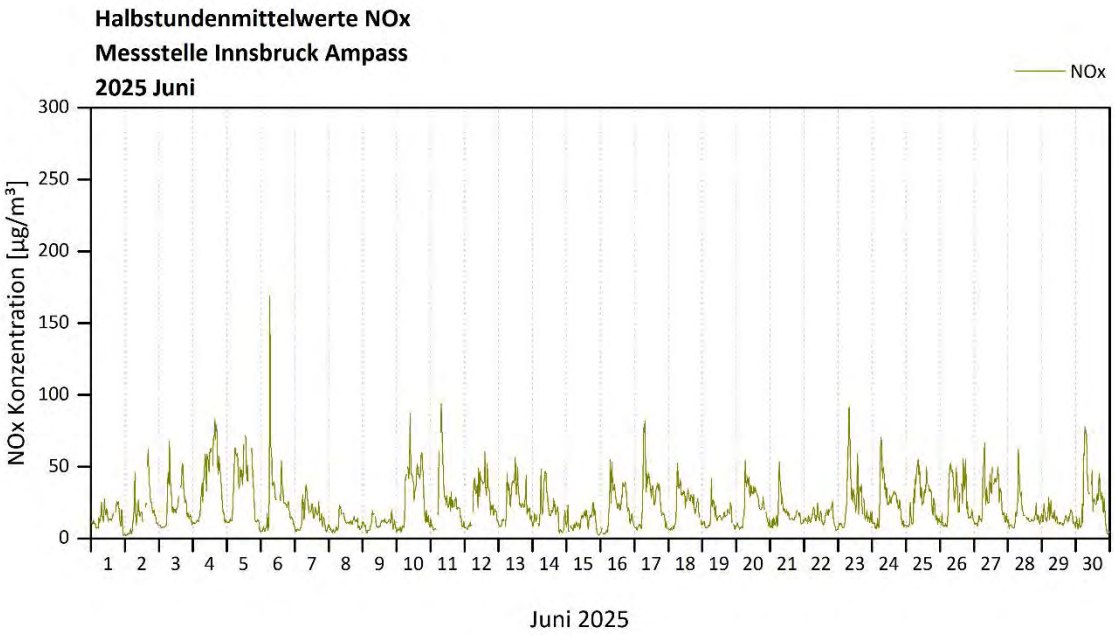
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

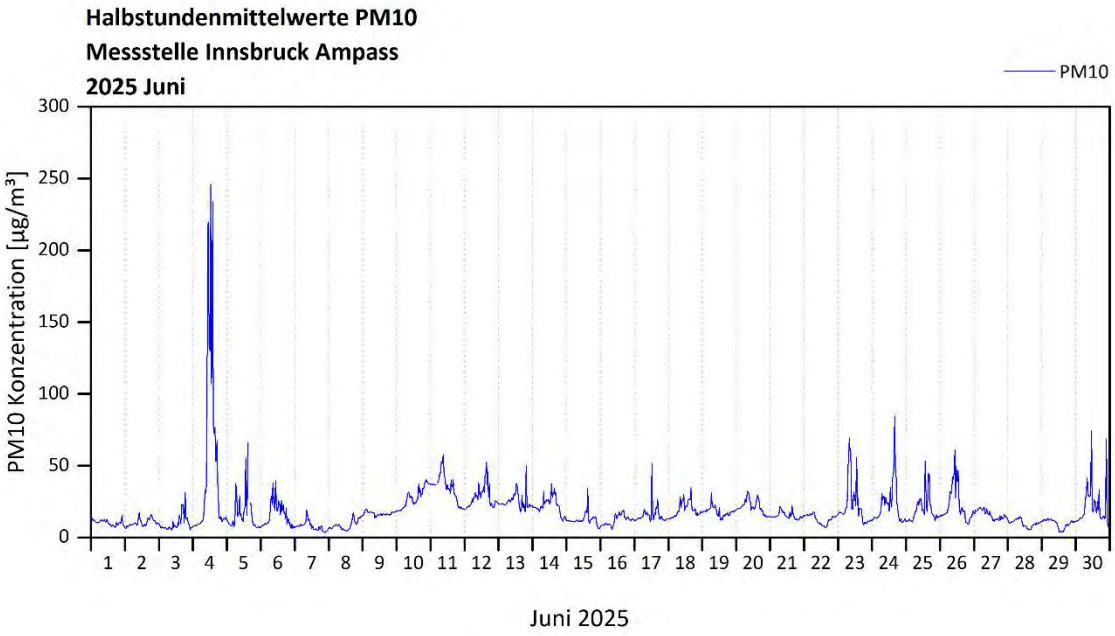
Stickstoffdioxid / Biossido di azoto



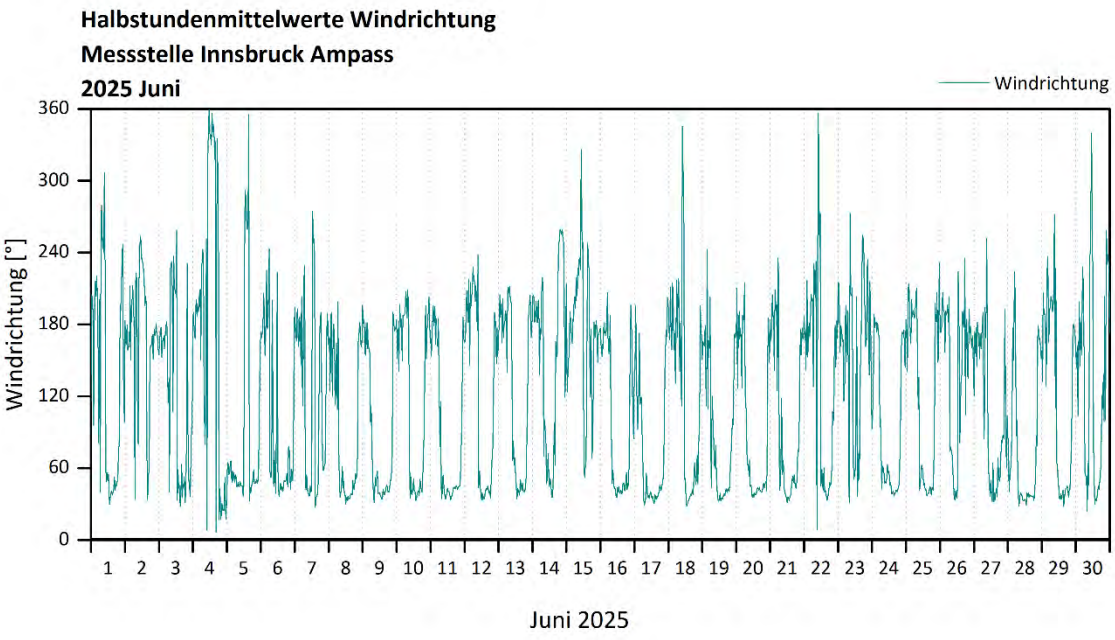
Stickstoffoxide / Ossidi di azoto



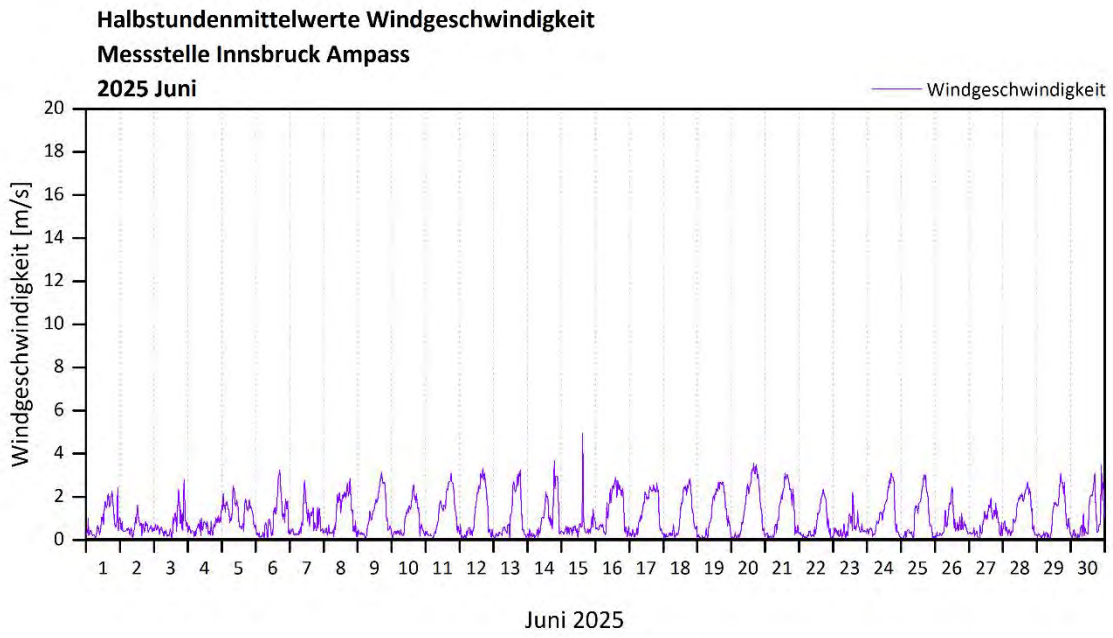
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

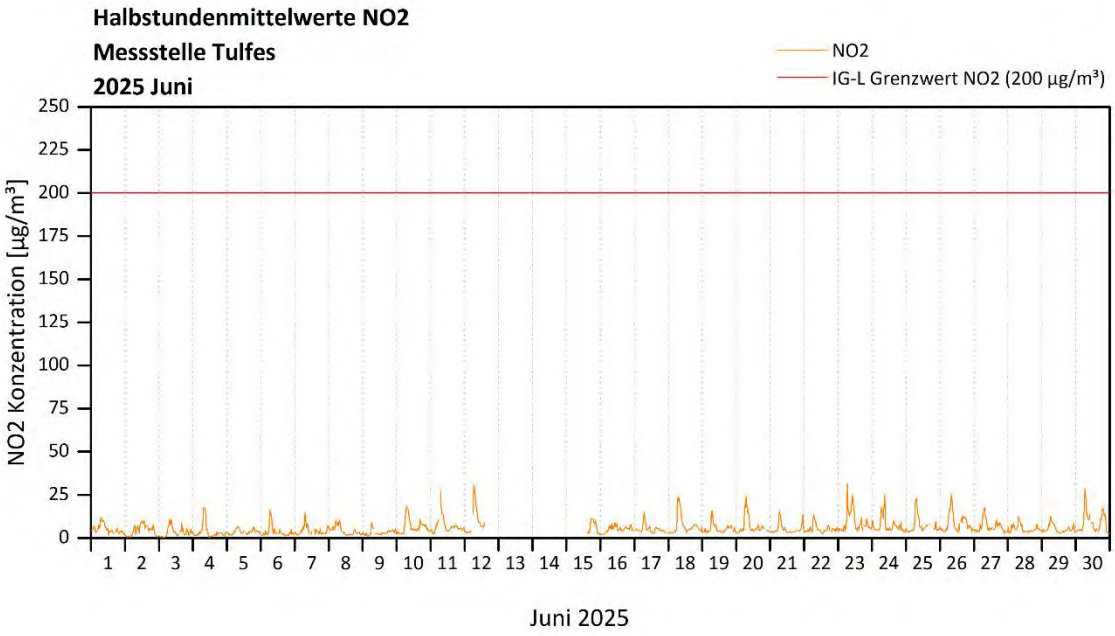


Windgeschwindigkeit / Velocità del vent

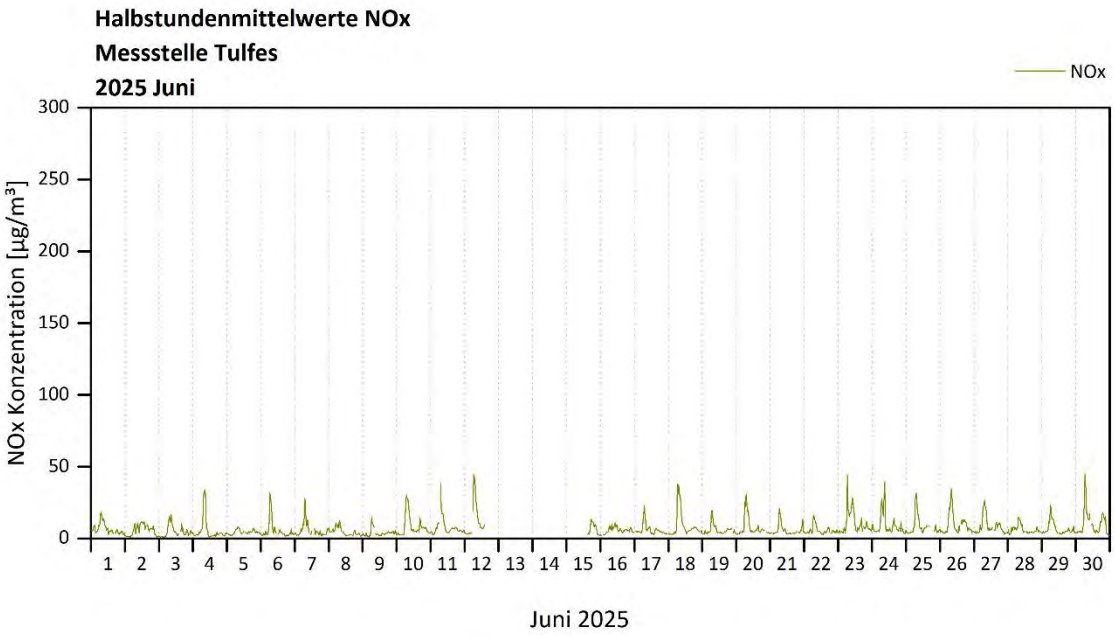


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

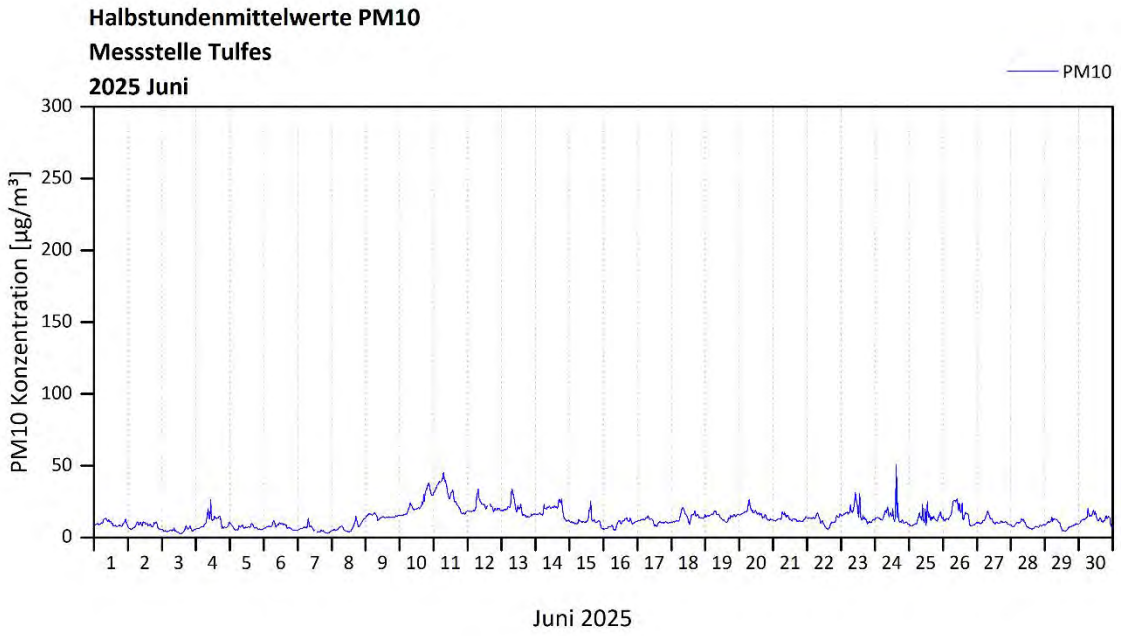
Stickstoffdioxid / Biossido di azoto



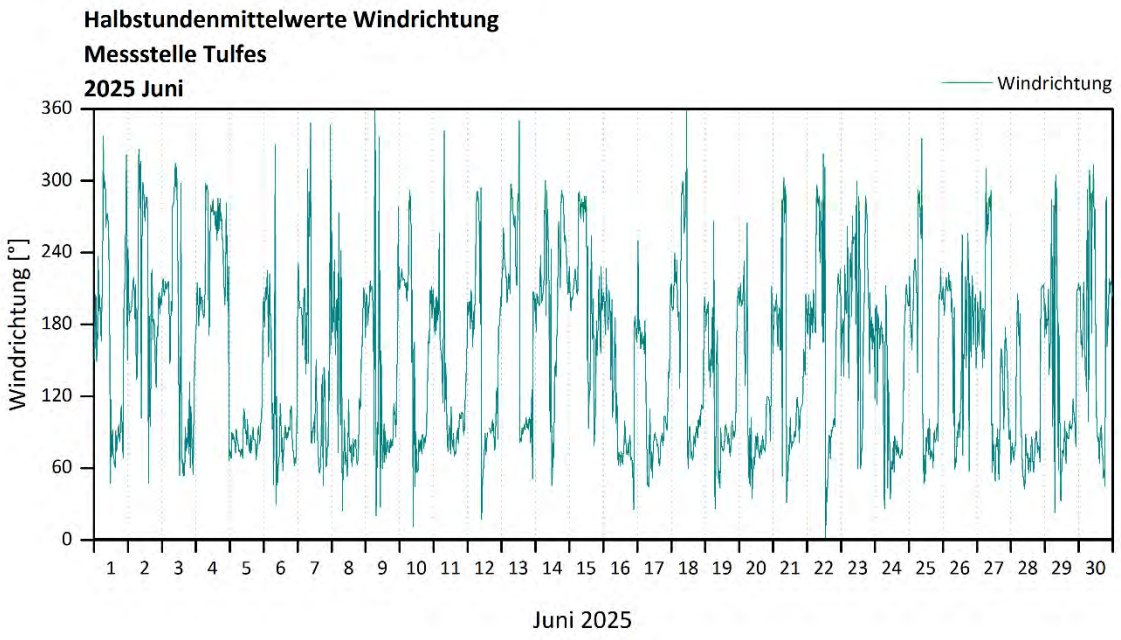
Stickstoffoxide / Ossidi di azoto



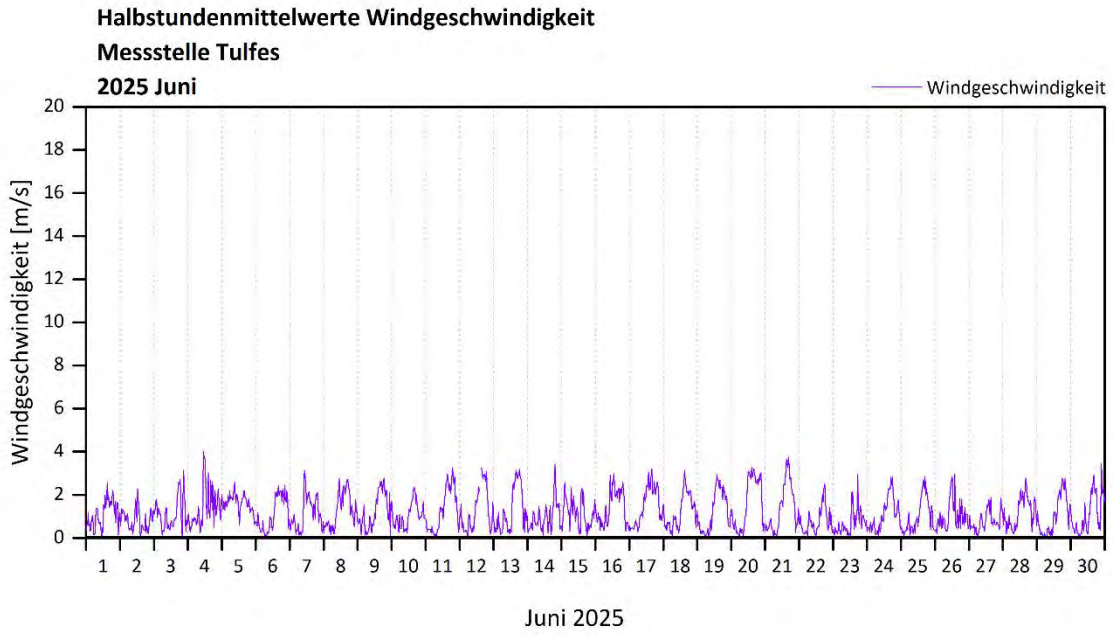
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

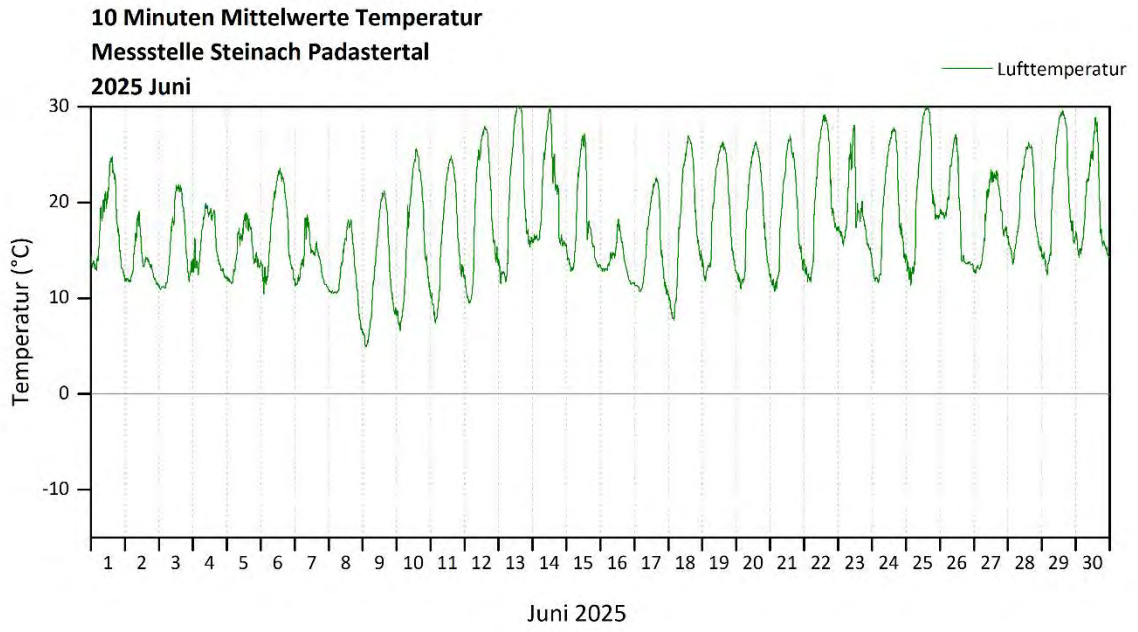


Windgeschwindigkeit / Velocità del vent

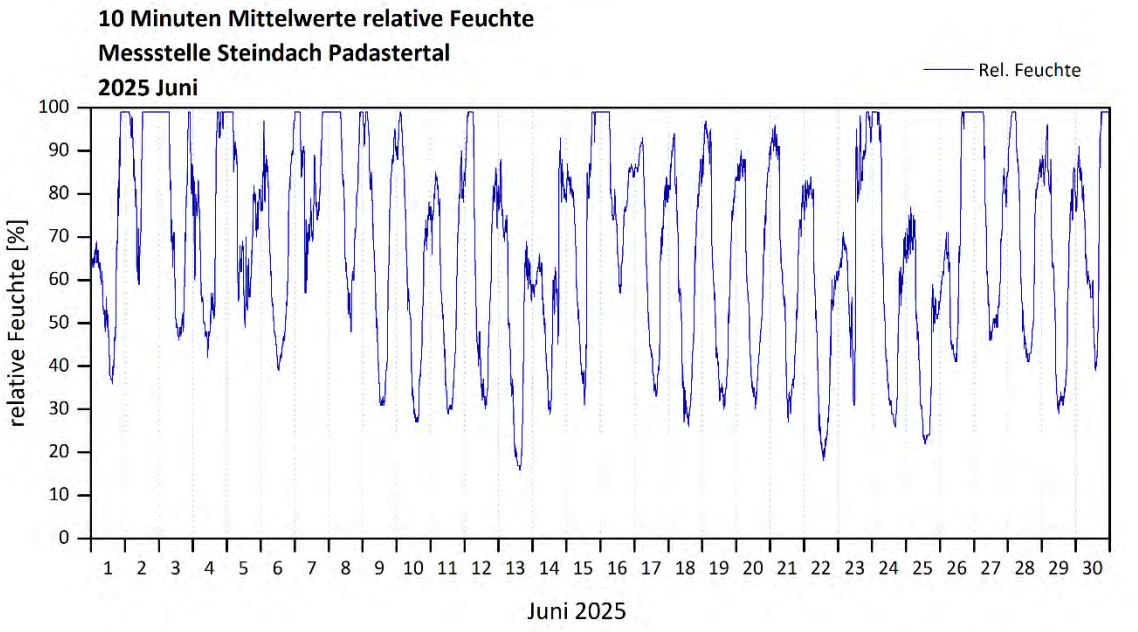


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

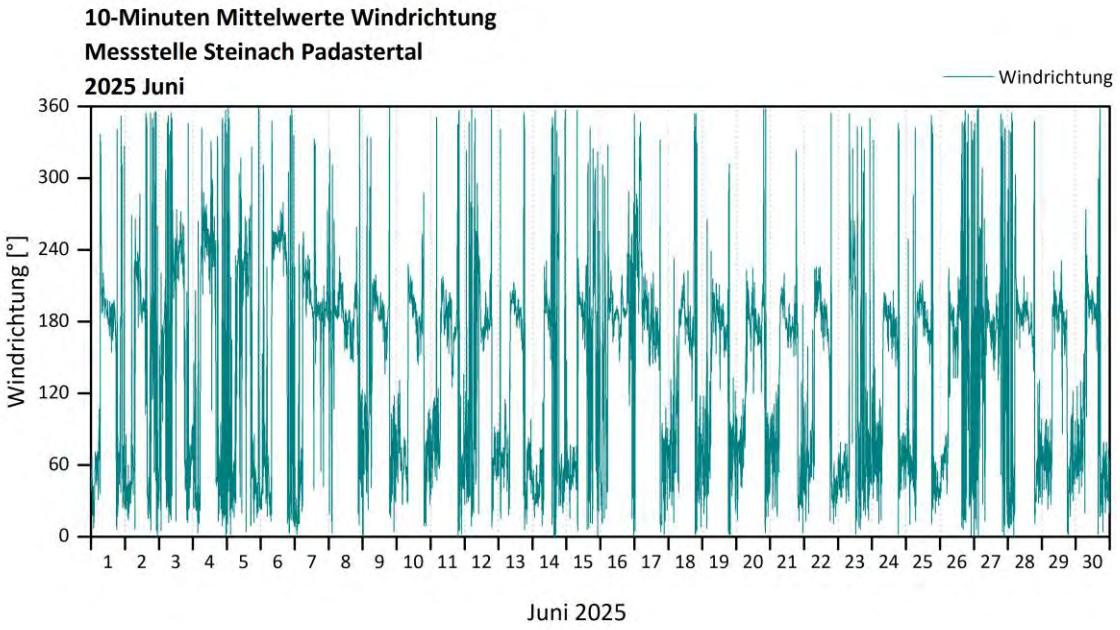
Temperatur / Temeraturà dell'aria



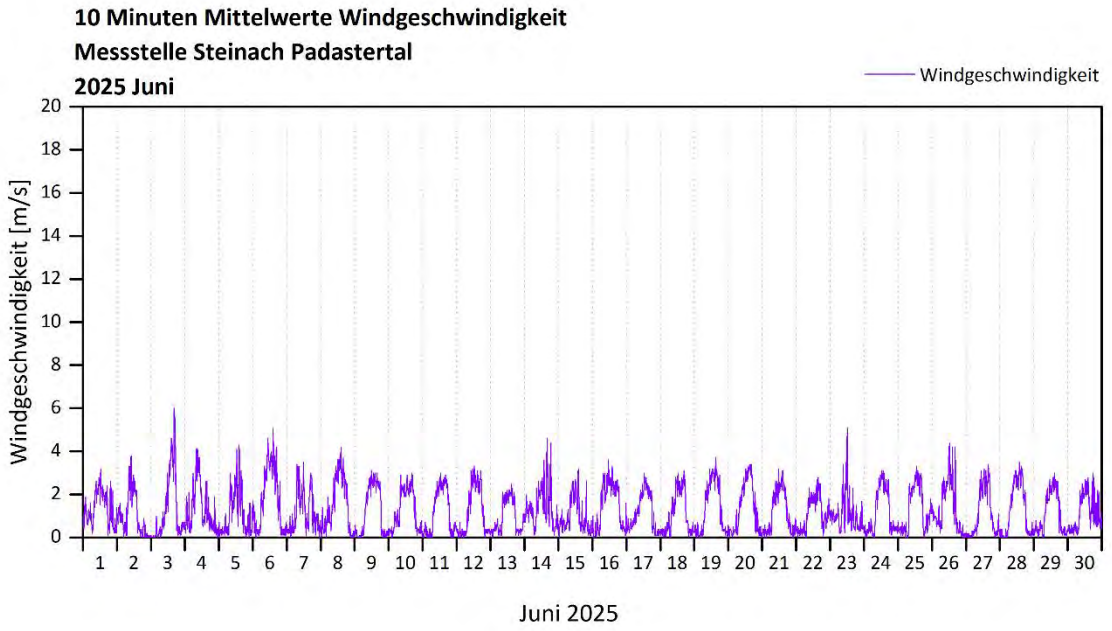
Relative Feuchtigkeit / Umidità relativa



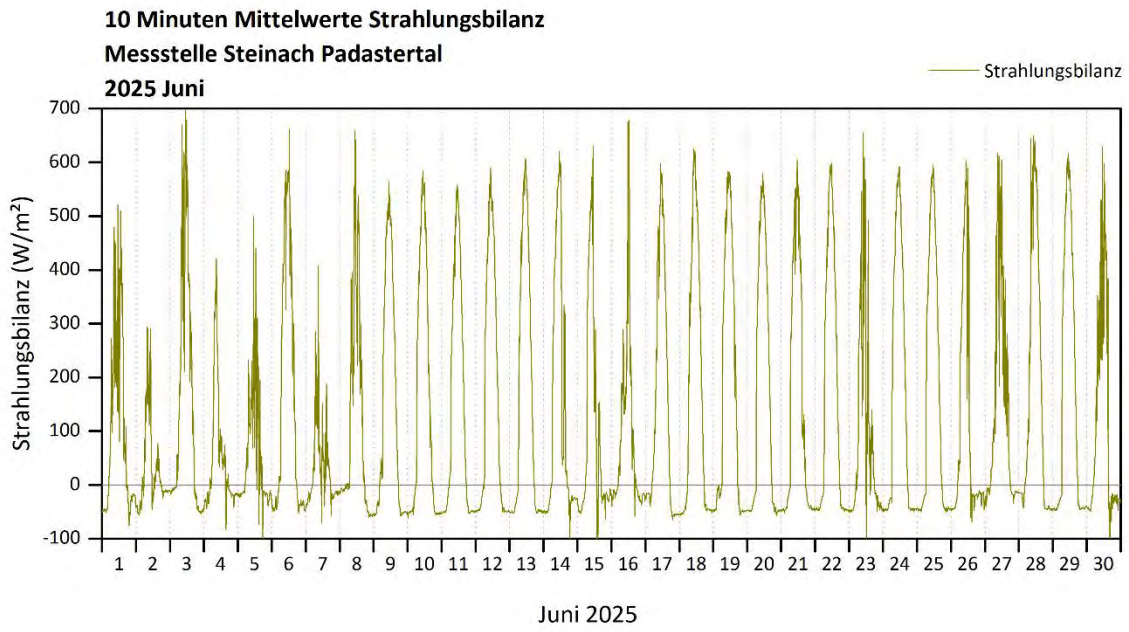
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht Juli 2025 Relazione mensile luglio 2025

Stickstoffdioxid Biossido di azoto

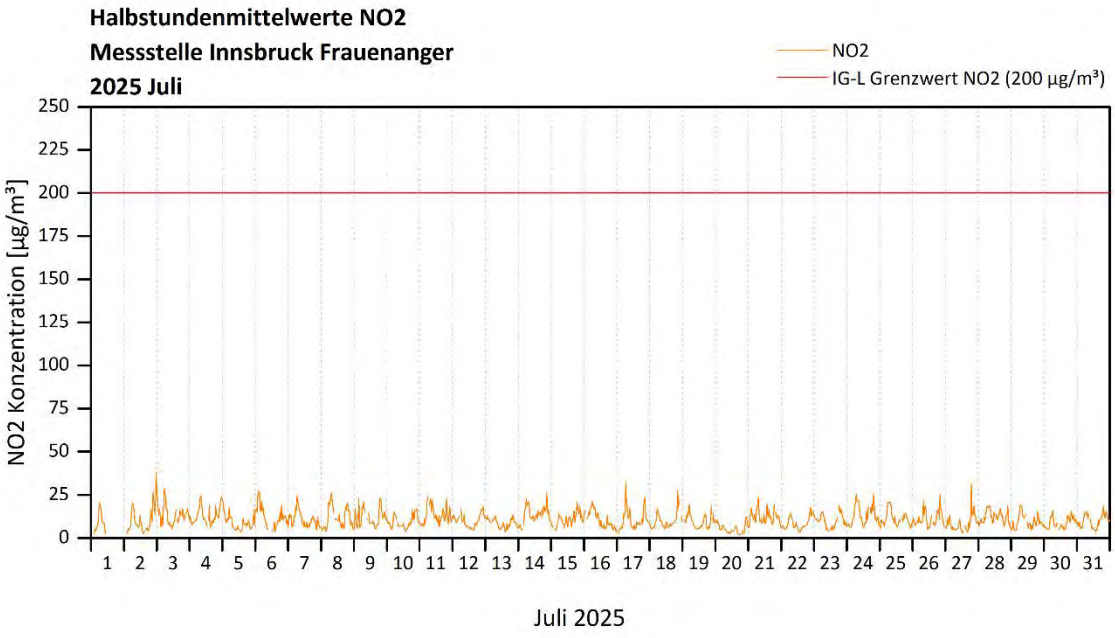
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 e 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	38	10,5	13,5	0		0	
Innsbruck Sillhöfe	52	10,2	13,2	0		0	
Steinach Siegreith	30	5,4	7,2	0		0	
Steinach Saxen	37	8,2	10,8	0		0	
Ampass	61	13,1	20,5	0		0	
Tulfes	24	5,3	8,7	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

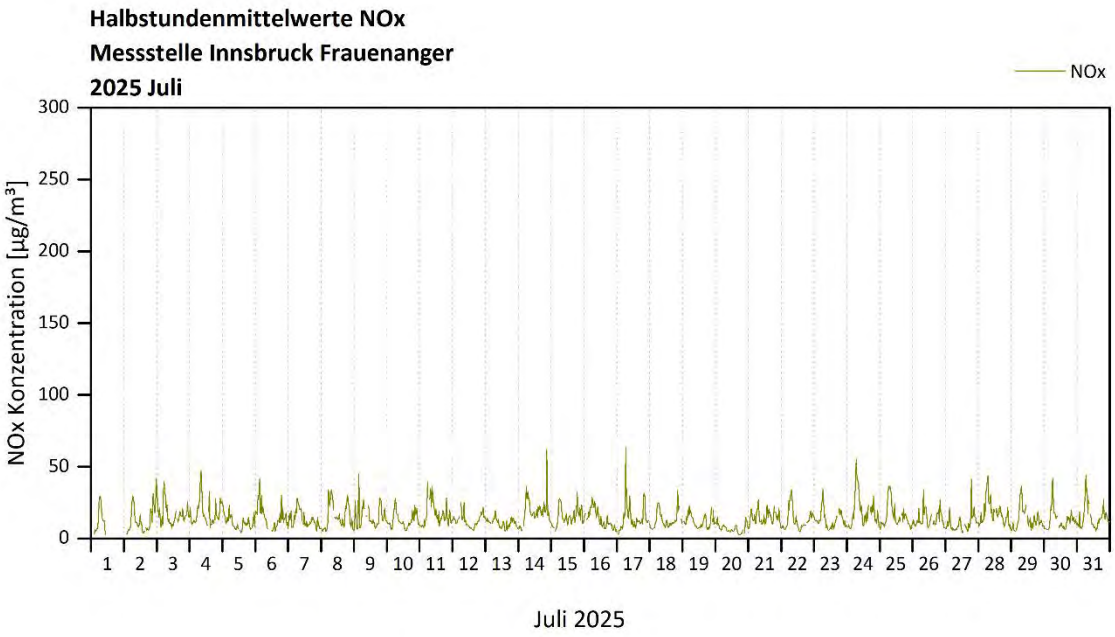
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 e 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	47	8,8	15,7	0		0	
Innsbruck Sillhöfe	111	9,4	16,6	0		0	
Steinach Siegreith	111	9,1	21,3	0		0	
Steinach Saxen	73	10,8	21,5	0		0	
Ampass	44	9,6	17,3	0		0	
Tulfes	29	8,4	14,5	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

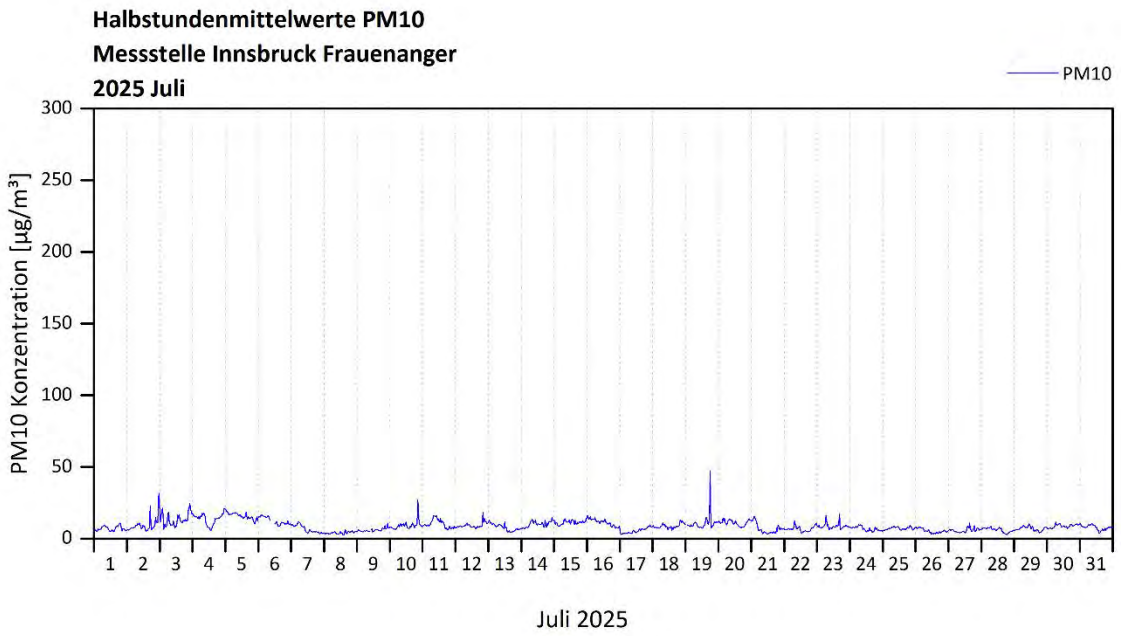
Stickstoffdioxid / Biossido di azoto



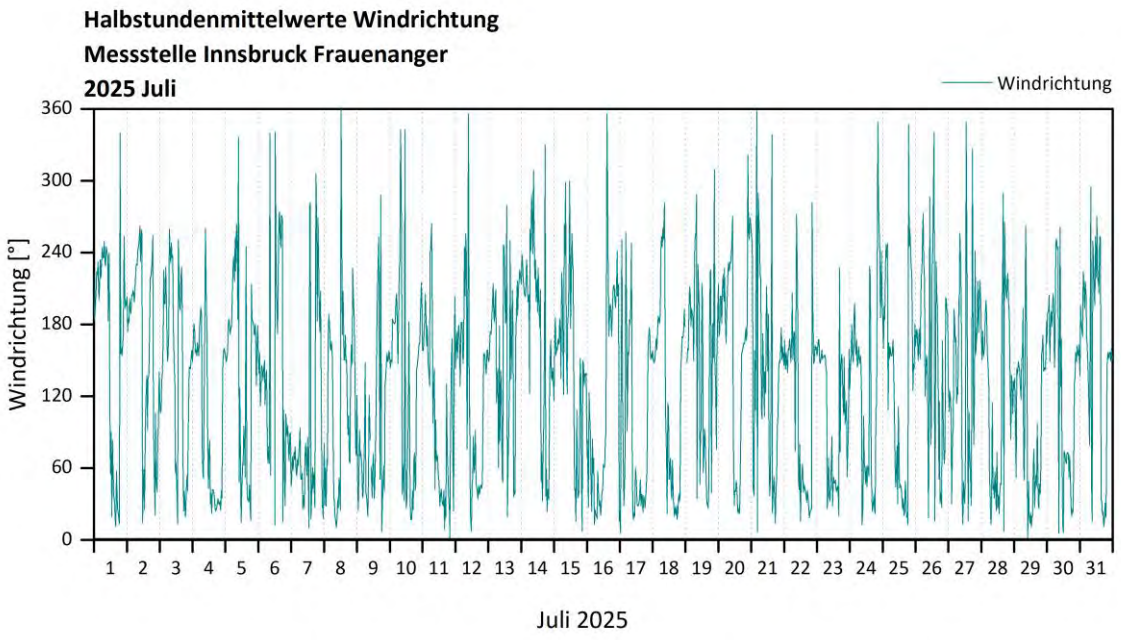
Stickstoffoxide / Ossidi di azoto



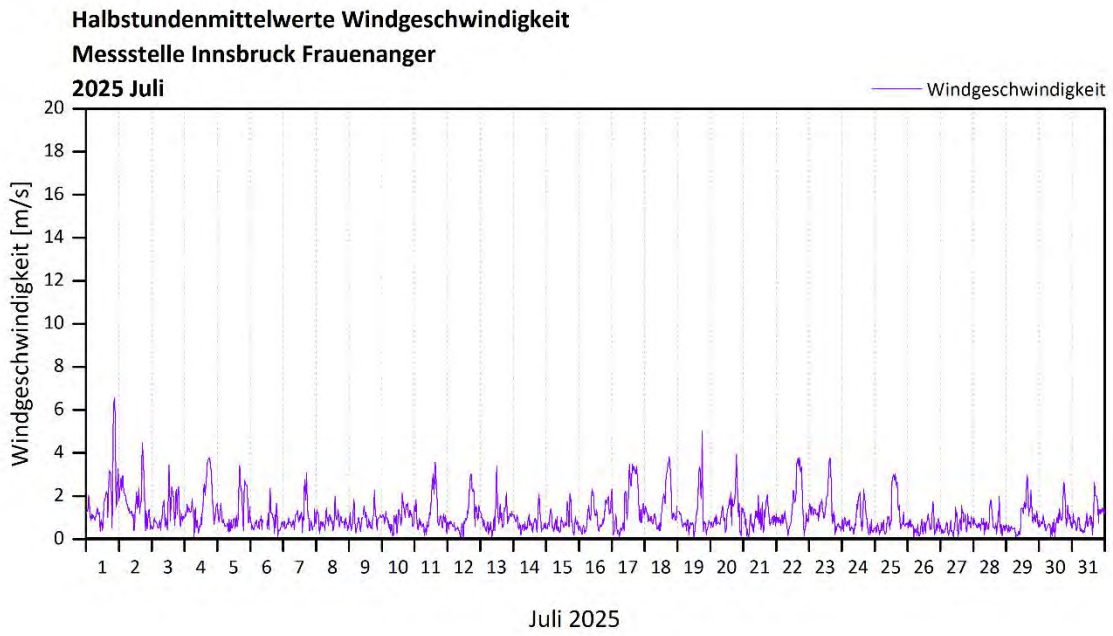
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

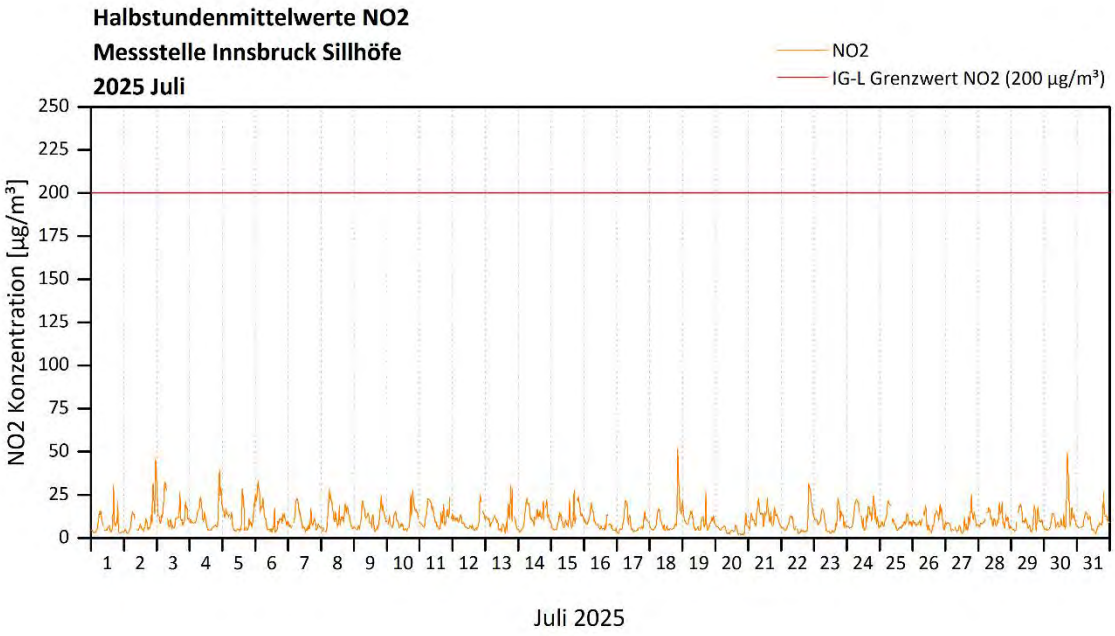


Windgeschwindigkeit / Velocità del vento

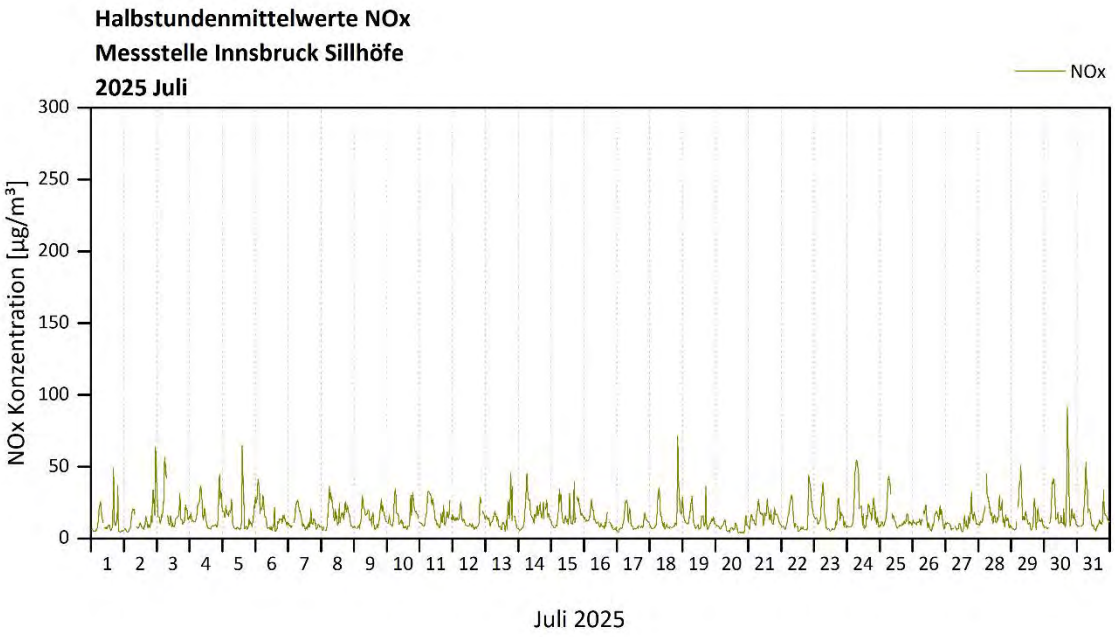


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

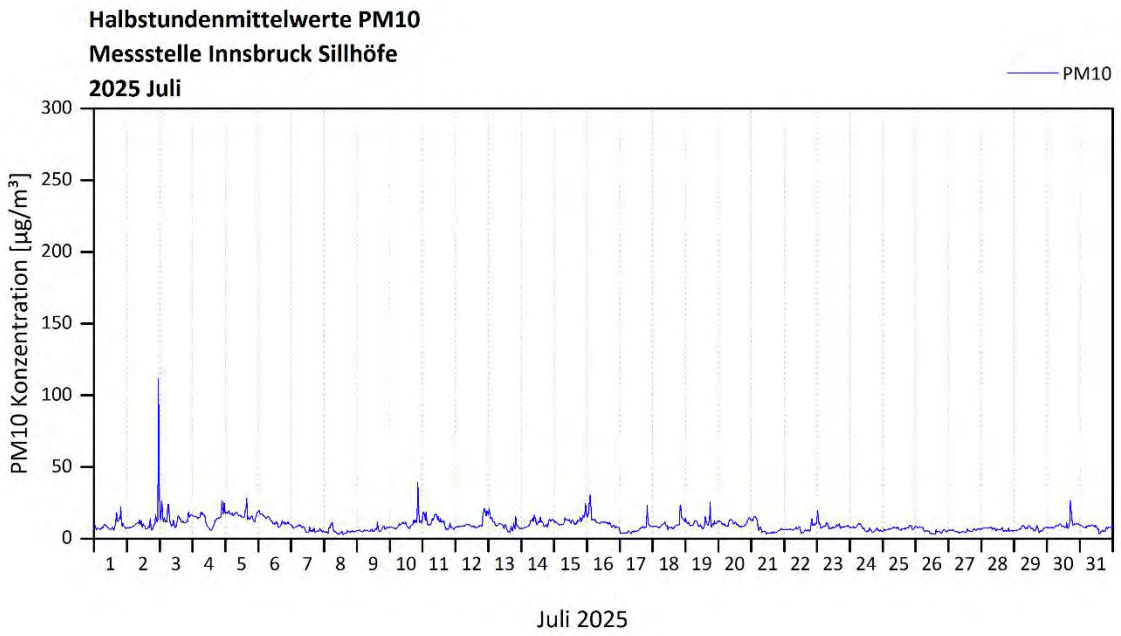
Stickstoffdioxid / Biossido di azoto



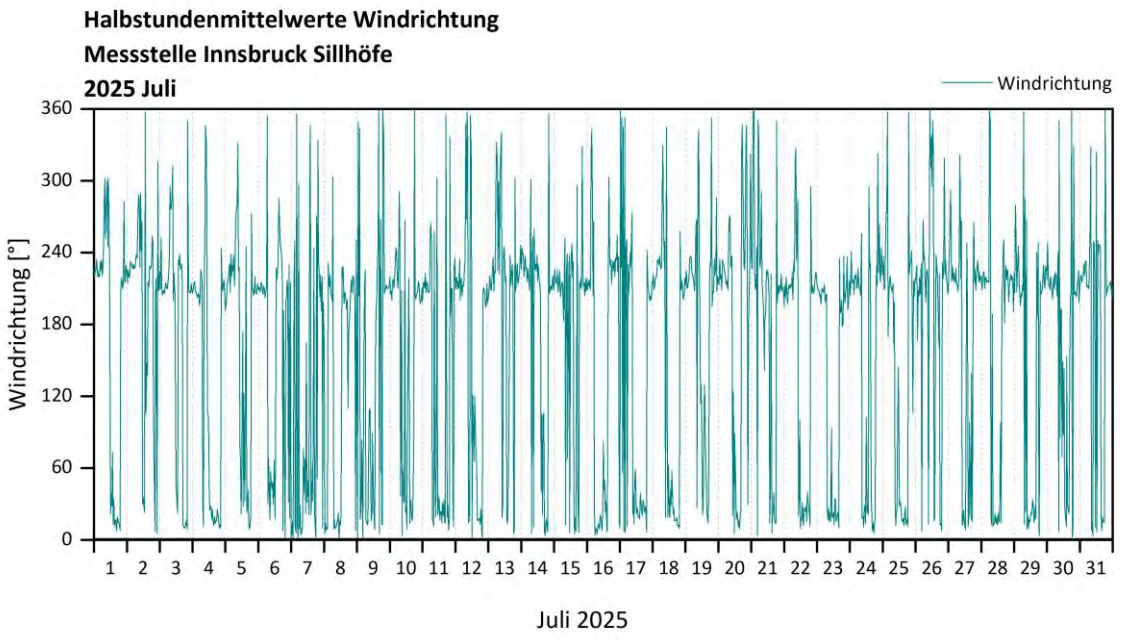
Stickstoffoxide / Ossidi di azoto



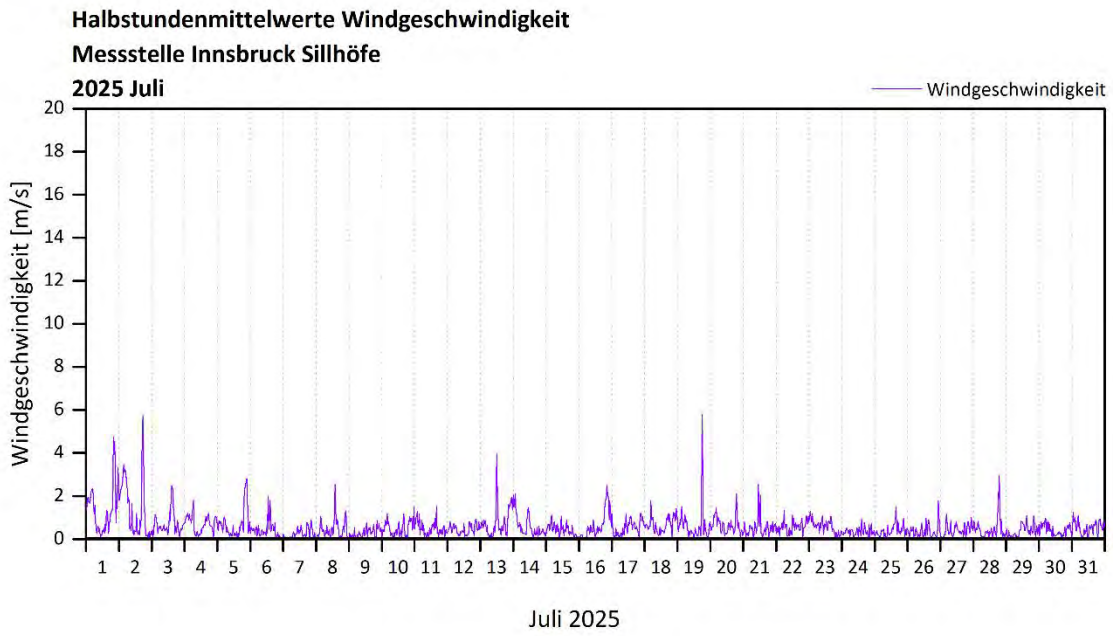
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

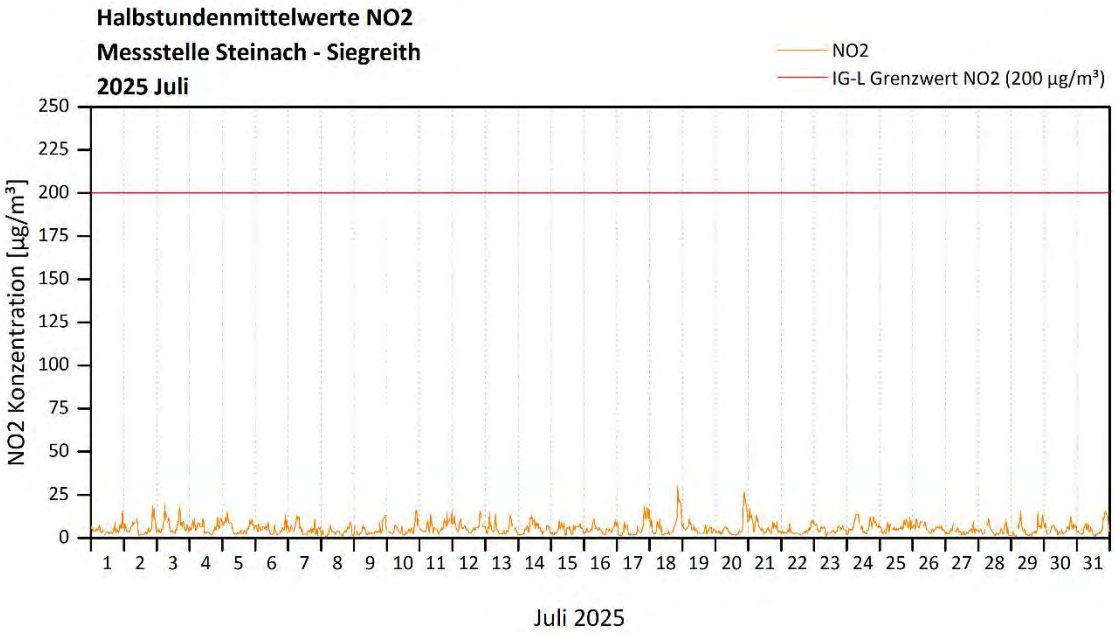


Windgeschwindigkeit / Velocità del vento

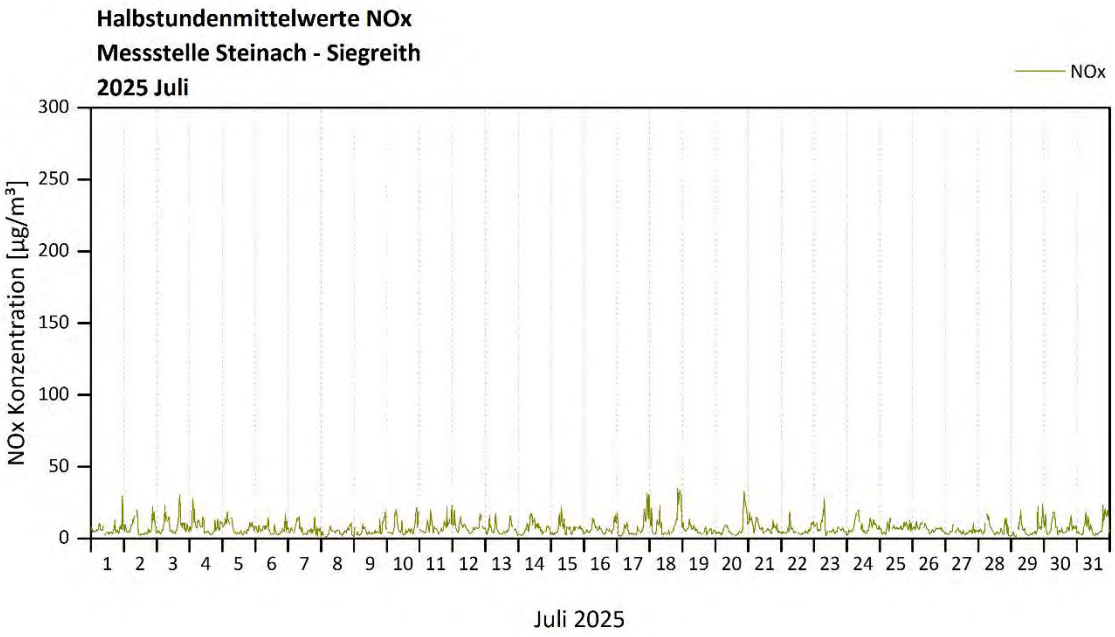


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

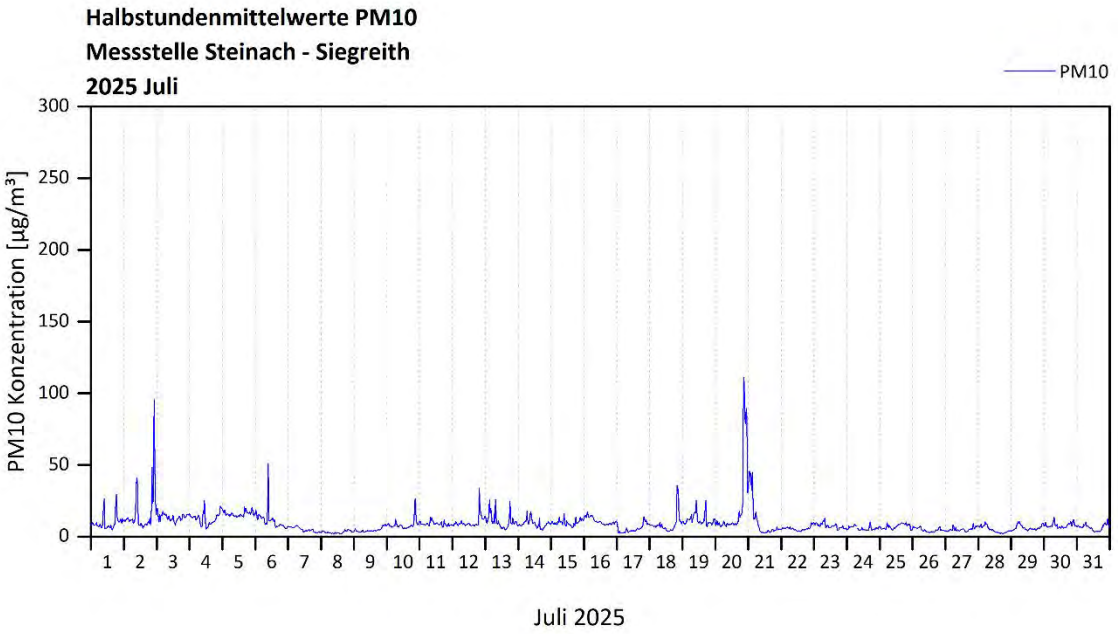
Stickstoffdioxid / Biossido di azoto



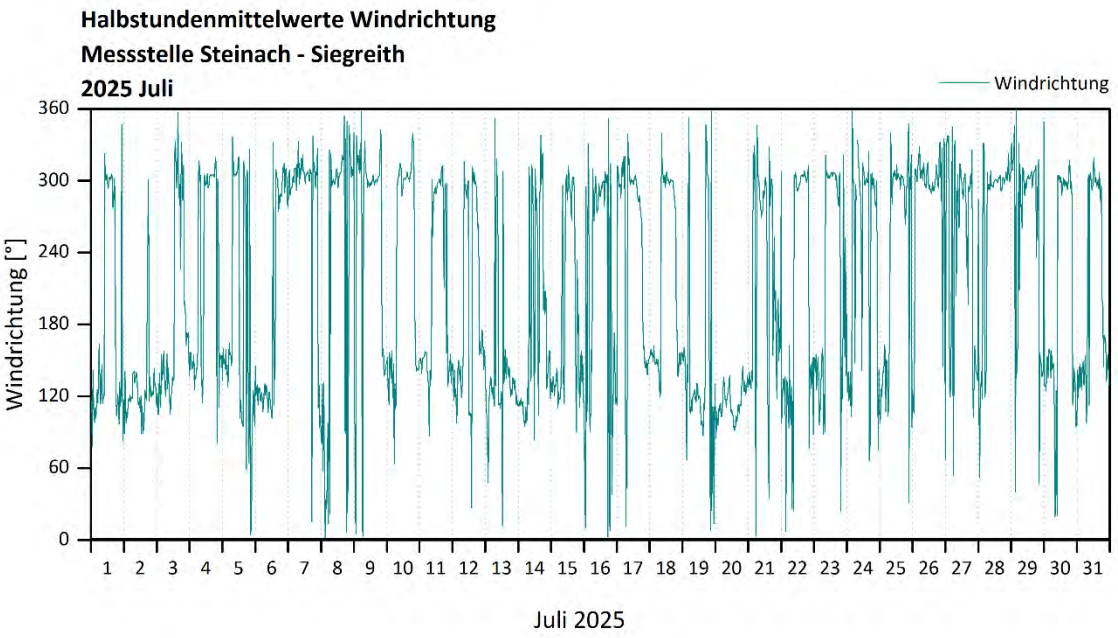
Stickstoffoxide / Ossidi di azoto



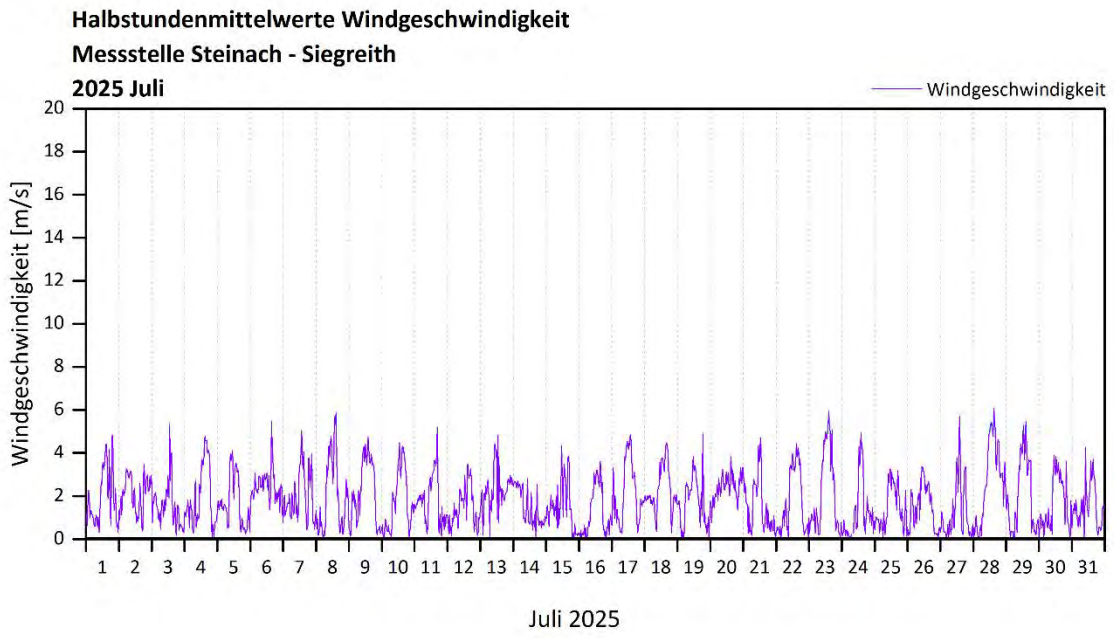
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

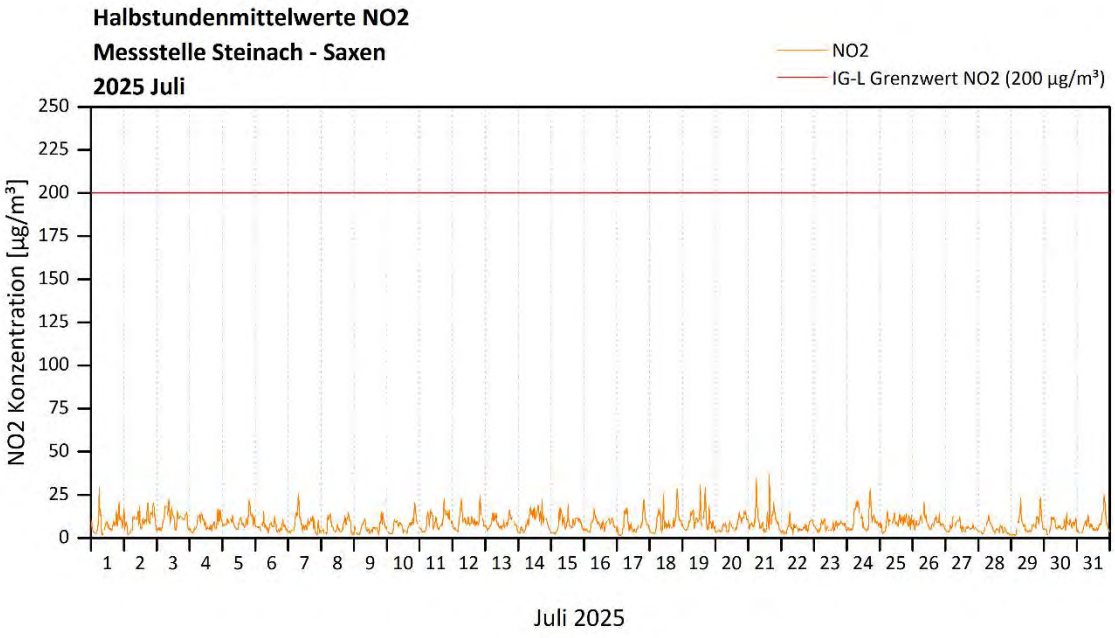


Windgeschwindigkeit / Velocità del vento

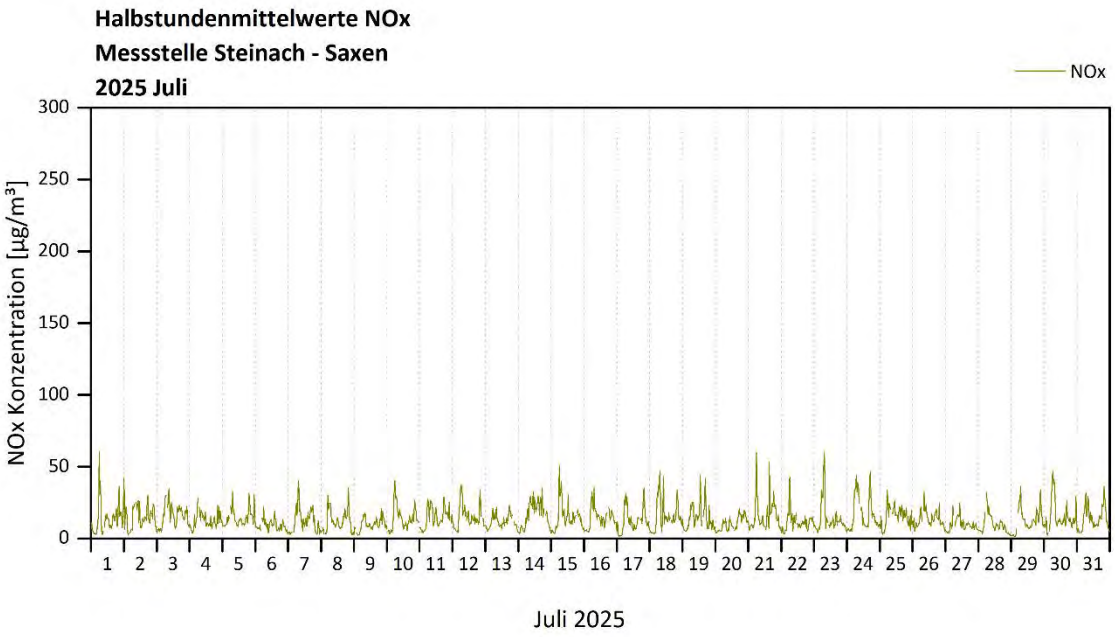


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

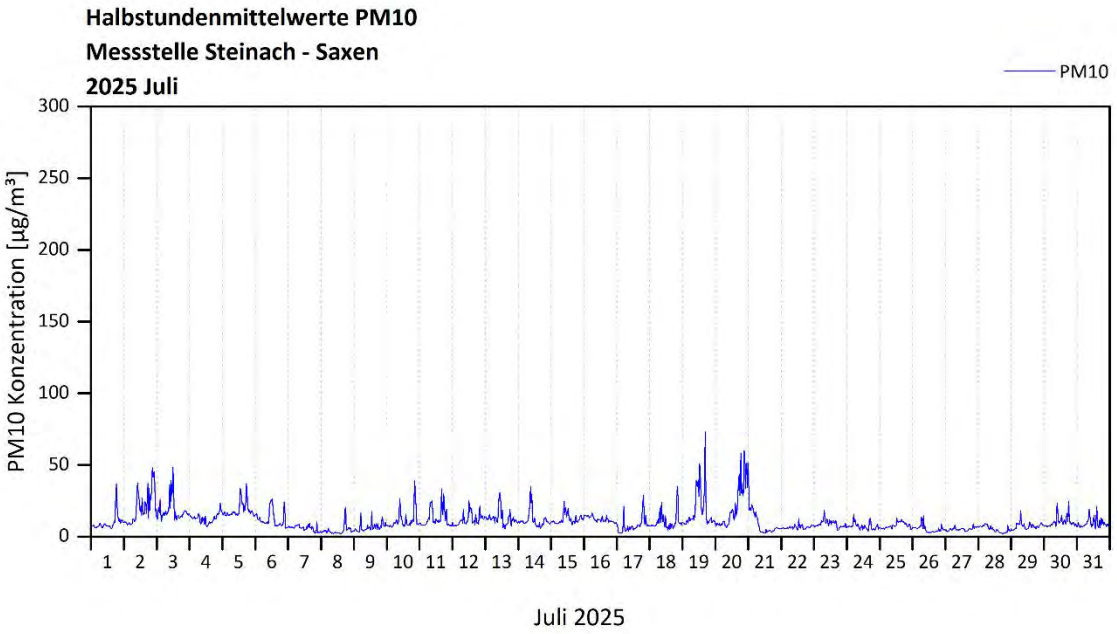
Stickstoffdioxid / Biossido di azoto



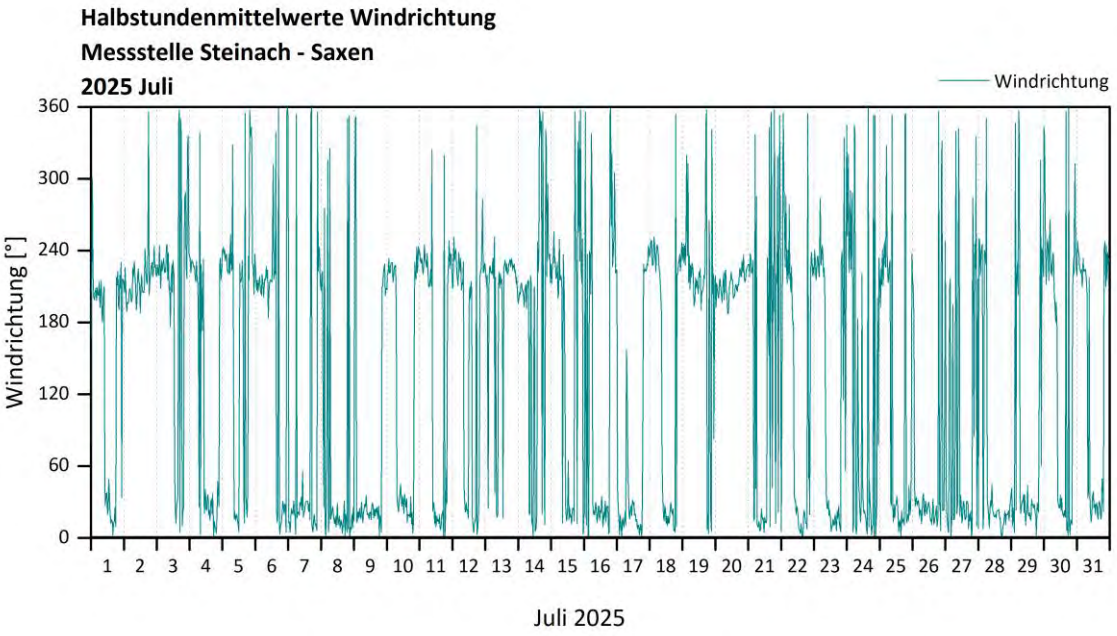
Stickstoffoxide / Ossidi di azoto



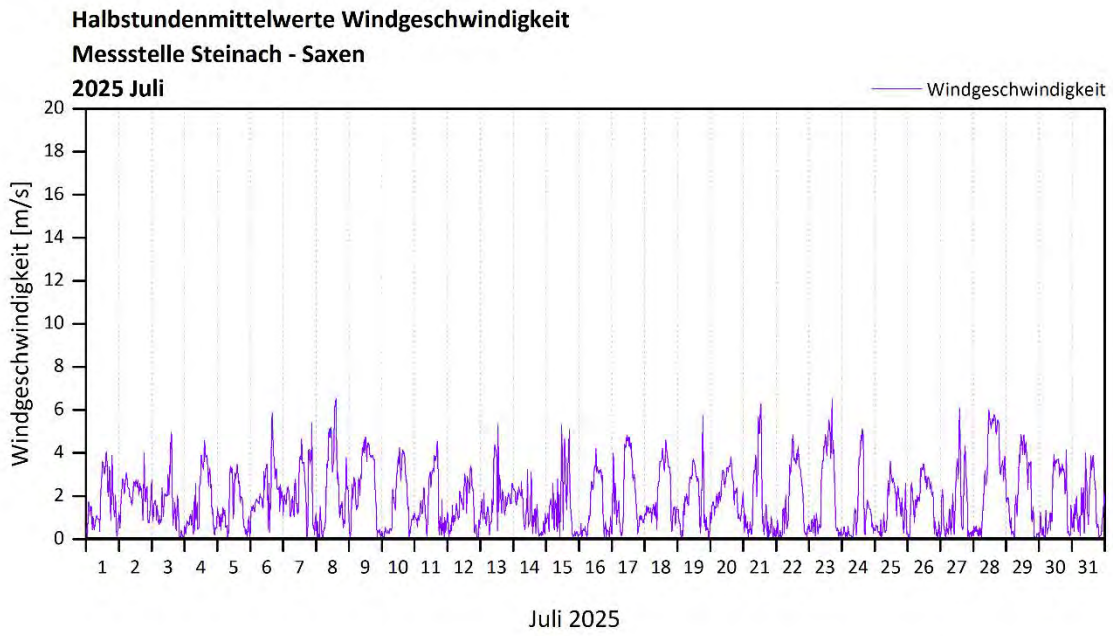
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



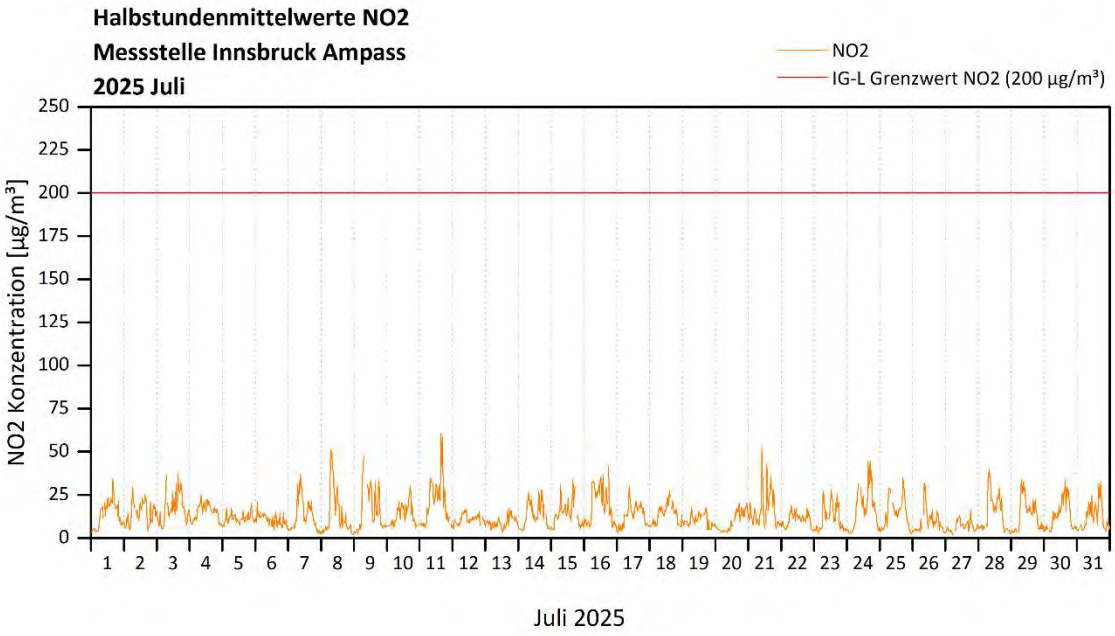
Windgeschwindigkeit / Velocità del vent



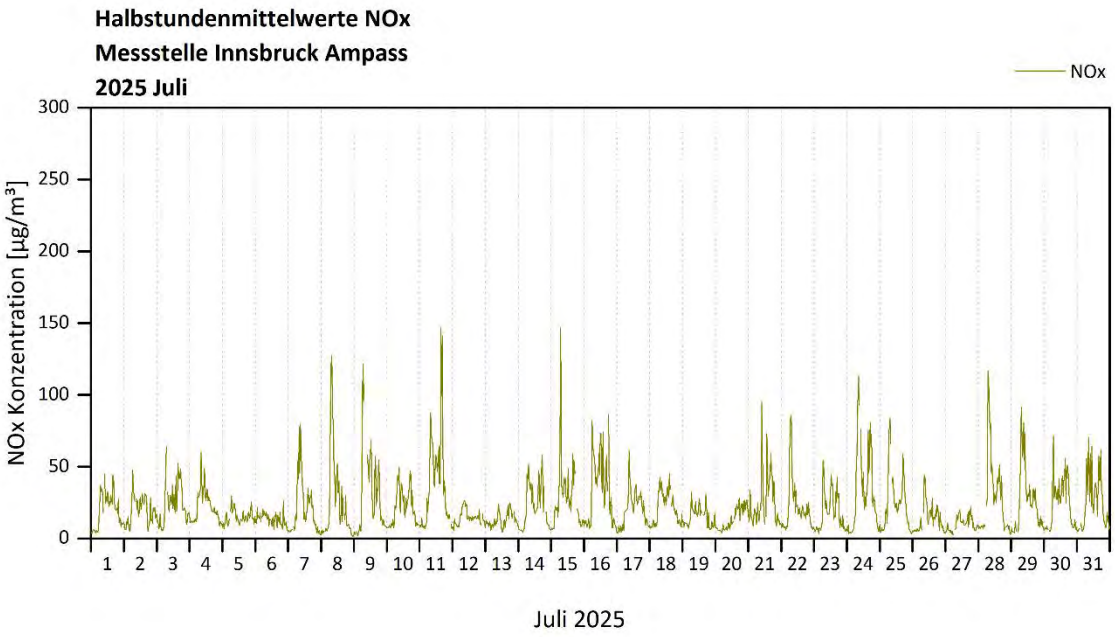
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

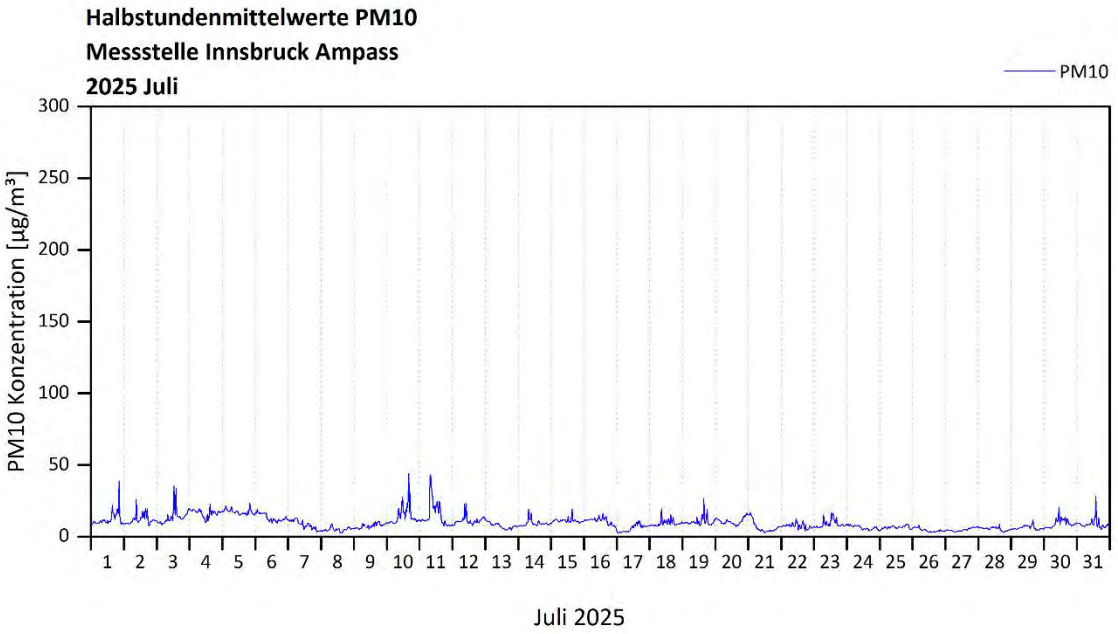
Stickstoffdioxid / Biossido di azoto



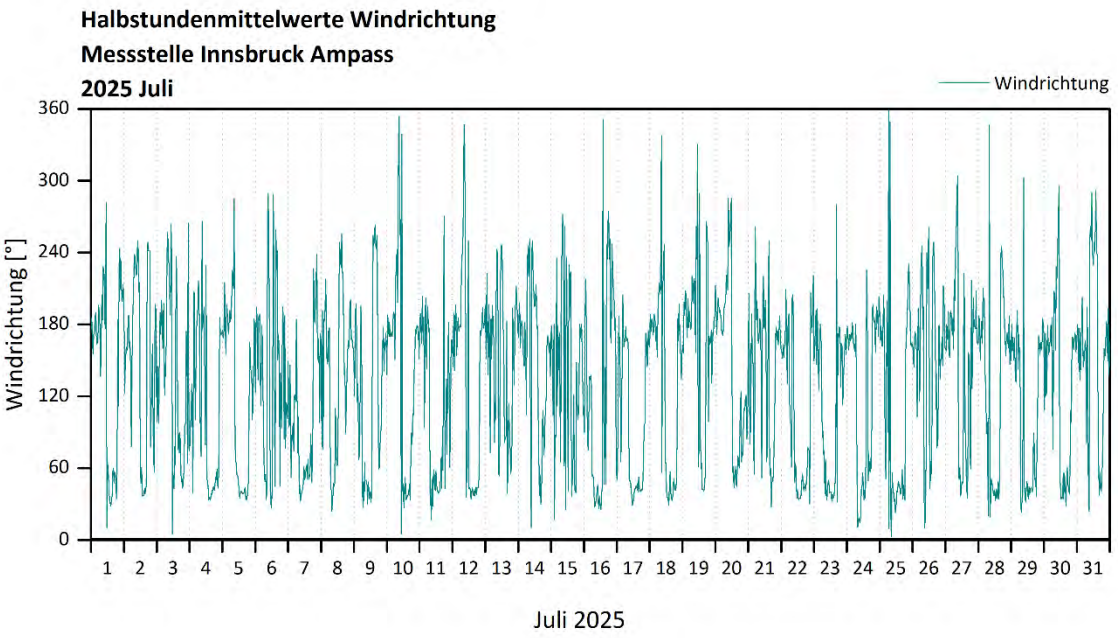
Stickstoffoxide / Ossidi di azoto



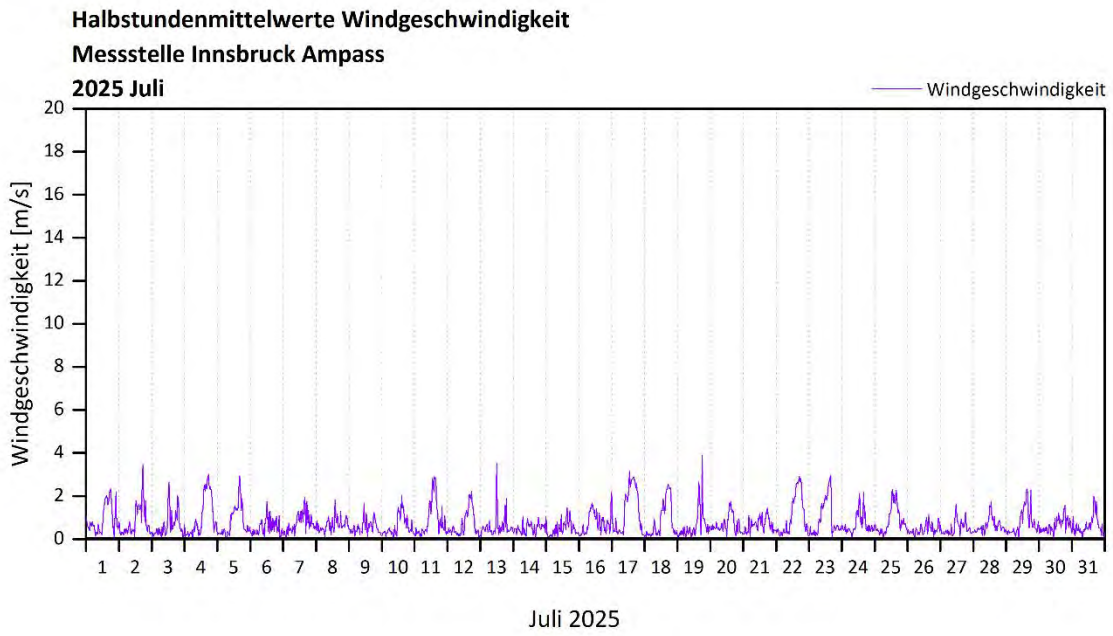
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

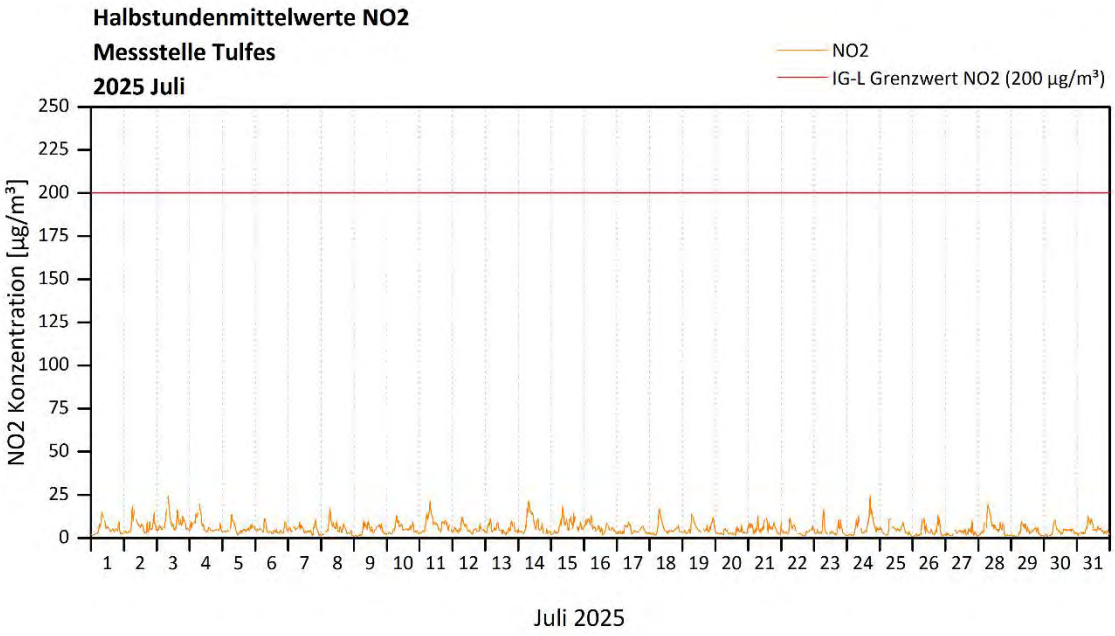


Windgeschwindigkeit / Velocità del vent

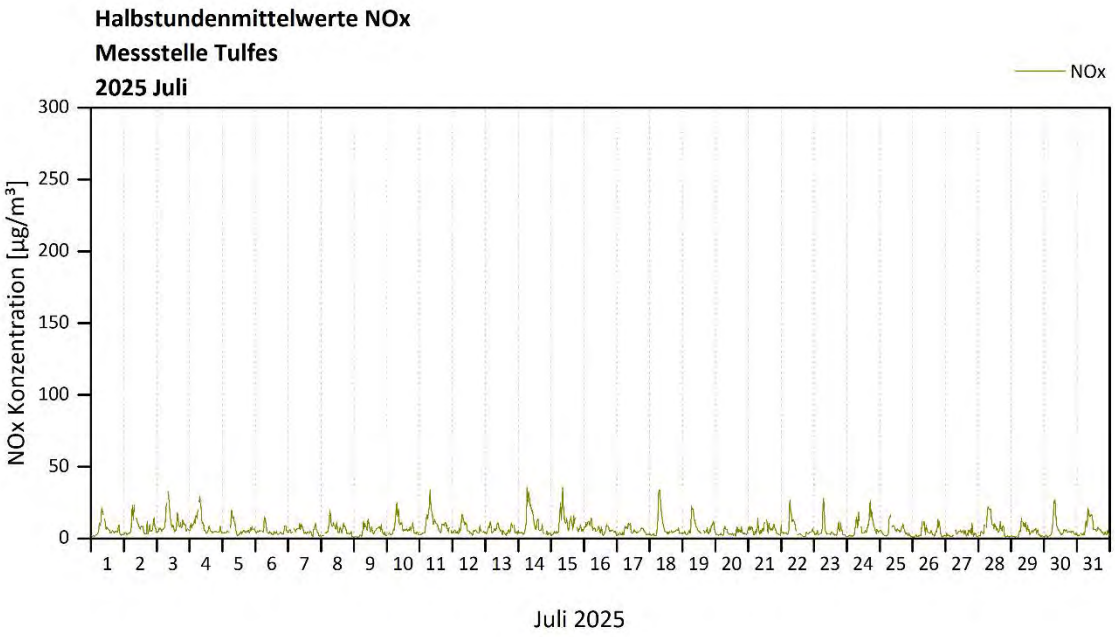


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

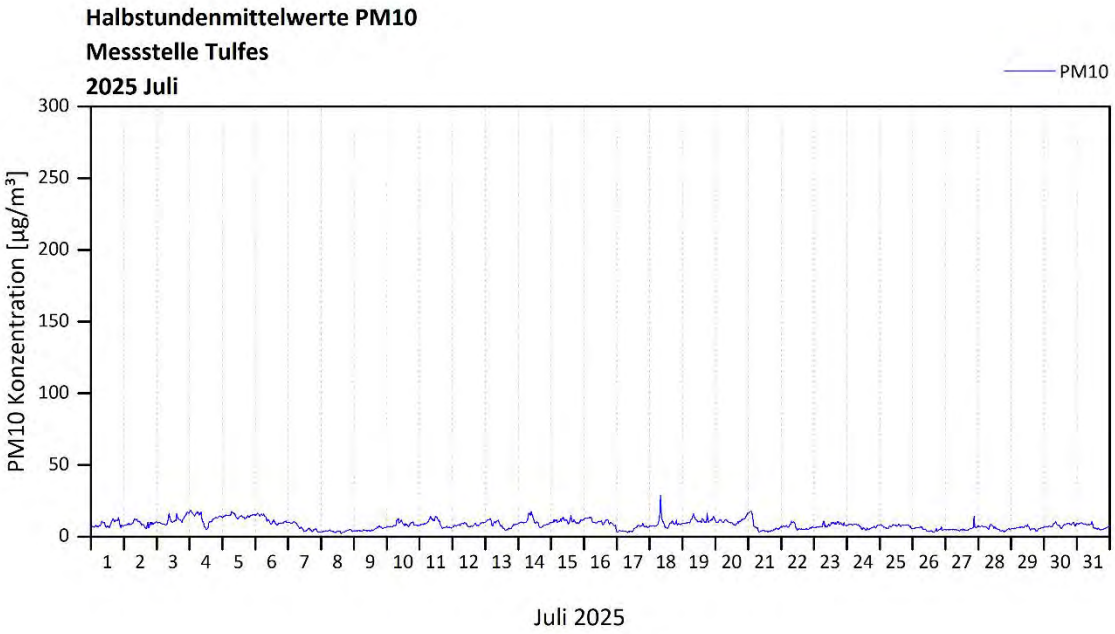
Stickstoffdioxid / Biossido di azoto



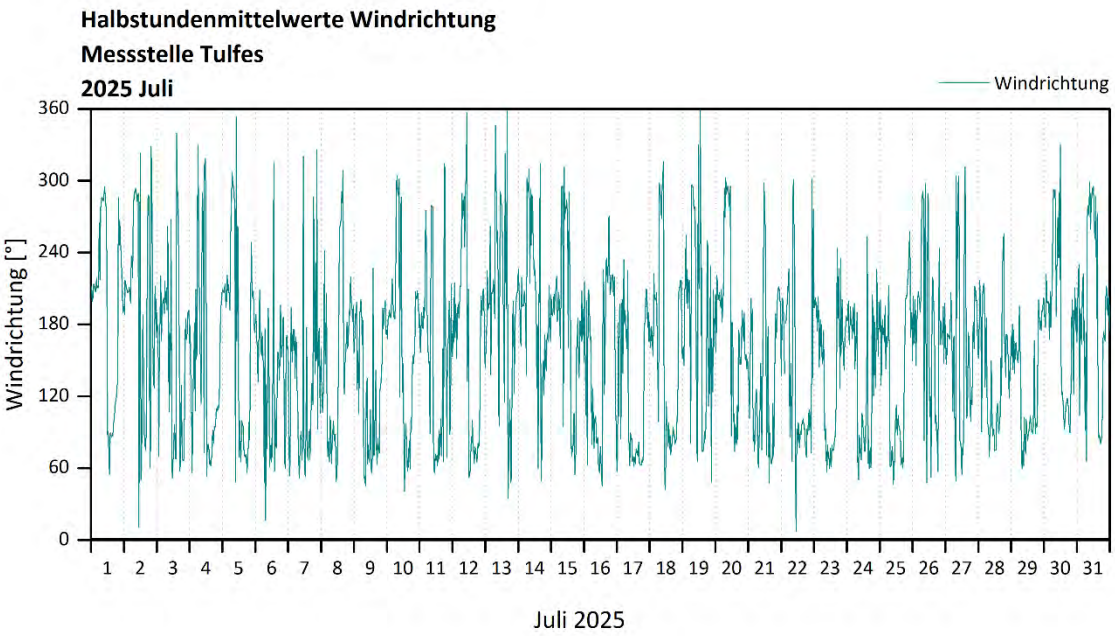
Stickstoffoxide / Ossidi di azoto



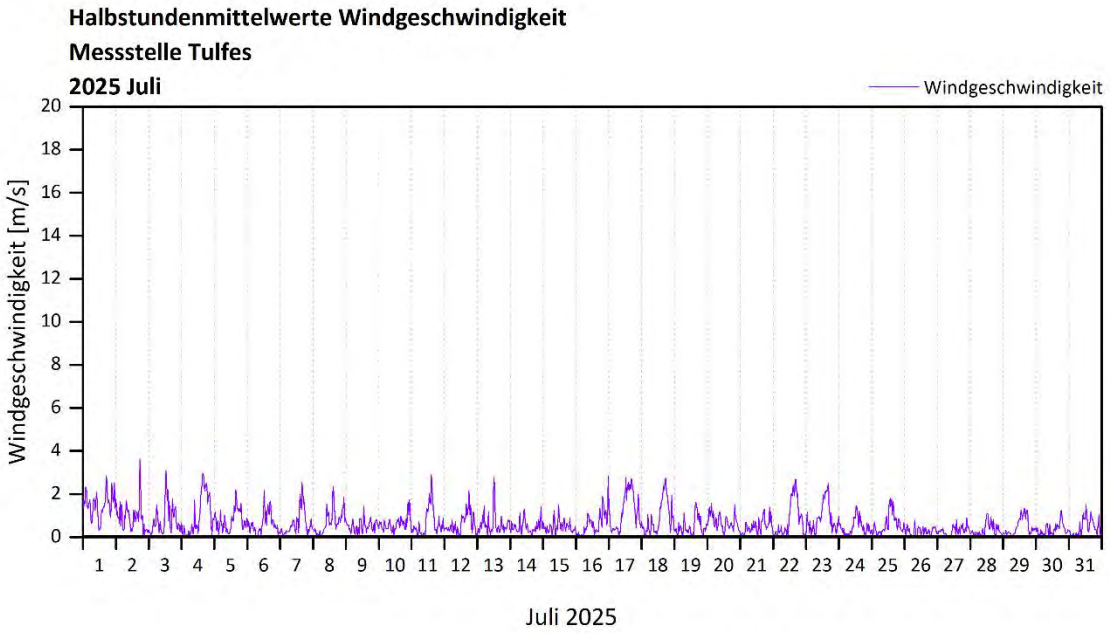
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

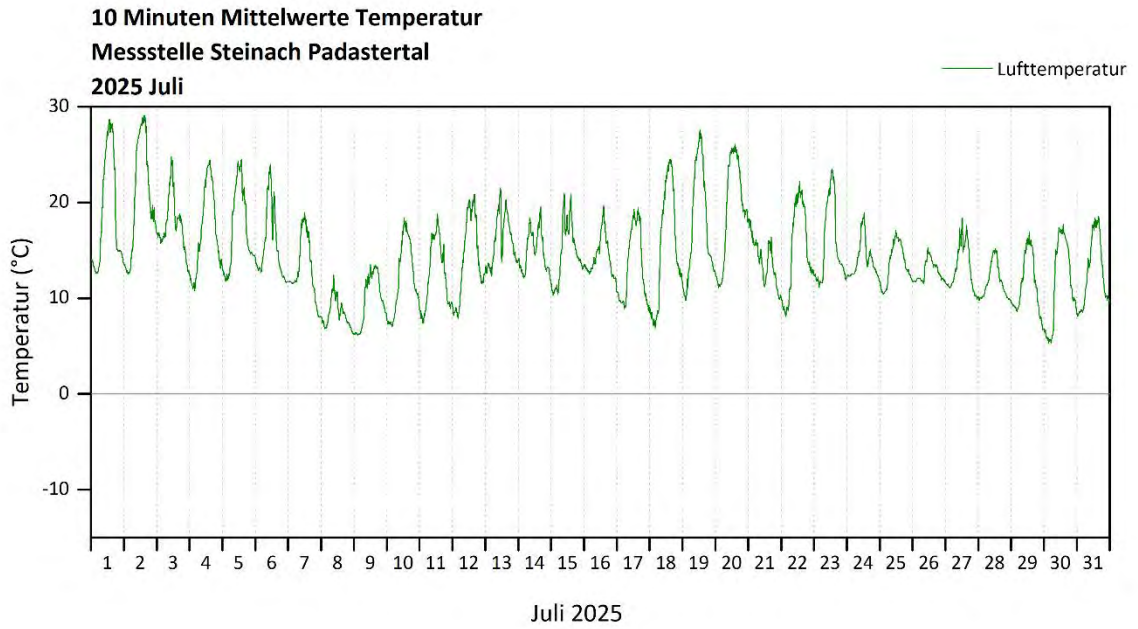


Windgeschwindigkeit / Velocità del vent

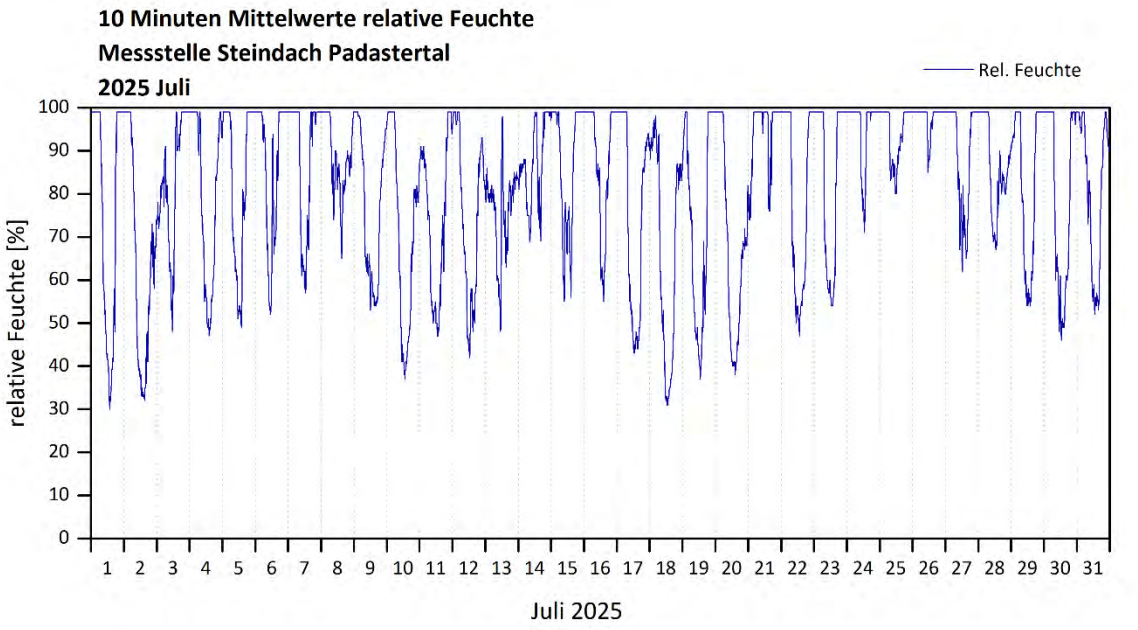


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

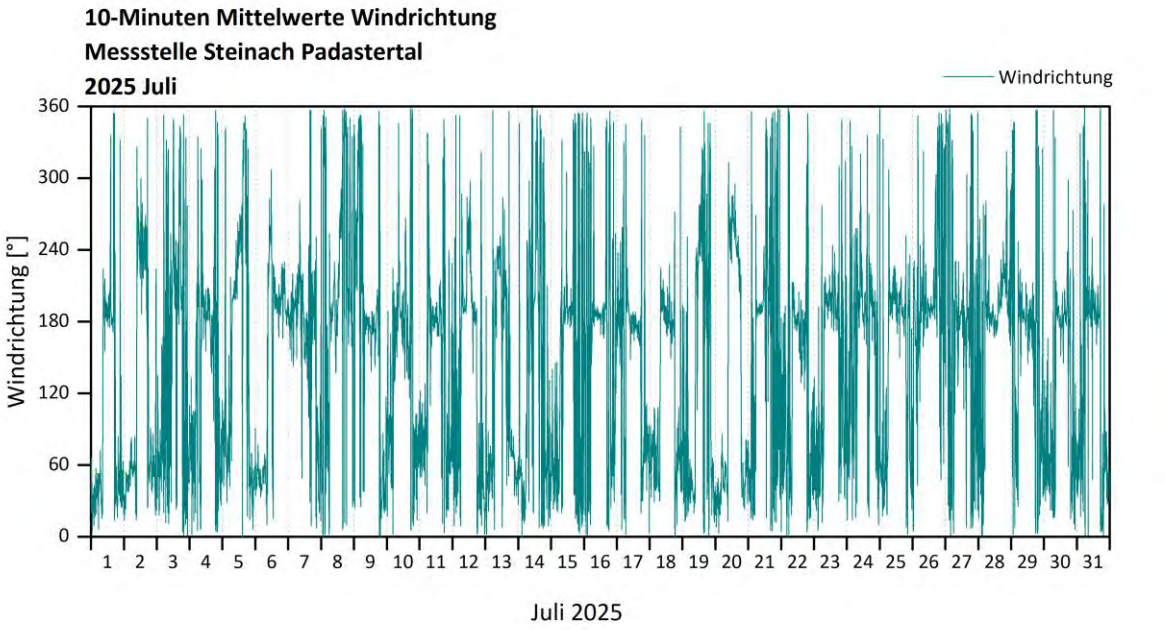
Temperatur / Temeraturà dell'aria



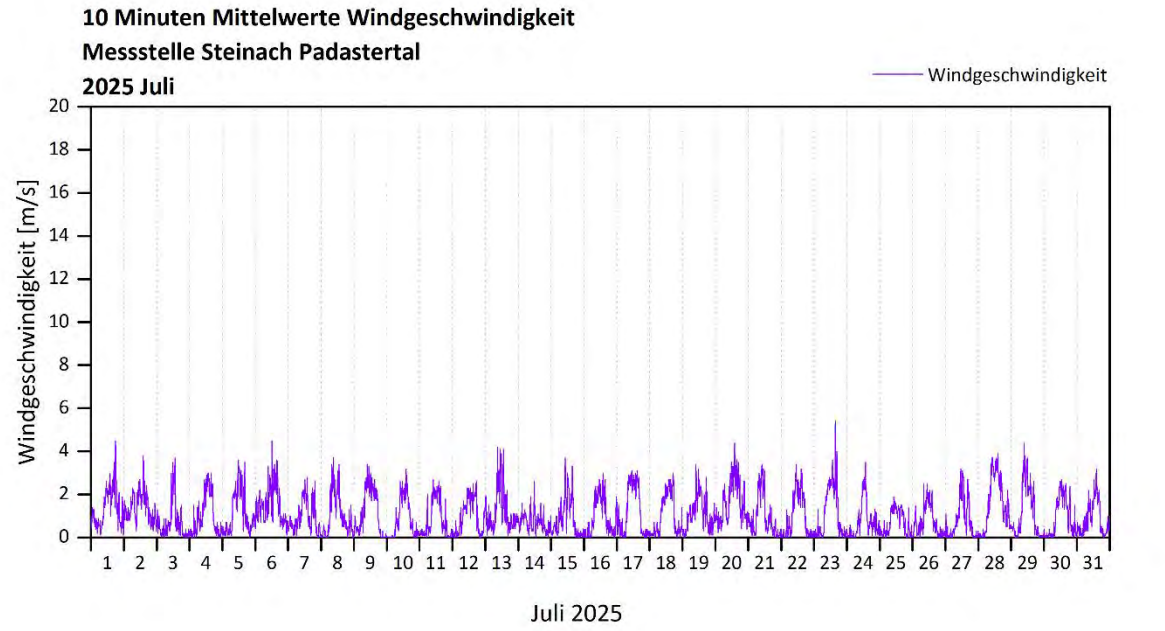
Relative Feuchtigkeit / Umidità relativa



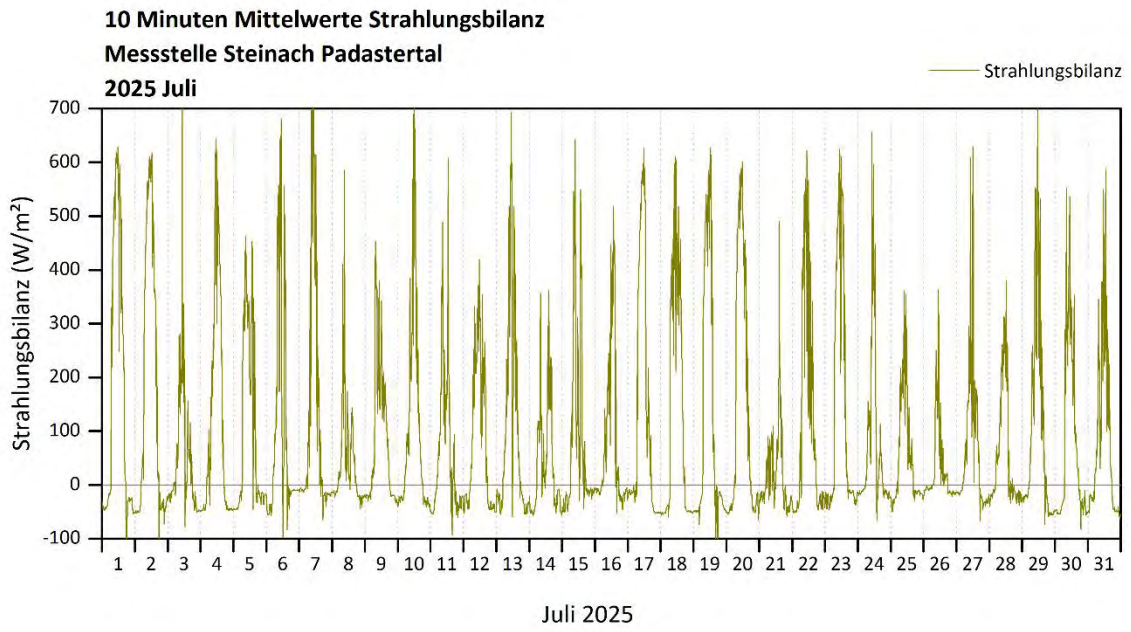
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht August 2025 Relazione mensile agosto 2025

Stickstoffdioxid Biossido di azoto

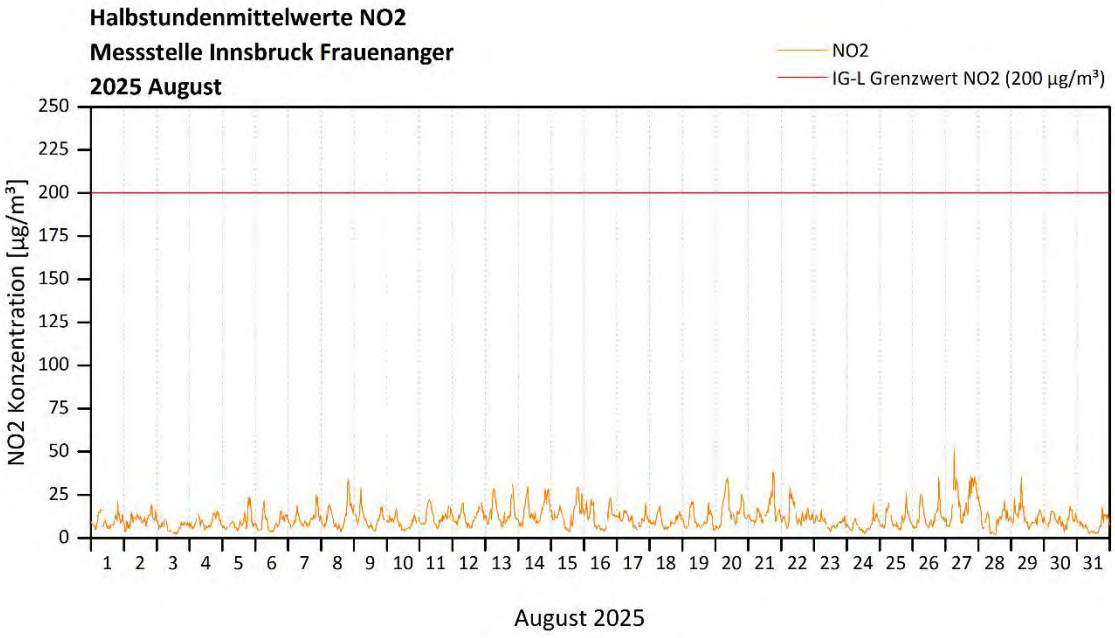
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 e 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	52	11.4	21.1	0		0	
Innsbruck Sillhöfe	77	11.7	21.9	0		0	
Steinach Siegreith	49	7.1	10.6	0		0	
Steinach Saxen	61	10.0	14.7	0		0	
Ampass	46	11.0	18.3	0		0	
Tulfes	31	6.2	10.3	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

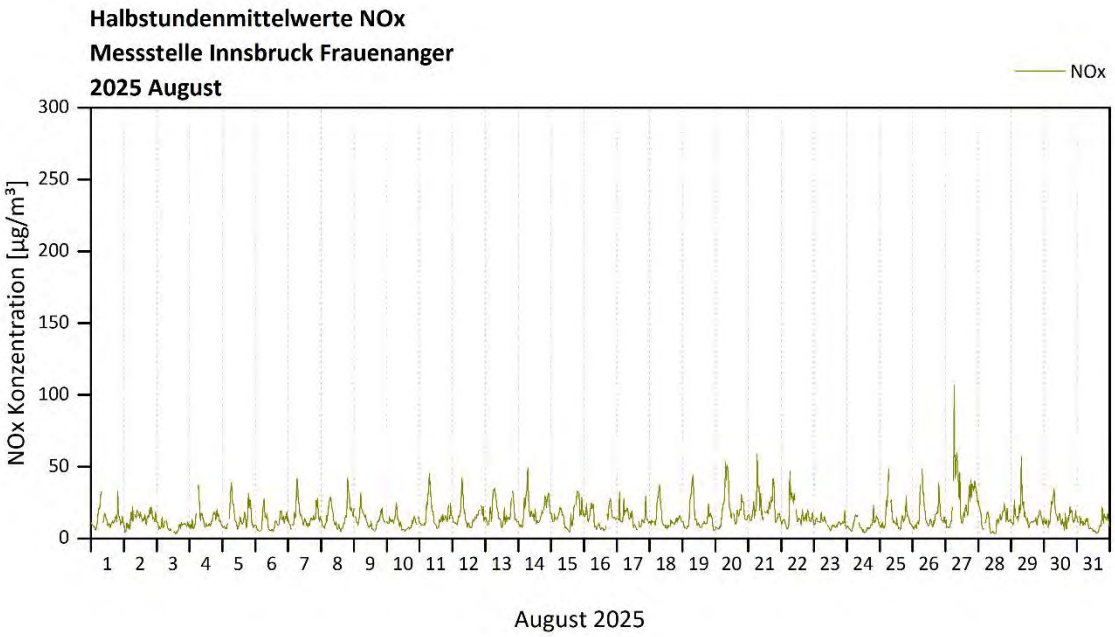
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 e 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	51	13.6	30.3	0		0	
Innsbruck Sillhöfe	56	14.5	32.0	0		0	
Steinach Siegreith	248	16.5	45.5	0		0	
Steinach Saxen	385	18.8	54.9	0		1	
Ampass	223	16.0	32.9	0		0	
Tulfes	49	13.6	30.1	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

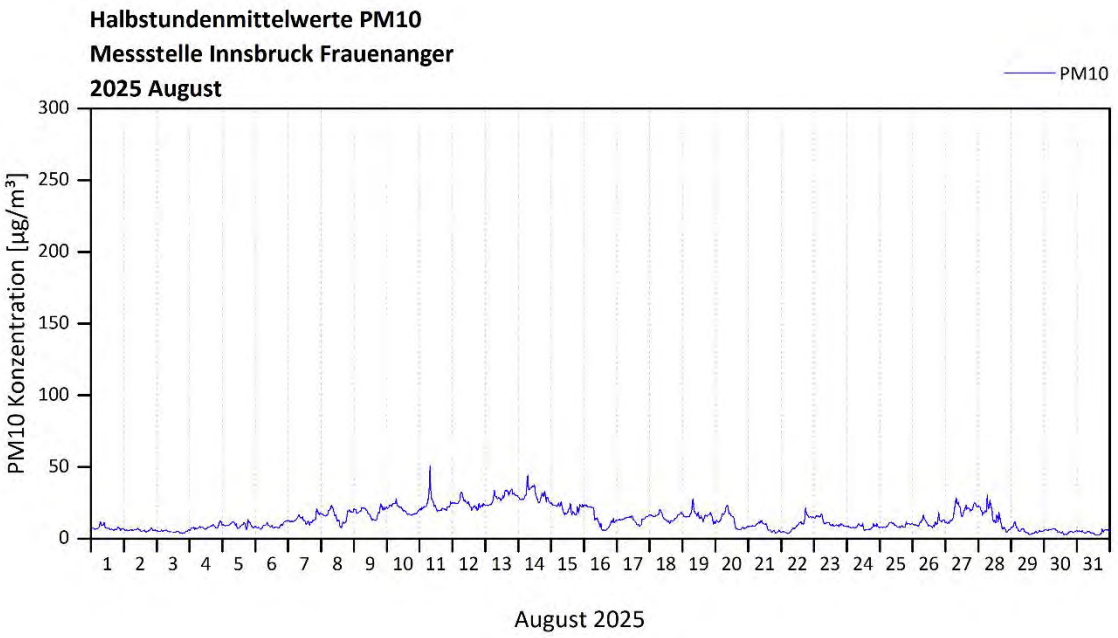
Stickstoffdioxid / Biossido di azoto



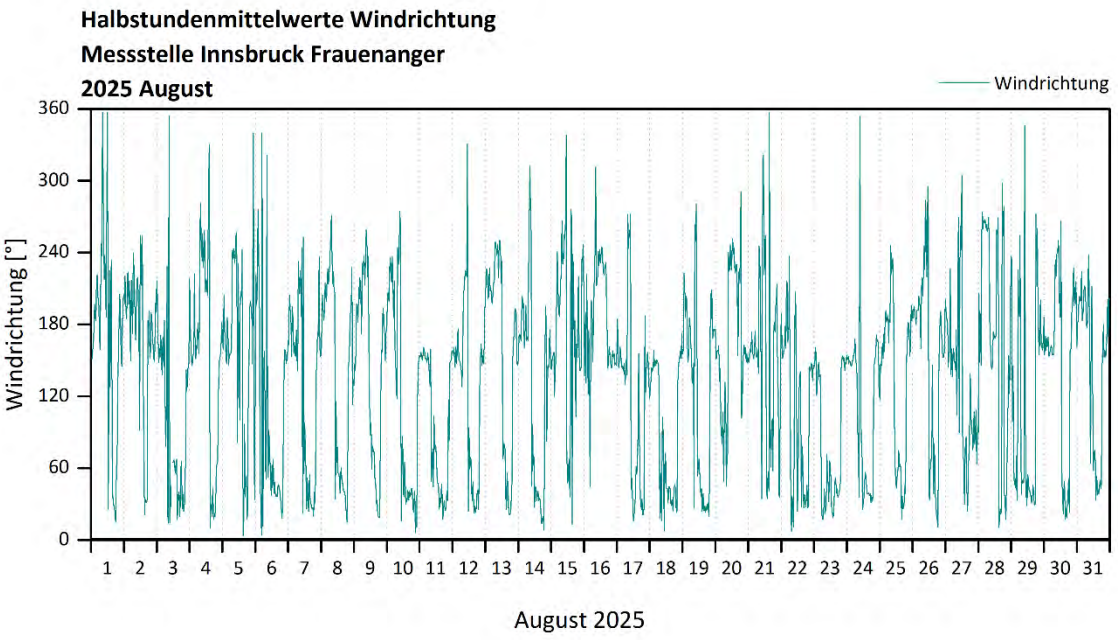
Stickstoffoxide / Ossidi di azoto



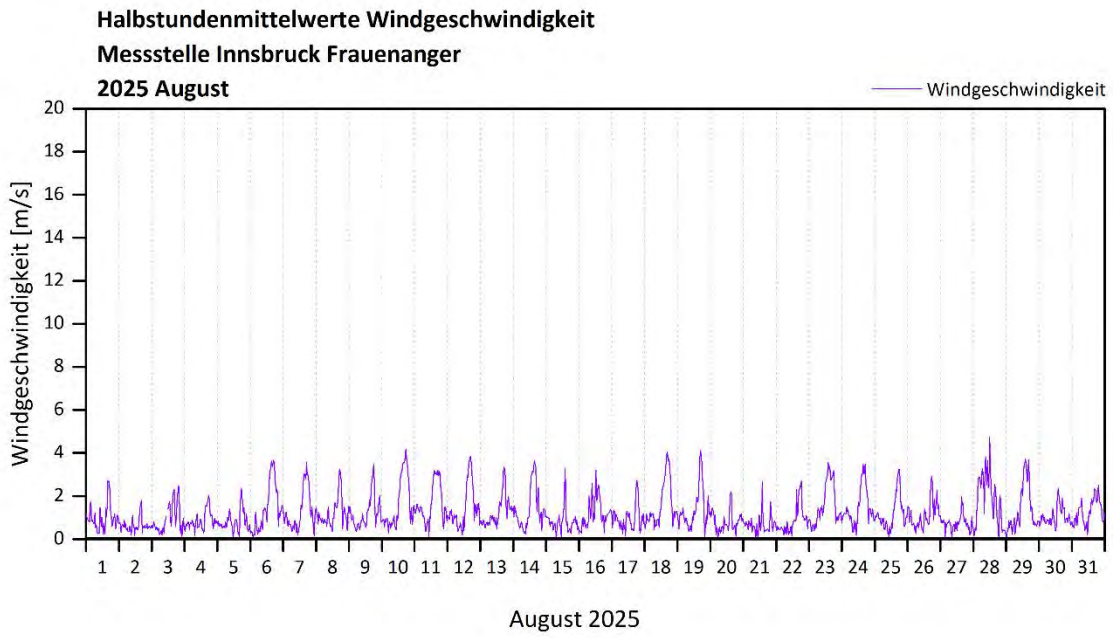
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

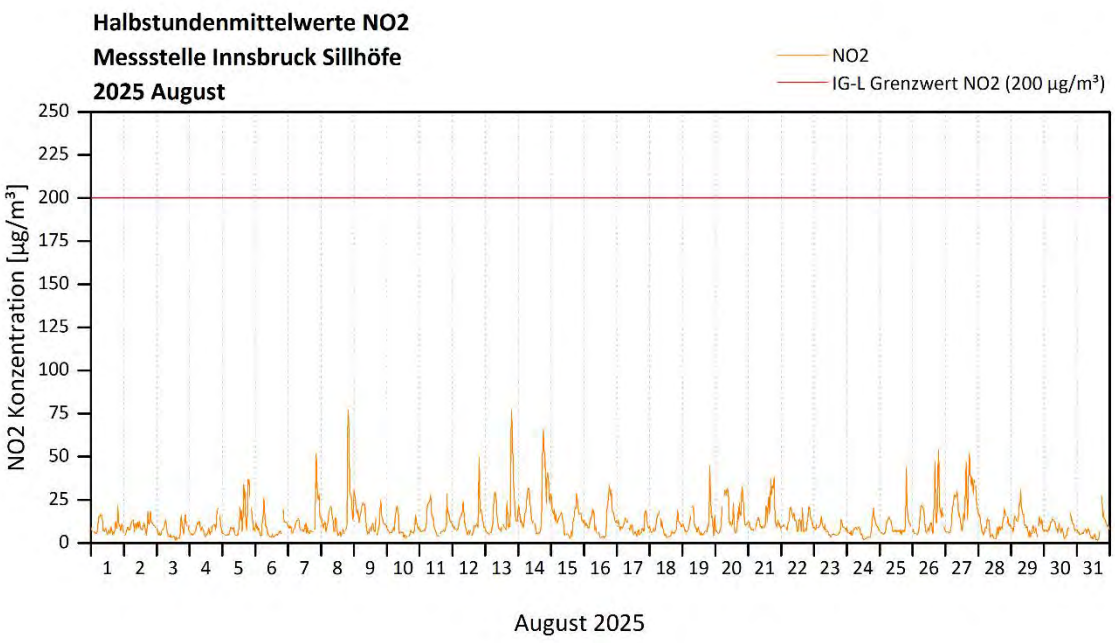


Windgeschwindigkeit / Velocità del vento

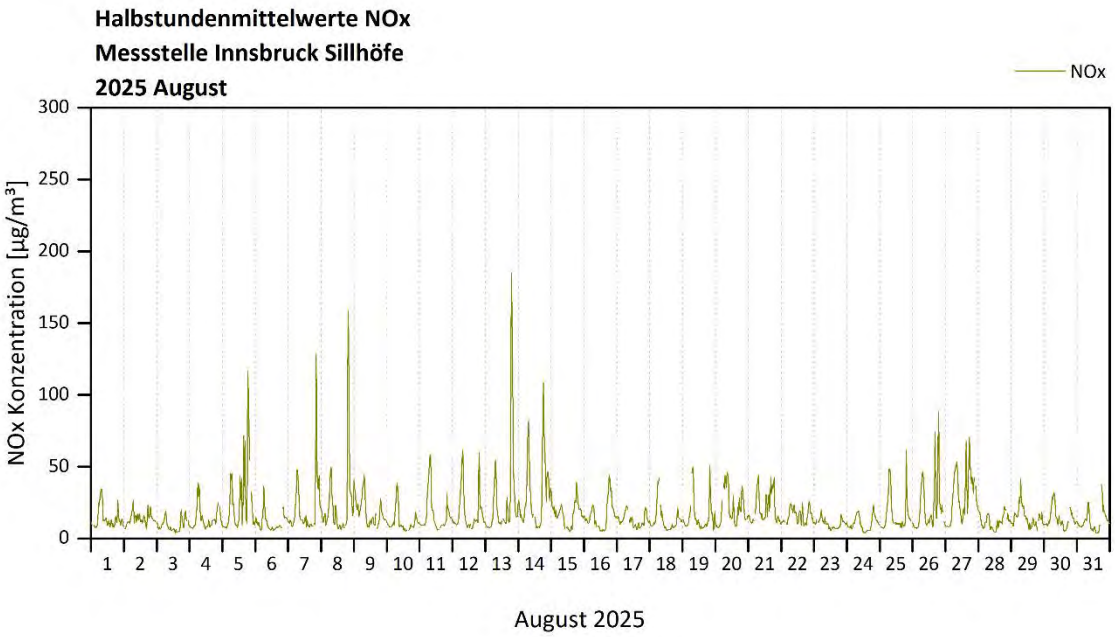


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

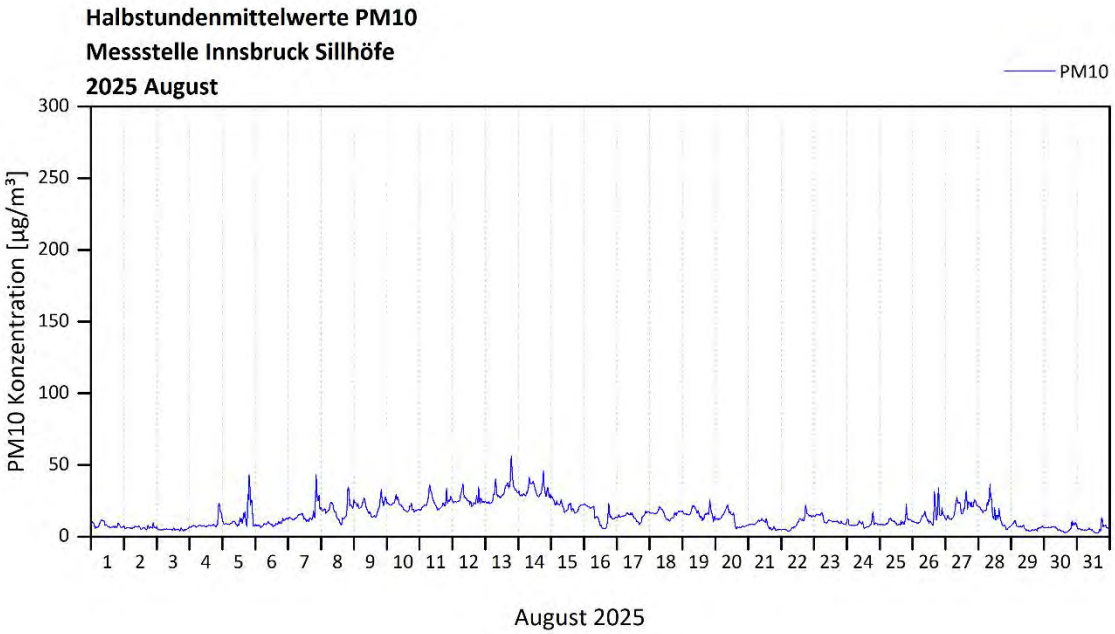
Stickstoffdioxid / Biossido di azoto



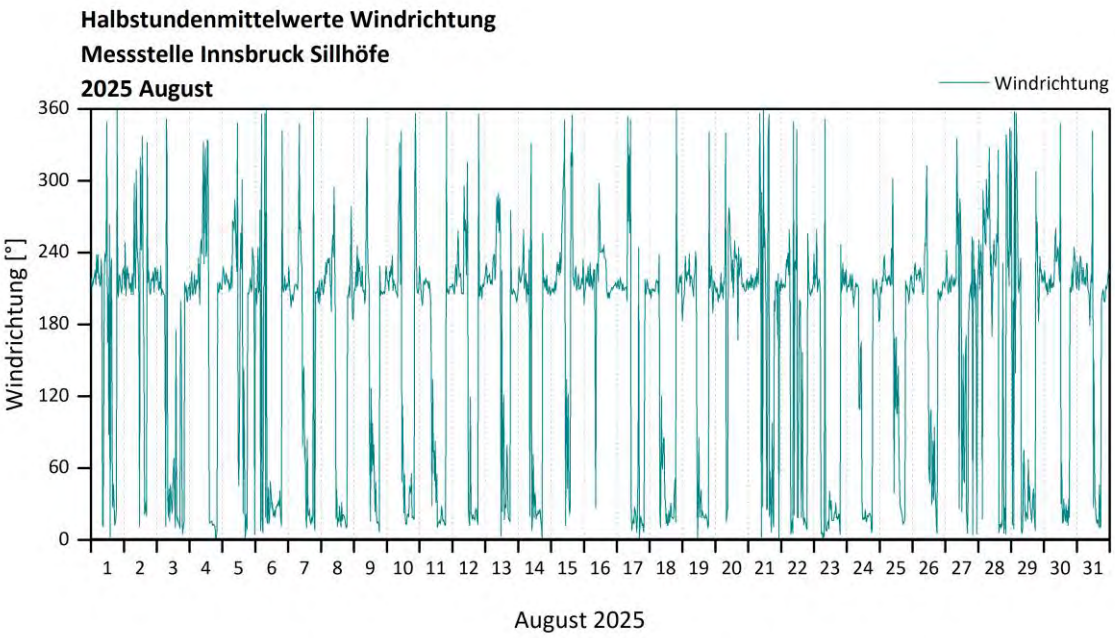
Stickstoffoxide / Ossidi di azoto



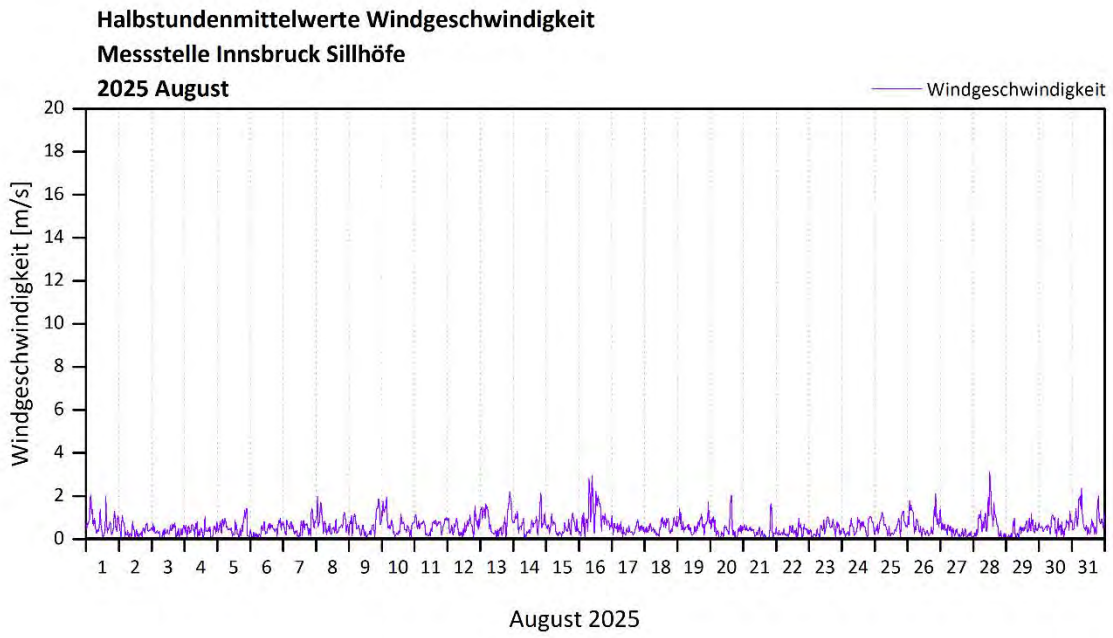
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

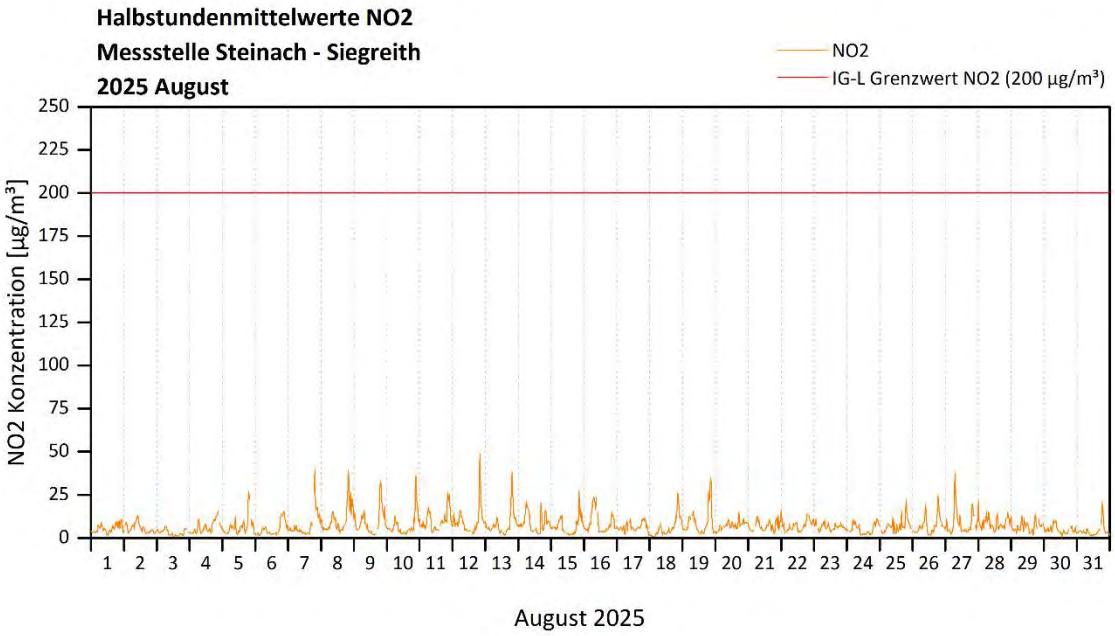


Windgeschwindigkeit / Velocità del vento

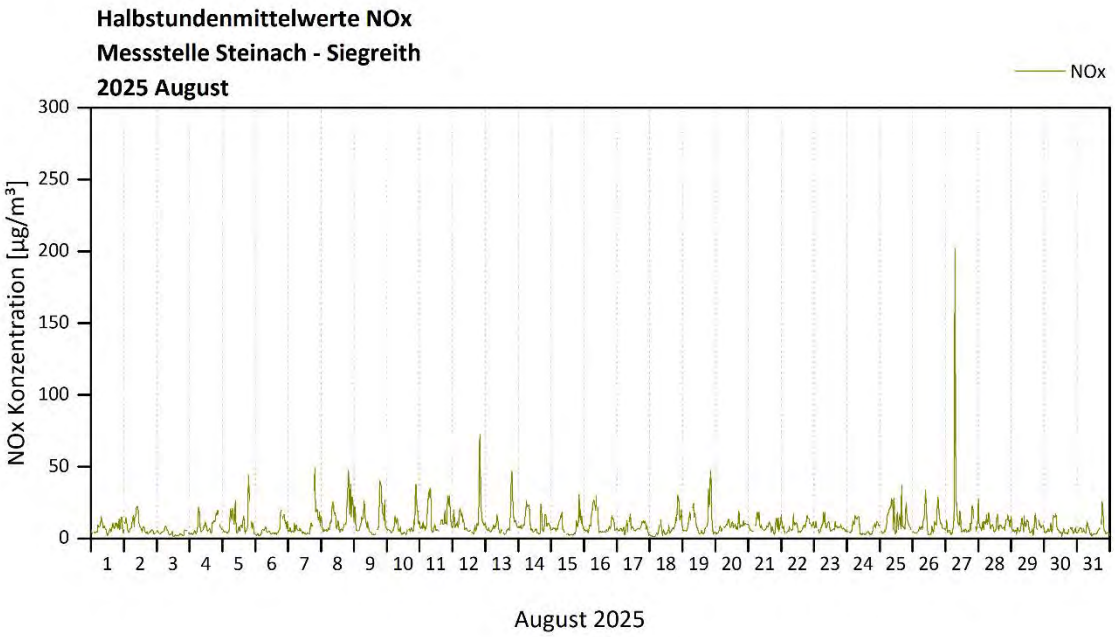


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

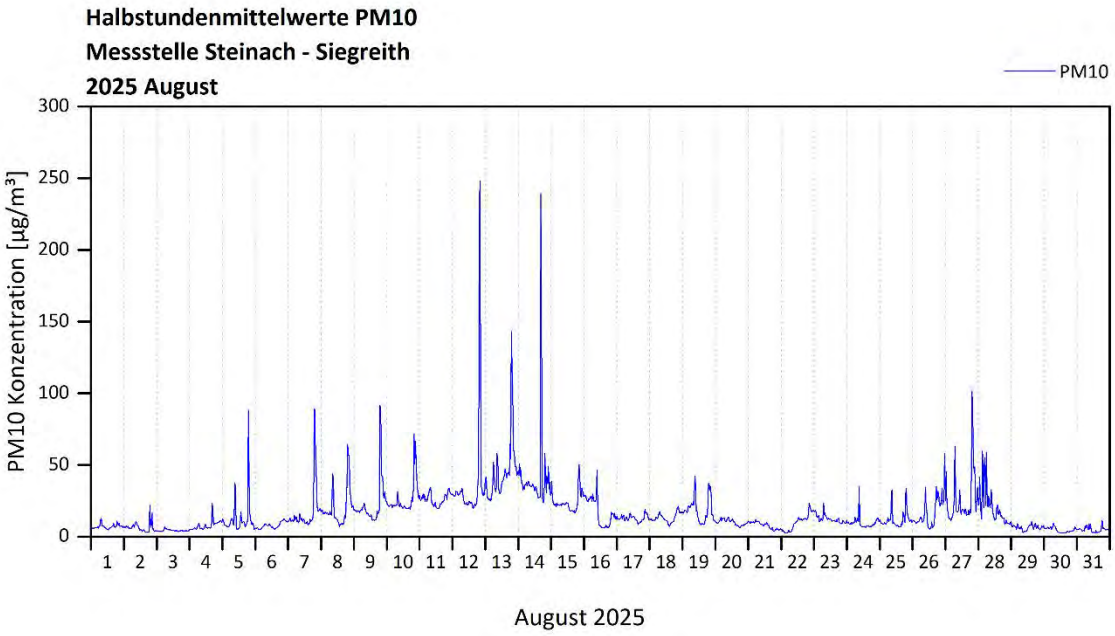
Stickstoffdioxid / Biossido di azoto



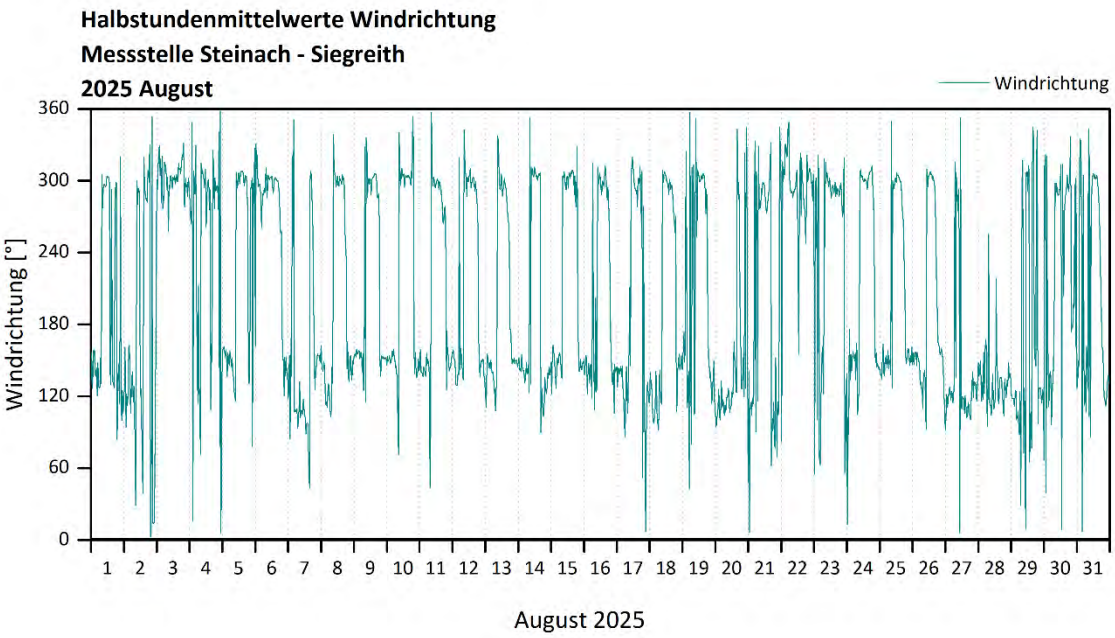
Stickstoffoxide / Ossidi di azoto



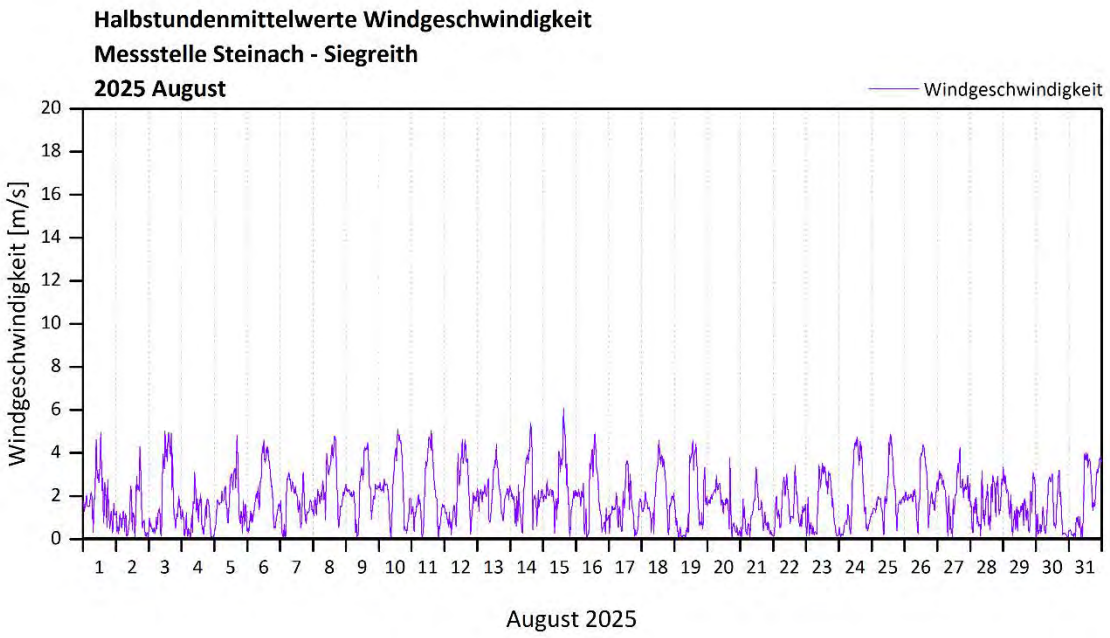
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

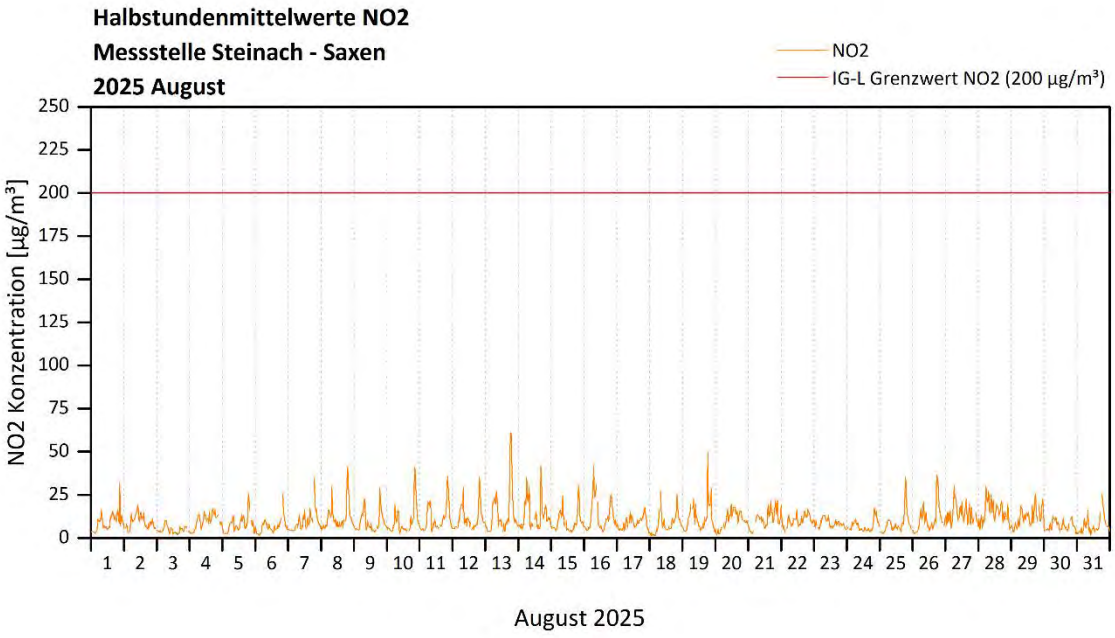


Windgeschwindigkeit / Velocità del vento

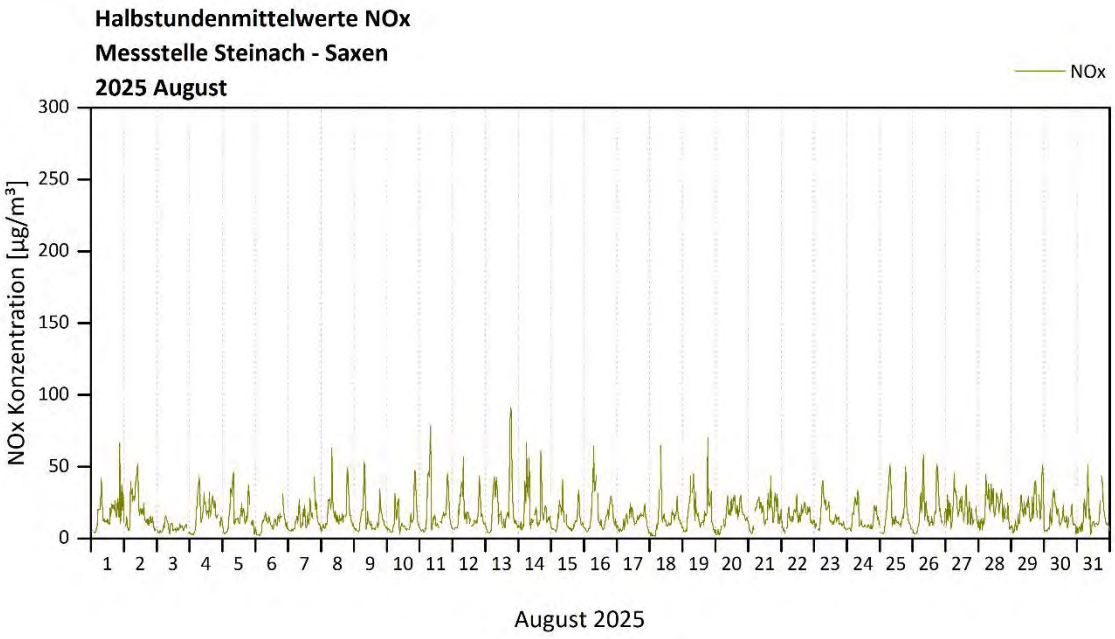


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

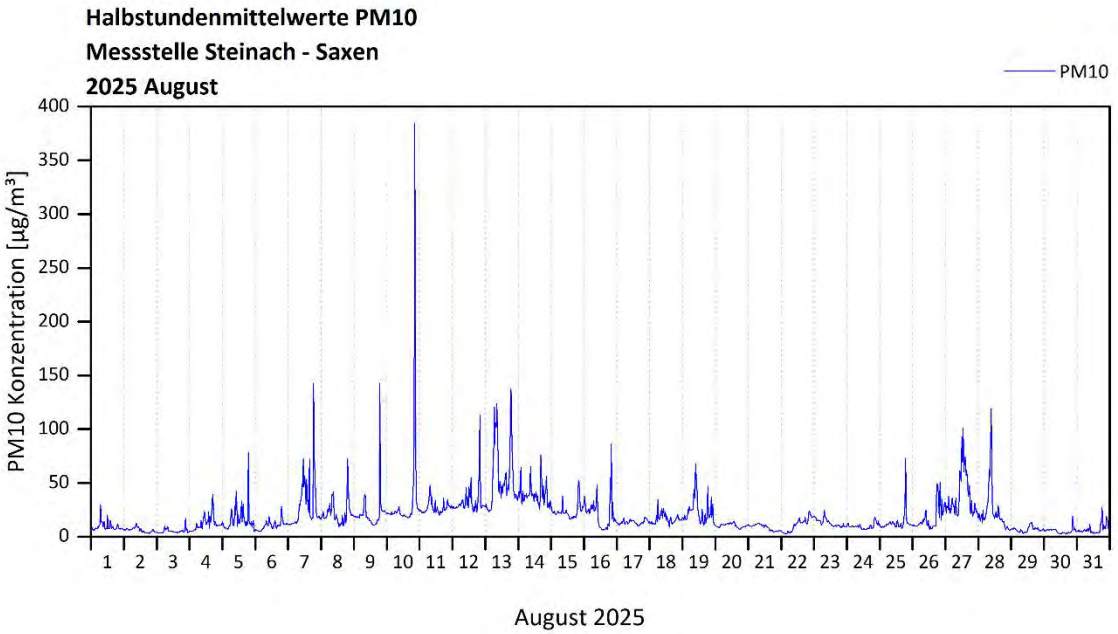
Stickstoffdioxid / Biossido di azoto



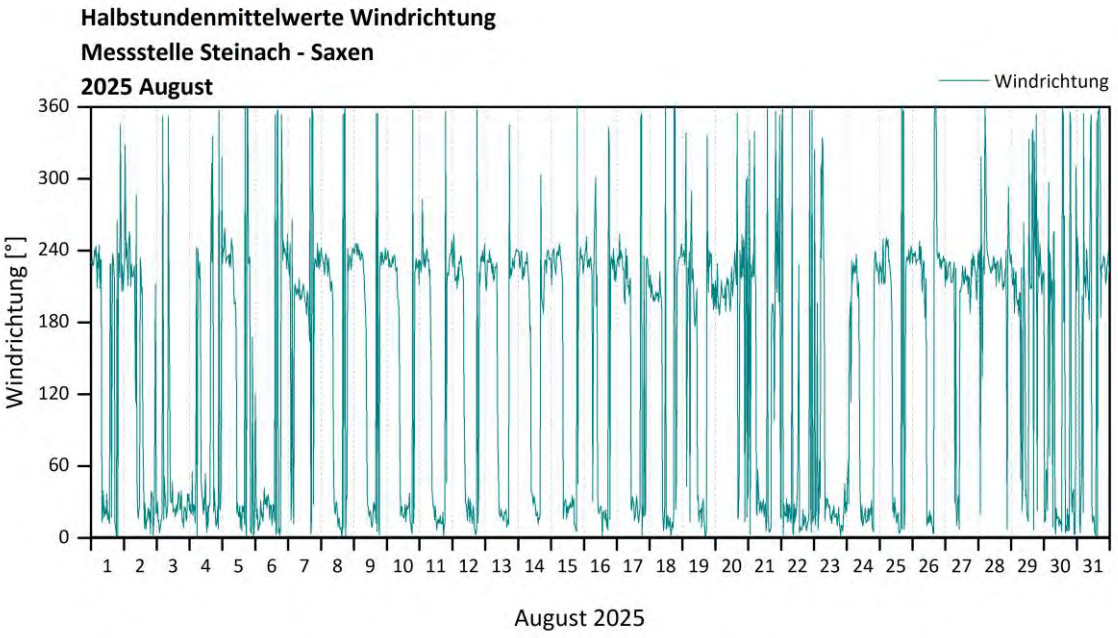
Stickstoffoxide / Ossidi di azoto



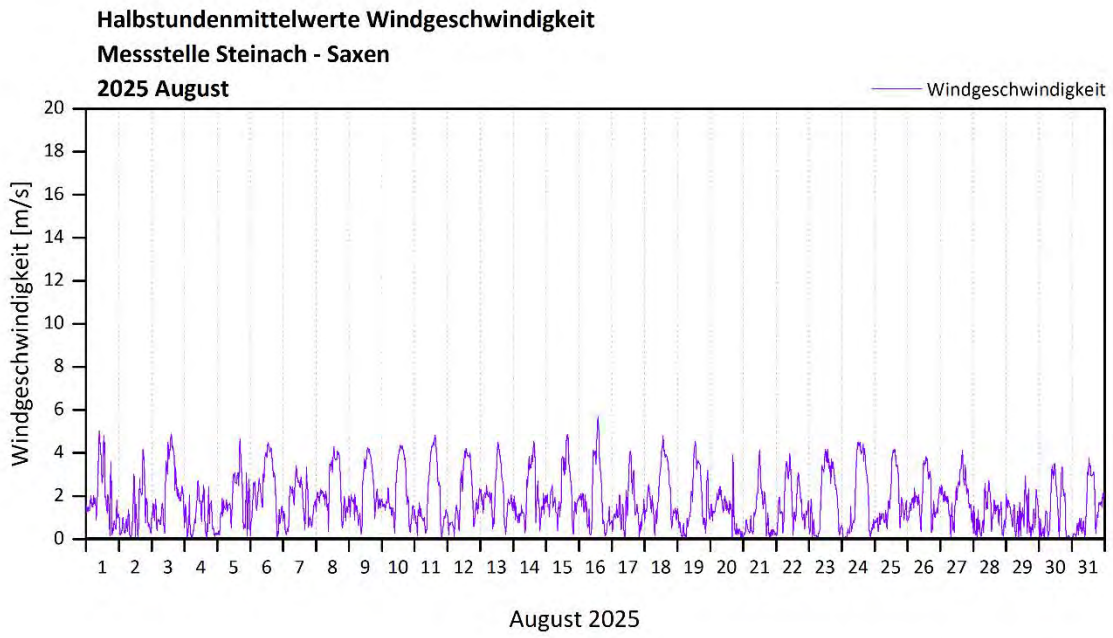
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



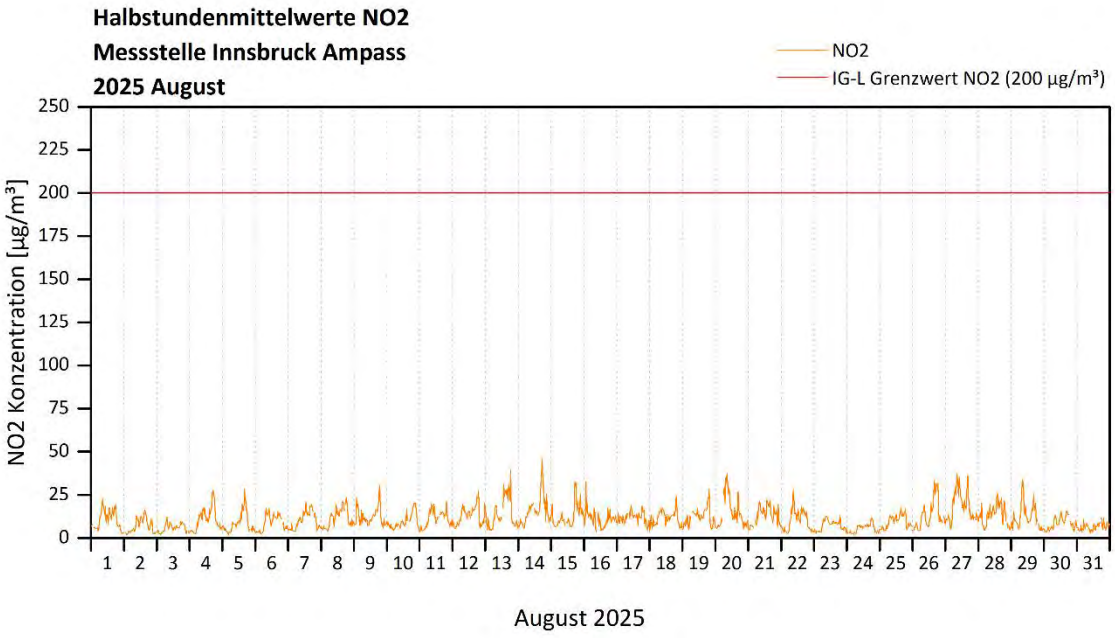
Windgeschwindigkeit / Velocità del vent



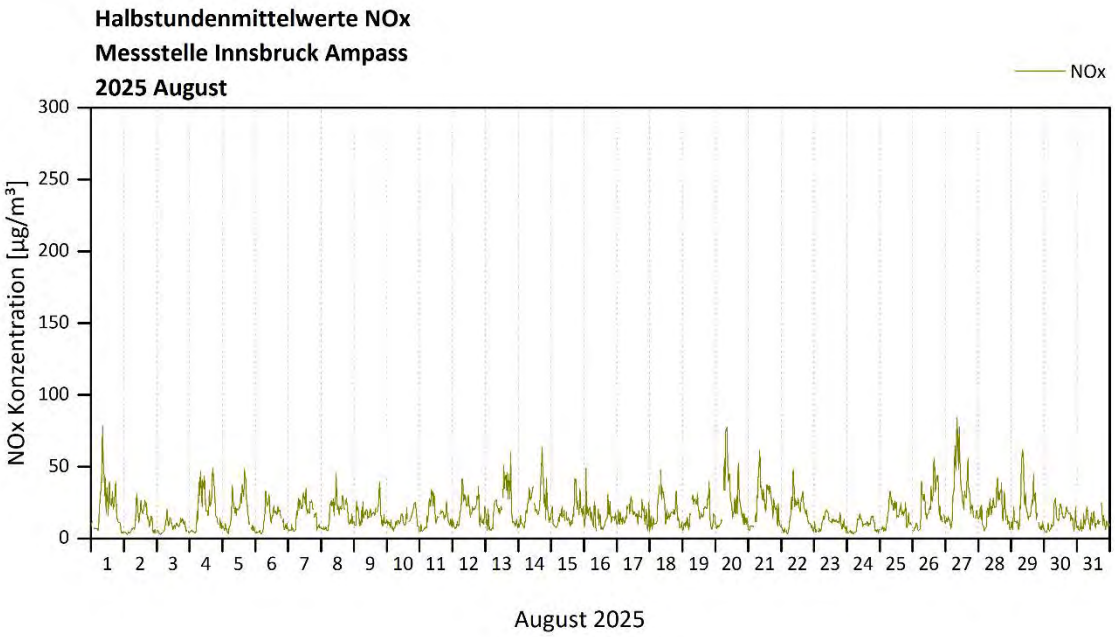
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

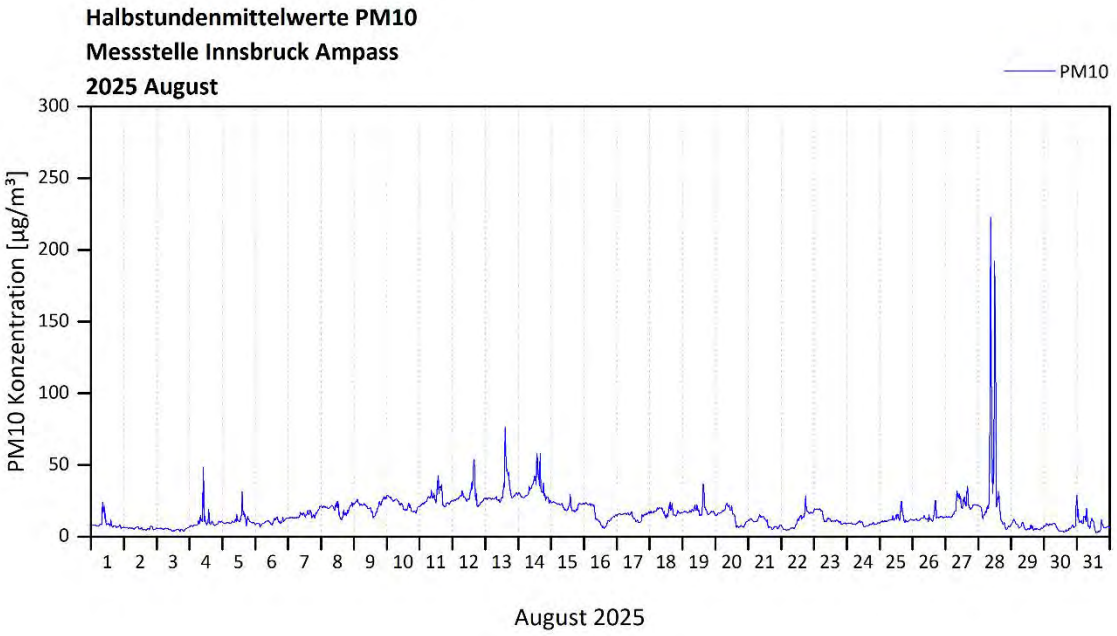
Stickstoffdioxid / Biossido di azoto



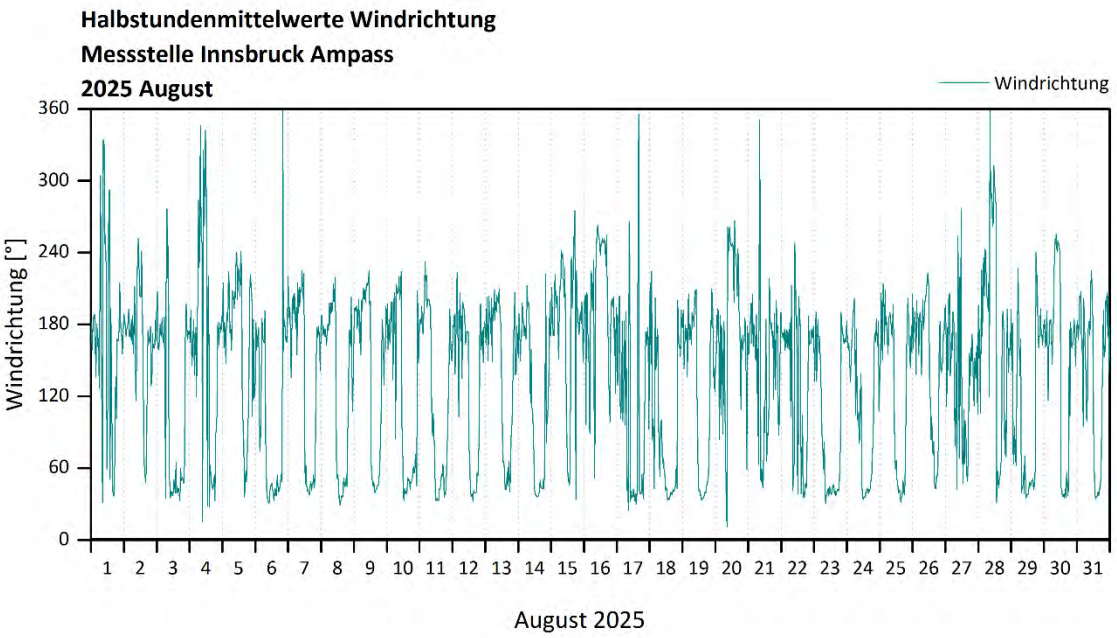
Stickstoffoxide / Ossidi di azoto



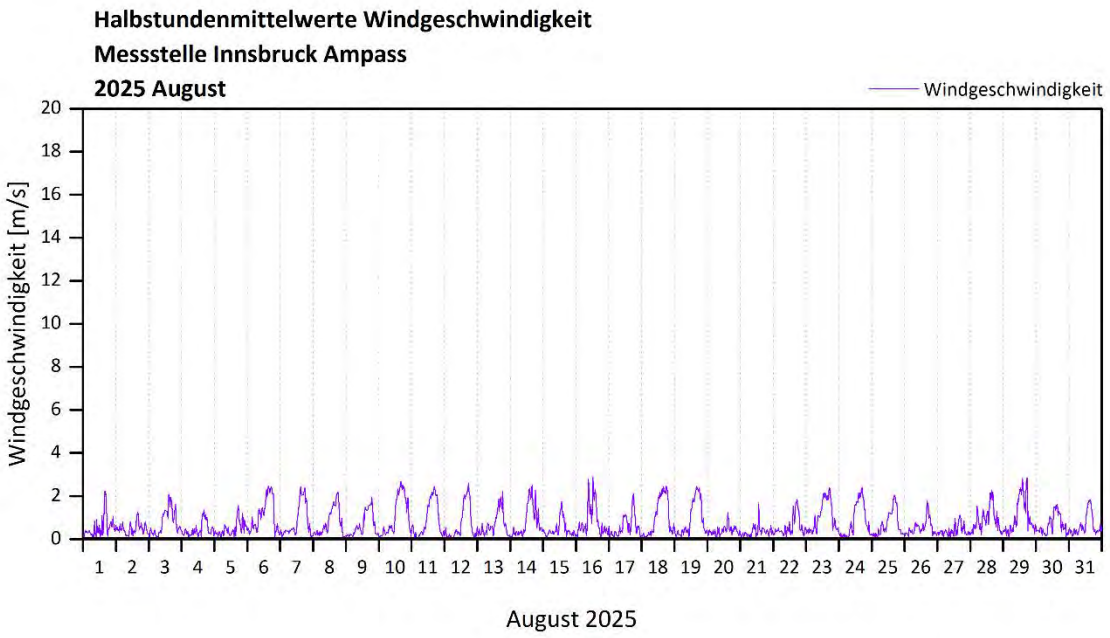
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

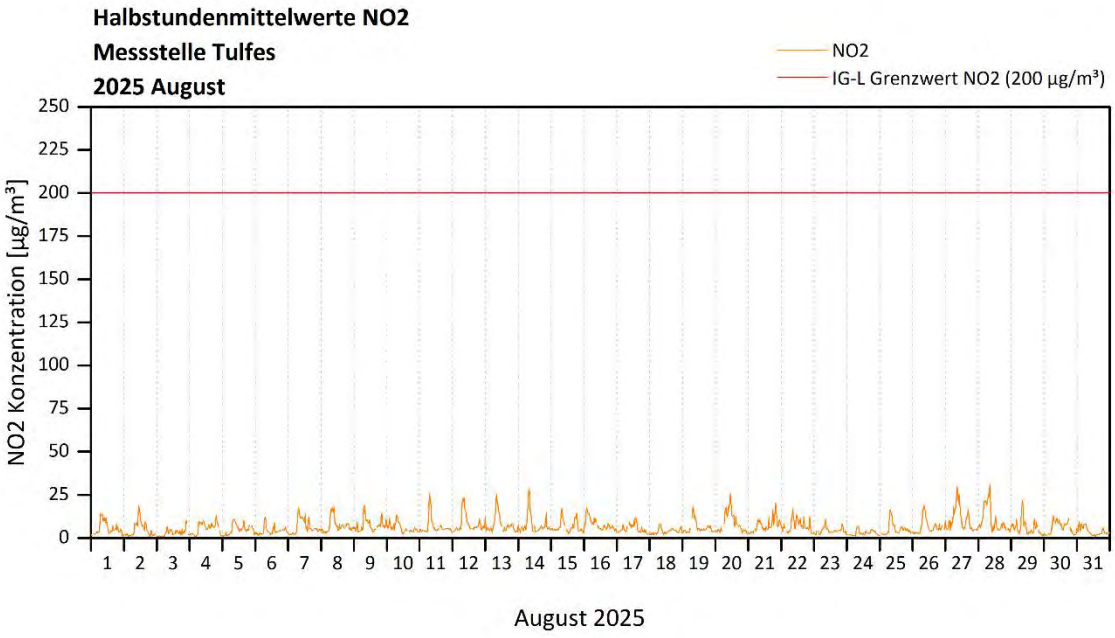


Windgeschwindigkeit / Velocità del vent

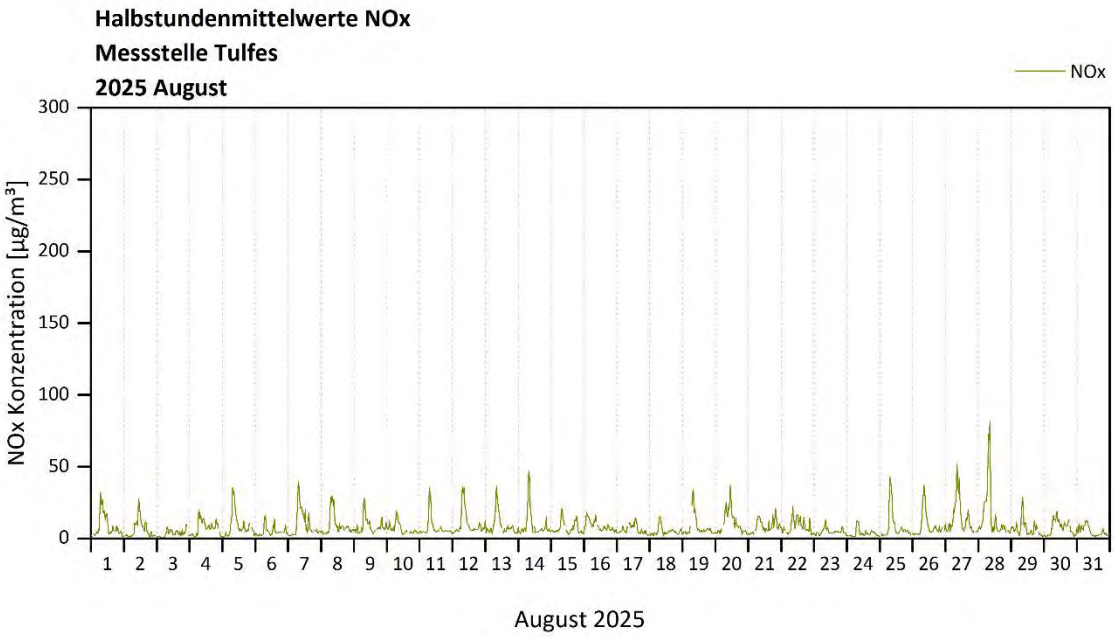


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

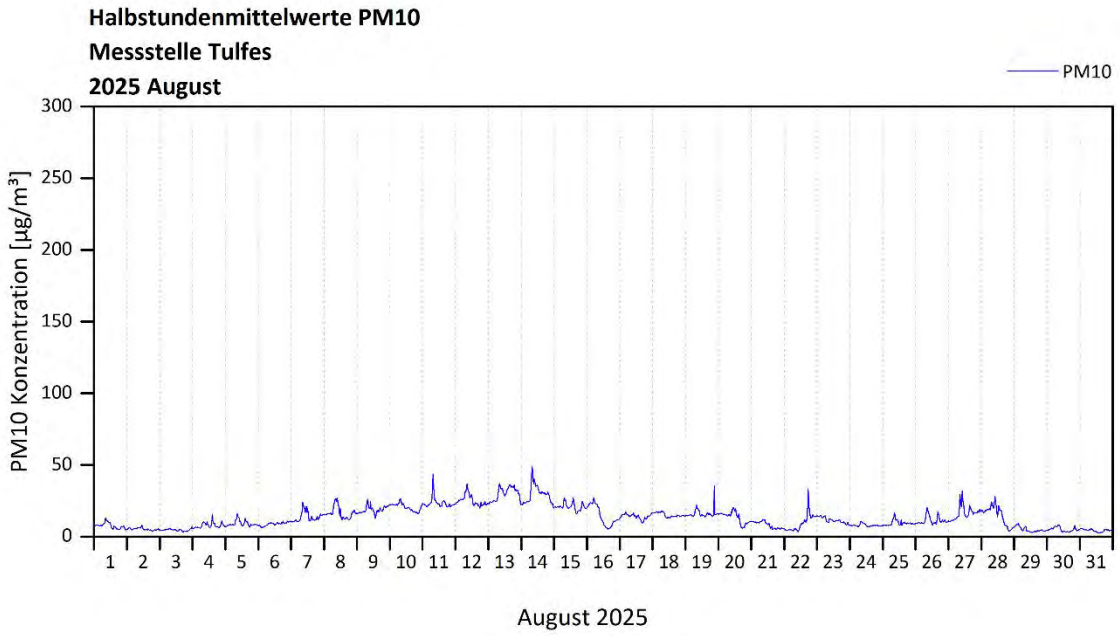
Stickstoffdioxid / Biossido di azoto



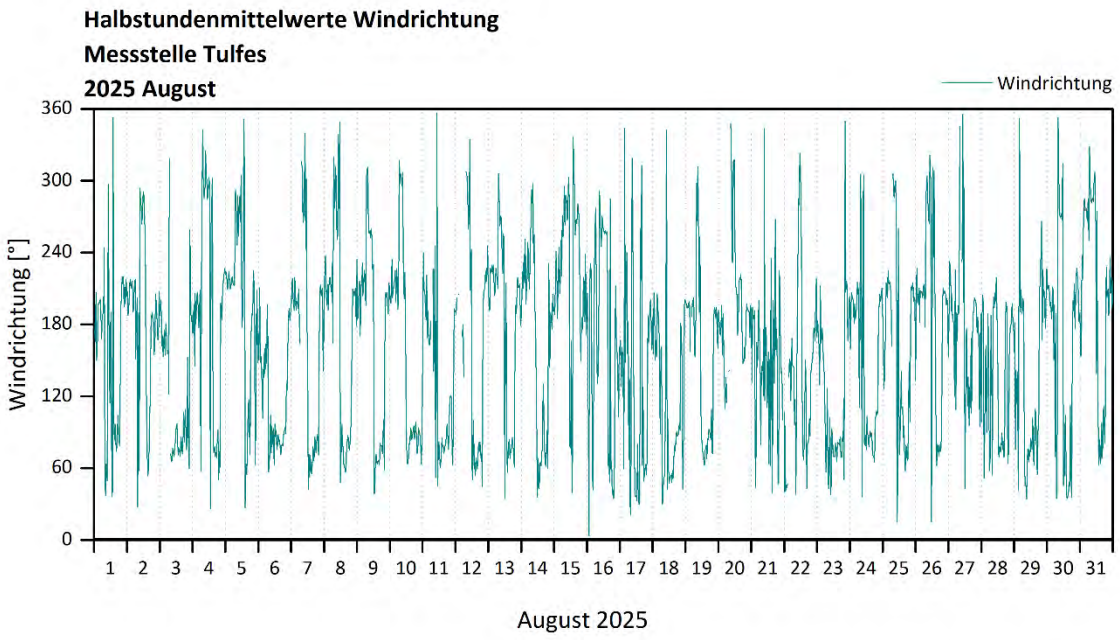
Stickstoffoxide / Ossidi di azoto



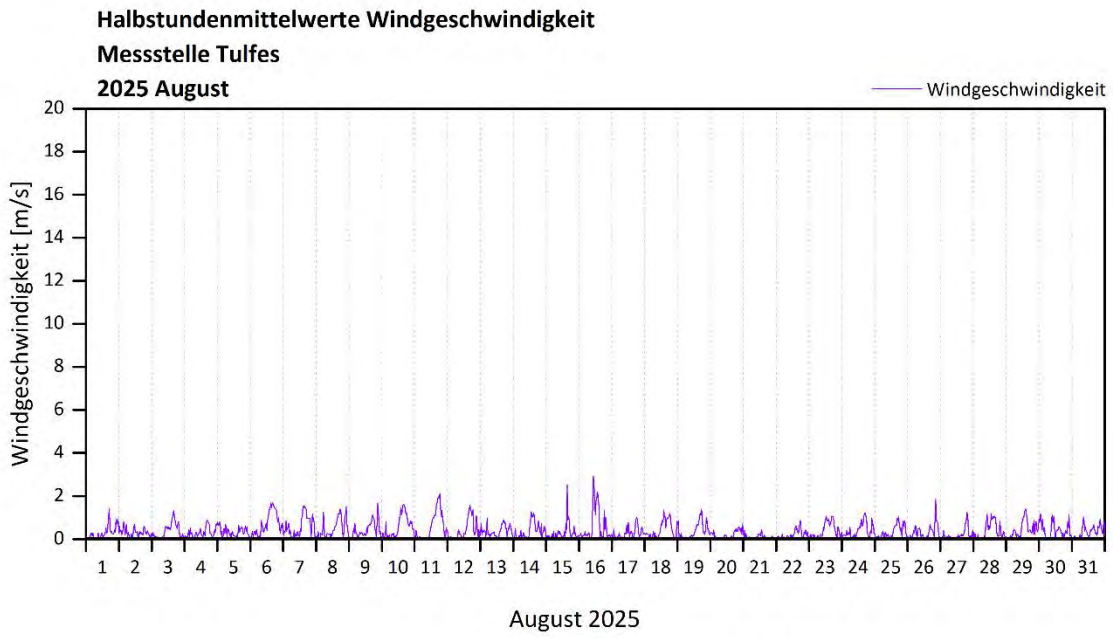
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

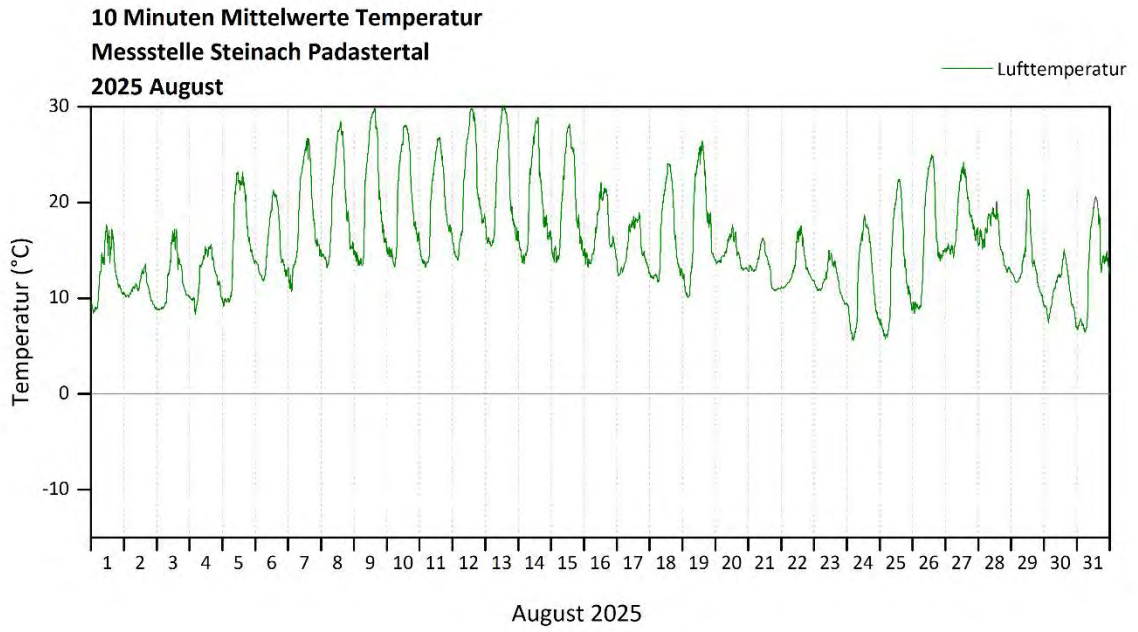


Windgeschwindigkeit / Velocità del vent

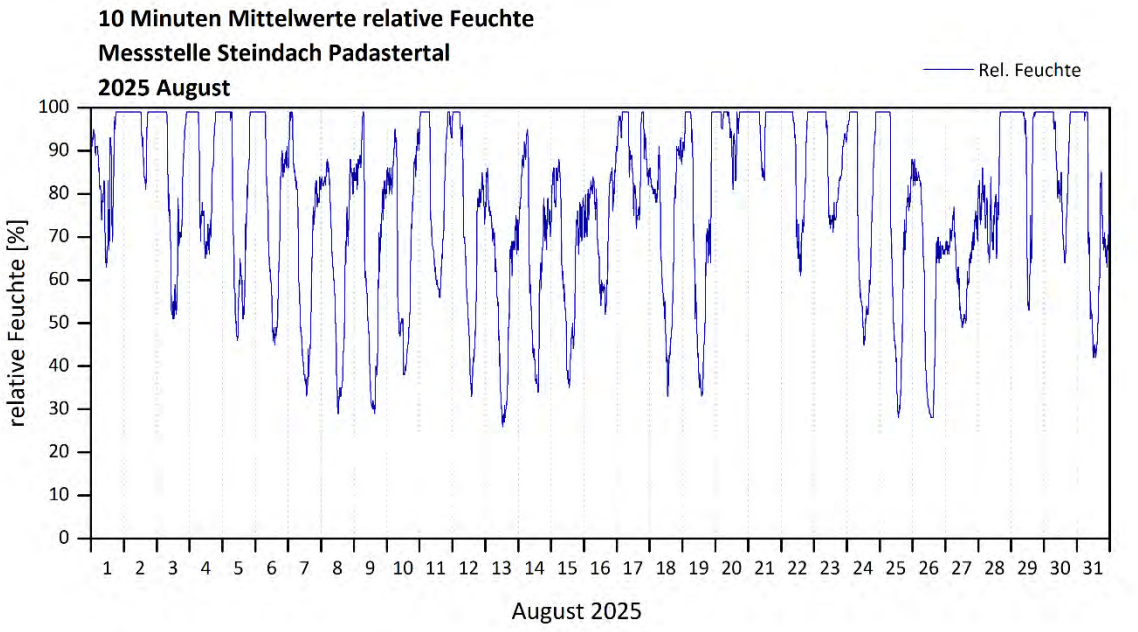


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

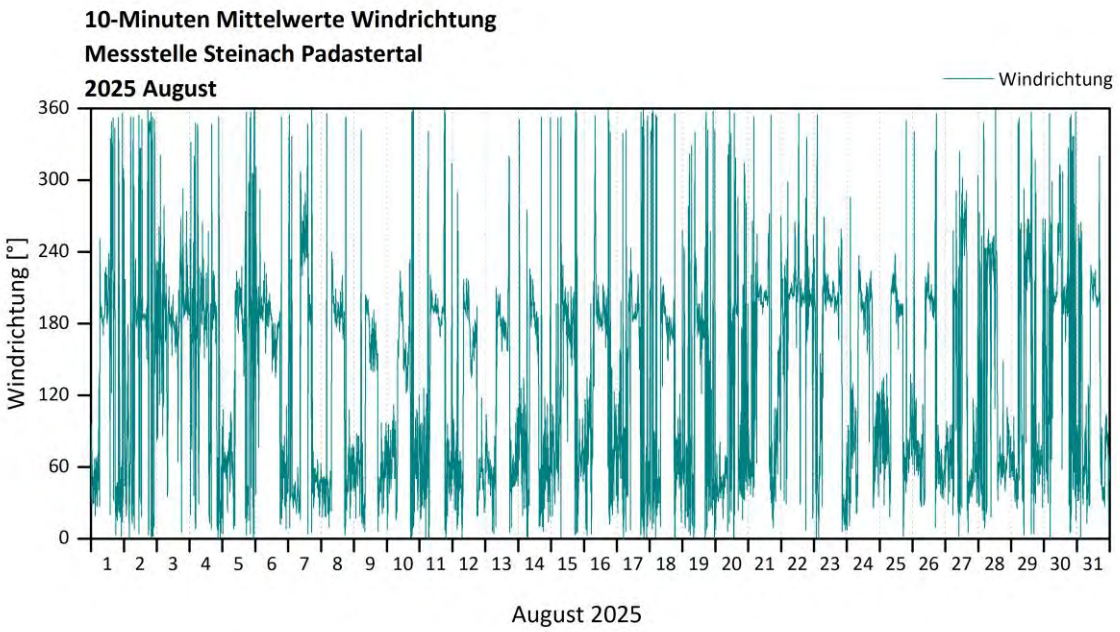
Temperatur / Temeraturà dell'aria



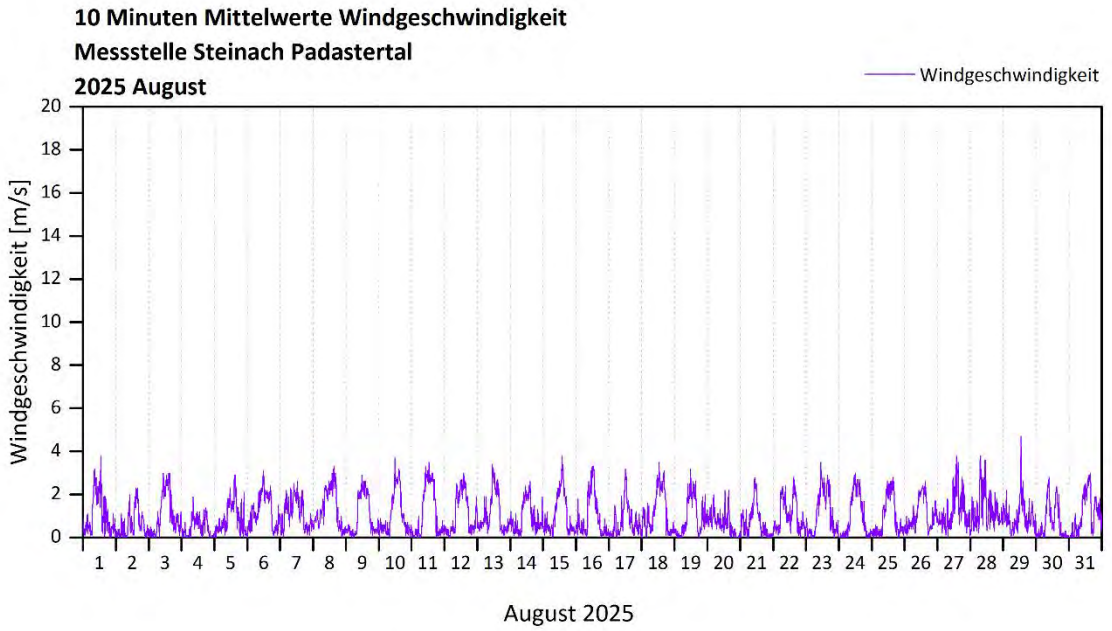
Relative Feuchtigkeit / Umidità relativa



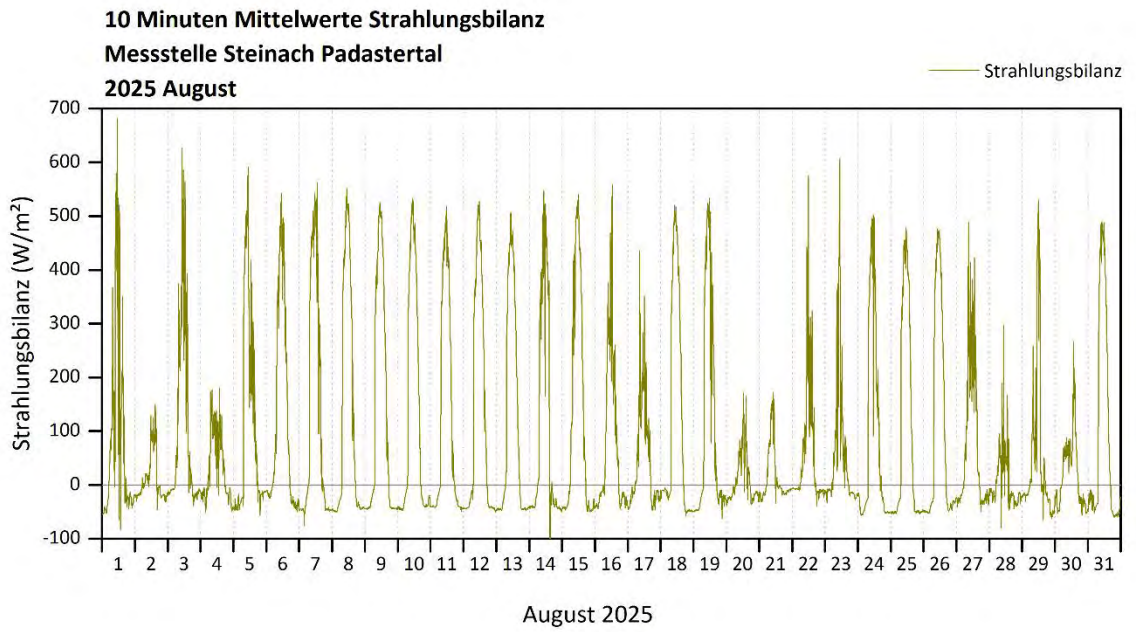
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht September 2025 Relazione mensile settembre 2025

Stickstoffdioxid Biossido di azoto

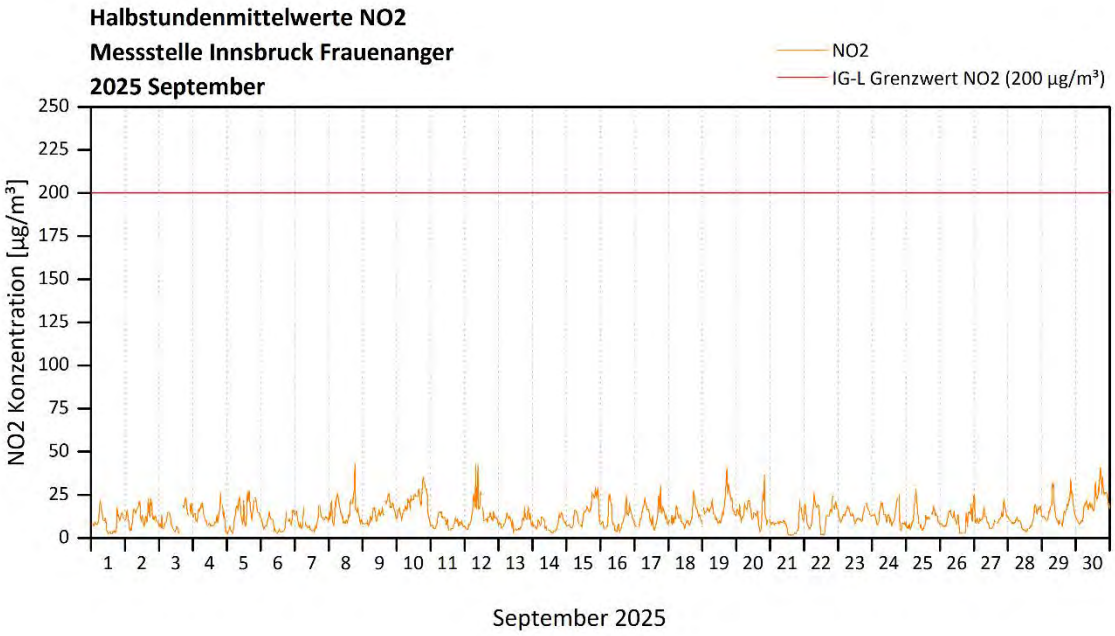
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 und 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	43	12,5	20,5	0		0	
Innsbruck Sillhöfe	47	12,6	19,3	0		0	
Steinach Siegreith	41	7,6	12,9	0		0	
Steinach Saxen	50	11,2	17,8	0		0	
Ampass	50	11,2	18,3	0		0	
Tulfes	30	6,4	10,4	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

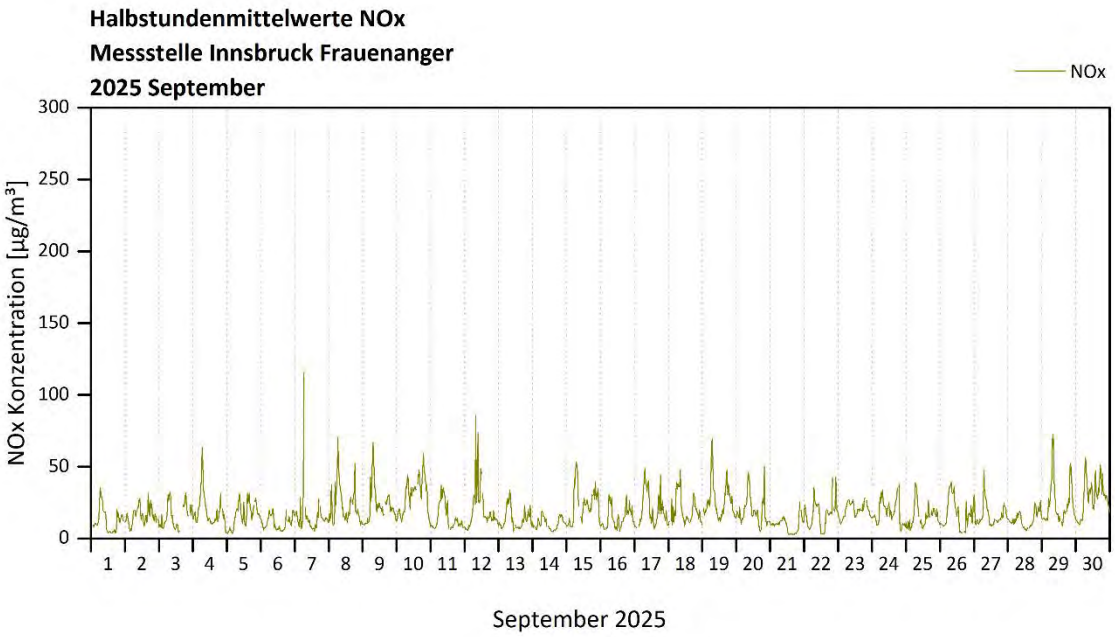
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 und 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	22	8,0	14,2	0		0	
Innsbruck Sillhöfe	38	8,9	15,8	0		0	
Steinach Siegreith	119	9,3	17,2	0		0	
Steinach Saxen	195	12,9	30,4	0		0	
Ampass	138	12,9	31,0	0		0	
Tulfes	28	8,7	16,4	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

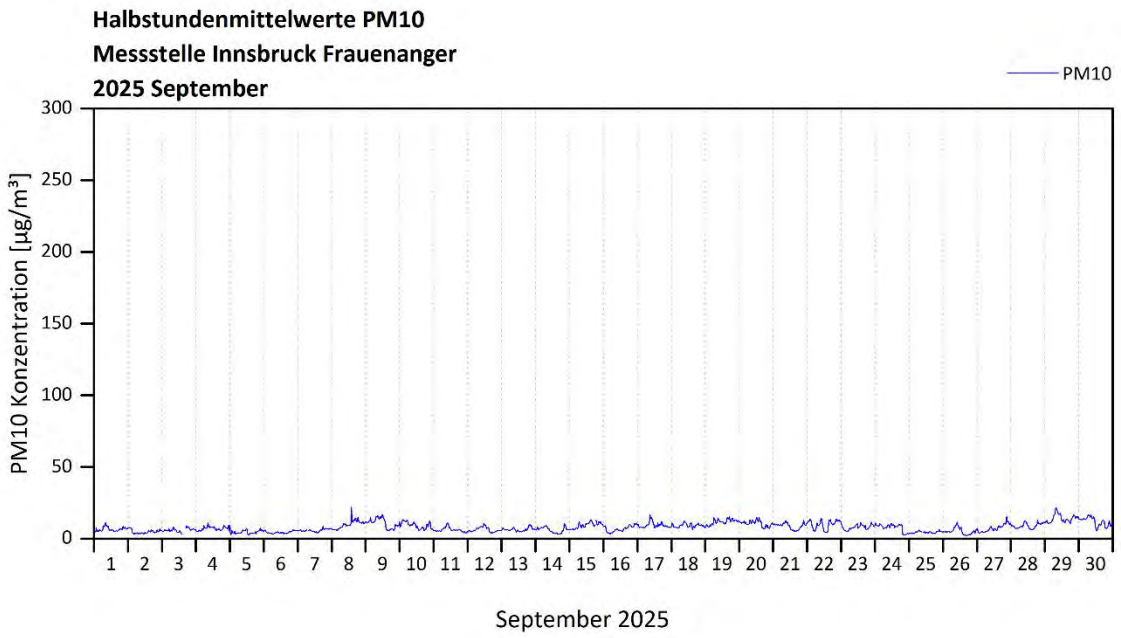
Stickstoffdioxid / Biossido di azoto



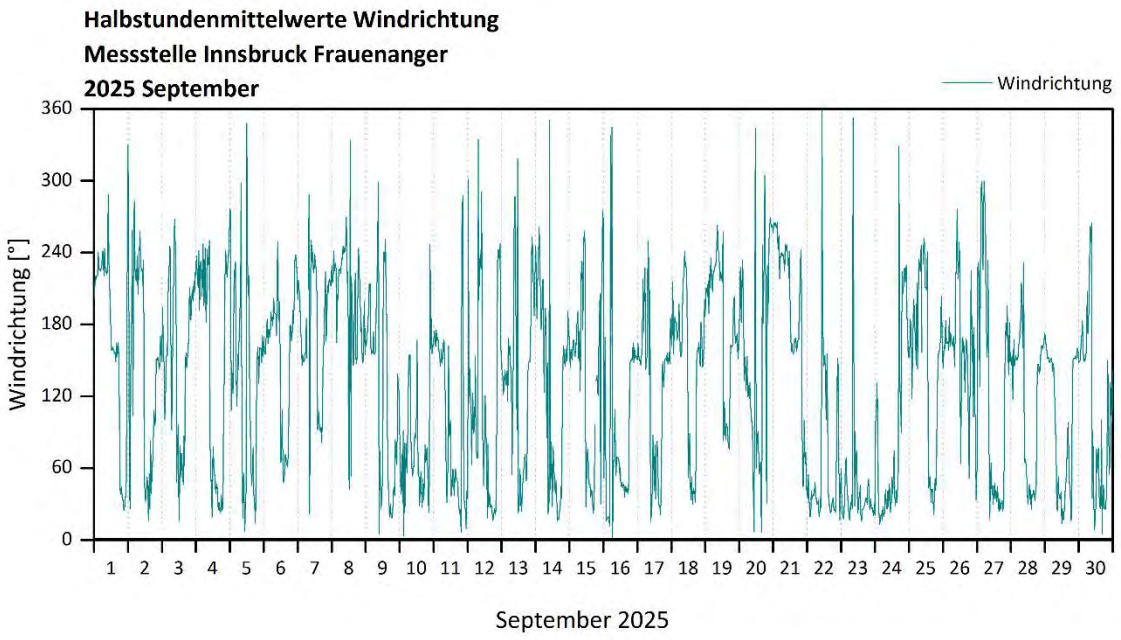
Stickstoffoxide / Ossidi di azoto



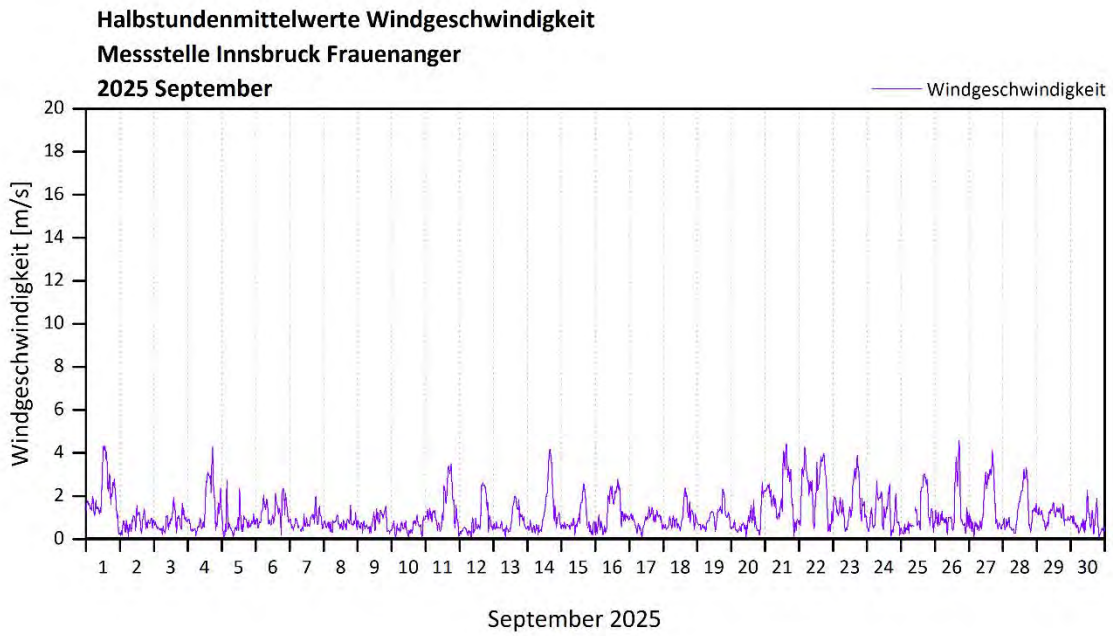
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

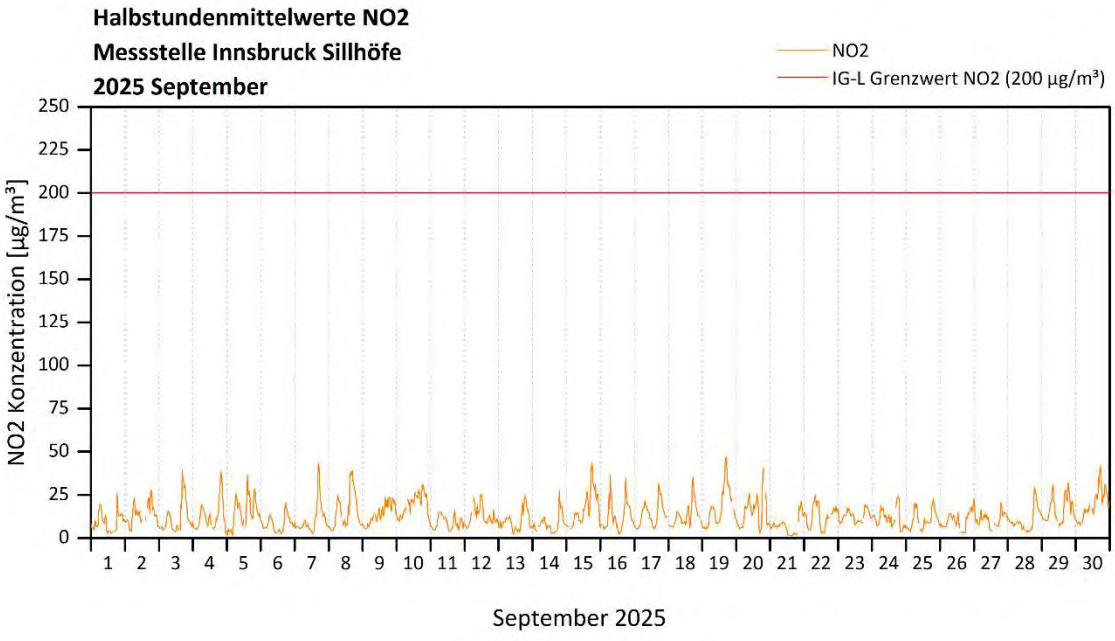


Windgeschwindigkeit / Velocità del vento

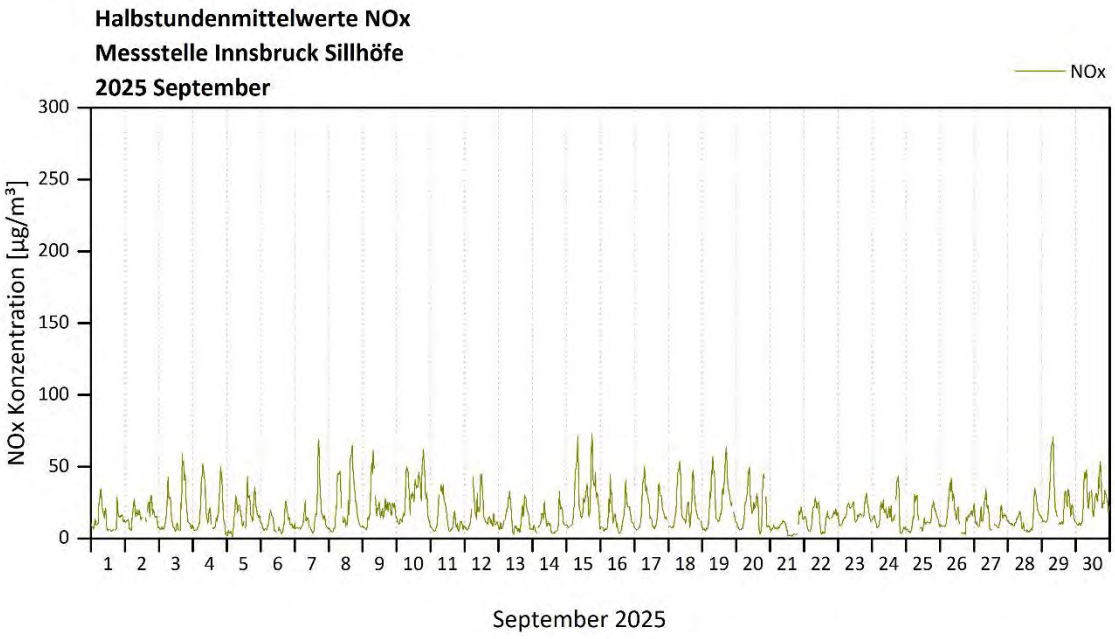


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

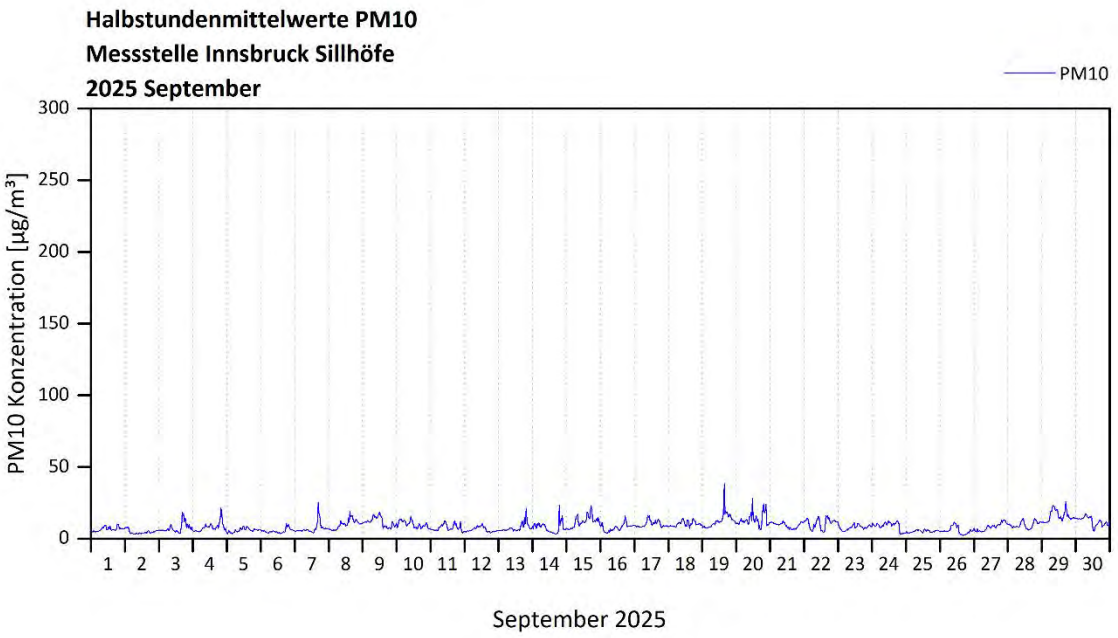
Stickstoffdioxid / Biossido di azoto



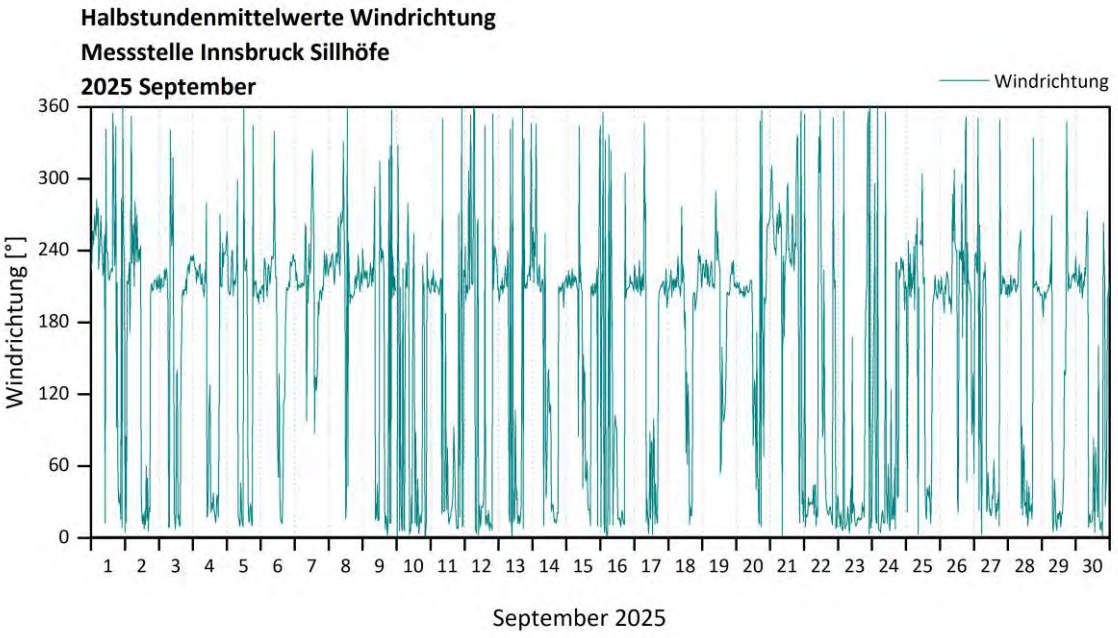
Stickstoffoxide / Ossidi di azoto



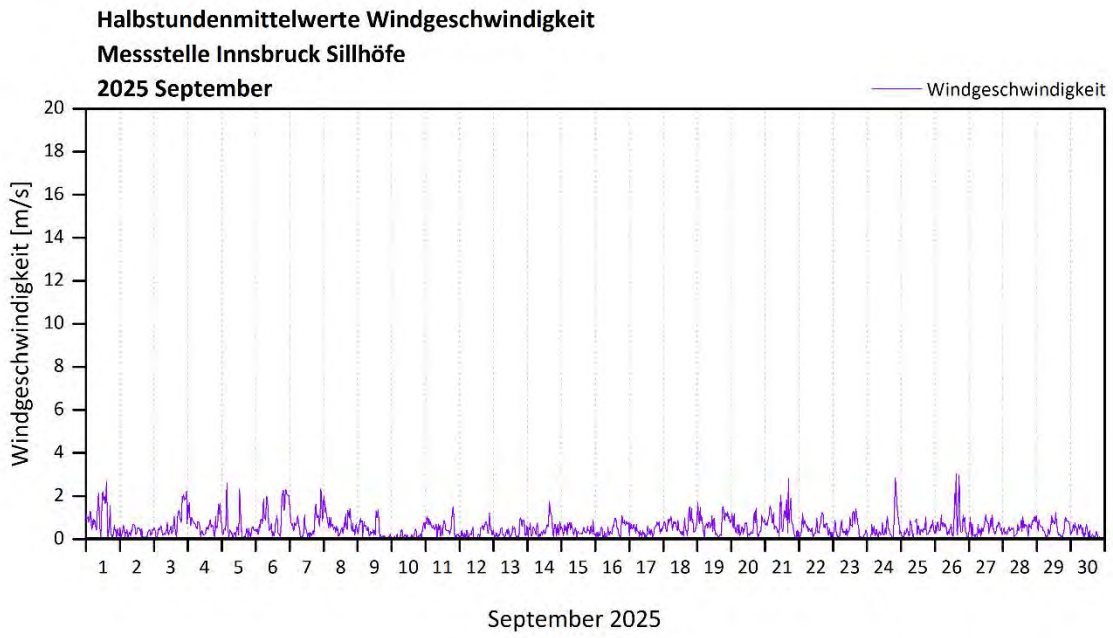
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

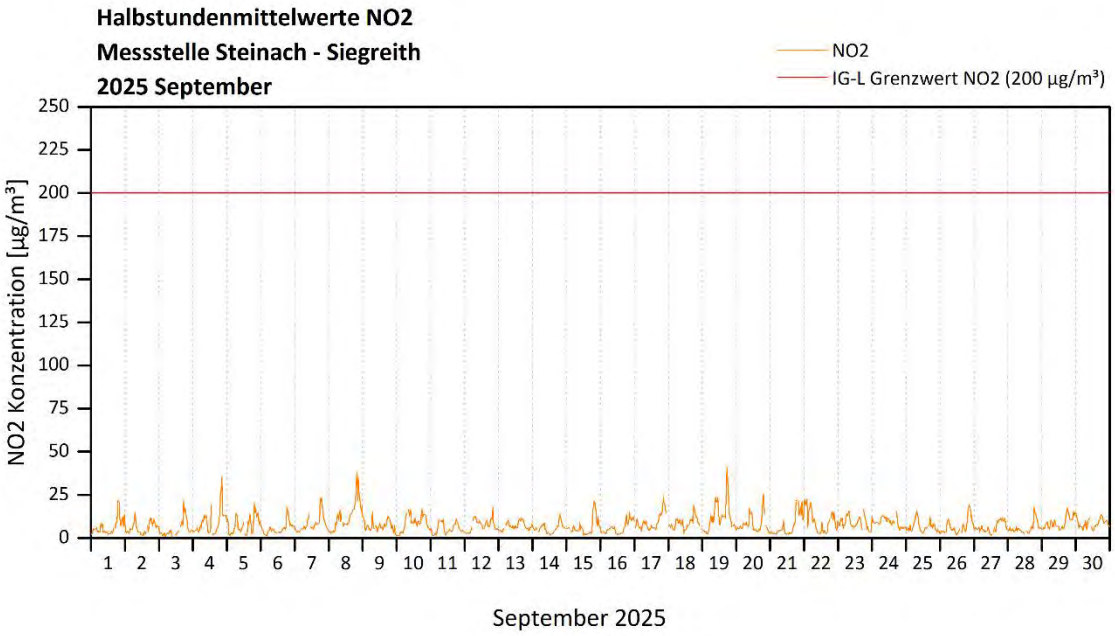


Windgeschwindigkeit / Velocità del vento

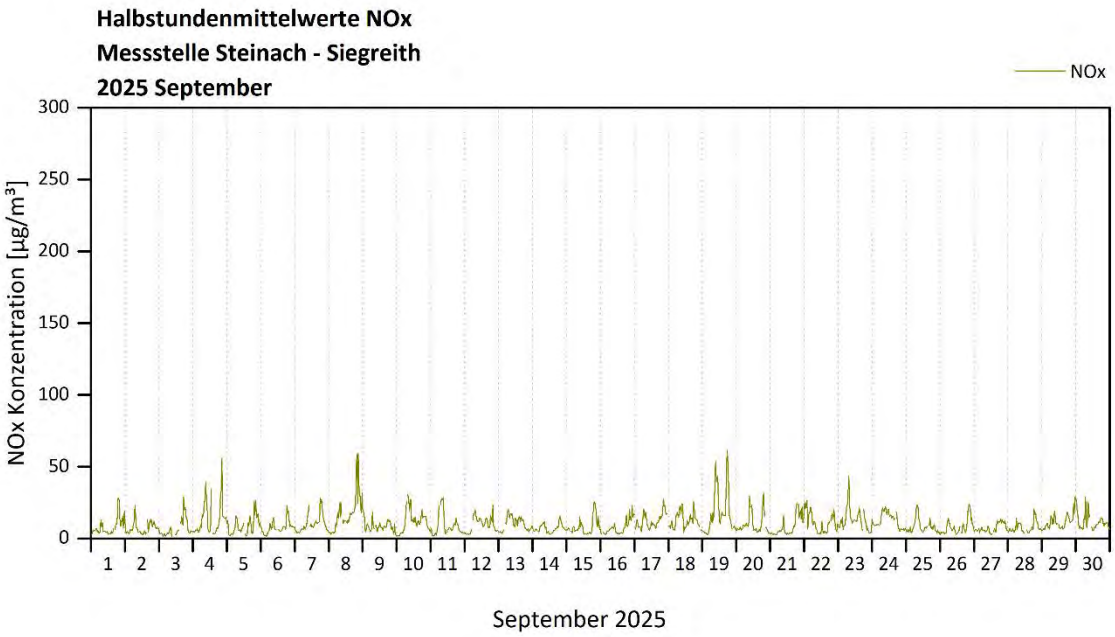


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

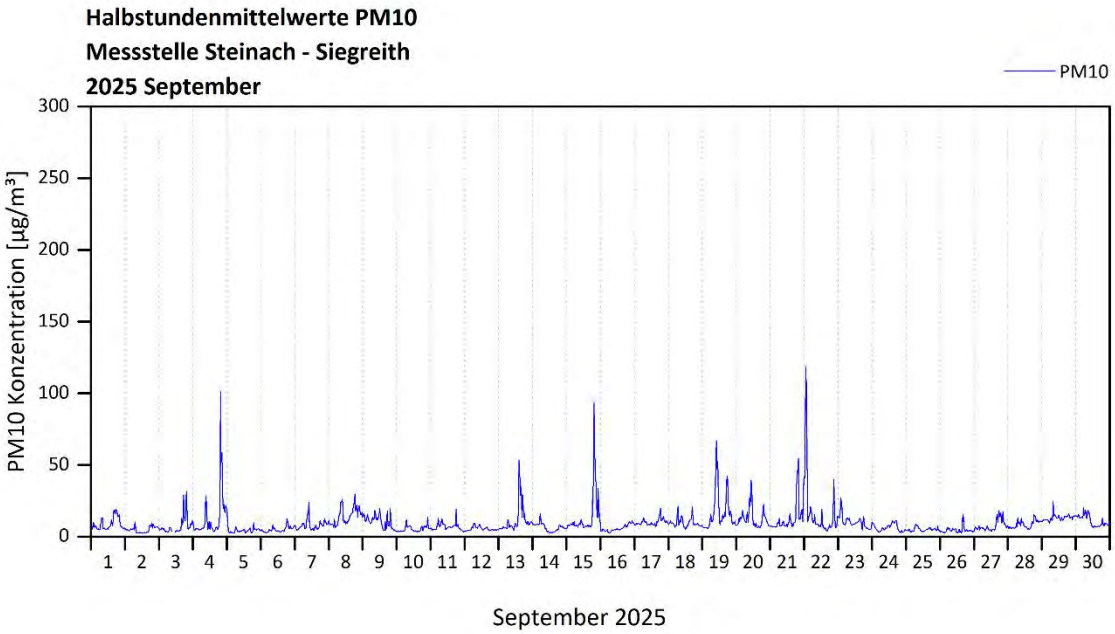
Stickstoffdioxid / Biossido di azoto



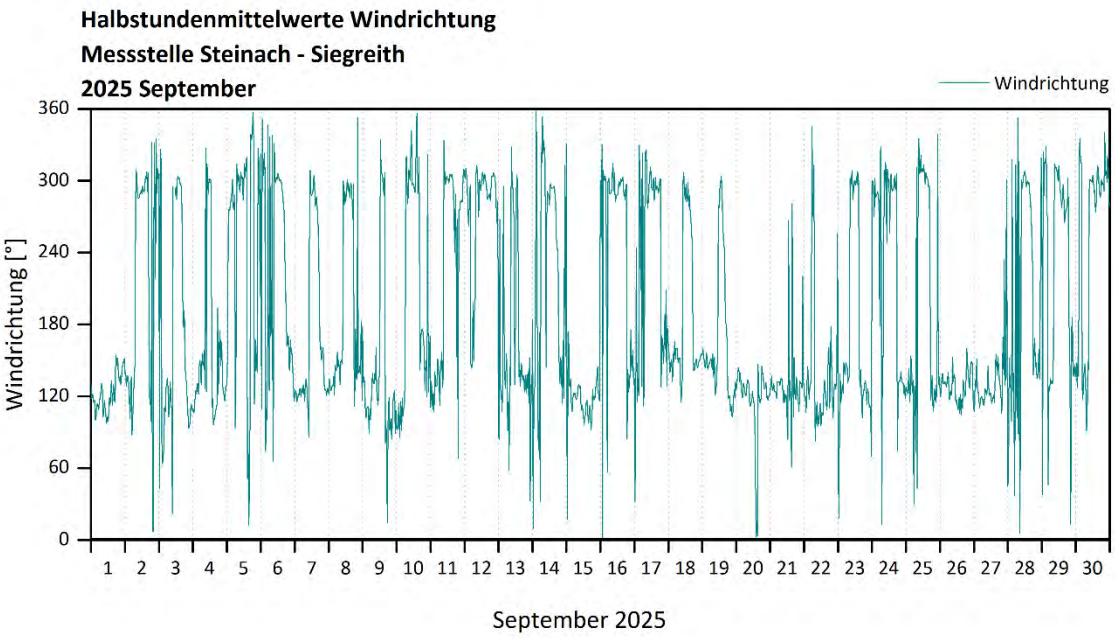
Stickstoffoxide / Ossidi di azoto



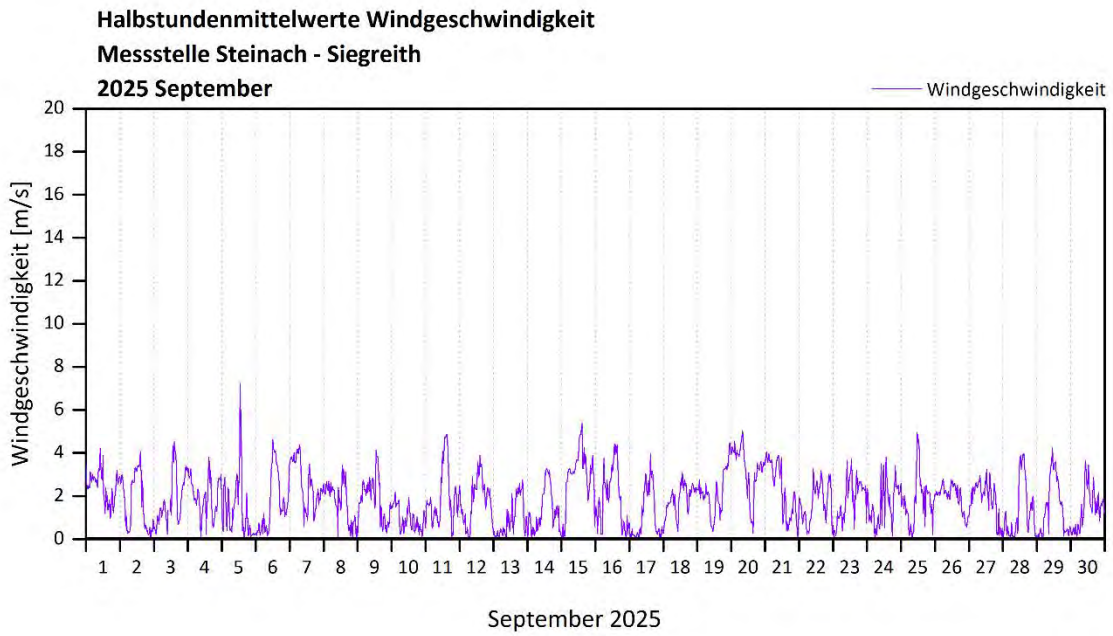
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

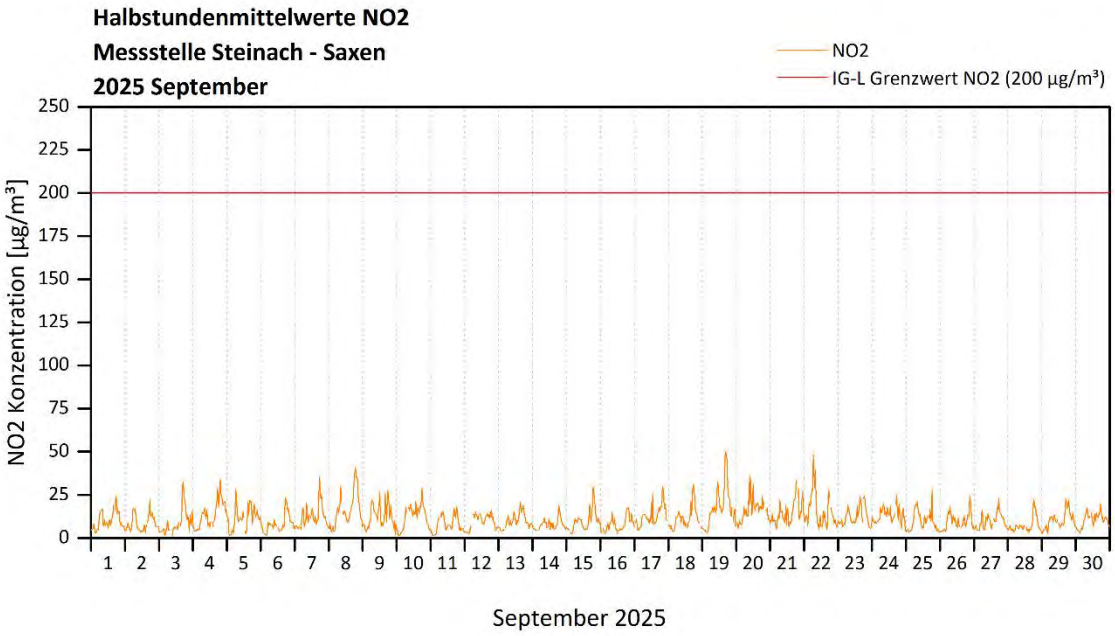


Windgeschwindigkeit / Velocità del vento

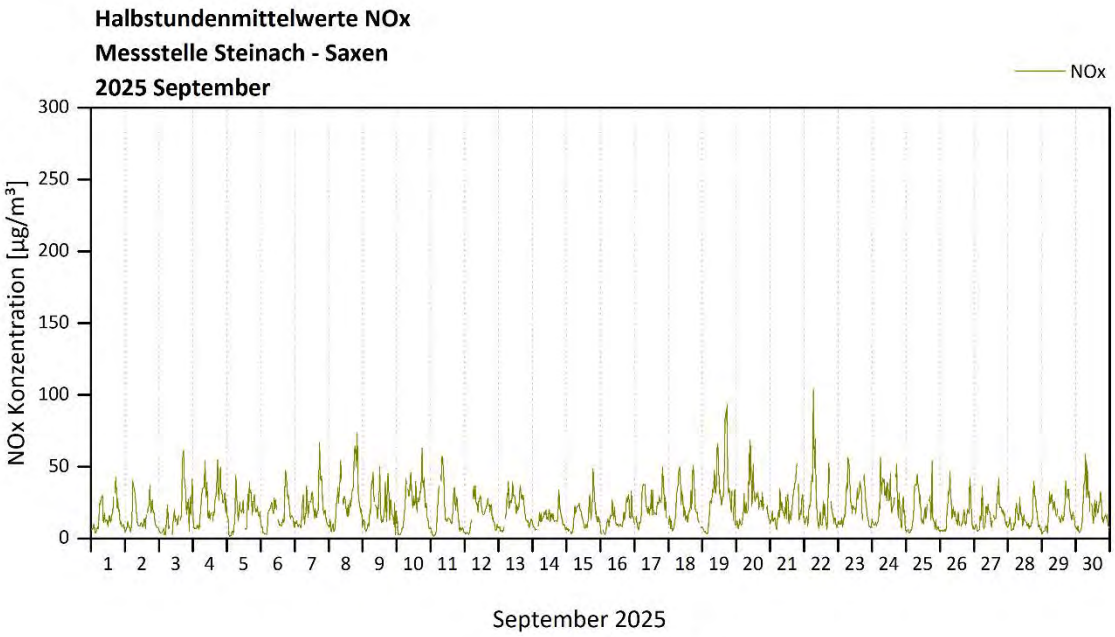


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

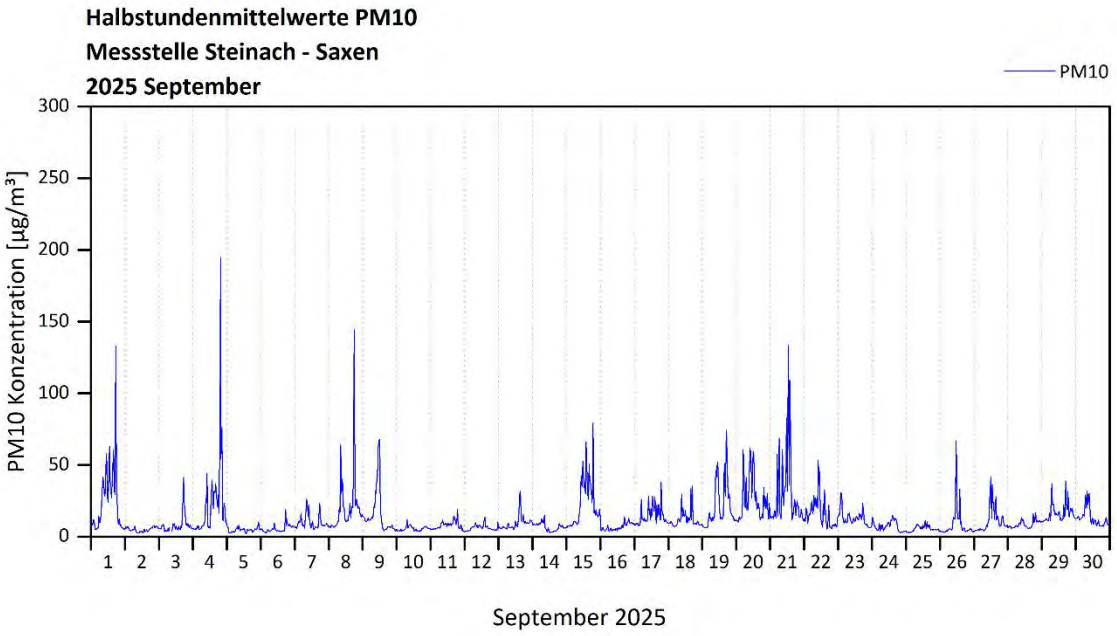
Stickstoffdioxid / Biossido di azoto



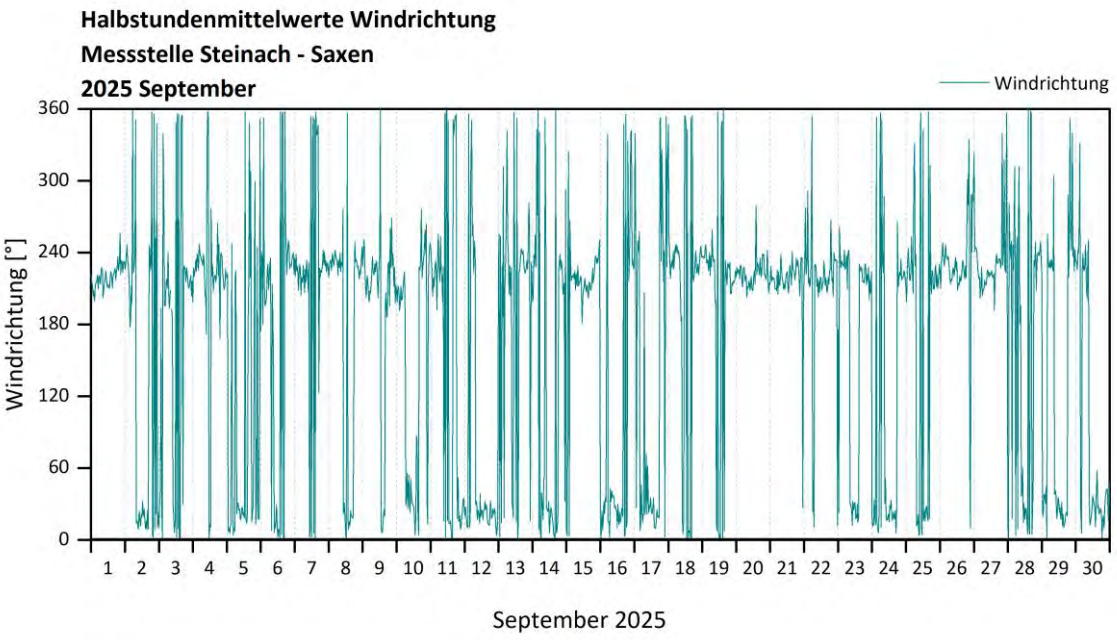
Stickstoffoxide / Ossidi di azoto



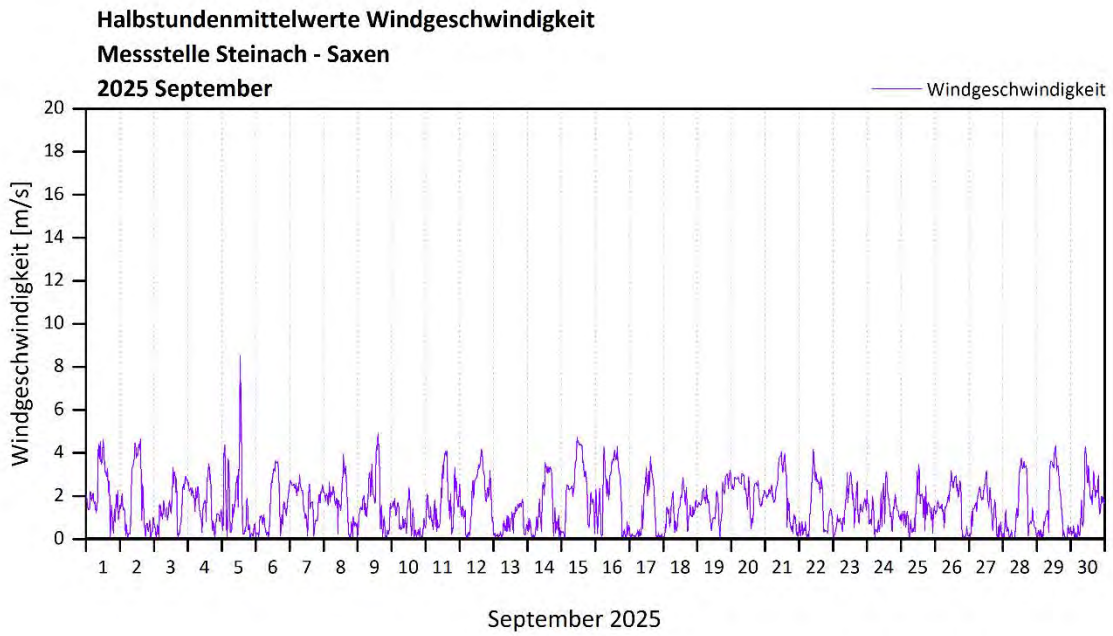
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



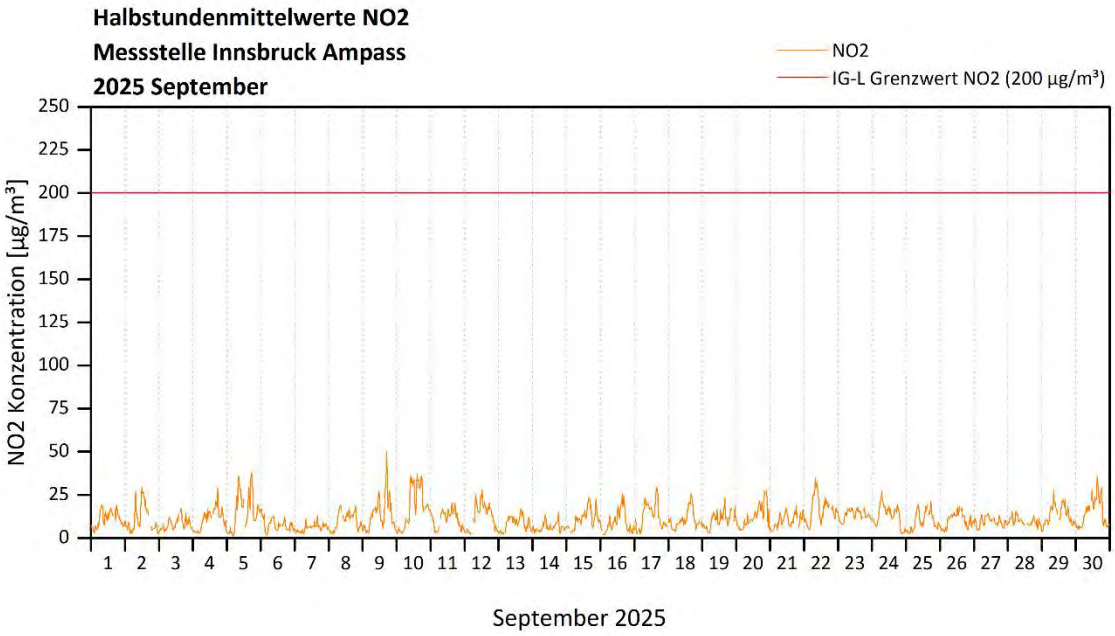
Windgeschwindigkeit / Velocità del vent



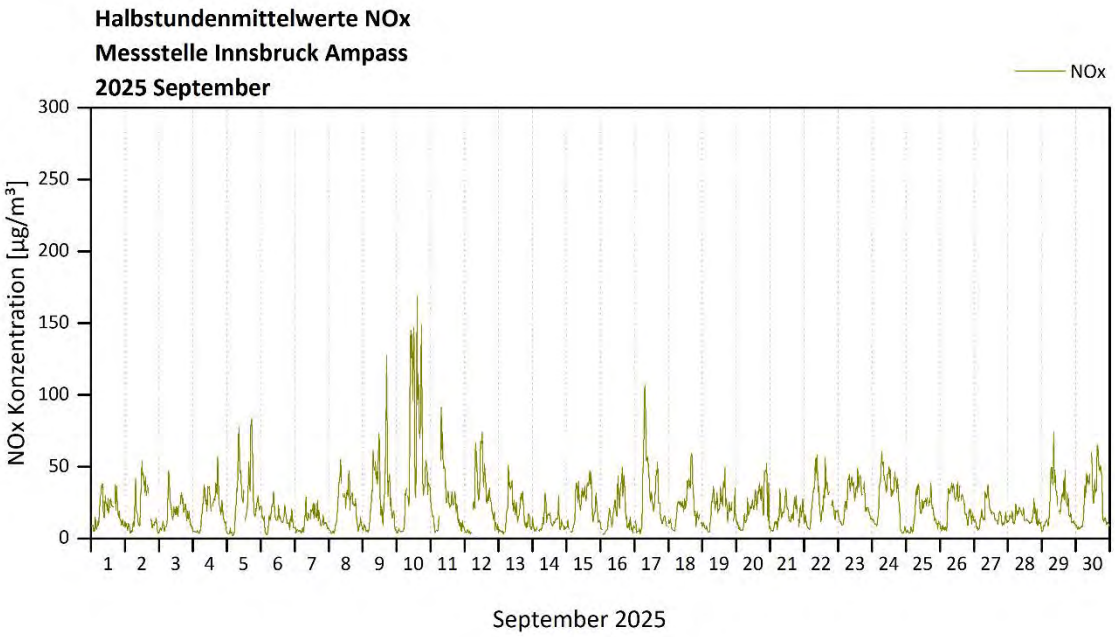
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

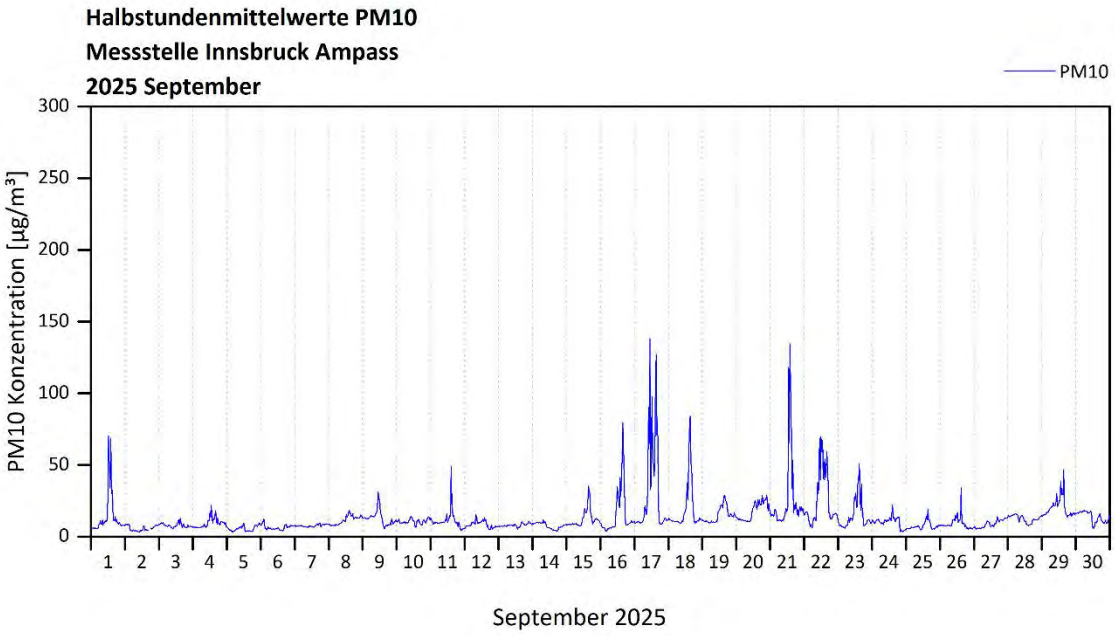
Stickstoffdioxid / Biossido di azoto



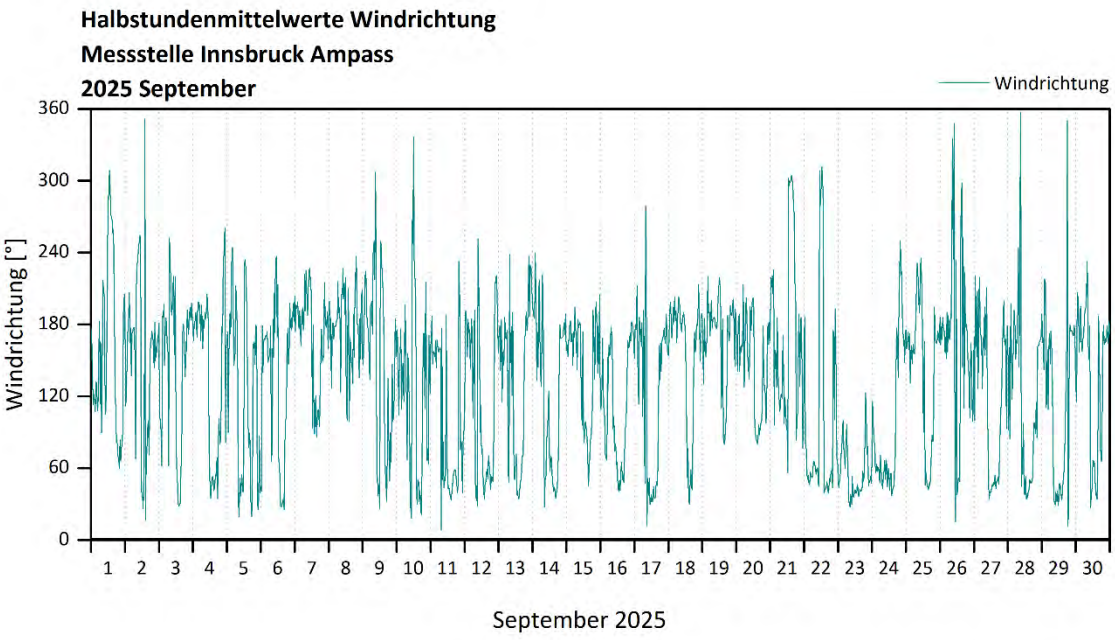
Stickstoffoxide / Ossidi di azoto



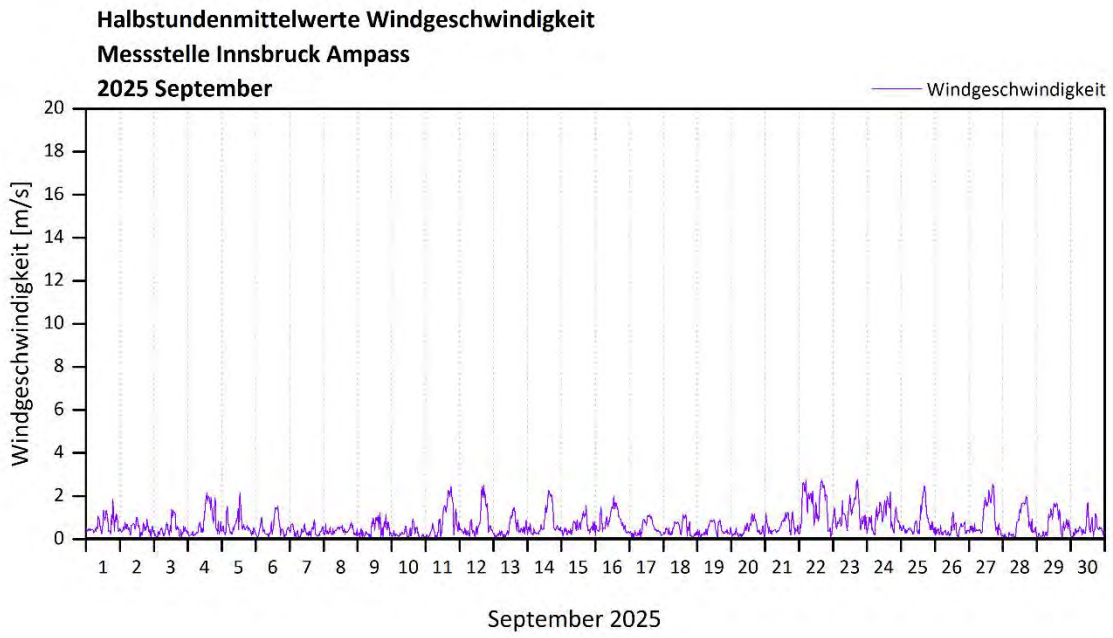
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

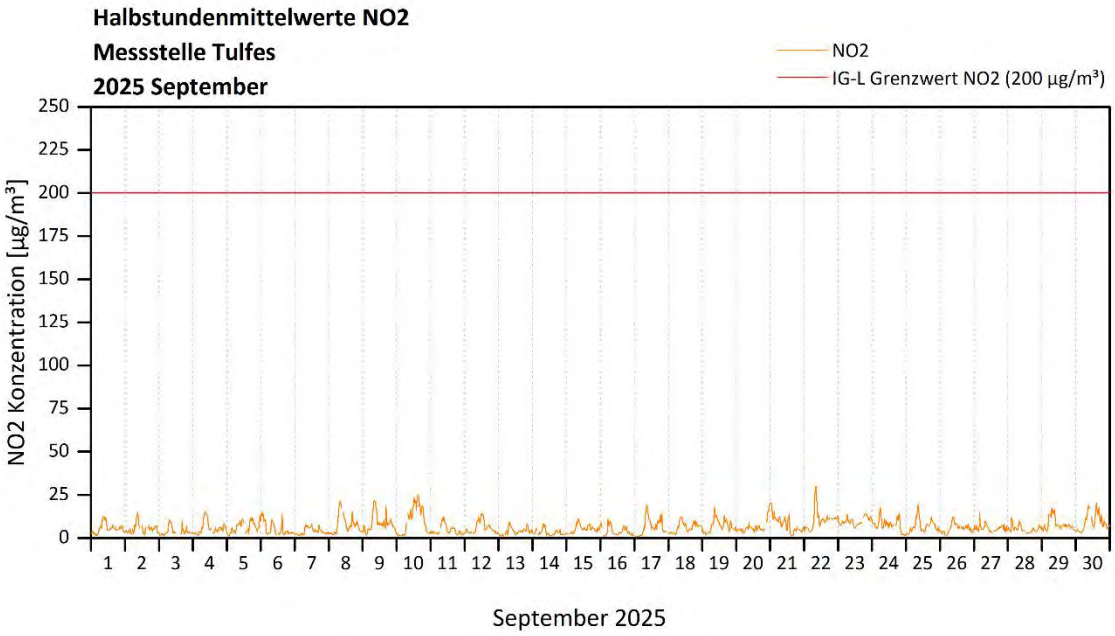


Windgeschwindigkeit / Velocità del vent

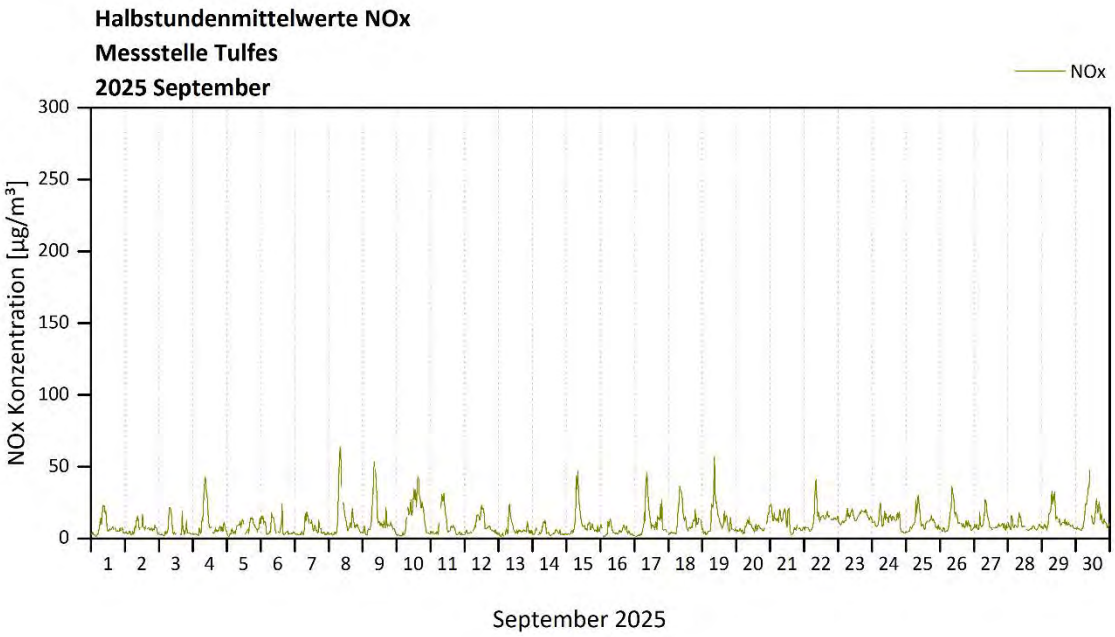


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

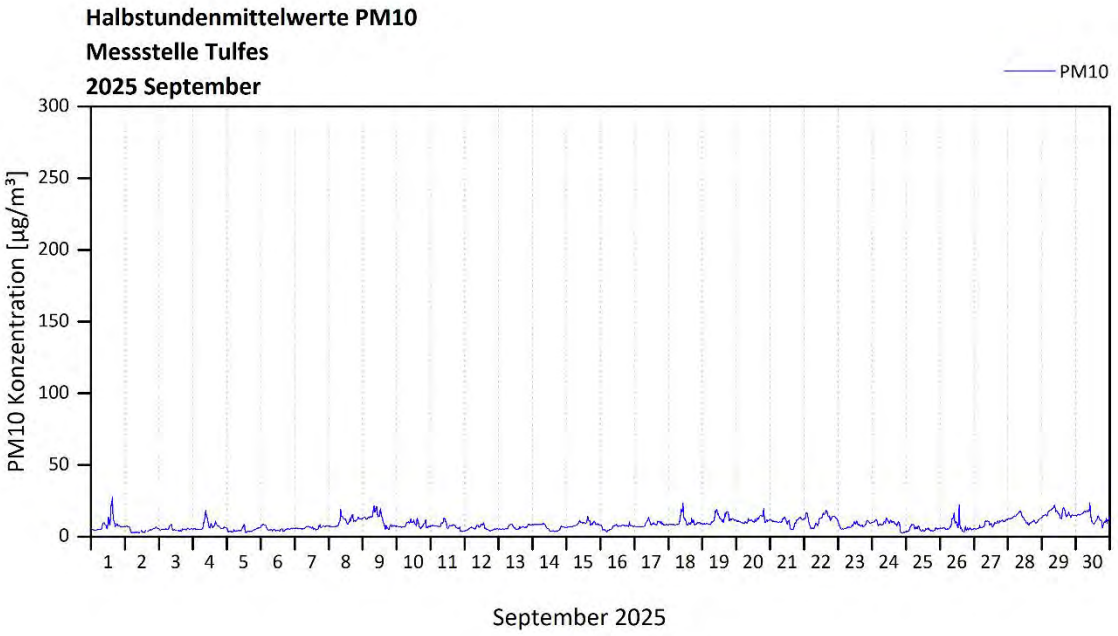
Stickstoffdioxid / Biossido di azoto



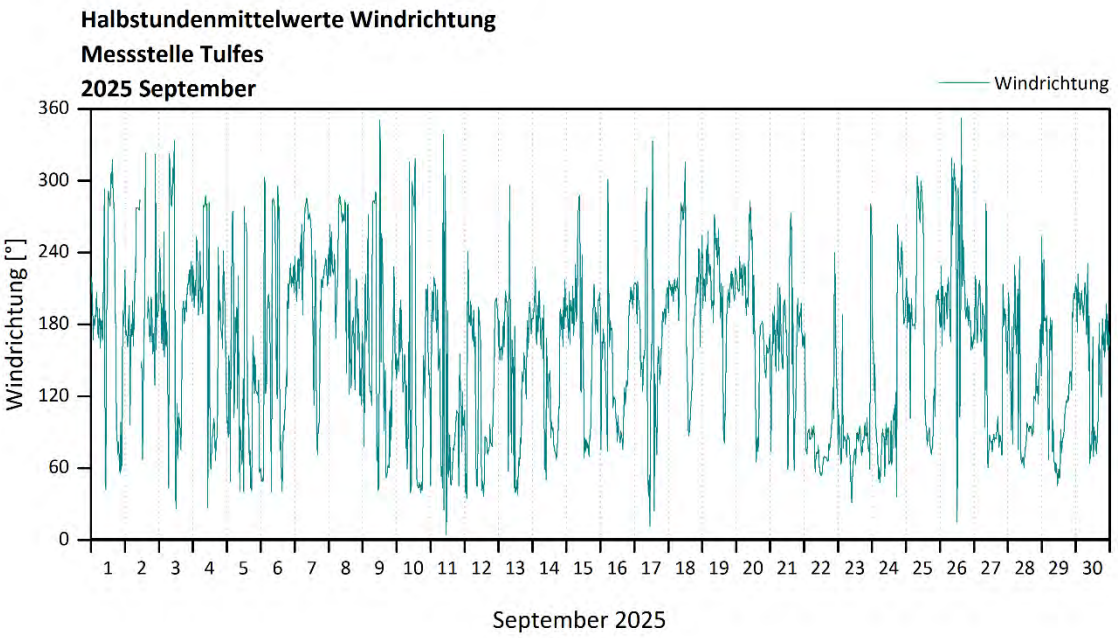
Stickstoffoxide / Ossidi di azoto



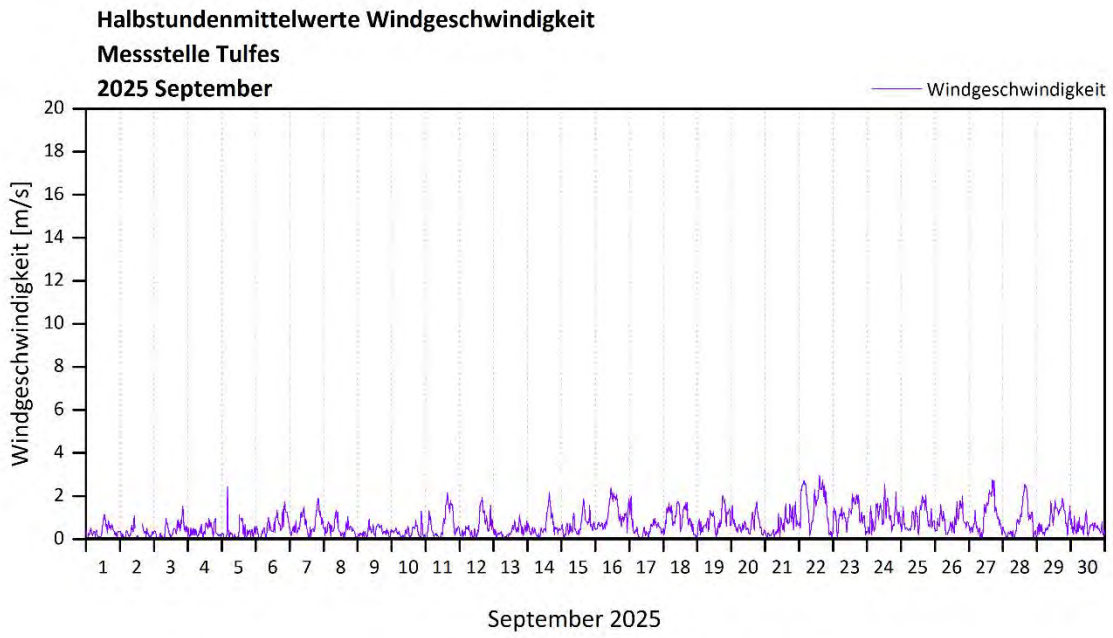
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

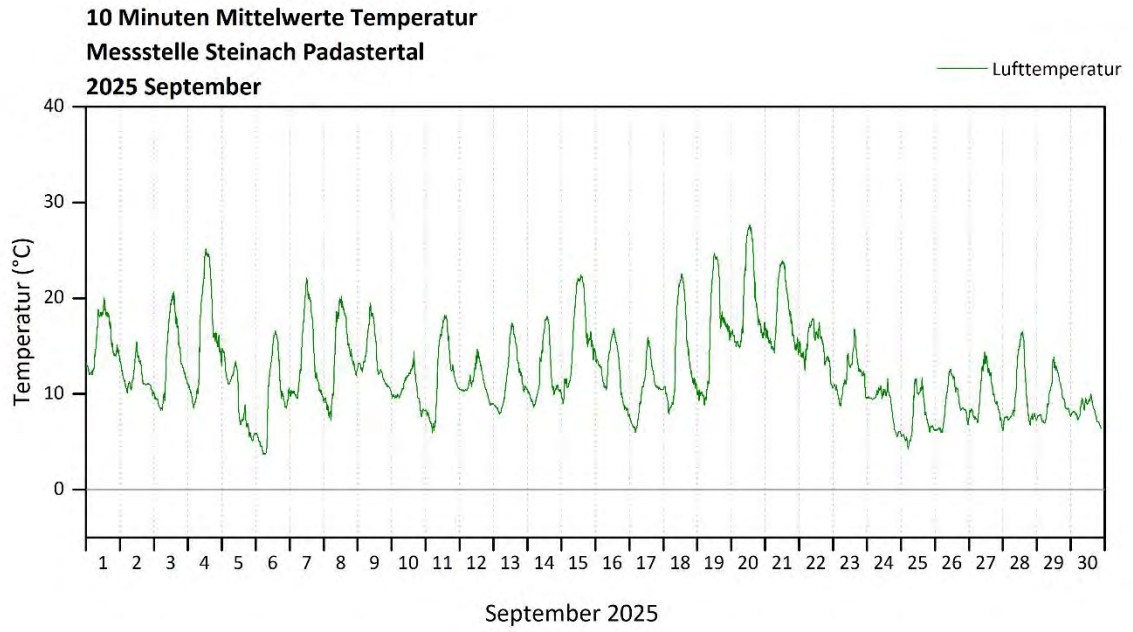


Windgeschwindigkeit / Velocità del vent

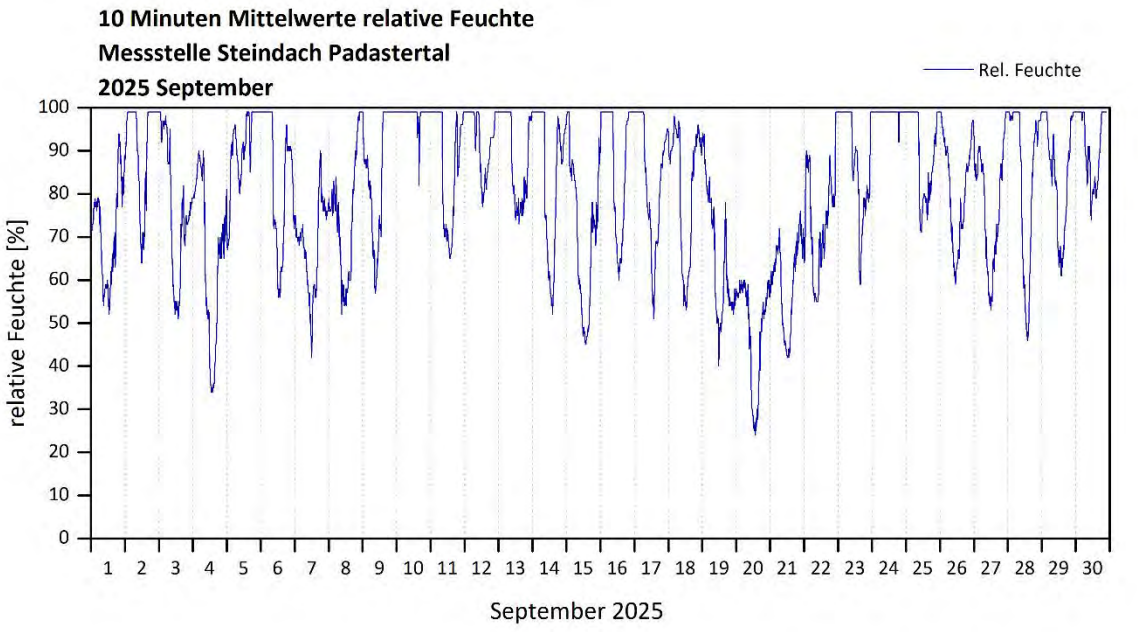


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

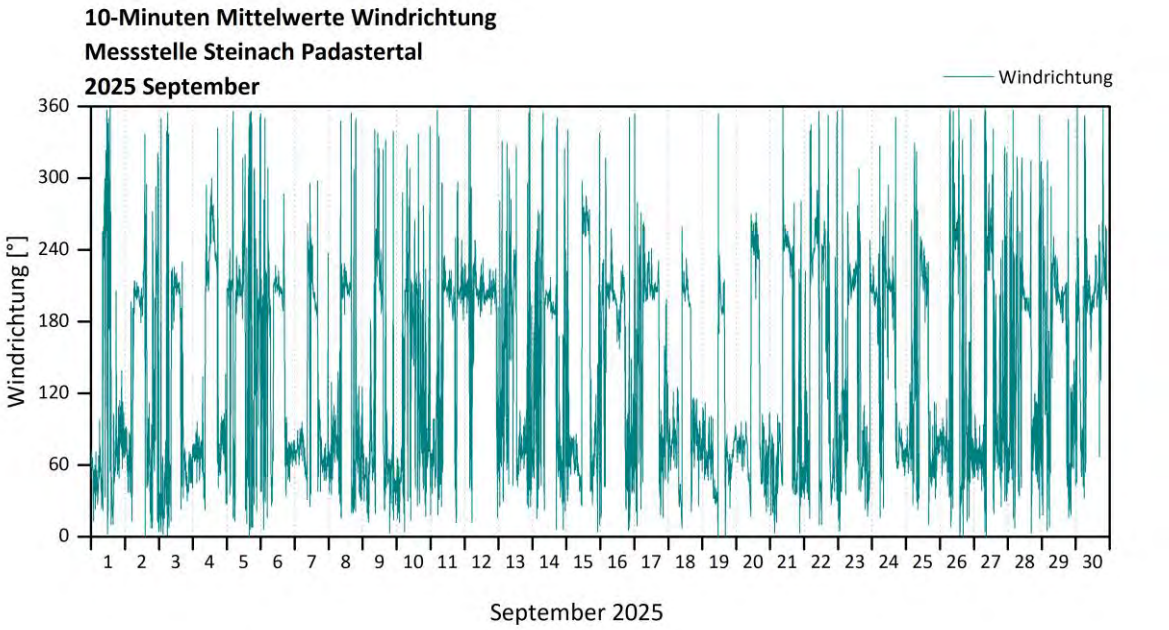
Temperatur / Temeraturà dell'aria



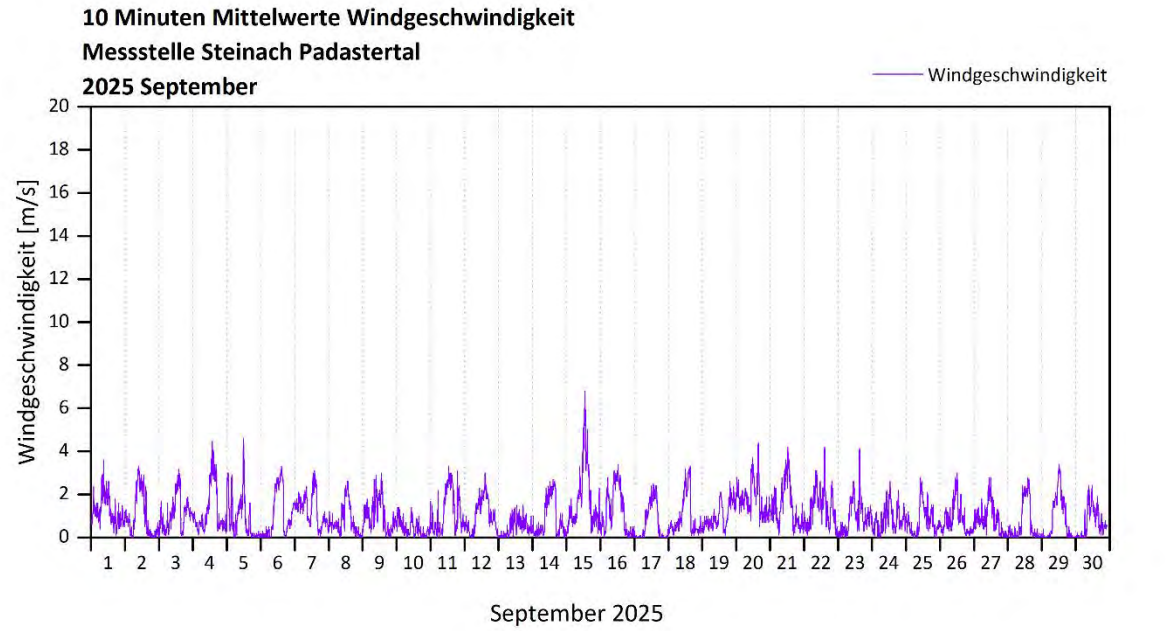
Relative Feuchtigkeit / Umidità relativa



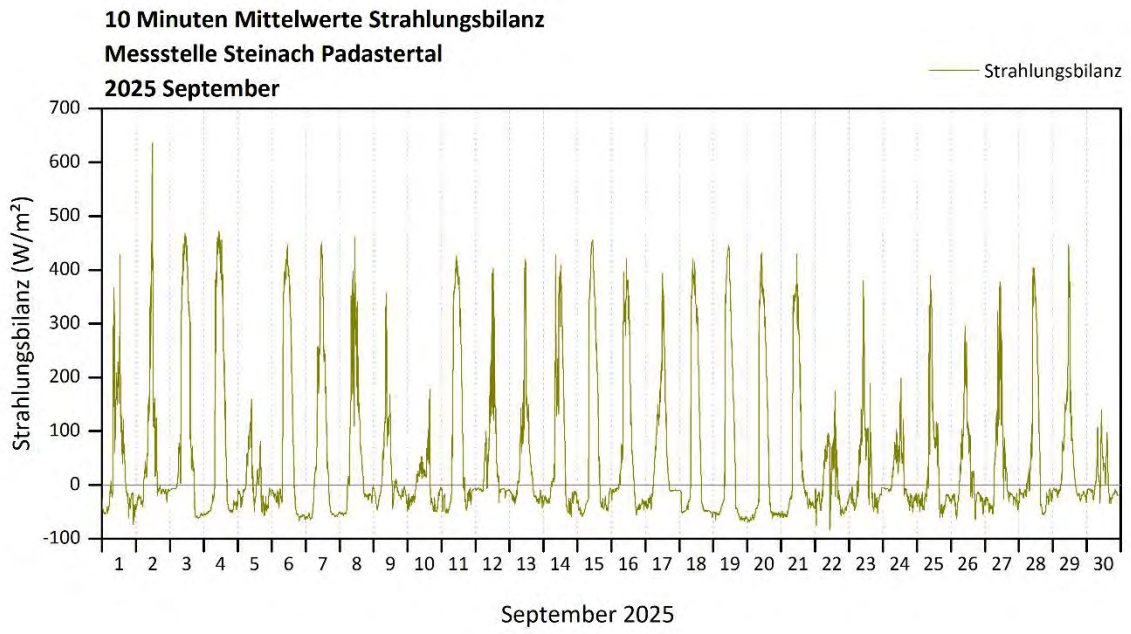
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht Oktober 2025 Relazione mensile ottobre 2025

Stickstoffdioxid Biossido di azoto

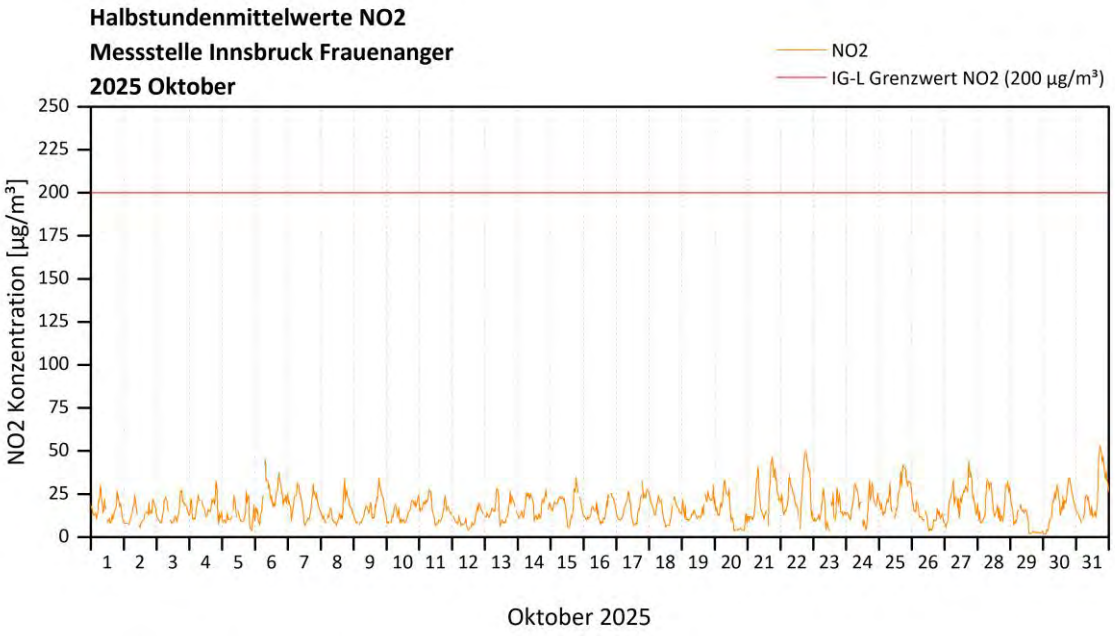
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 e 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	53	17.0	25.2	0		0	
Innsbruck Sillhöfe	56	16.4	24.9	0		0	
Steinach Siegreith	30	8.4	11.3	0		0	
Steinach Saxen	43	11.9	16.0	0		0	
Ampass	62	14.1	20.7	0		0	
Tulfes	33	9.0	14.5	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

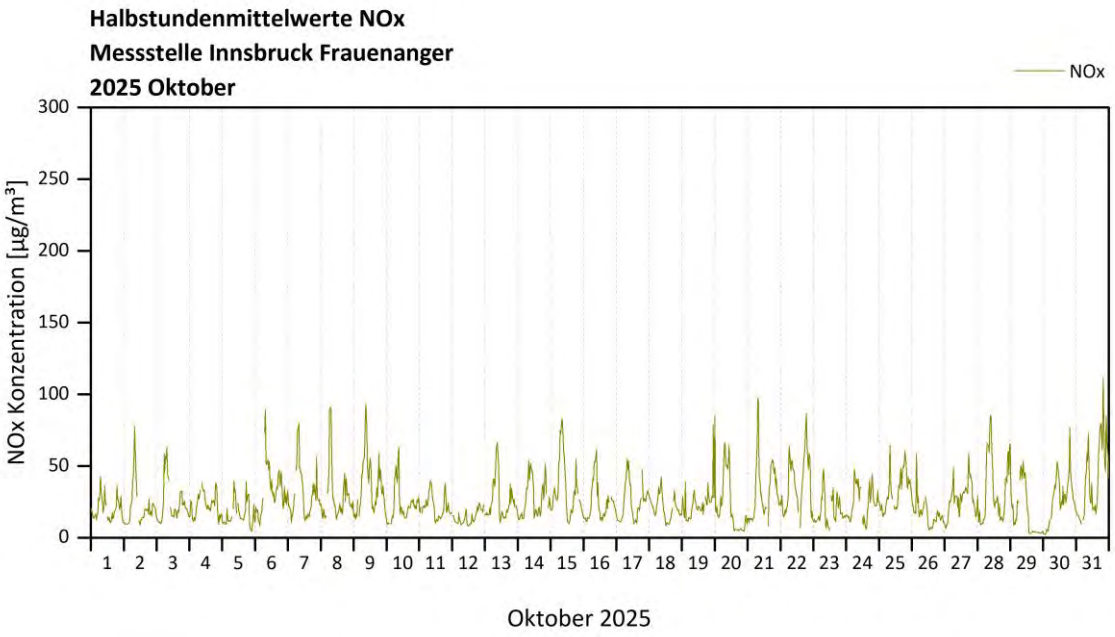
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 e 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	35	10.0	17.0	0		0	
Innsbruck Sillhöfe	57	10.4	16.6	0		0	
Steinach Siegreith	37	9.3	17.3	0		0	
Steinach Saxen	128	14.1	30.6	0		0	
Ampass	223	14.6	29.4	0		0	
Tulfes	35	10.9	18.9	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

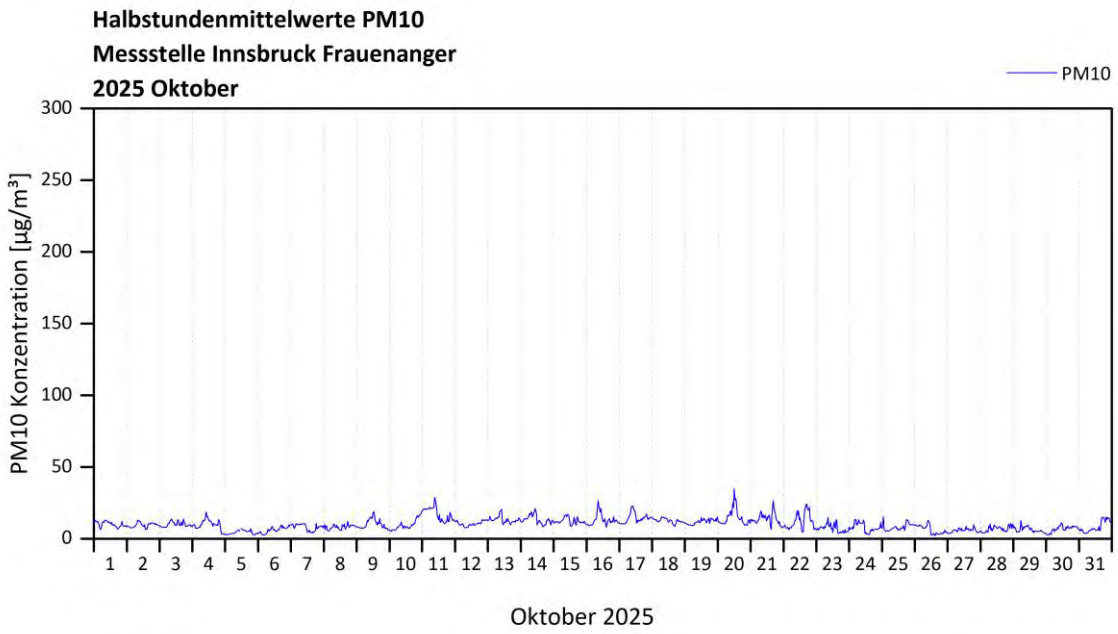
Stickstoffdioxid / Biossido di azoto



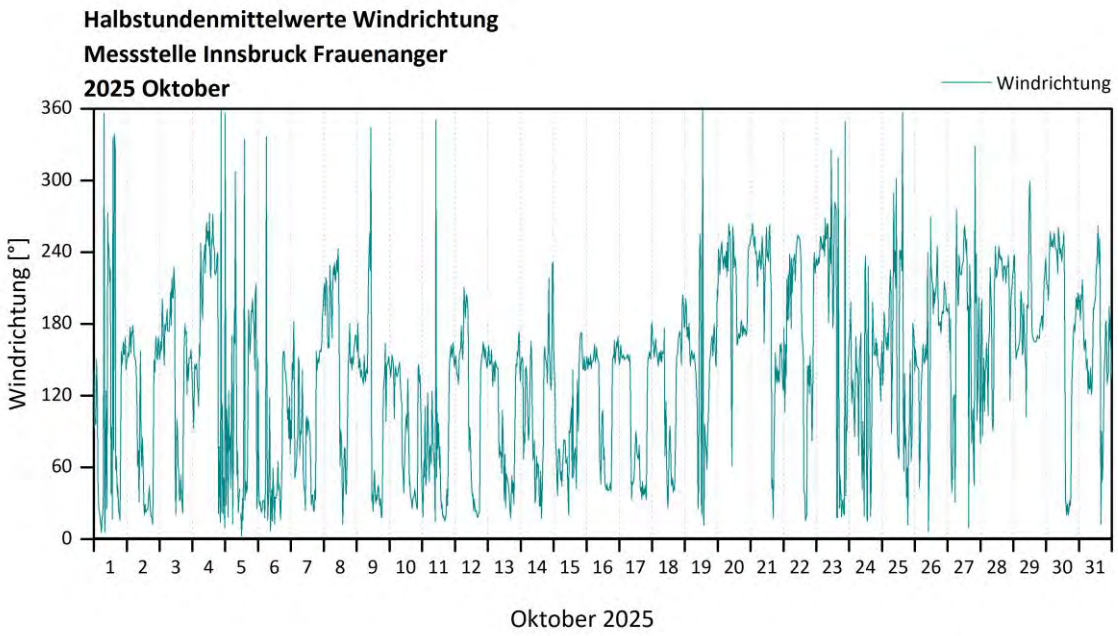
Stickstoffoxide / Ossidi di azoto



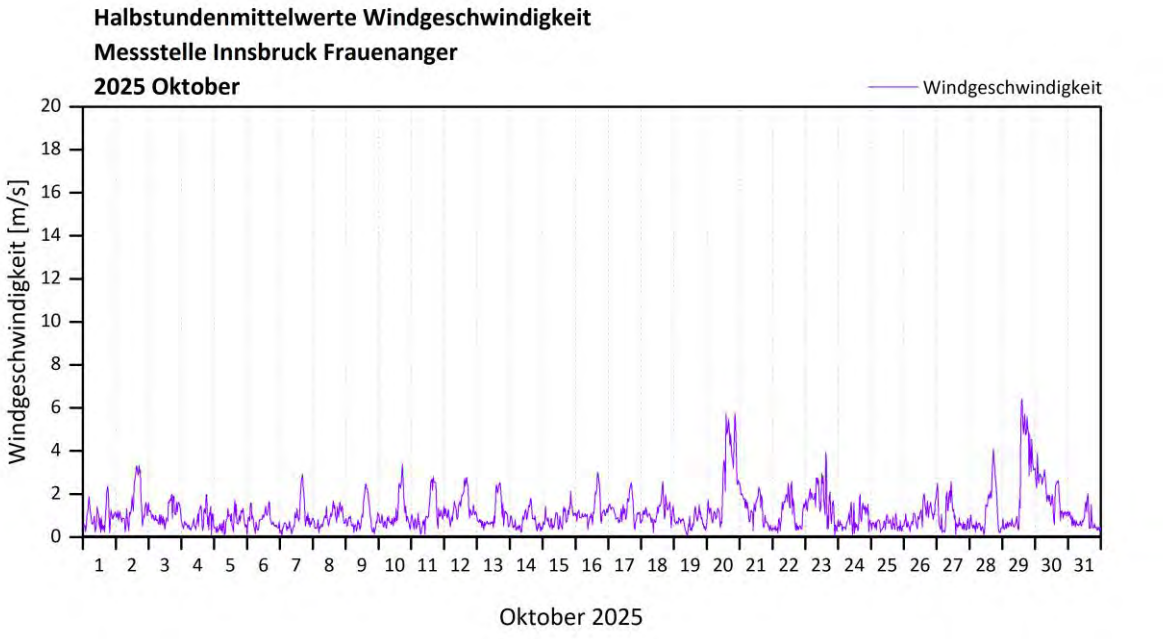
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

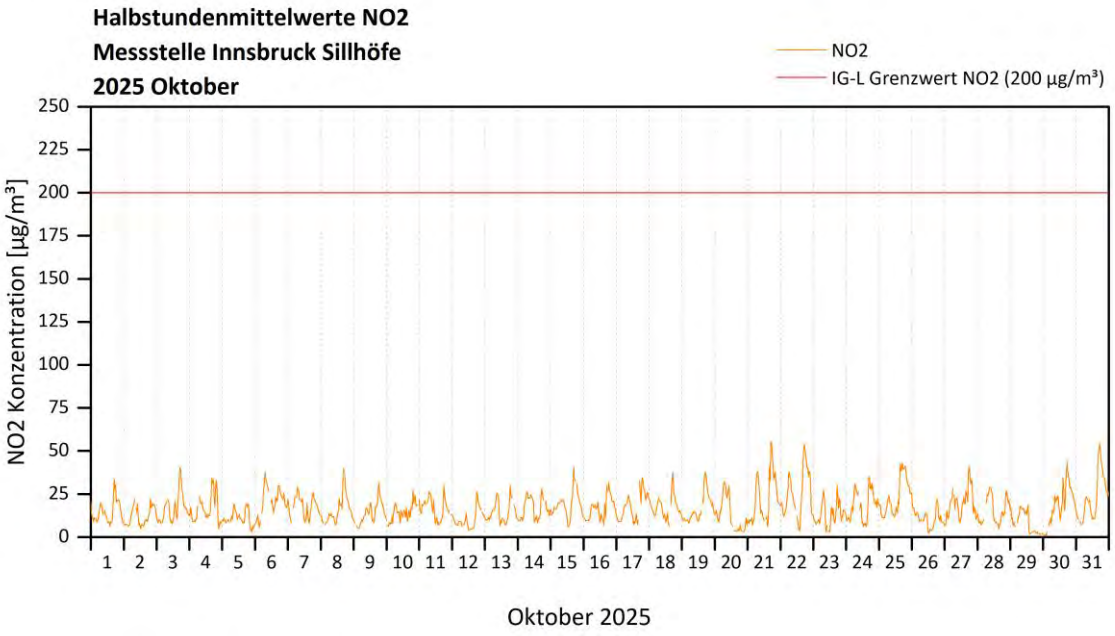


Windgeschwindigkeit / Velocità del vento

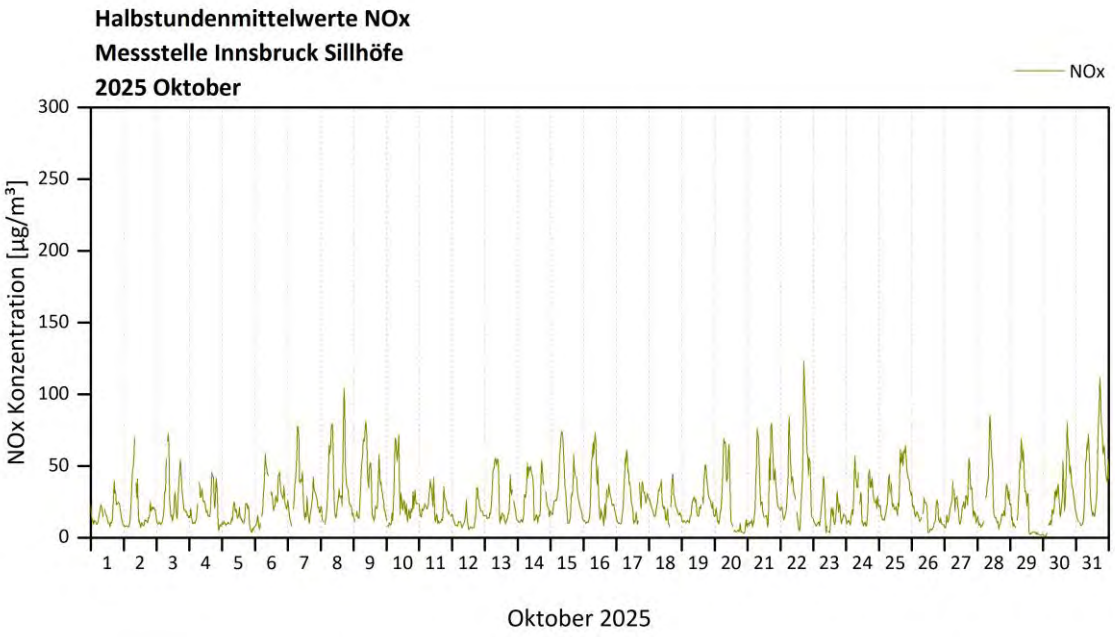


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

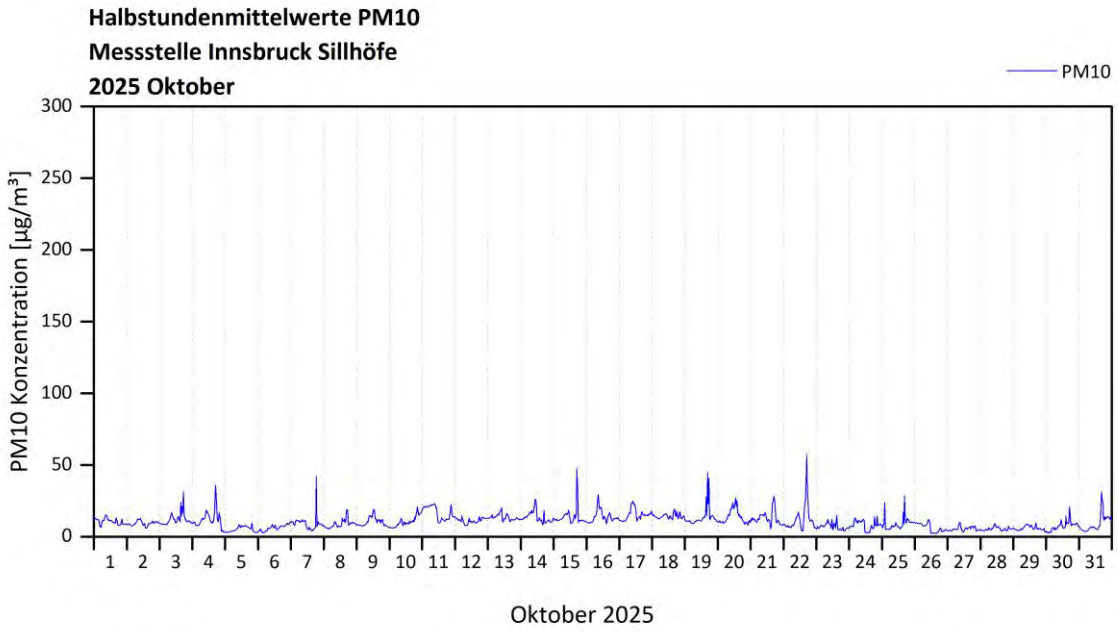
Stickstoffdioxid / Biossido di azoto



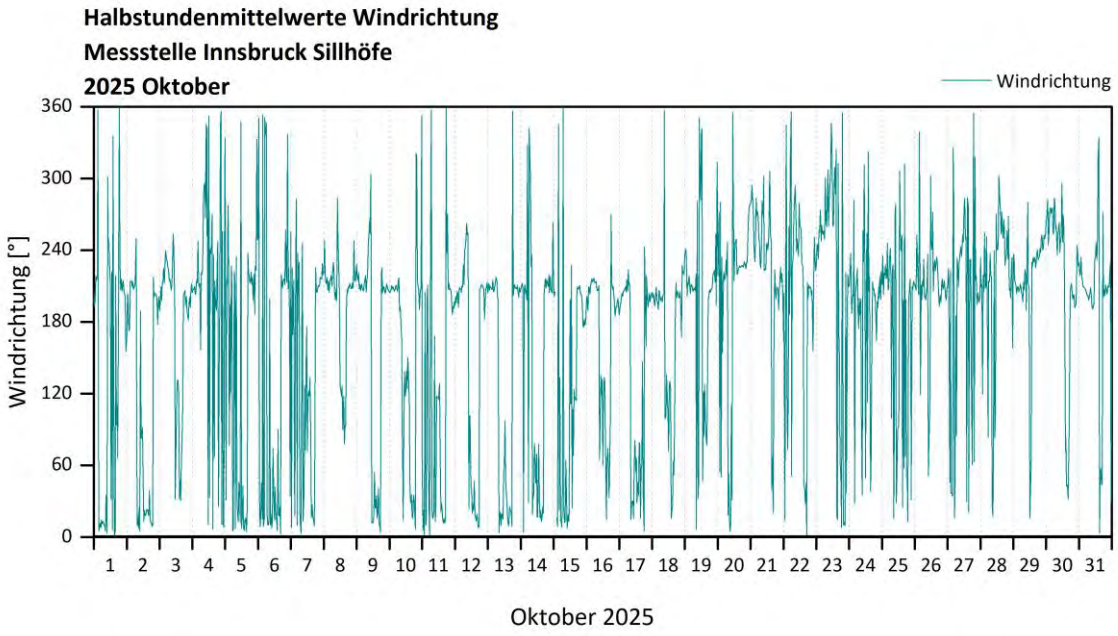
Stickstoffoxide / Ossidi di azoto



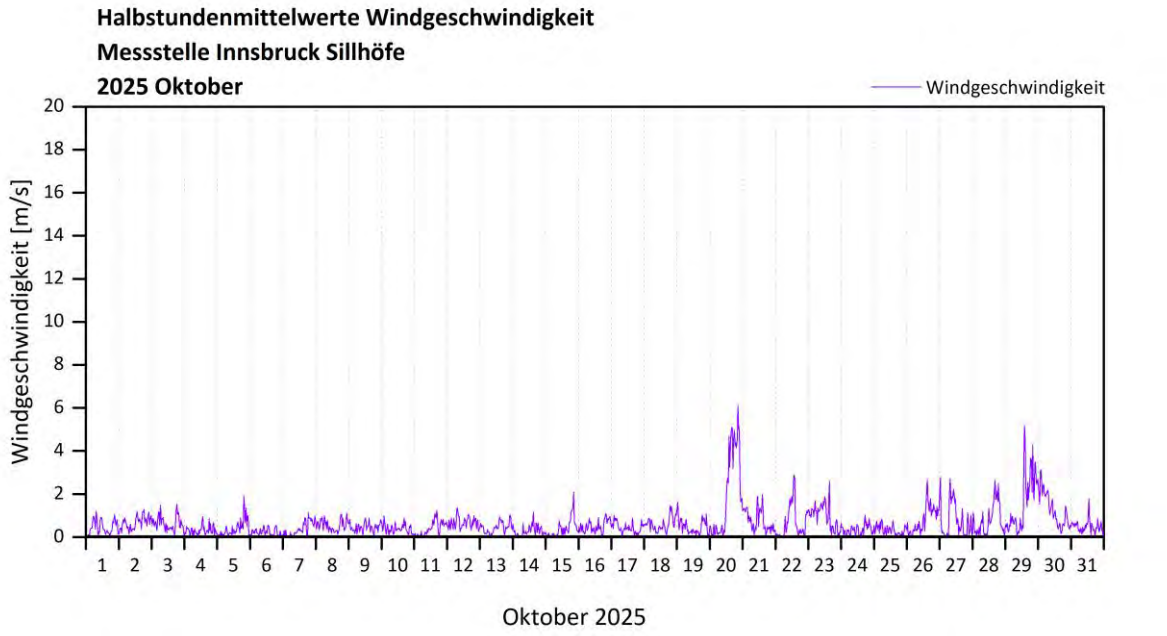
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

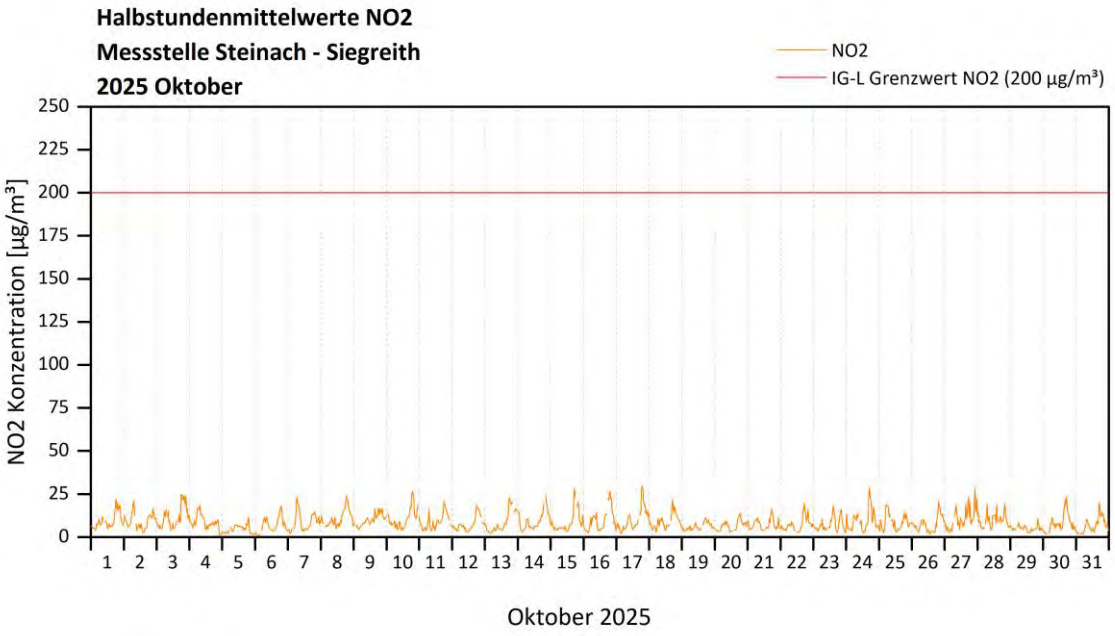


Windgeschwindigkeit / Velocità del vento

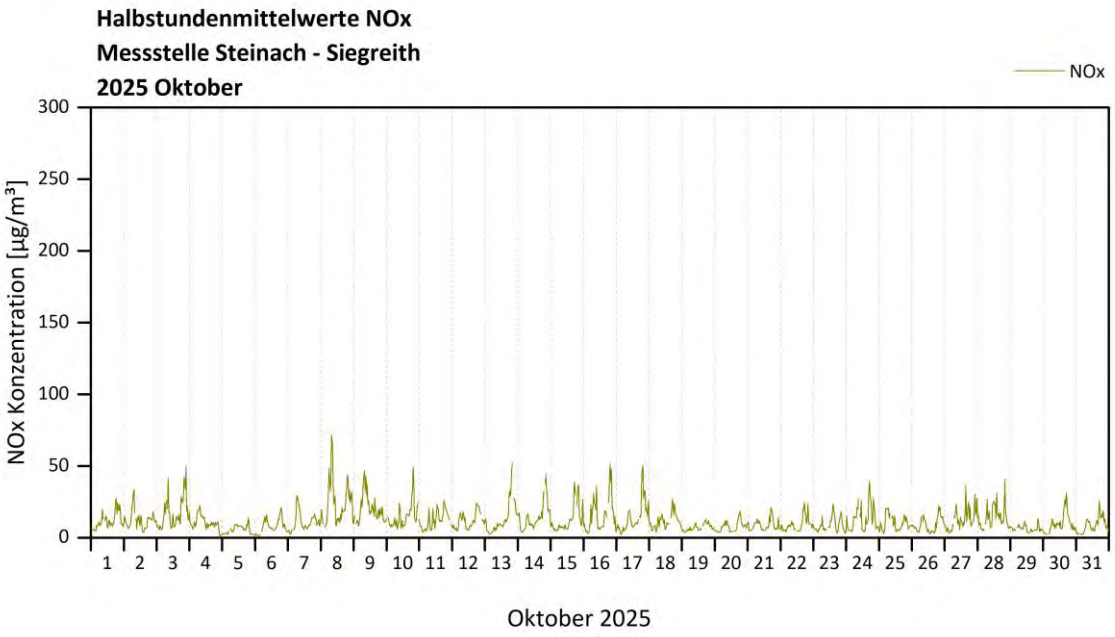


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

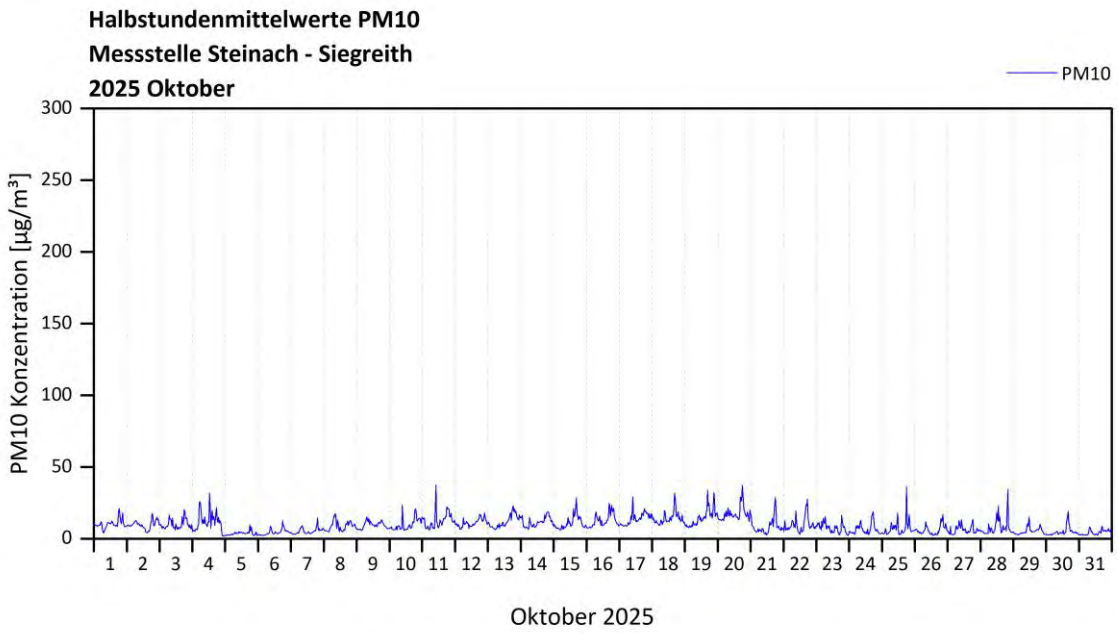
Stickstoffdioxid / Biossido di azoto



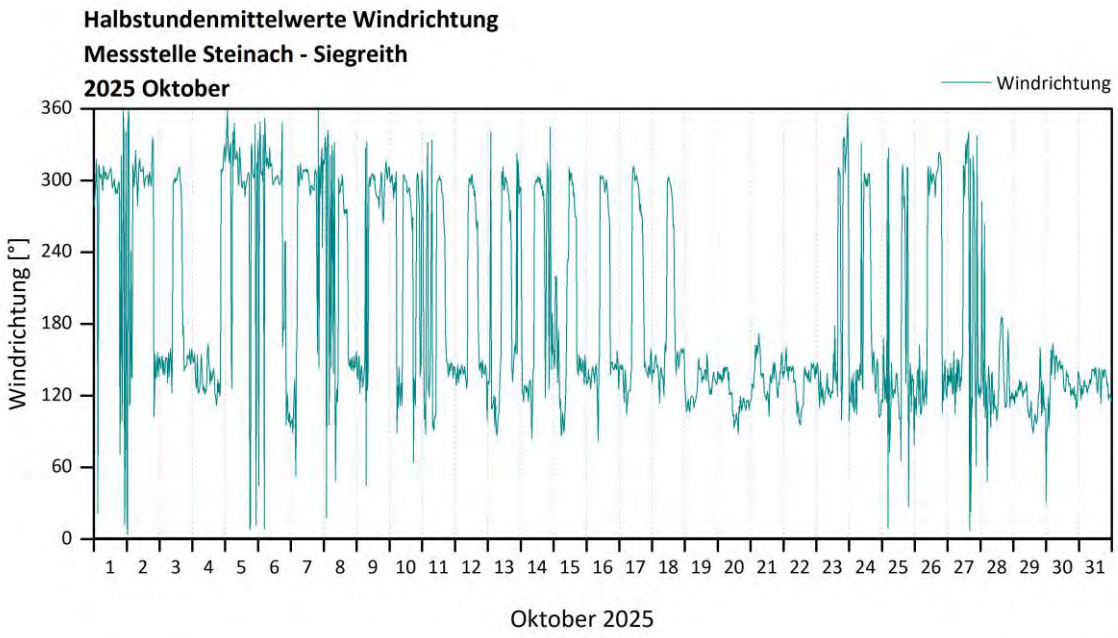
Stickstoffoxide / Ossidi di azoto



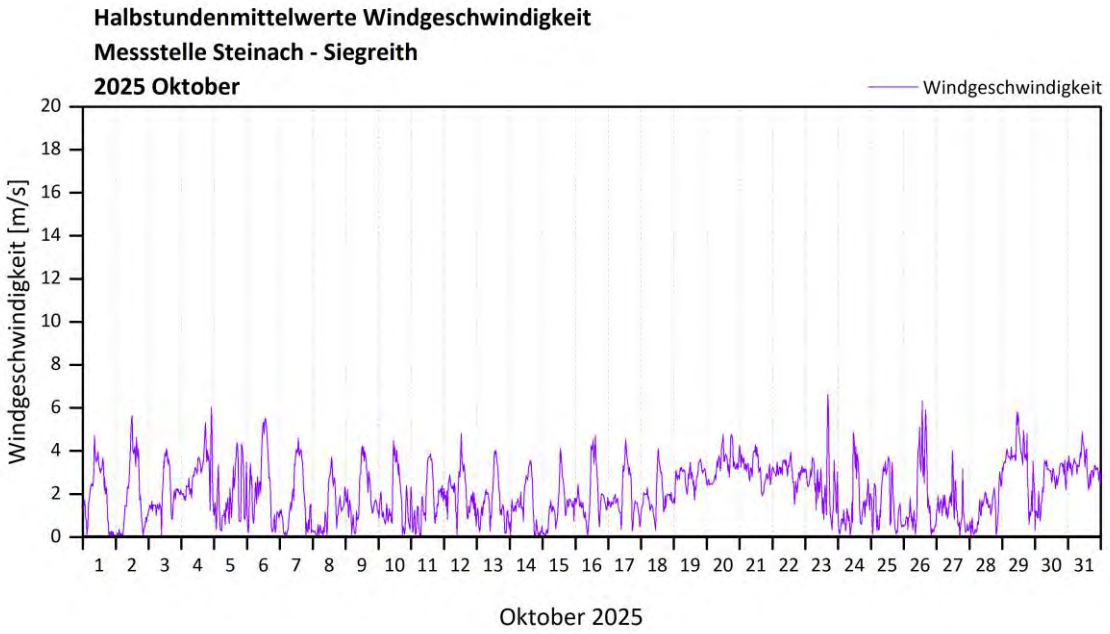
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

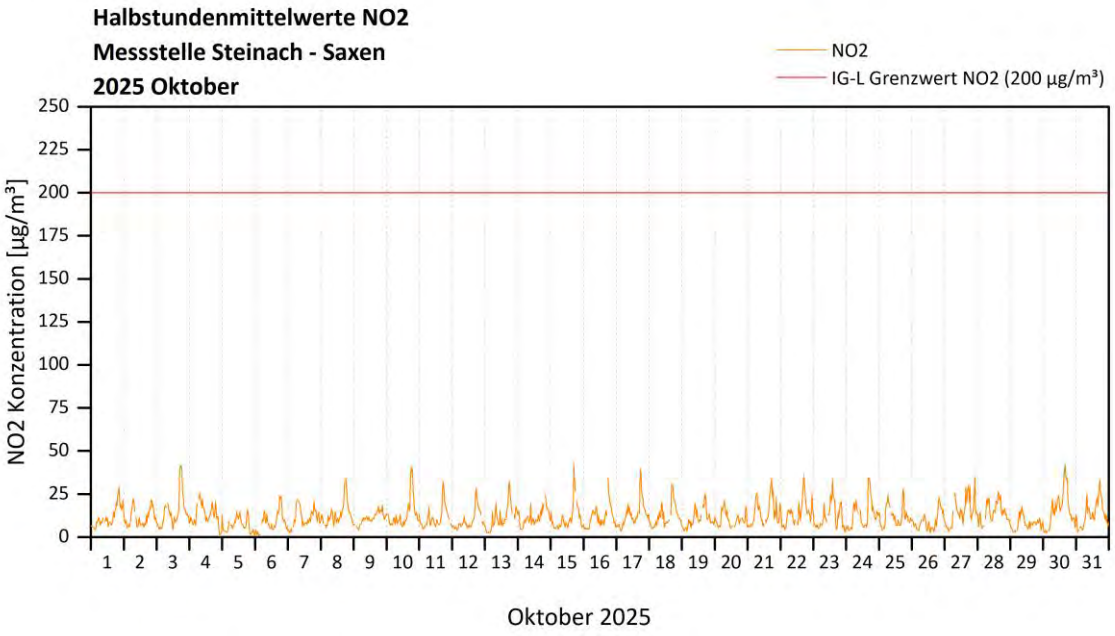


Windgeschwindigkeit / Velocità del vento

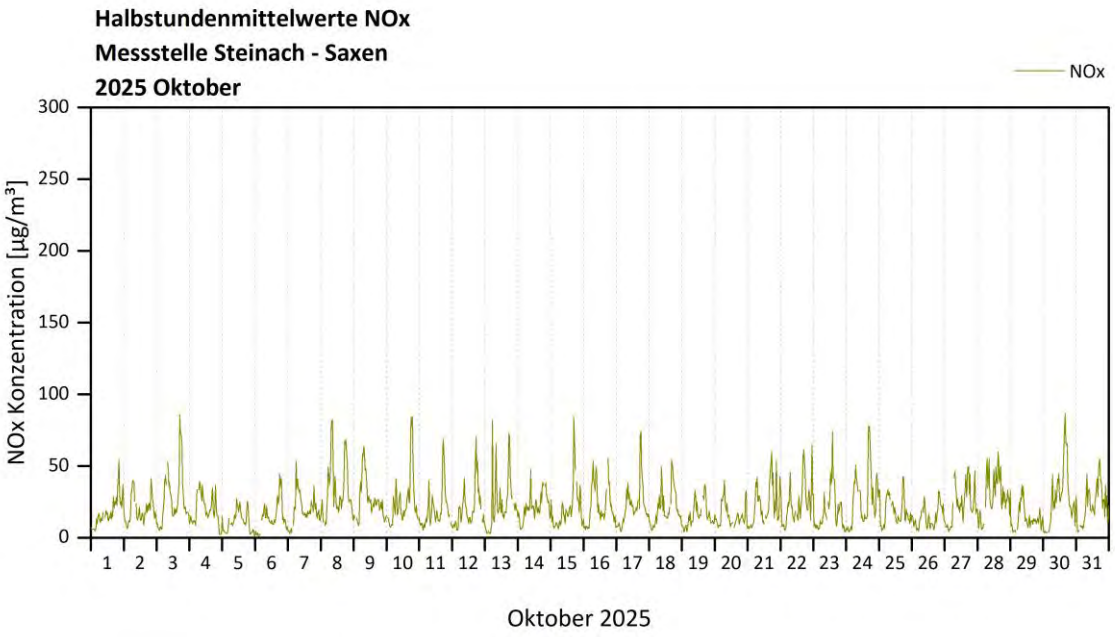


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

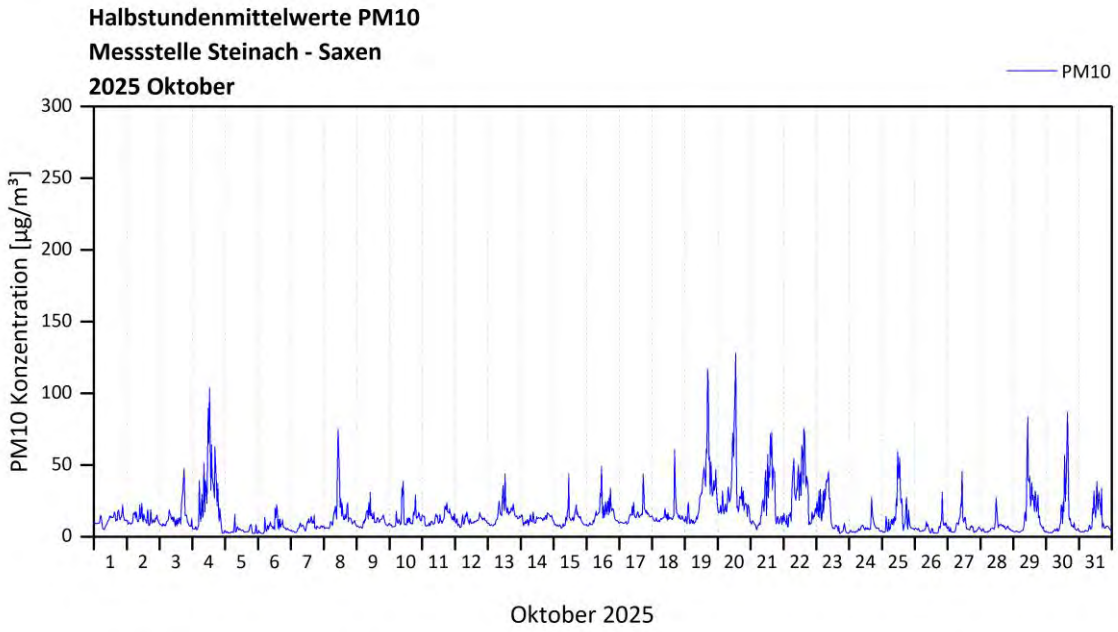
Stickstoffdioxid / Biossido di azoto



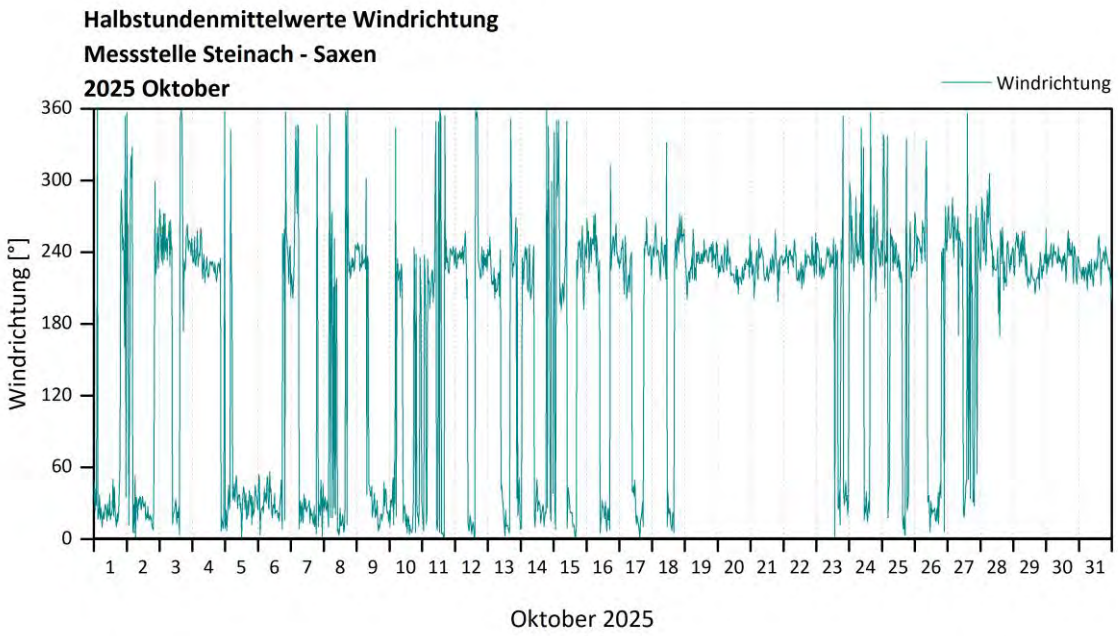
Stickstoffoxide / Ossidi di azoto



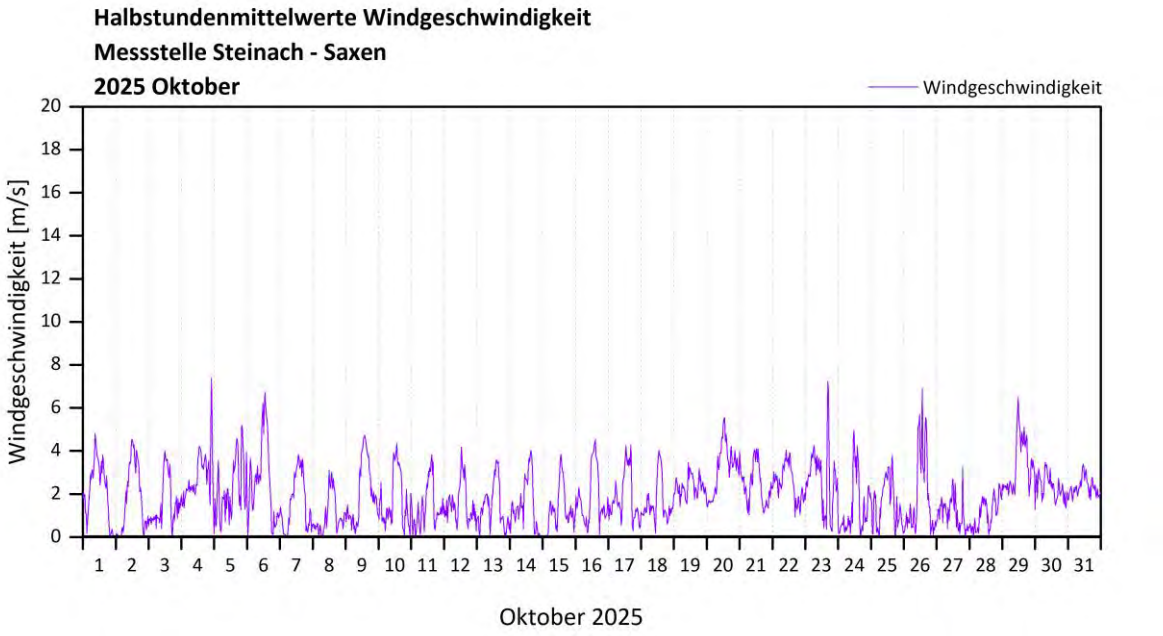
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



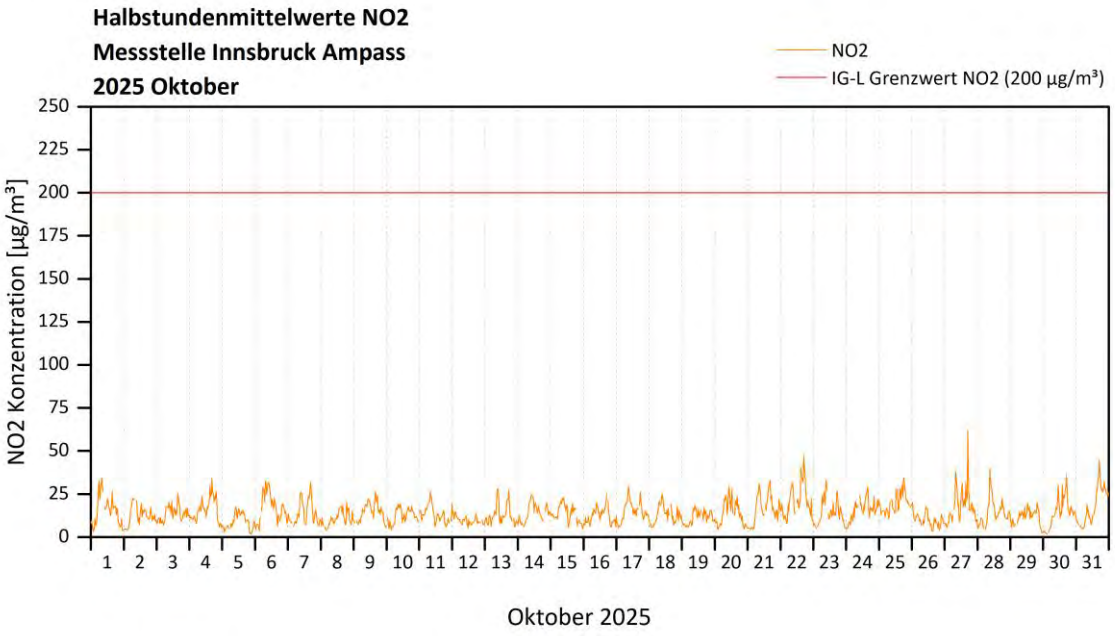
Windgeschwindigkeit / Velocità del vent



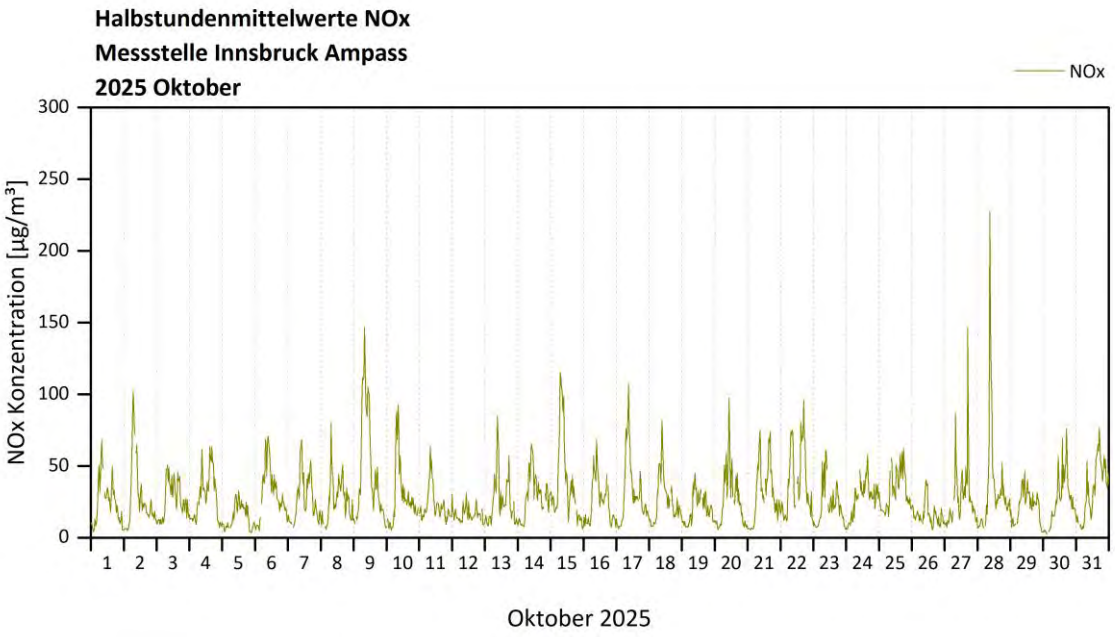
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

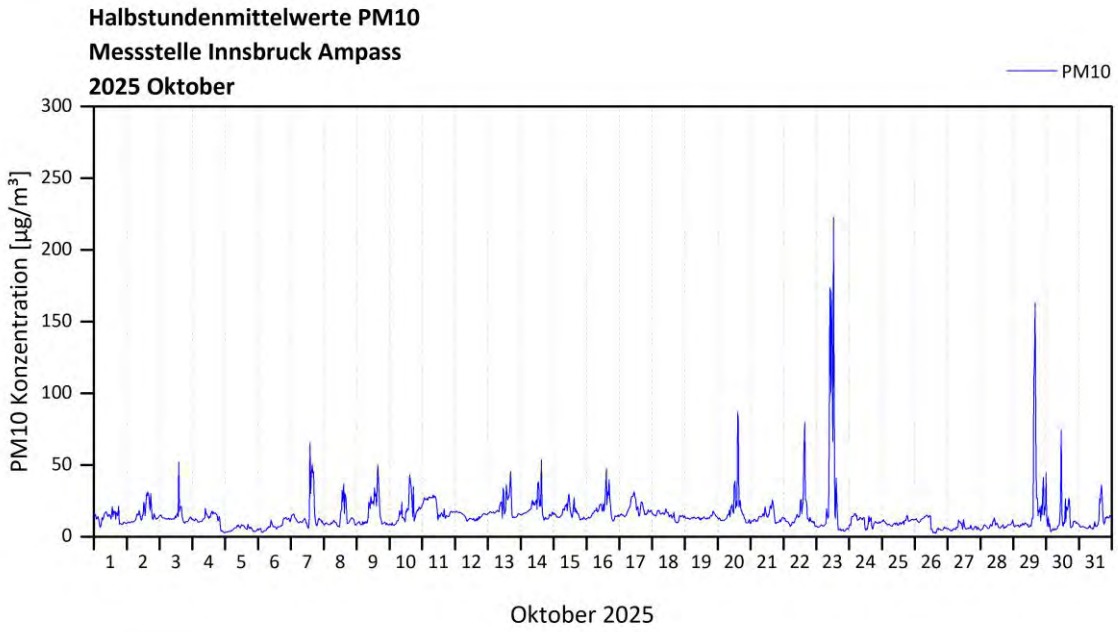
Stickstoffdioxid / Biossido di azoto



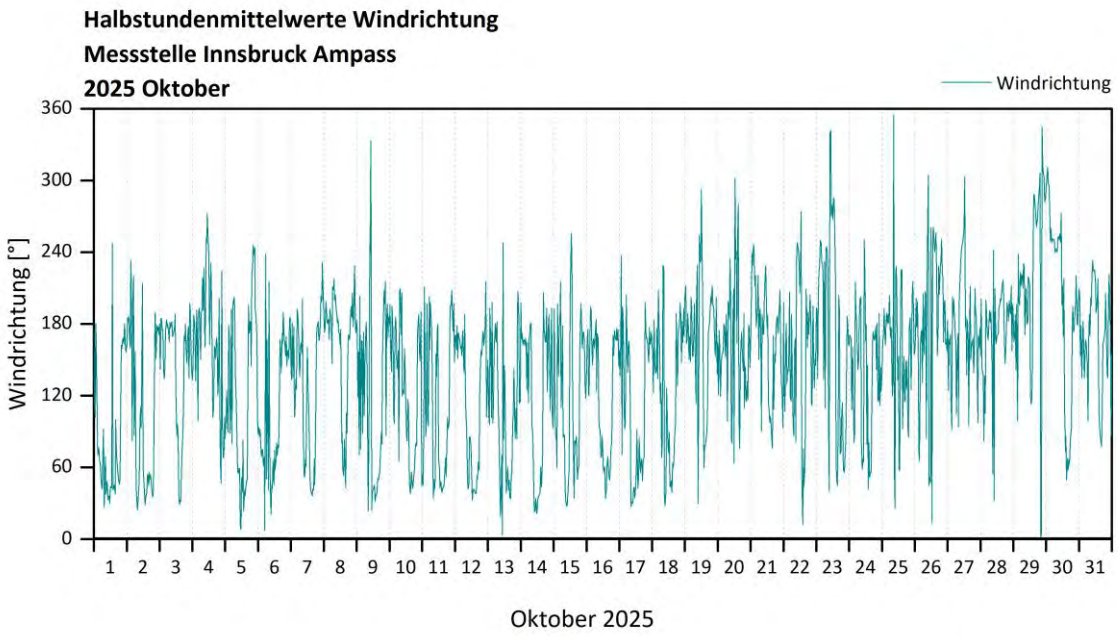
Stickstoffoxide / Ossidi di azoto



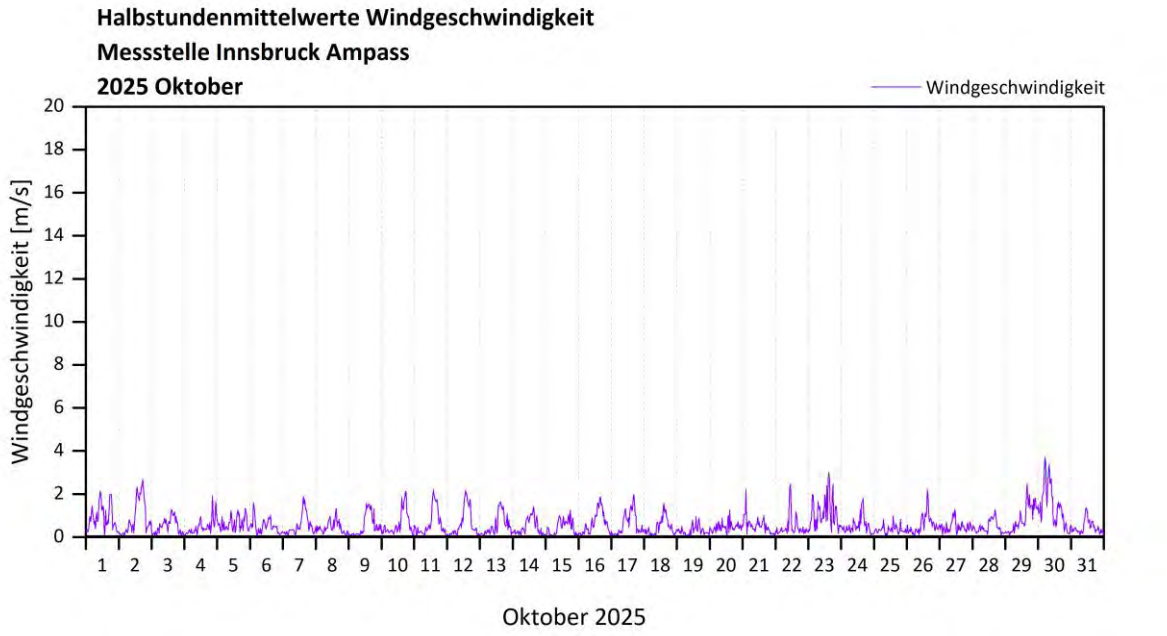
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

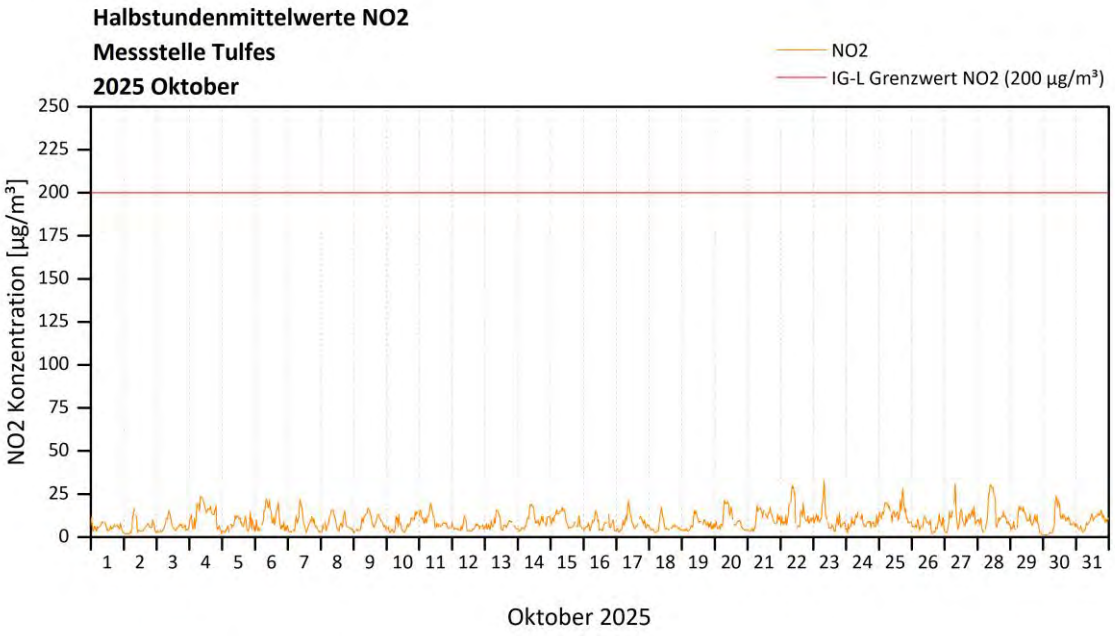


Windgeschwindigkeit / Velocità del vent

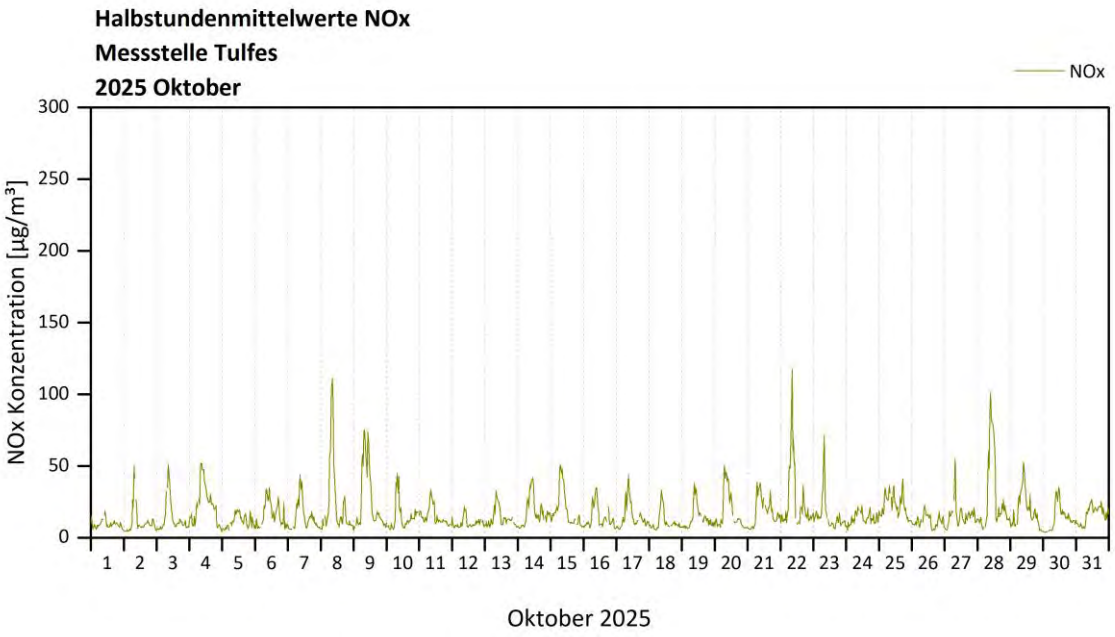


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

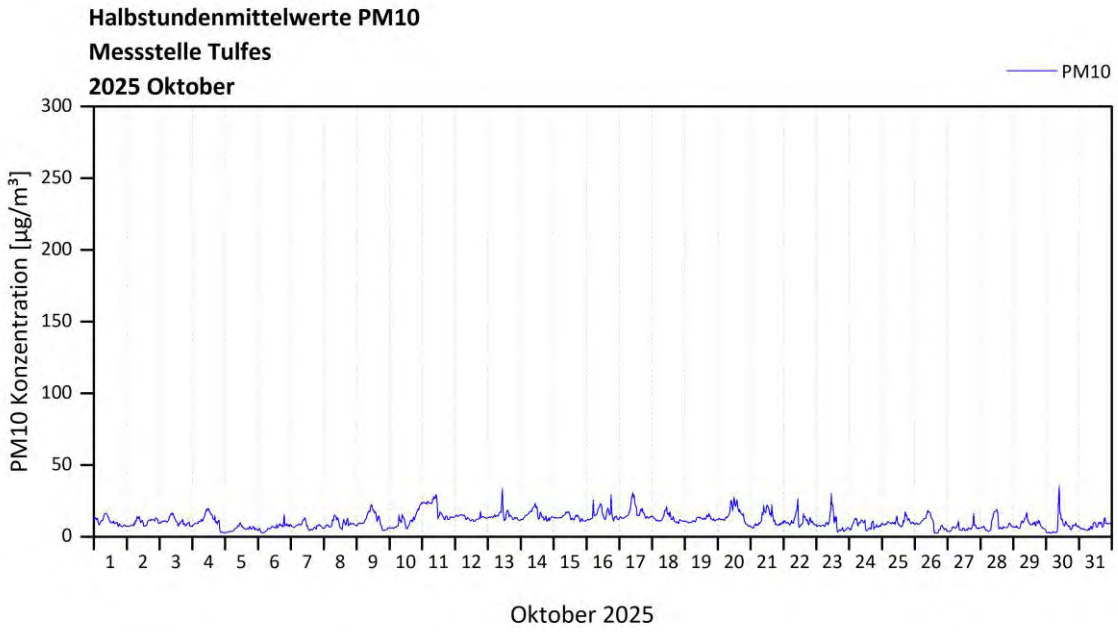
Stickstoffdioxid / Biossido di azoto



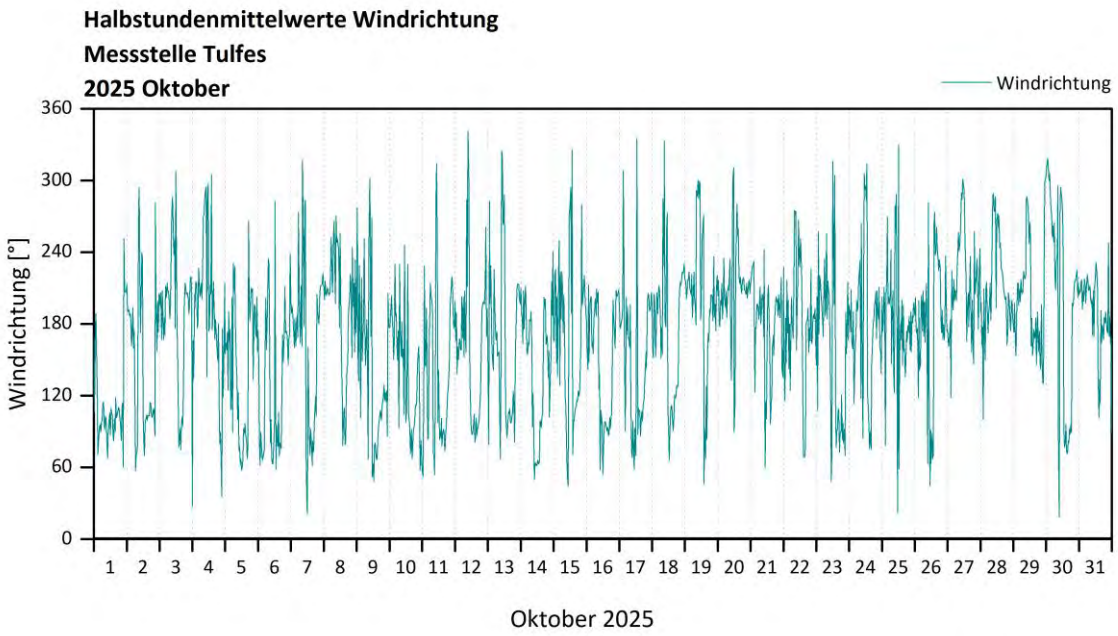
Stickstoffoxide / Ossidi di azoto



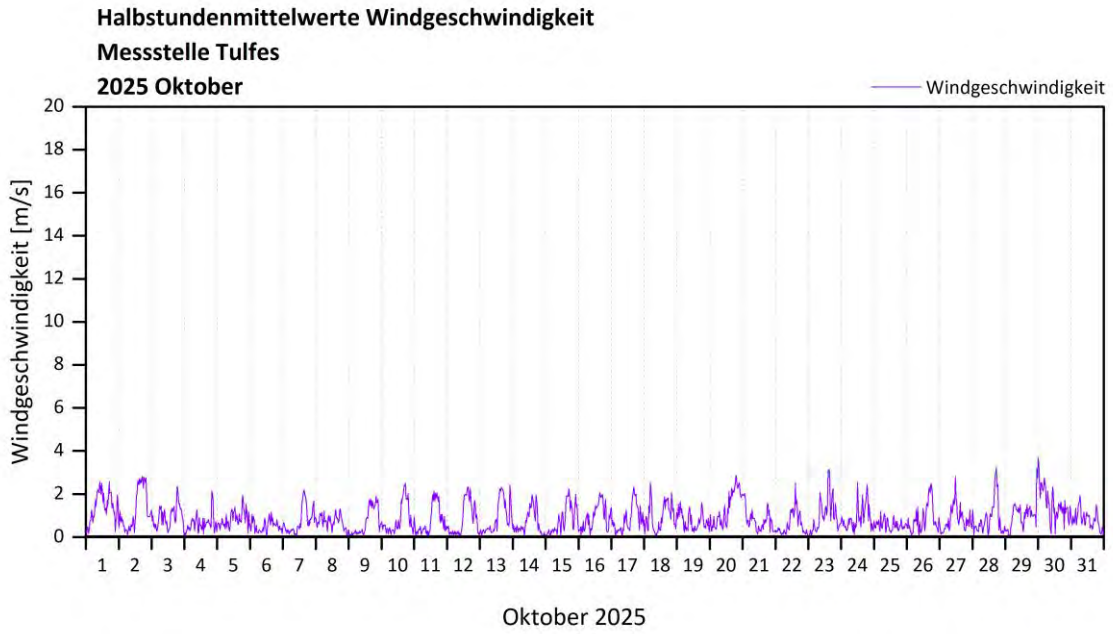
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

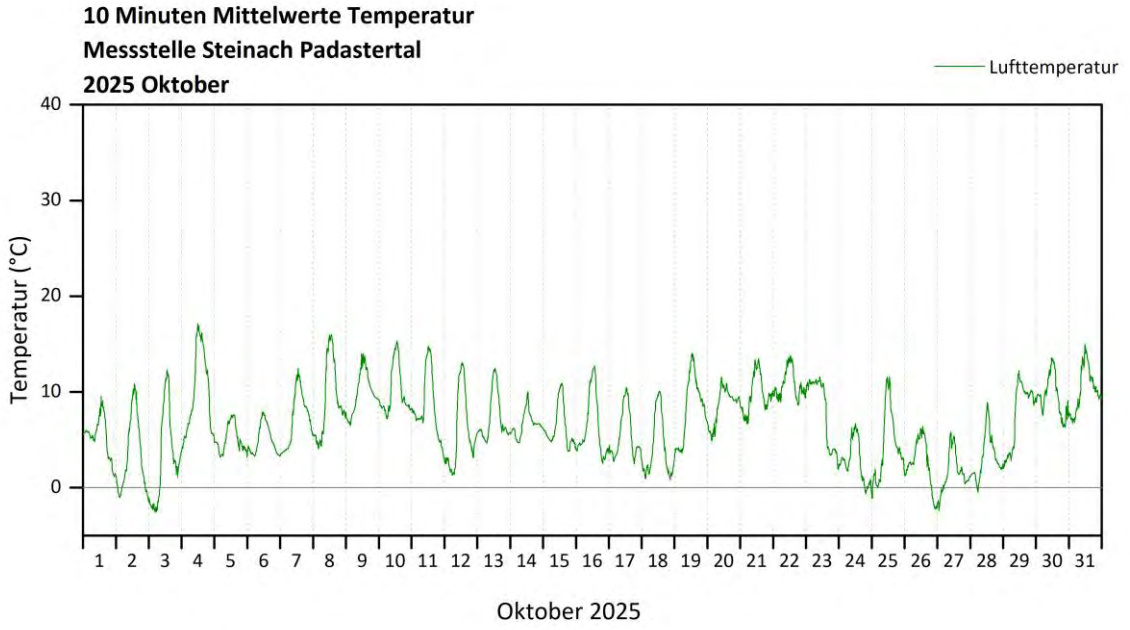


Windgeschwindigkeit / Velocità del vent

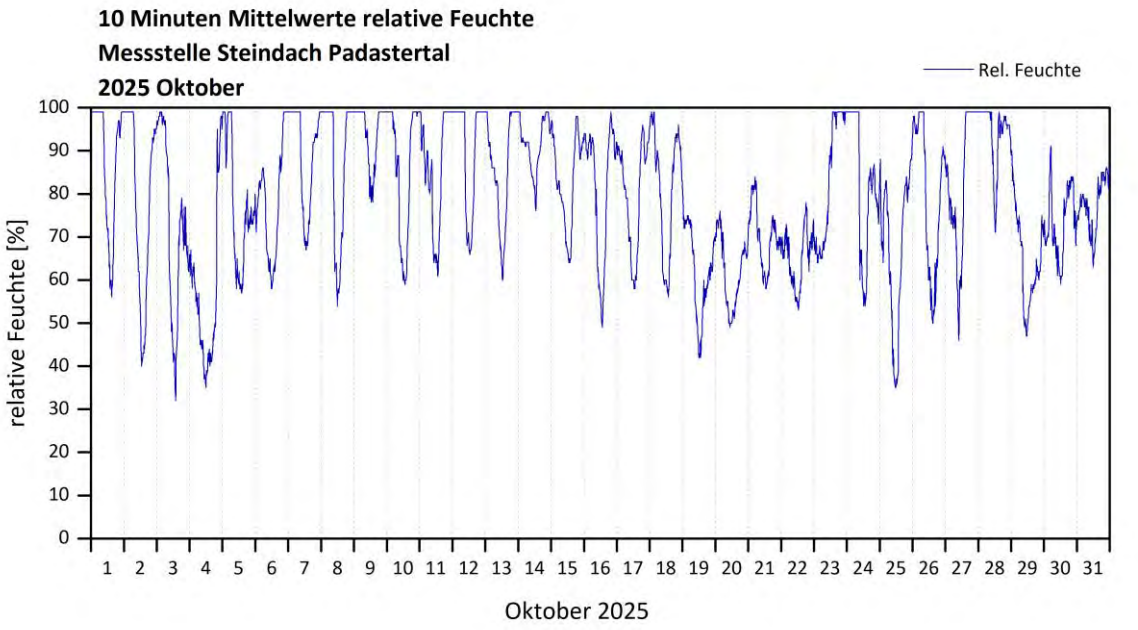


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

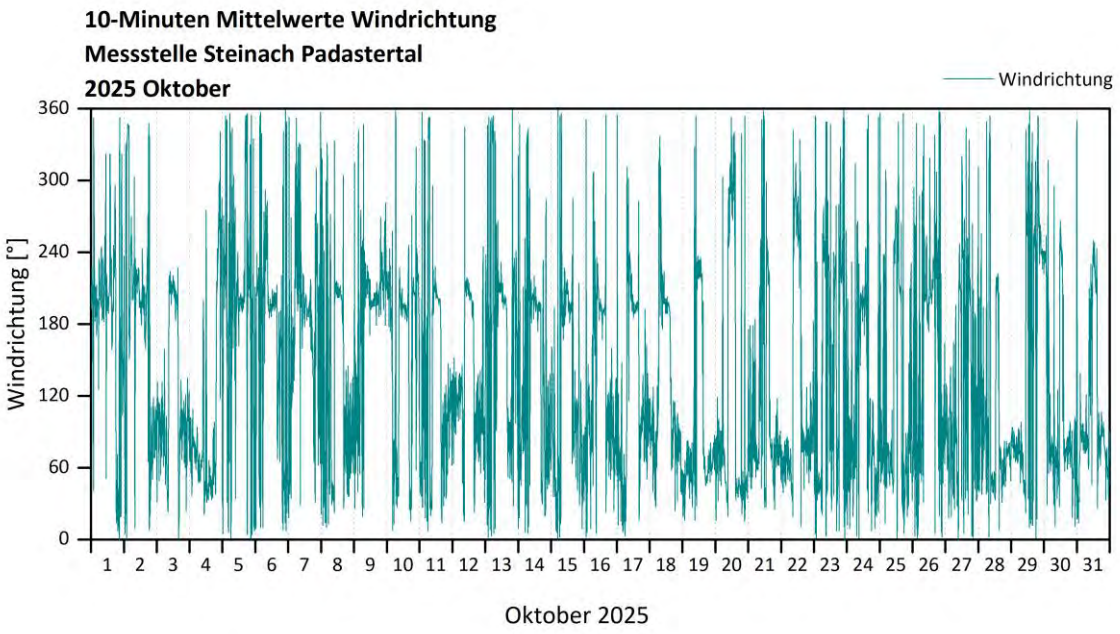
Temperatur / Temeraturà dell'aria



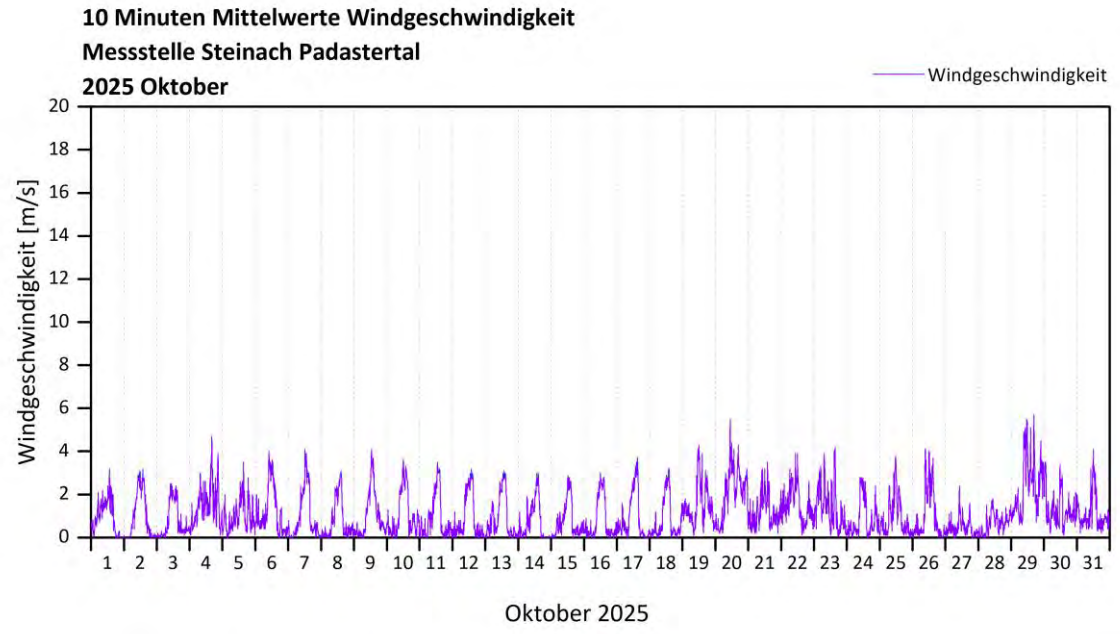
Relative Feuchtigkeit / Umidità relativa



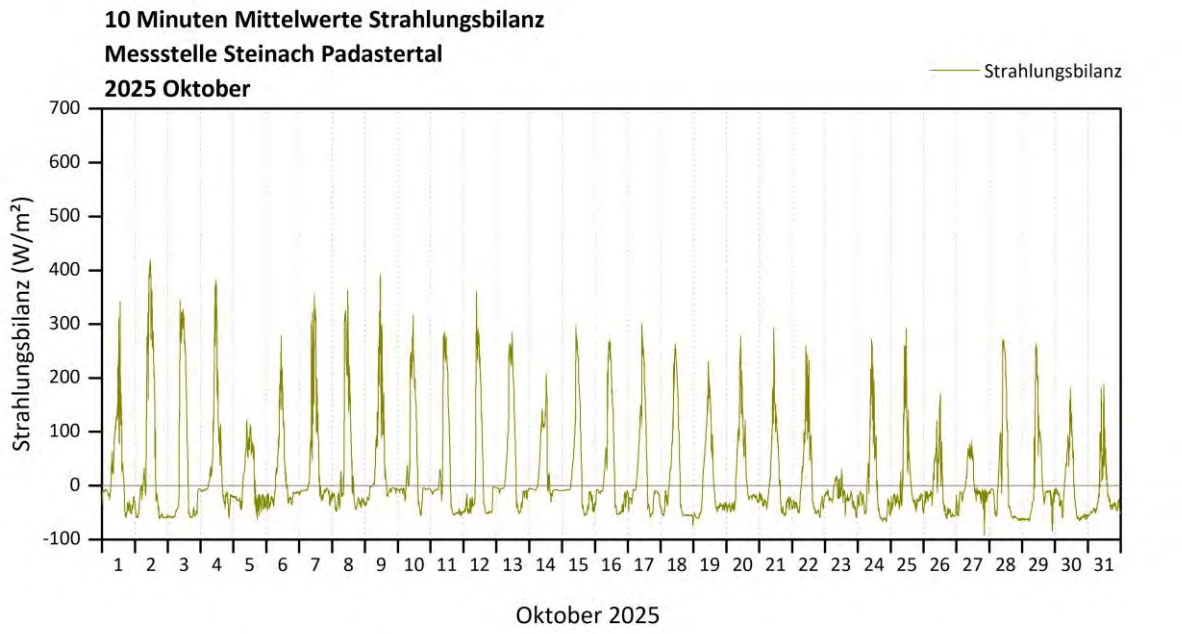
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht November 2025 Relazione mensile novembre 2025

Stickstoffdioxid Biossido di azoto

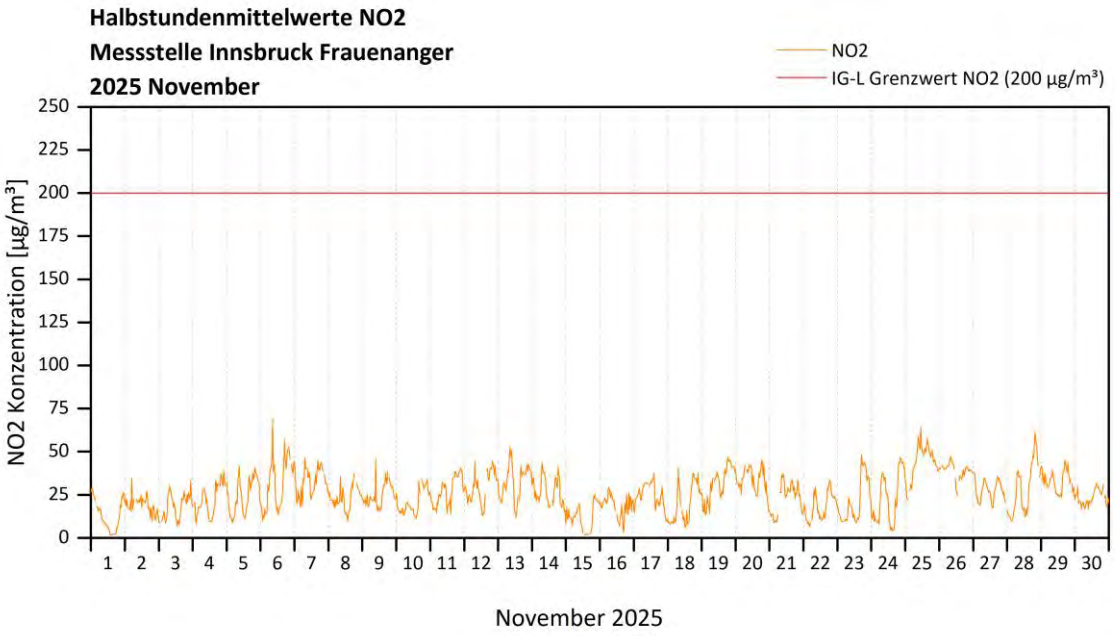
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 e 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	70	25.6	44.3	0		0	
Innsbruck Sillhöfe	55	23.7	42.0	0		0	
Steinach Siegreith	47	12.4	23.7	0		0	
Steinach Saxen	58	16.7	26.6	0		0	
Ampass	54	20.0	37.3	0		0	
Tulfes	42	14.8	33.0	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

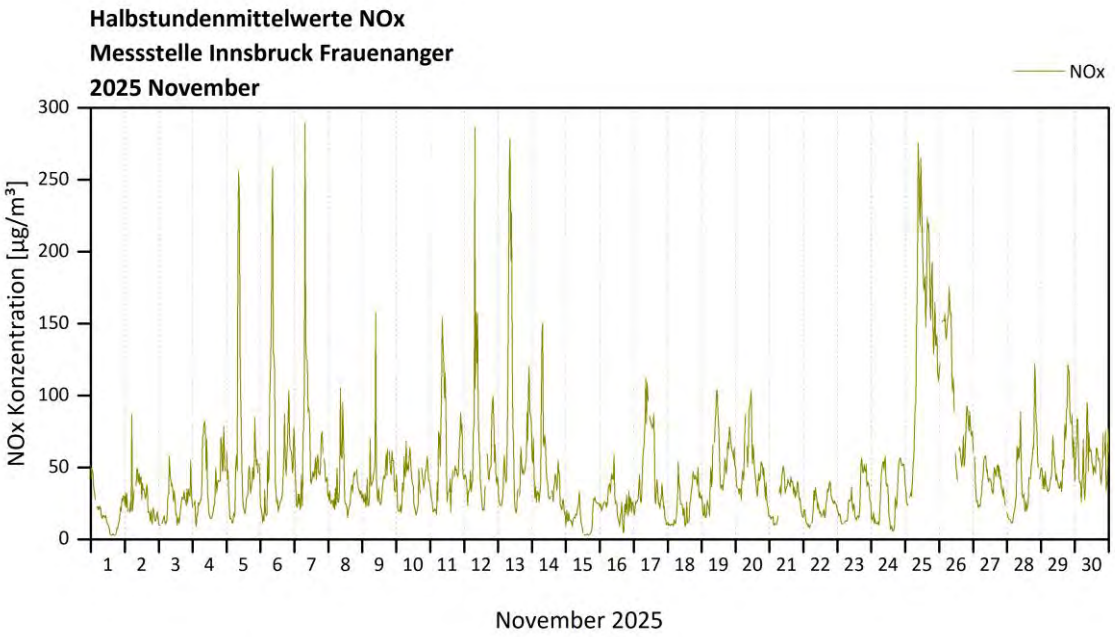
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 e 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	122	12.0	18.2	0		0	
Innsbruck Sillhöfe	65	12.4	18.6	0		0	
Steinach Siegreith	67	11.1	19.3	0		0	
Steinach Saxen	158	16.6	45.2	0		0	
Ampass	332	13.4	23.0	0		1	
Tulfes	35	11.6	21.4	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

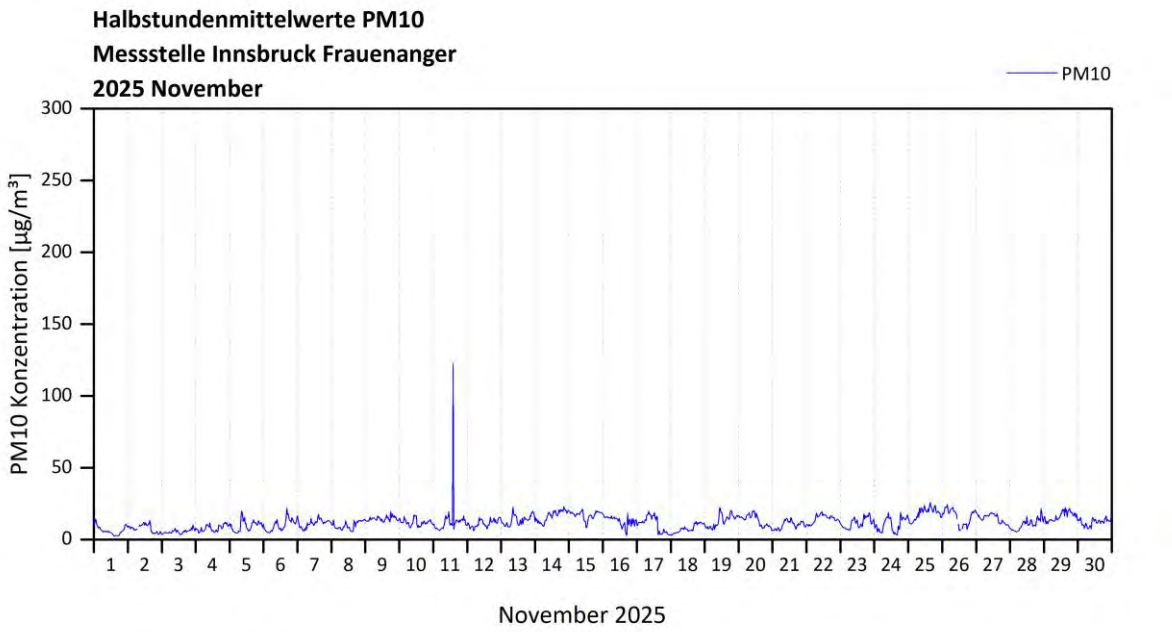
Stickstoffdioxid / Biossido di azoto



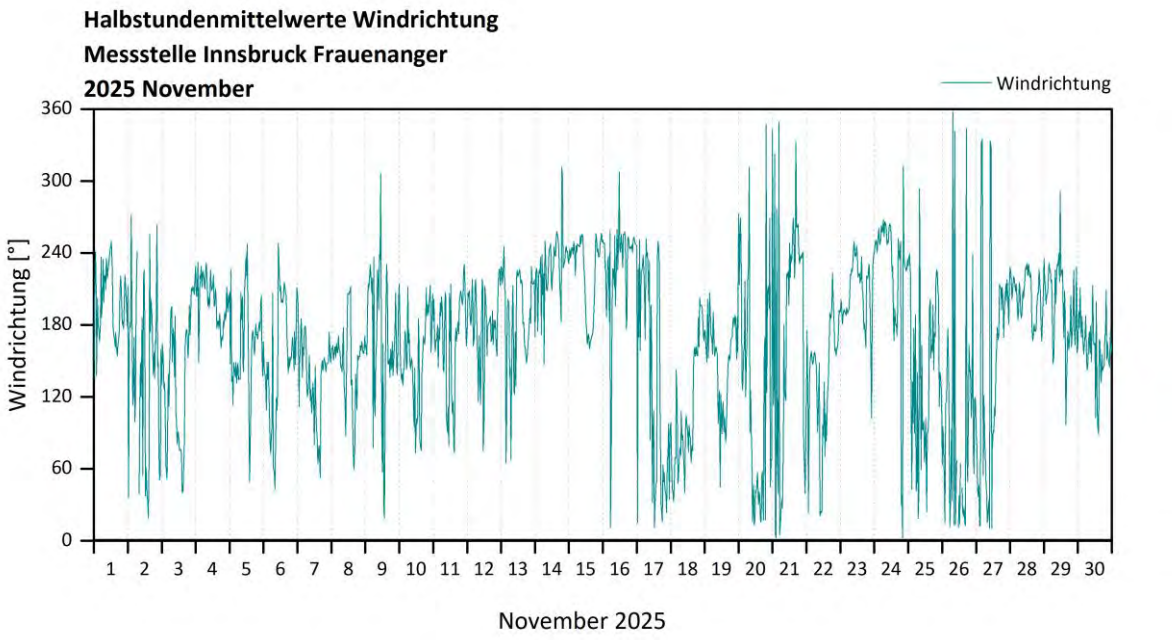
Stickstoffoxide / Ossidi di azoto



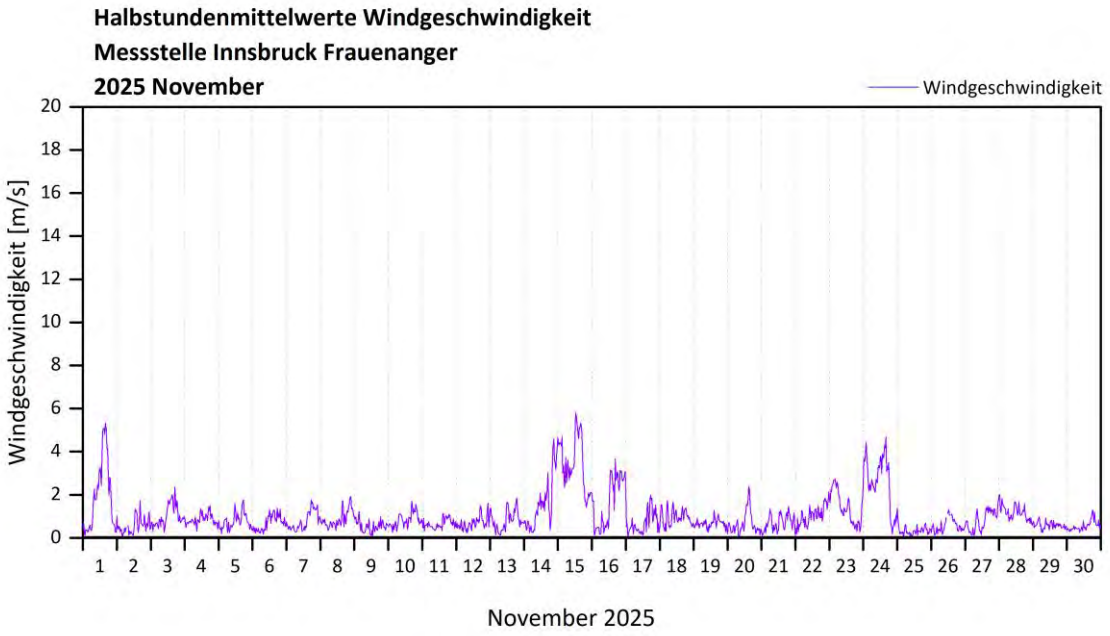
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

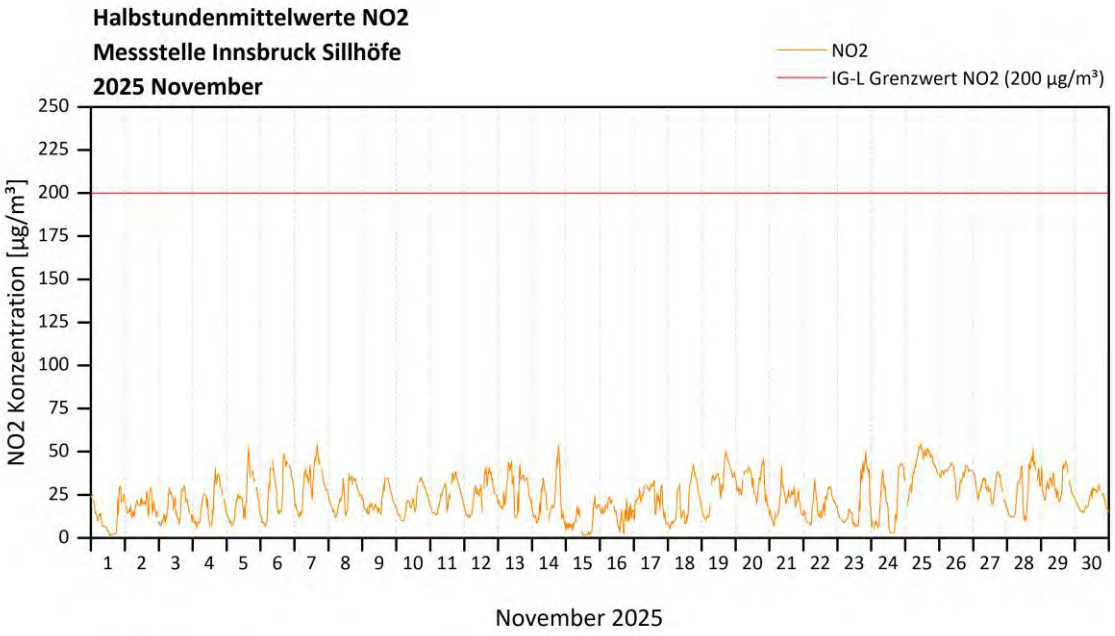


Windgeschwindigkeit / Velocità del vento

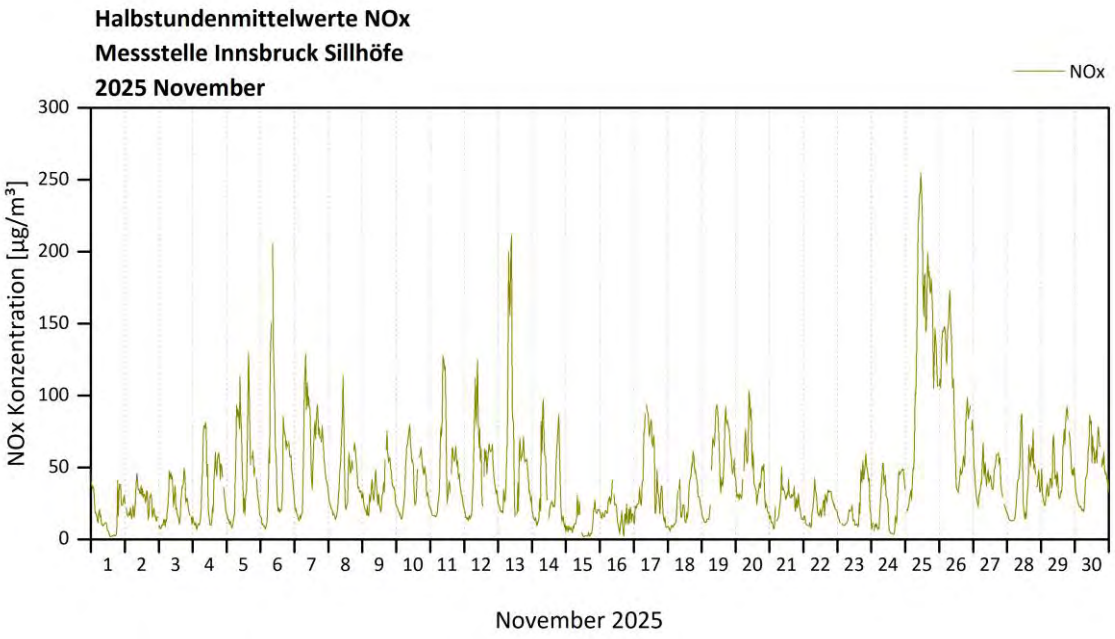


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

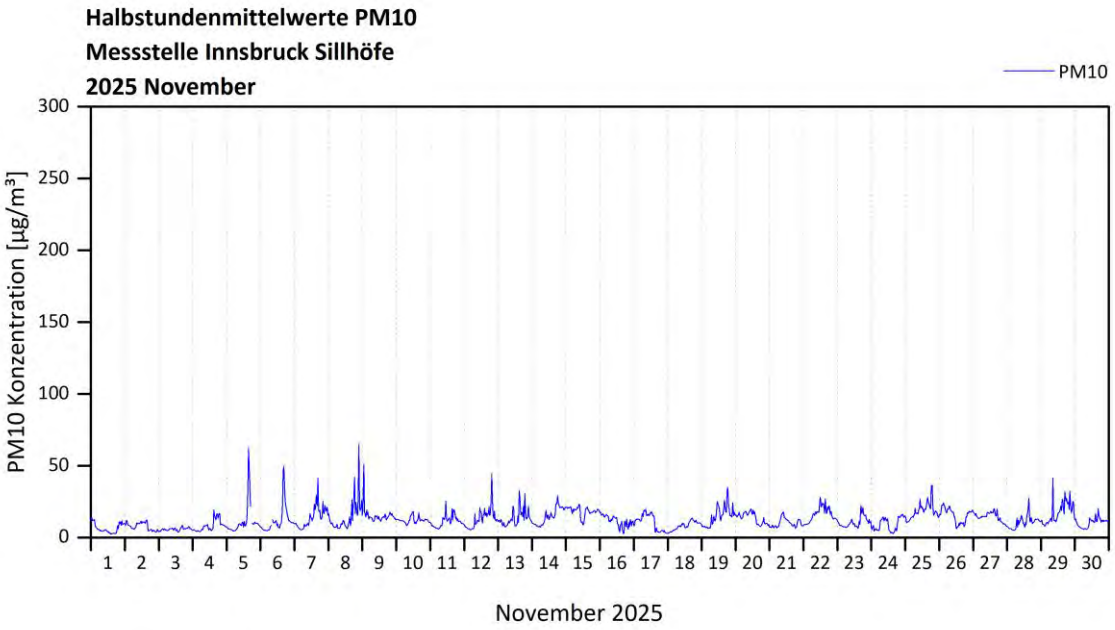
Stickstoffdioxid / Biossido di azoto



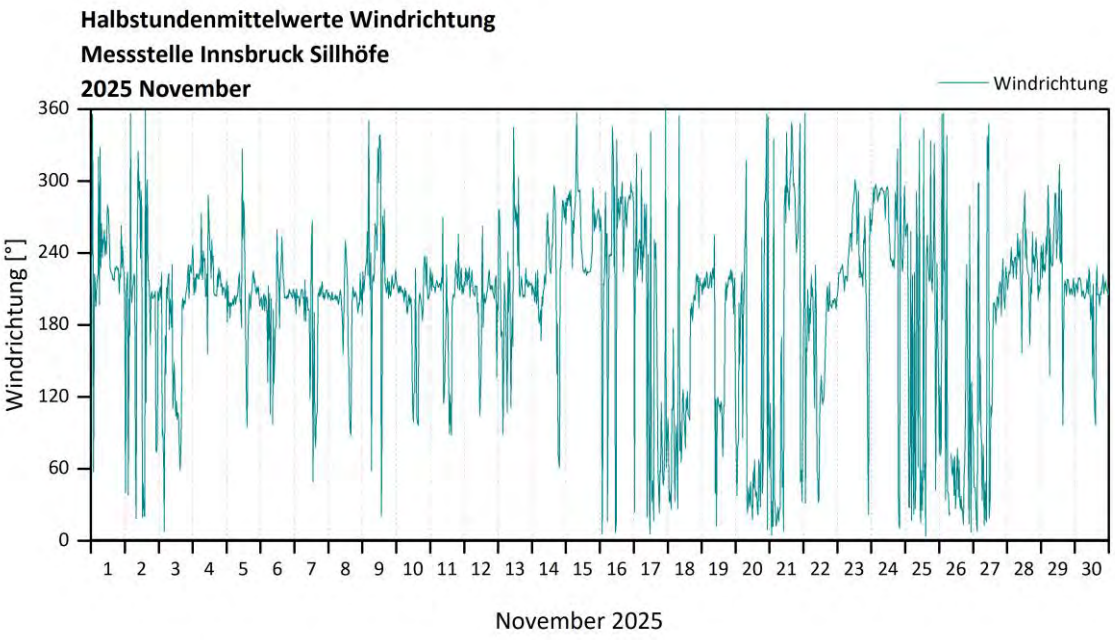
Stickstoffoxide / Ossidi di azoto



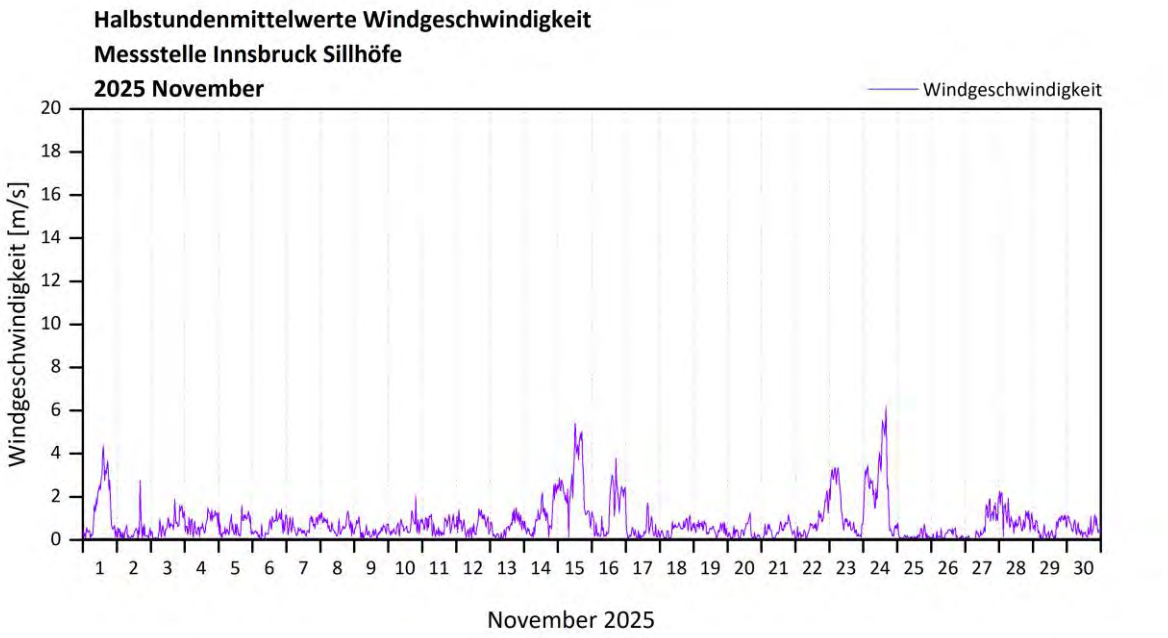
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

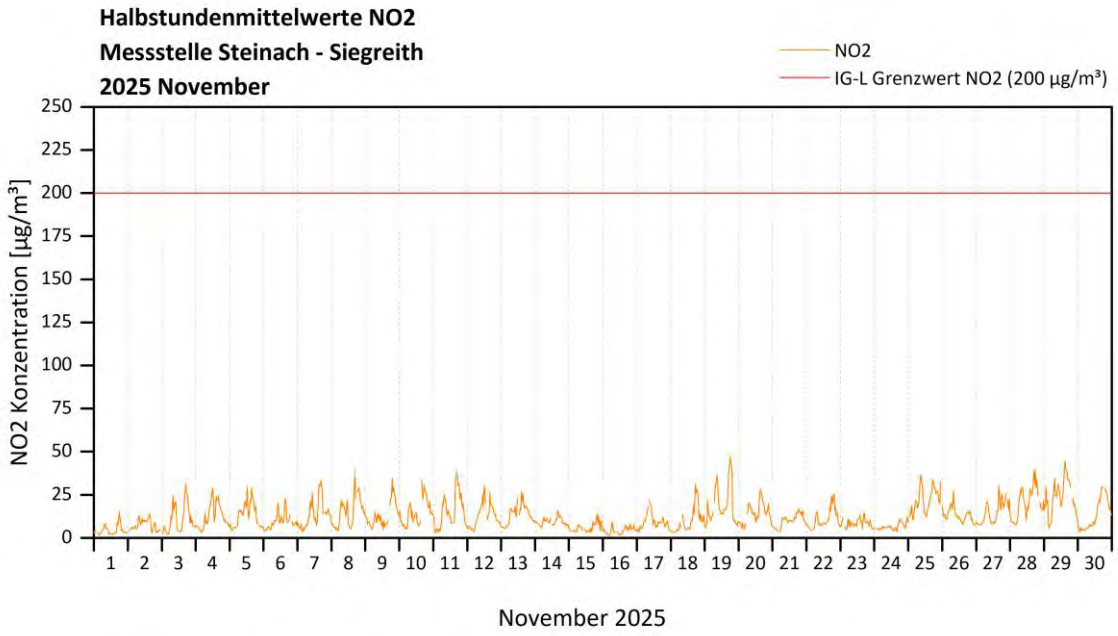


Windgeschwindigkeit / Velocità del vento

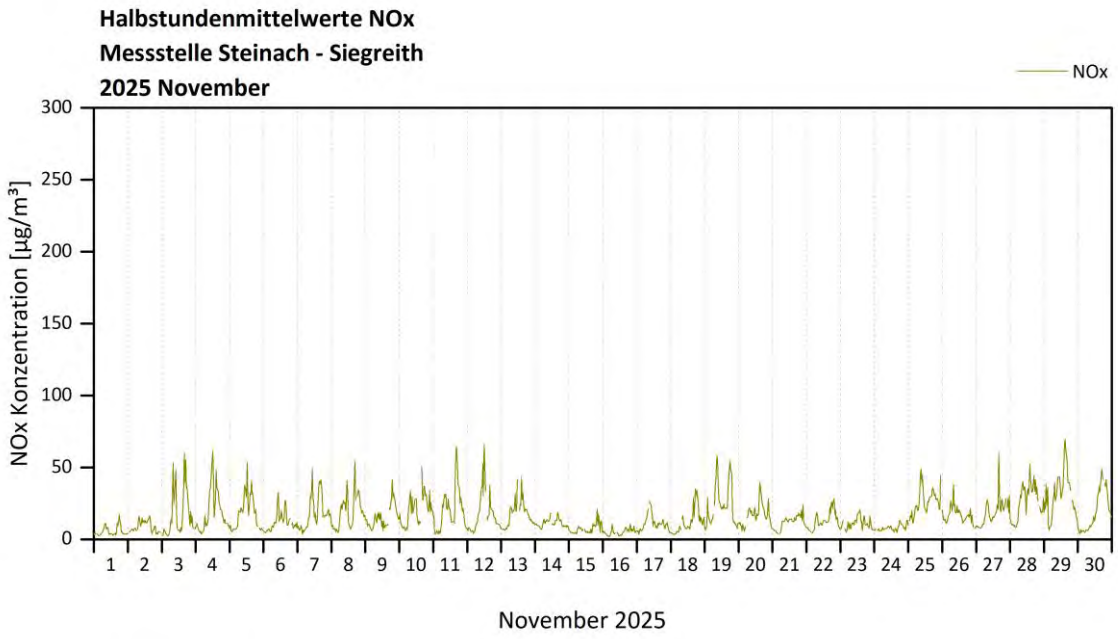


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

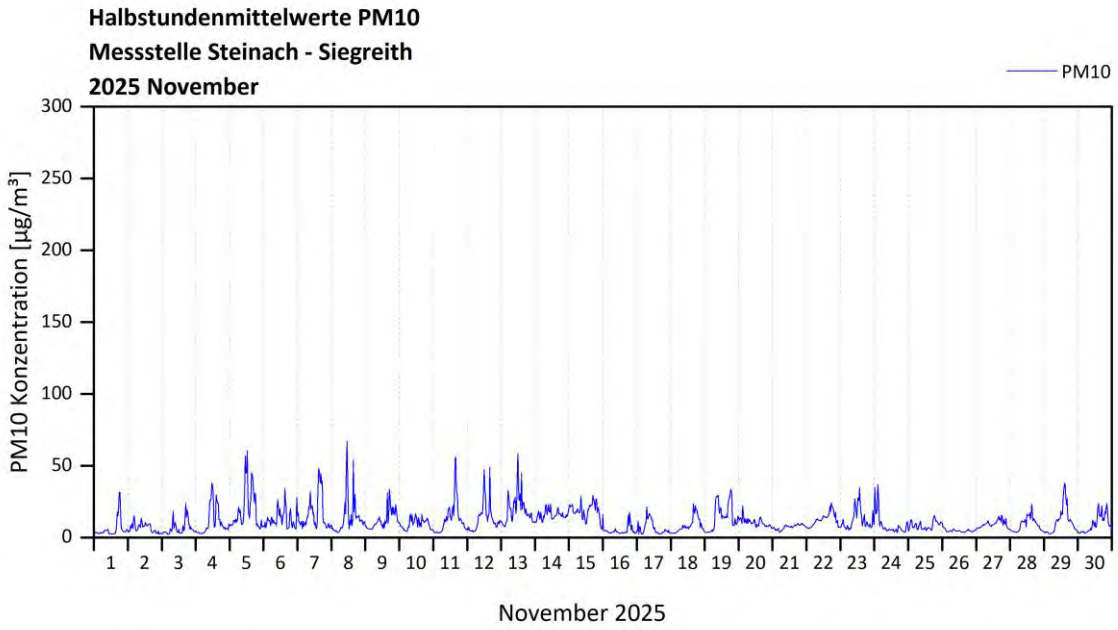
Stickstoffdioxid / Biossido di azoto



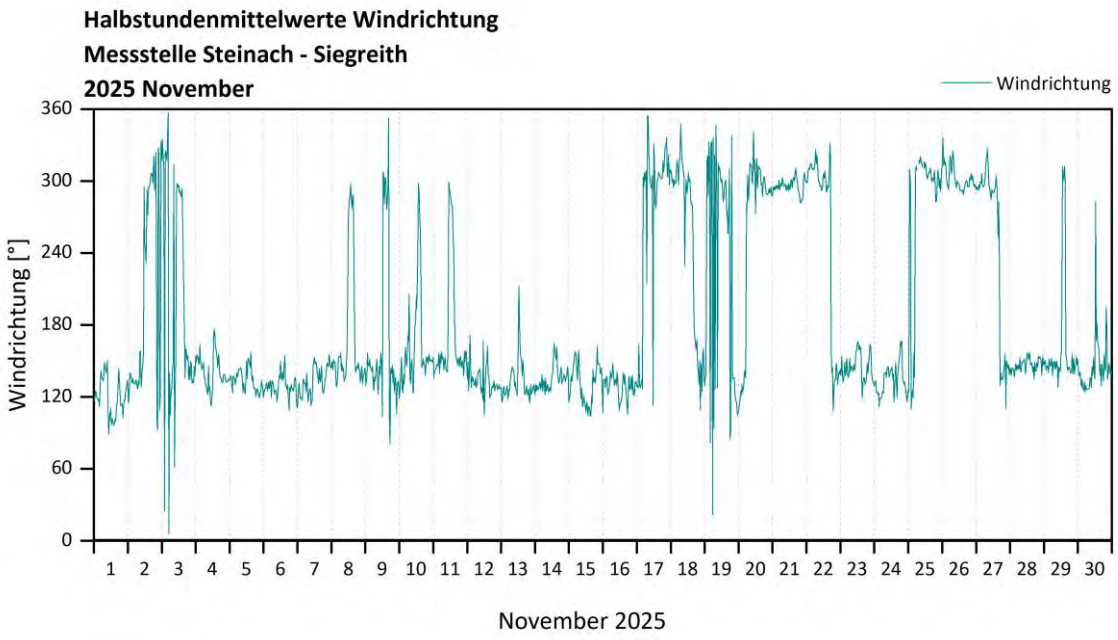
Stickstoffoxide / Ossidi di azoto



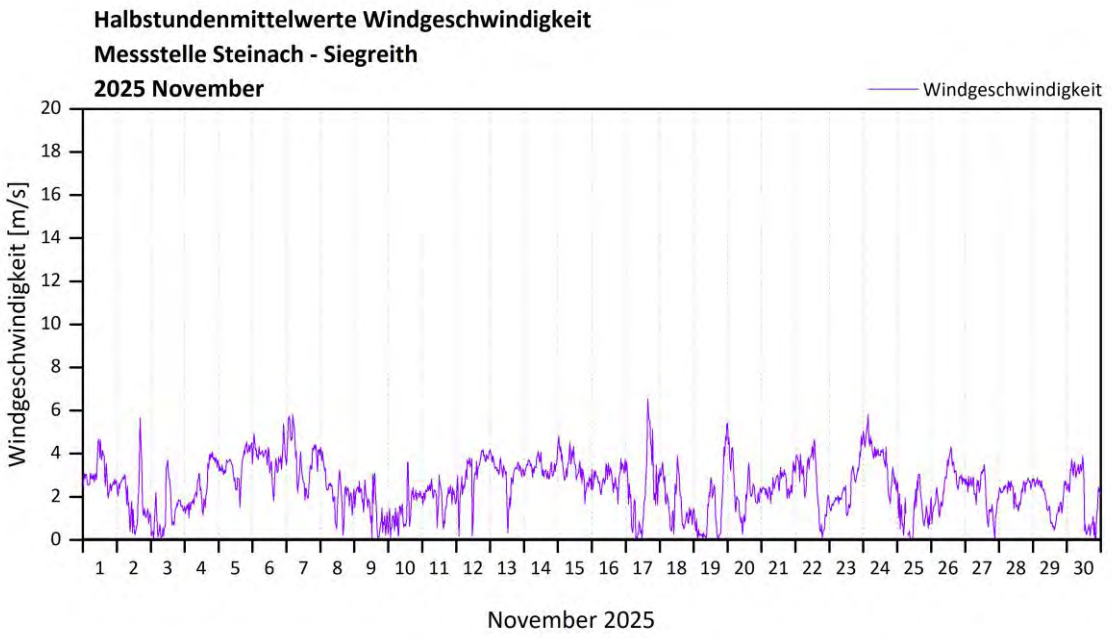
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

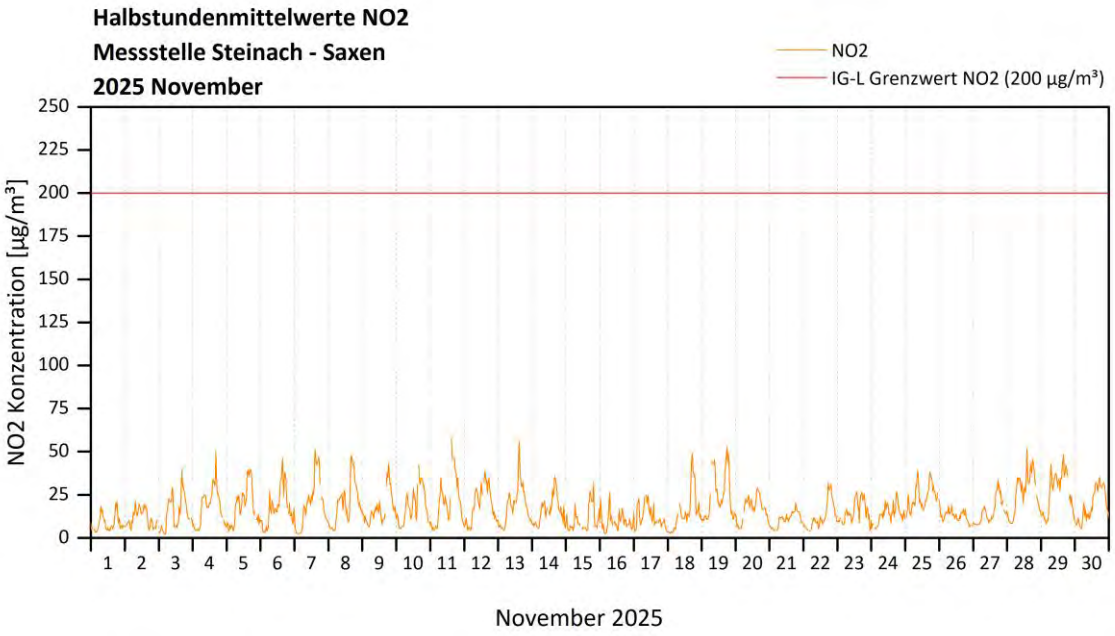


Windgeschwindigkeit / Velocità del vento

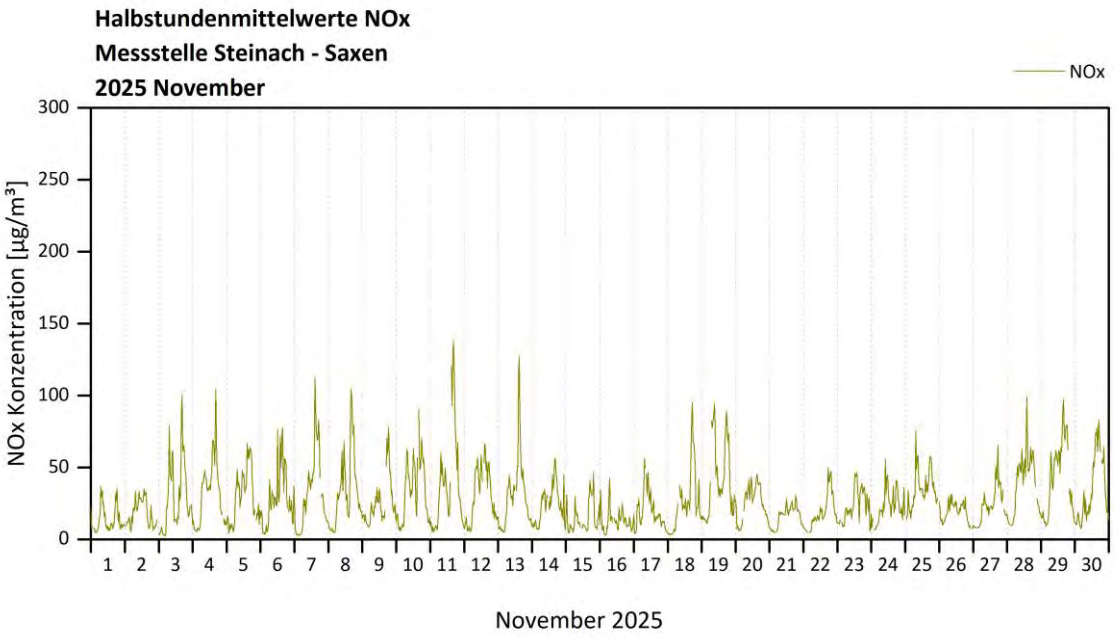


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

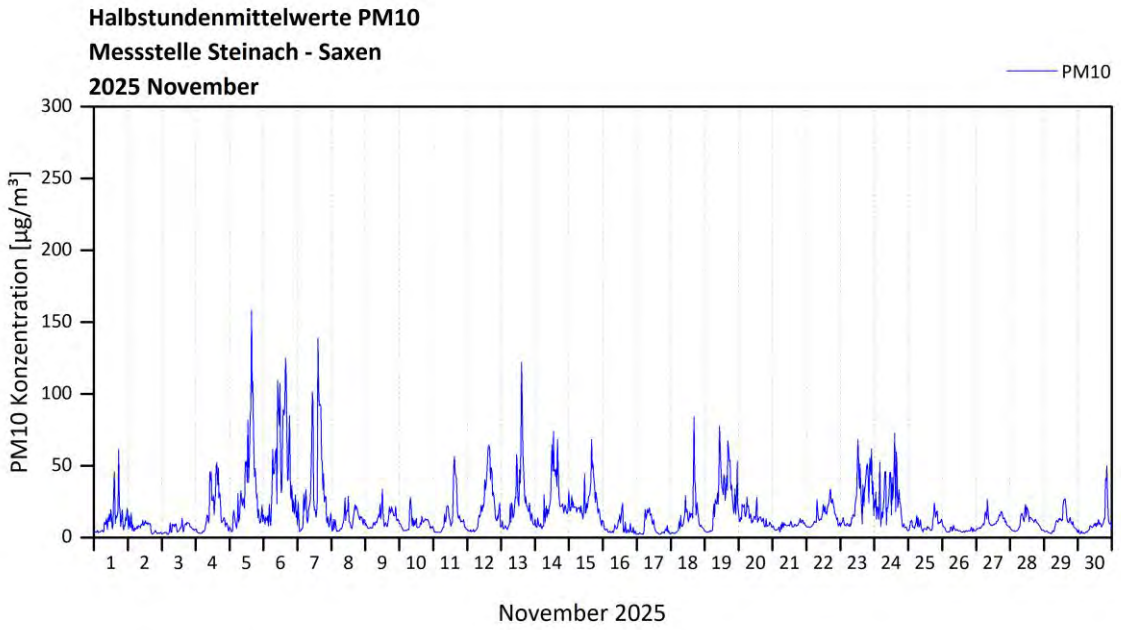
Stickstoffdioxid / Biossido di azoto



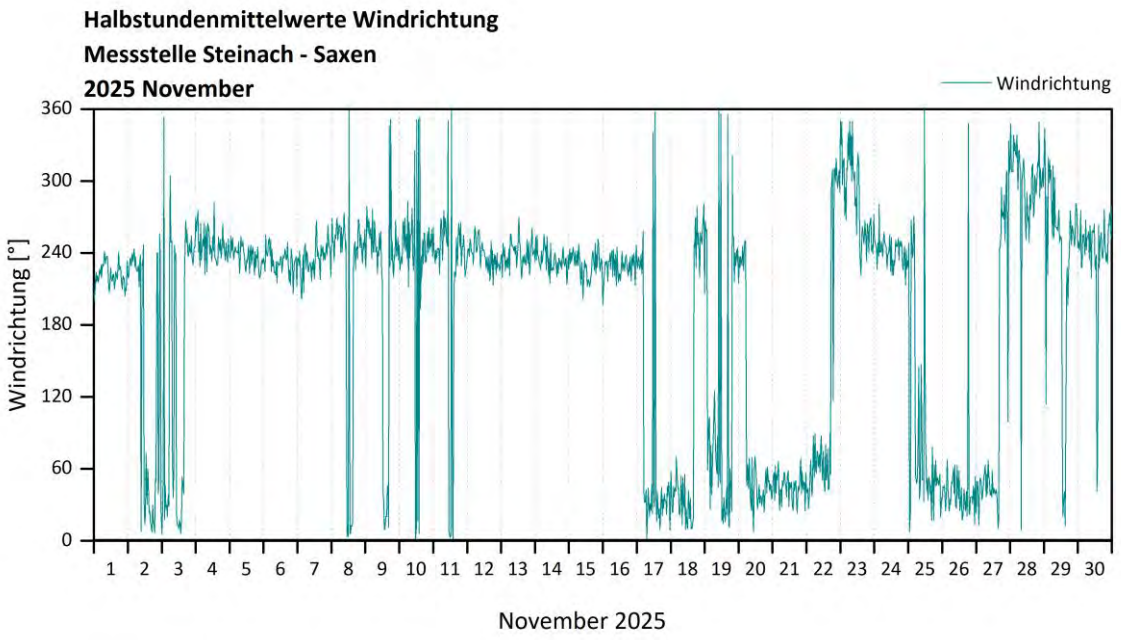
Stickstoffoxide / Ossidi di azoto



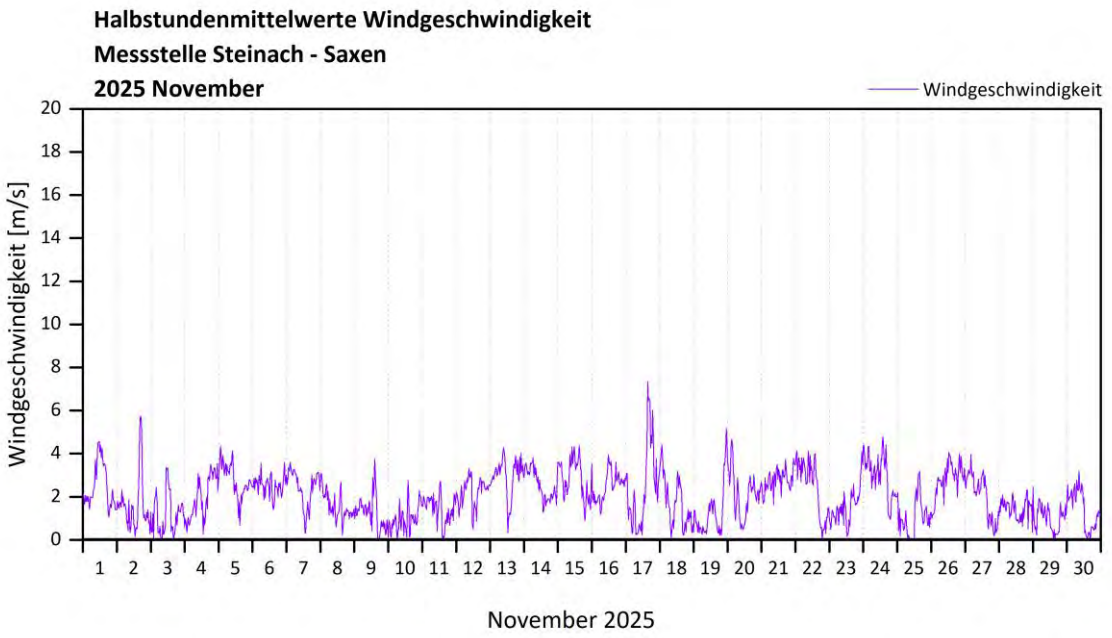
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



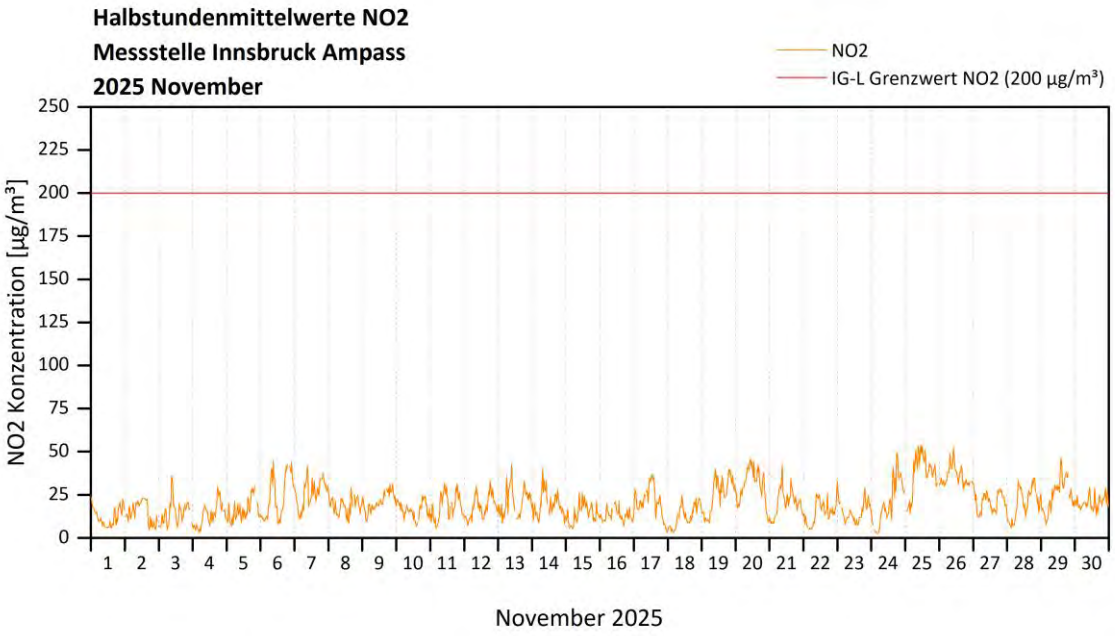
Windgeschwindigkeit / Velocità del vent



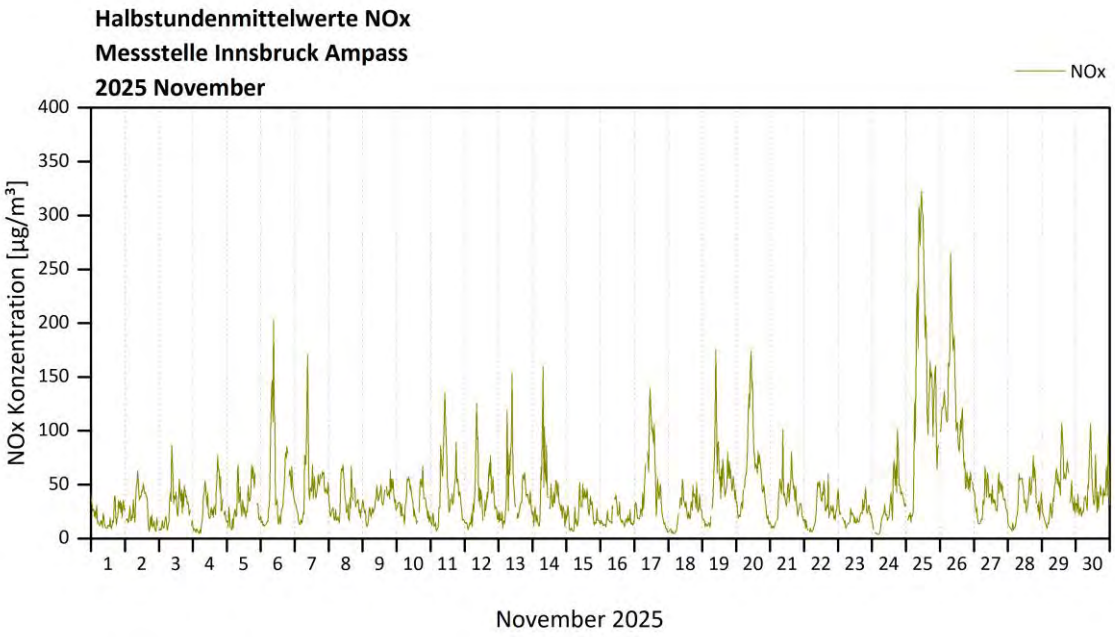
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

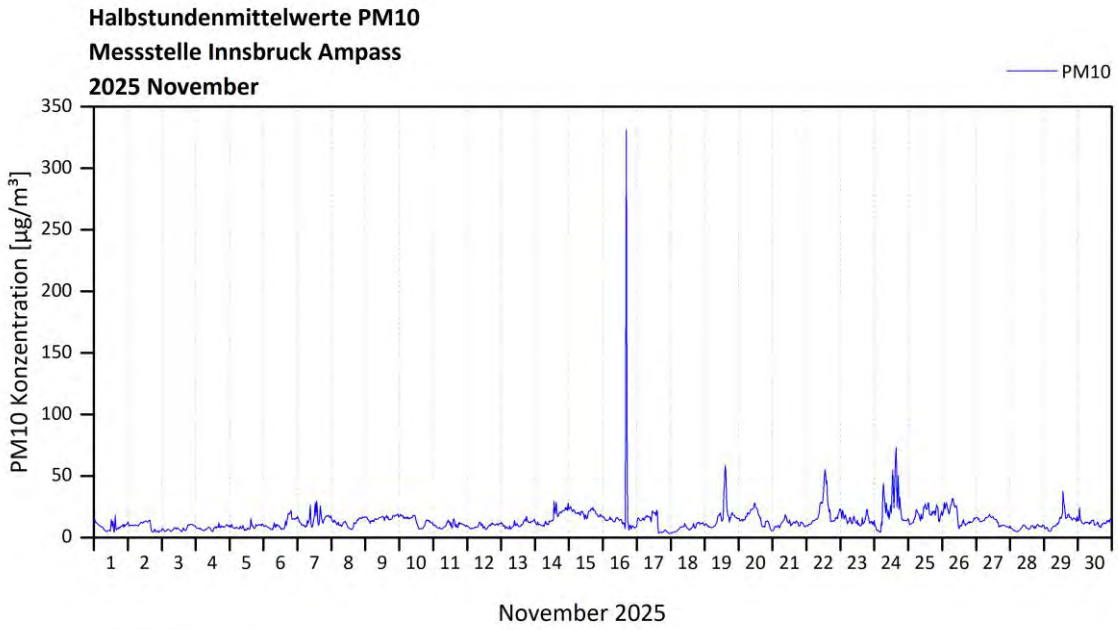
Stickstoffdioxid / Biossido di azoto



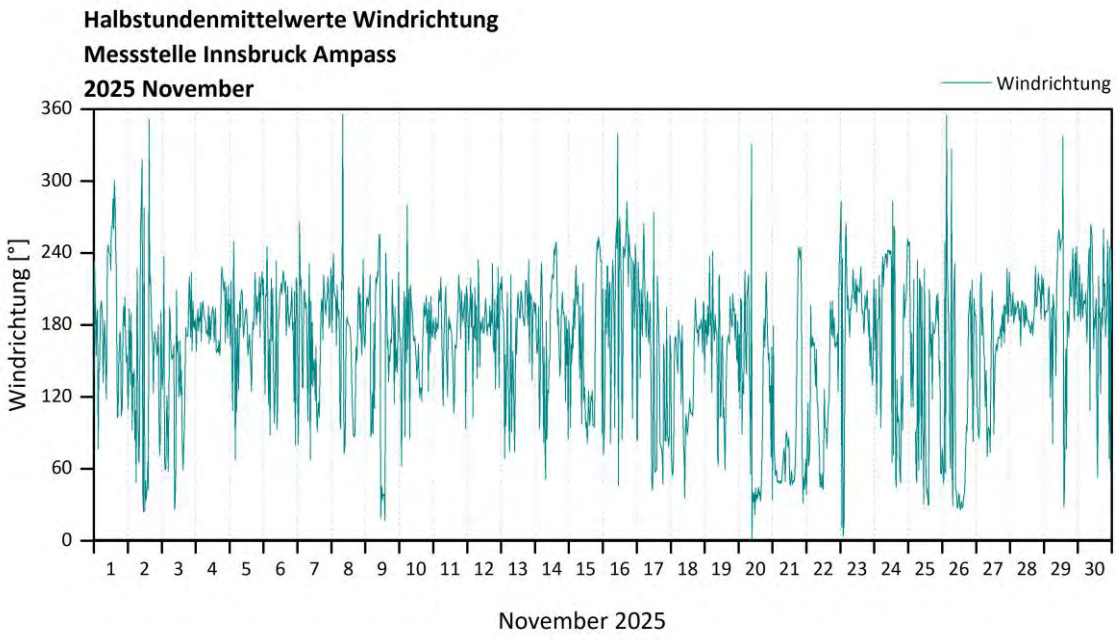
Stickstoffoxide / Ossidi di azoto



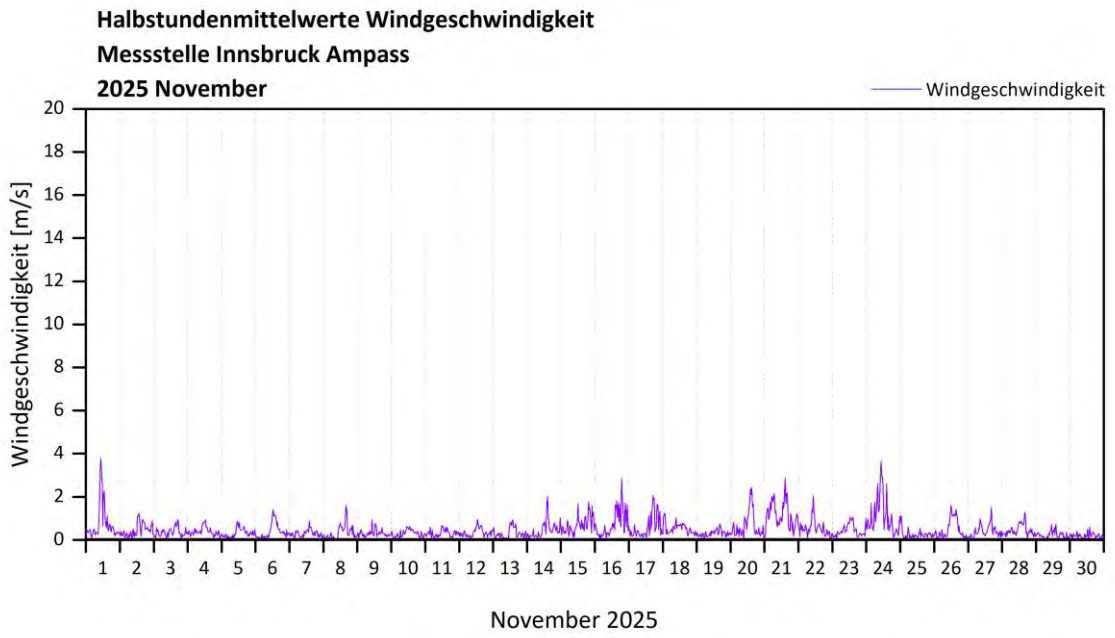
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

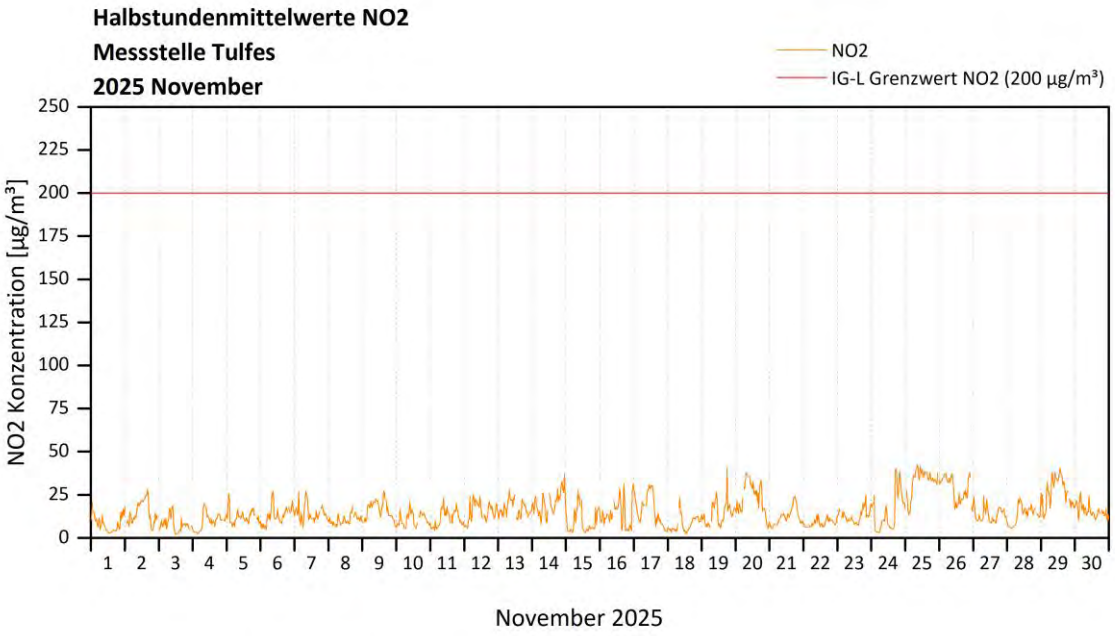


Windgeschwindigkeit / Velocità del vent

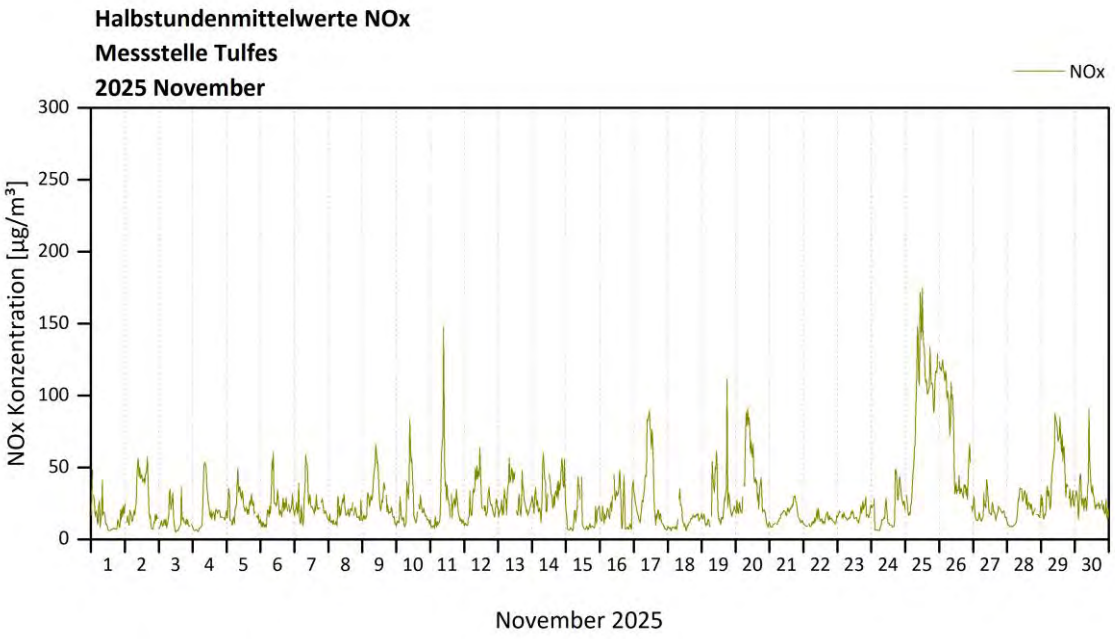


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

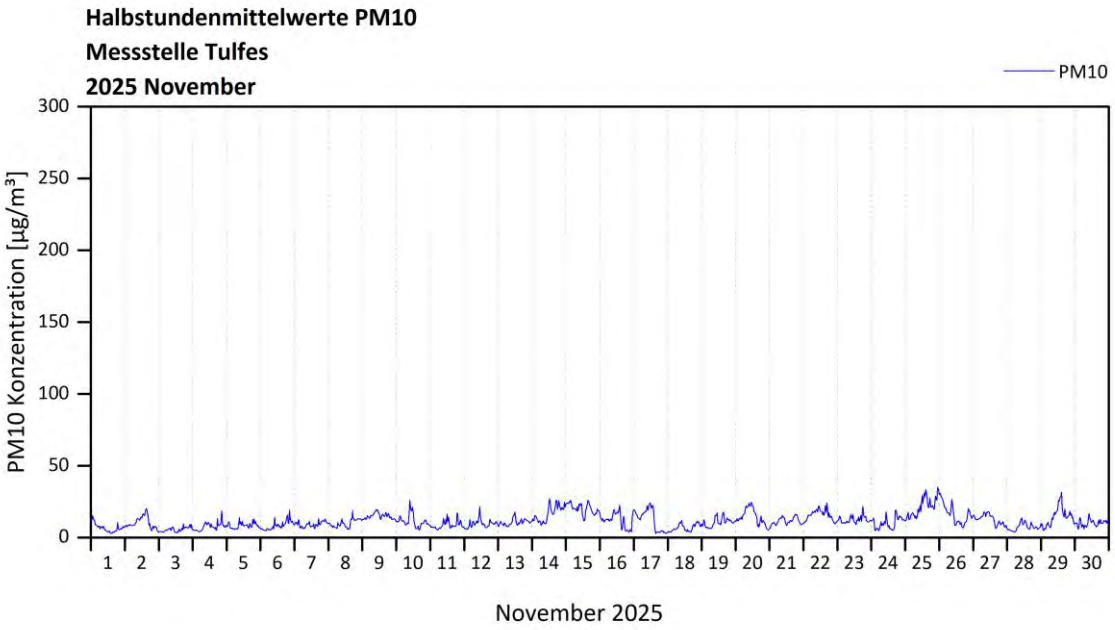
Stickstoffdioxid / Biossido di azoto



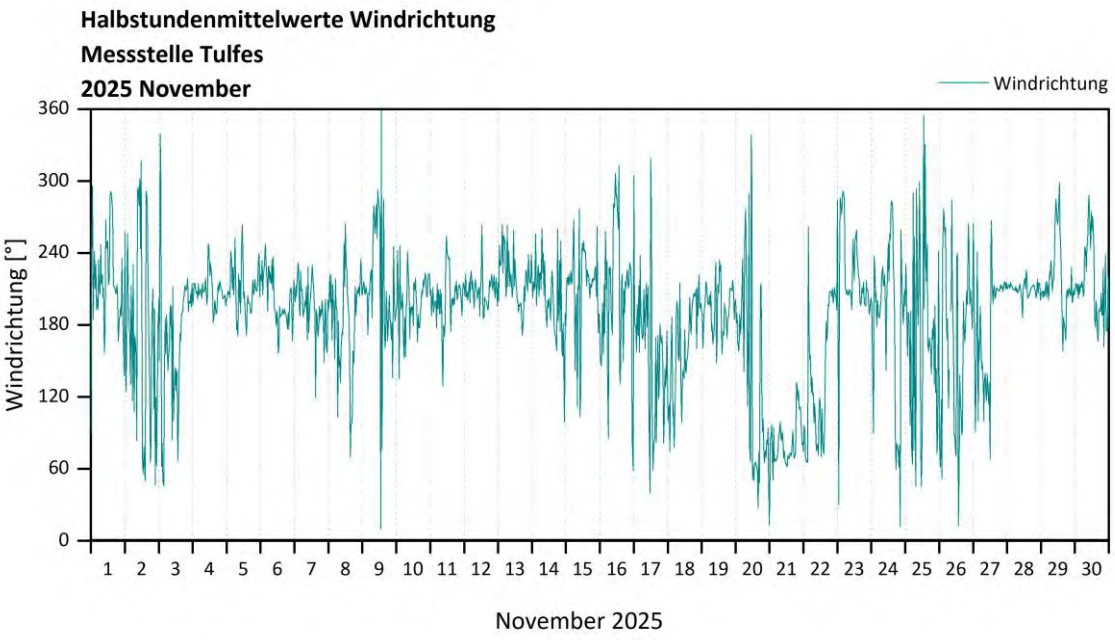
Stickstoffoxide / Ossidi di azoto



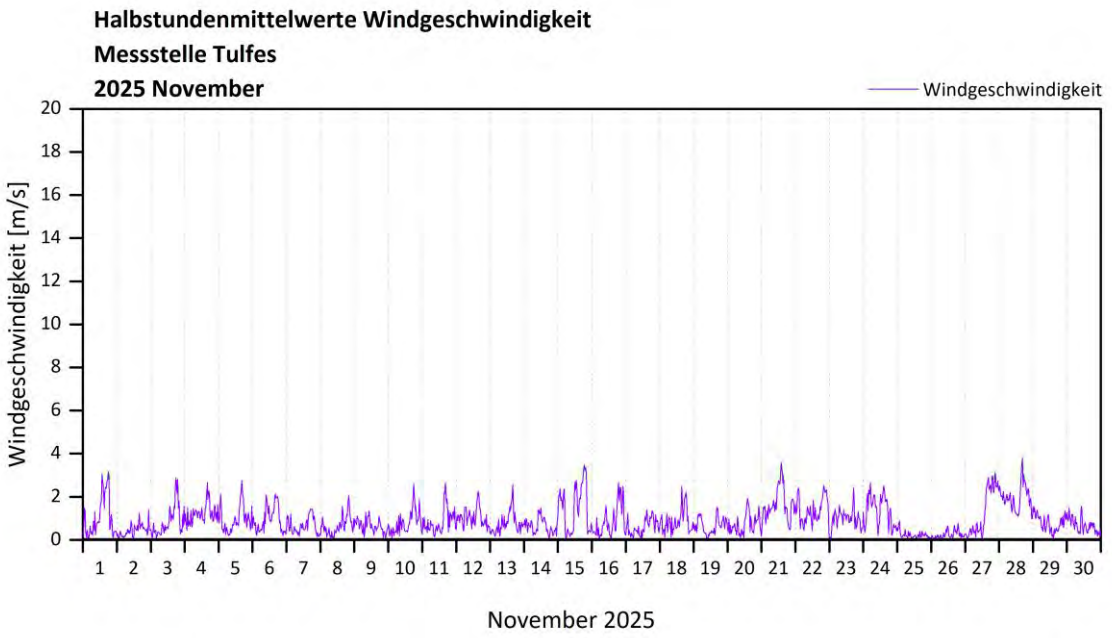
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

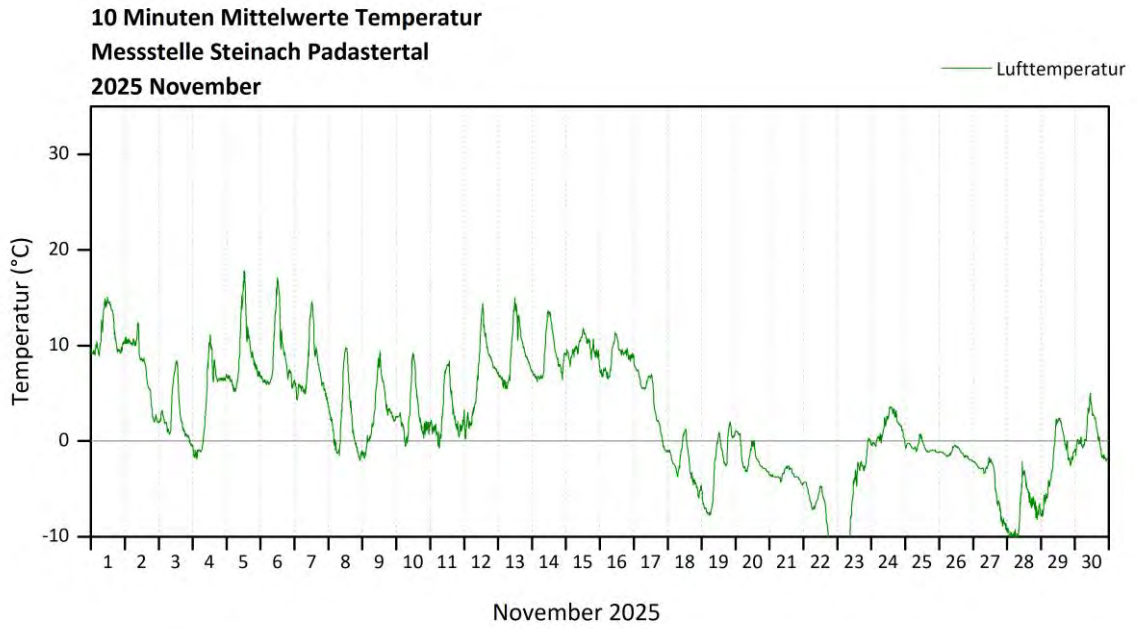


Windgeschwindigkeit / Velocità del vent

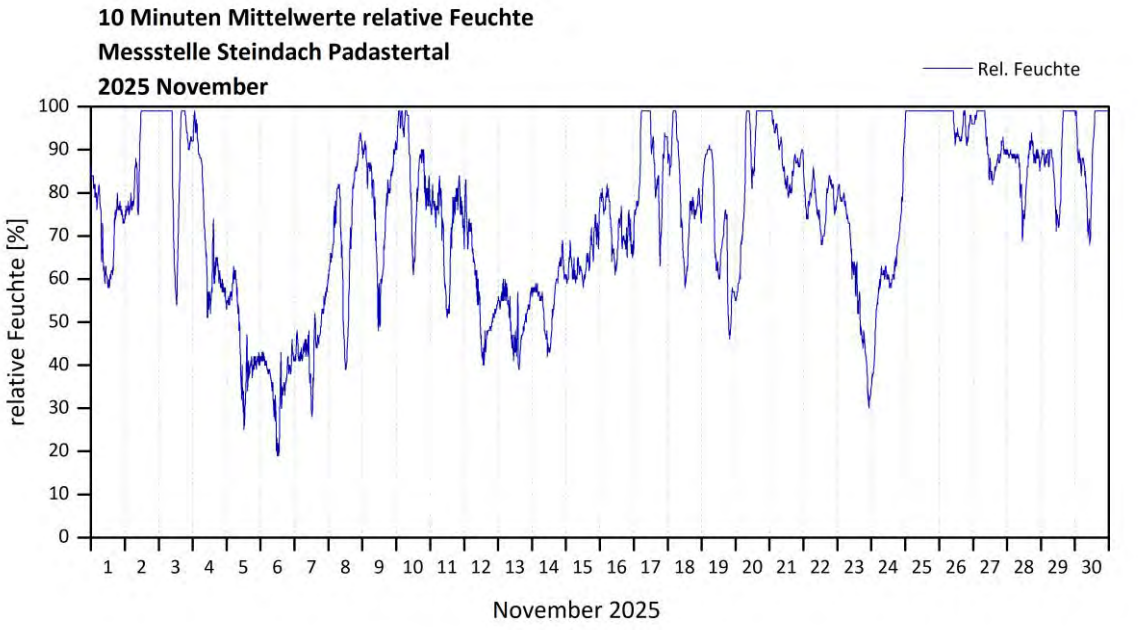


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

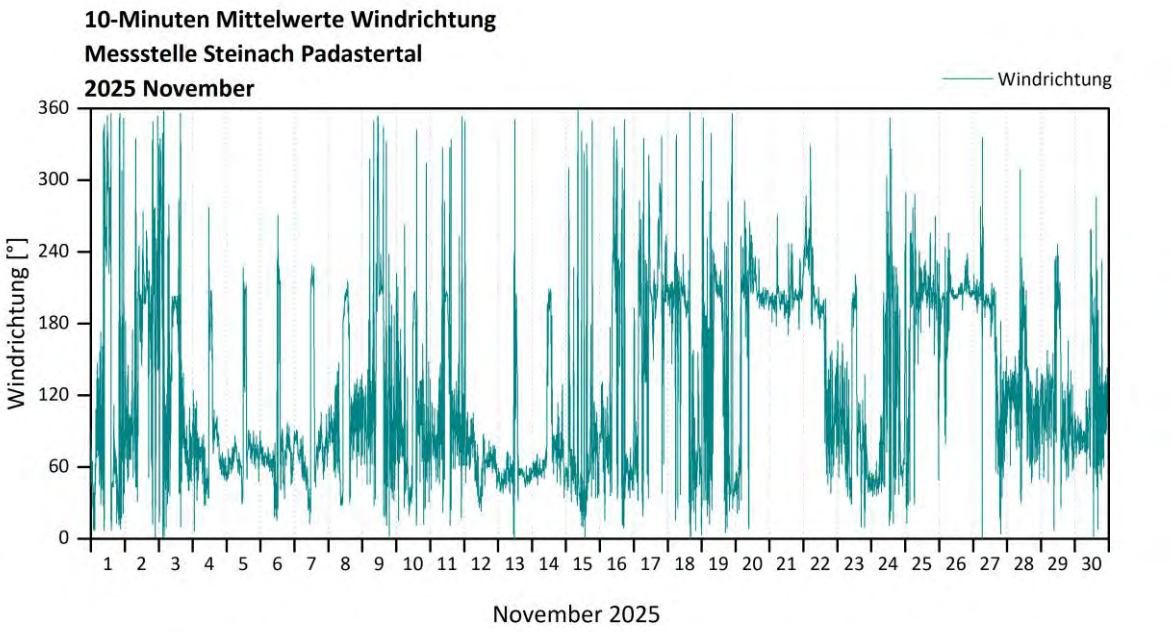
Temperatur / Temeraturà dell'aria



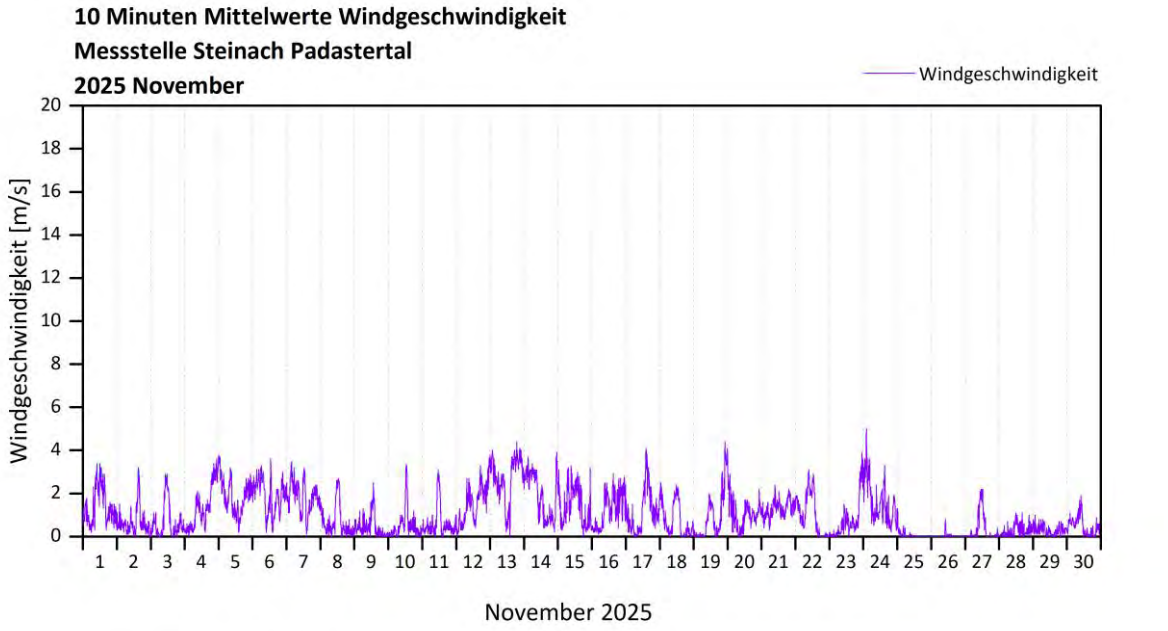
Relative Feuchtigkeit / Umidità relativa



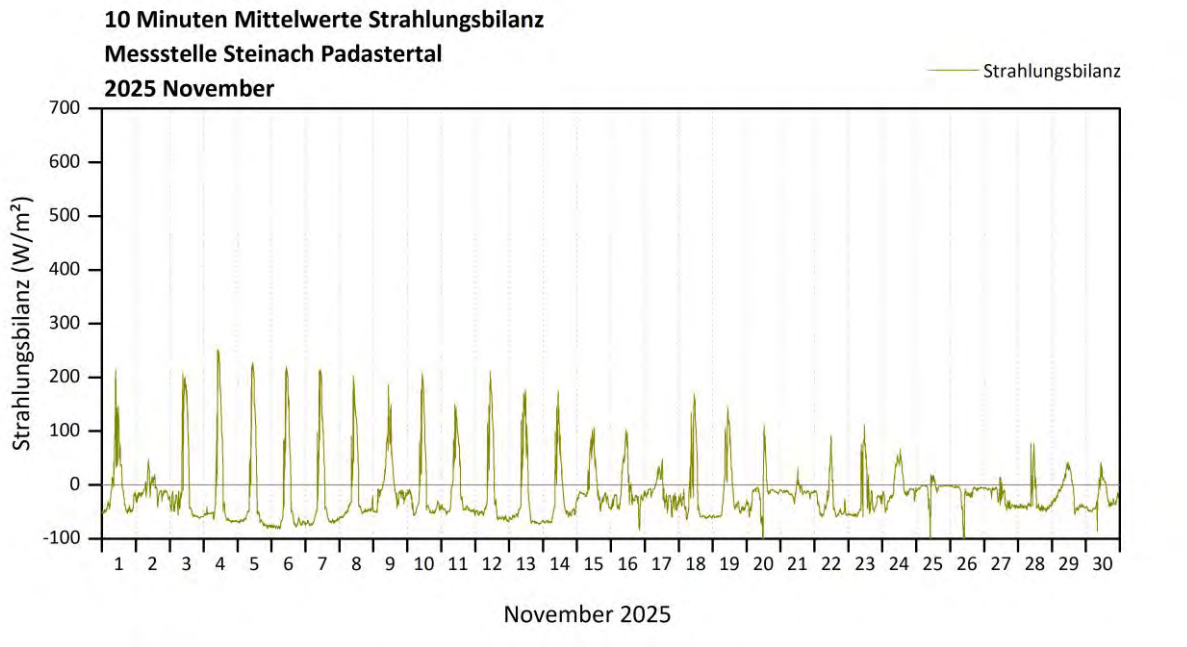
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent



Strahlungsbilanz / Radazione



Monatsbericht Dezember 2025 Relazione mensile dicembre 2025

Stickstoffdioxid Biossido di azoto

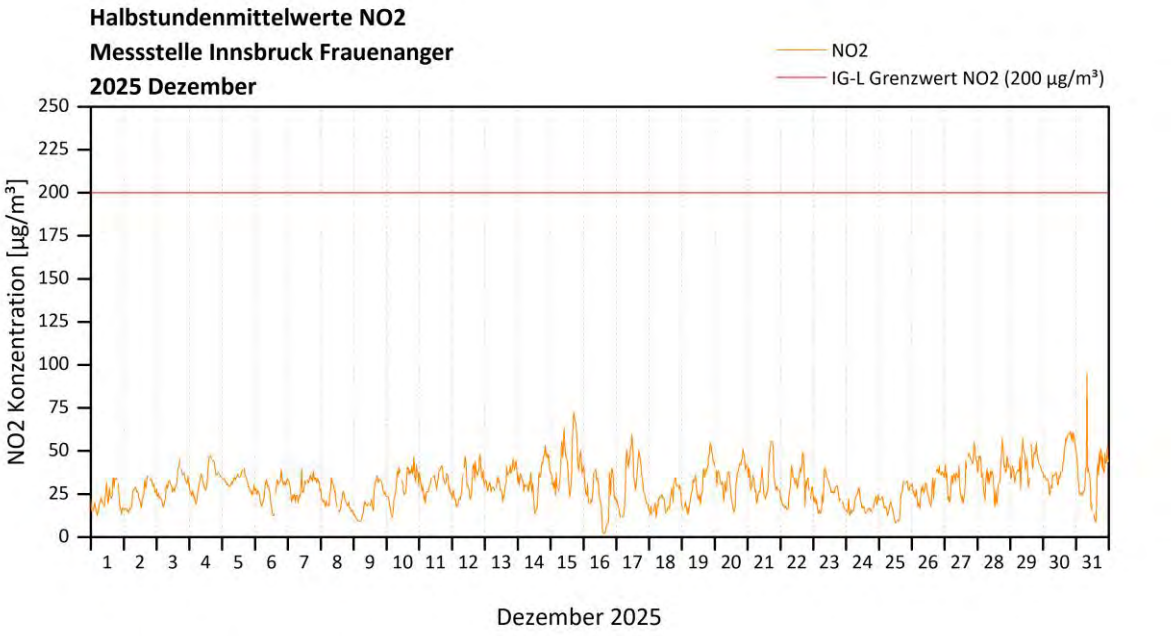
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 100 und 200 µg/m³	Quantitá di valori tra 100 und 200 µg/m³	Anzahl der Werte über 200 µg/m³	Quantità di valori superiori a 200 µg/m³
Innsbruck Frauenanger	95	30.1	43.2	0		0	
Innsbruck Sillhöfe	72	26.7	40.7	0		0	
Steinach Siegreith	61	13.8	31.7	0		0	
Steinach Saxen	67	19.6	34.0	0		0	
Ampass	61	23.2	36.3	0		0	
Tulfes	52	18.9	30.9	0		0	

Feinstaub PM10 Polveri sottili (diametro <10µm)

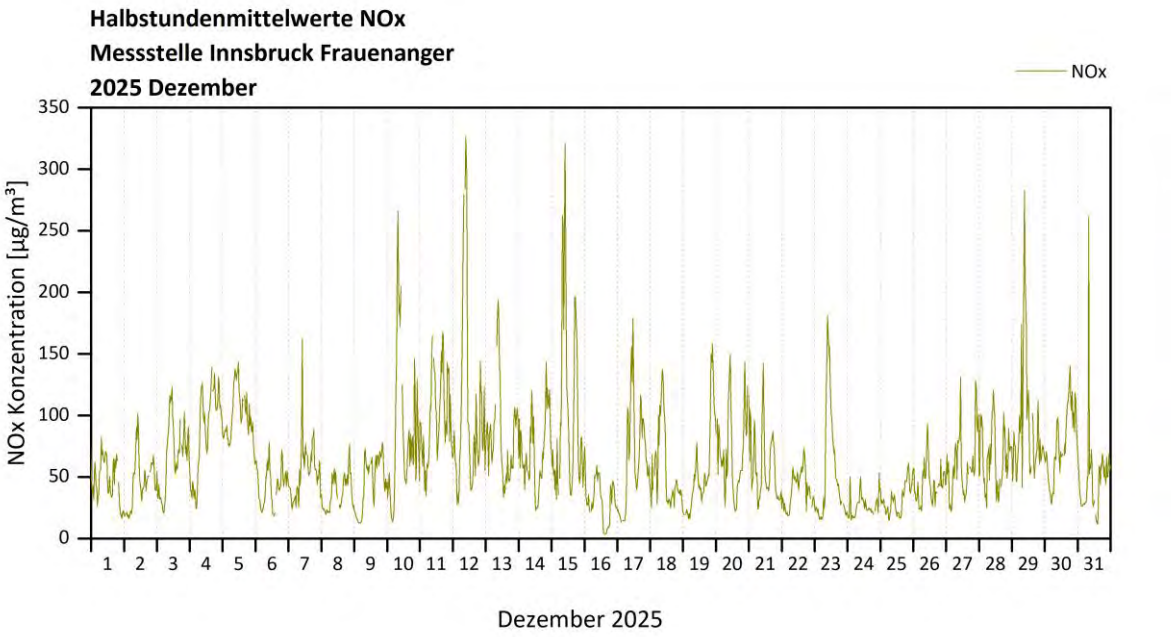
	Max HMW / Monat µg/m³ Media massima mensile ogni 1/2 ora	Monatsmittelwert µg/m³ Media mensile	Max TMW µg/m³ Media massima giornaliera	Anzahl der Werte zwischen 250 und 300 µg/m³	Quantitá di valori tra 250 und 300 µg/m³	Anzahl der Werte über 300 µg/m³	Quantità di valori superiori a 300 µg/m³
Innsbruck Frauenanger	110	15.5	26.6	0		0	
Innsbruck Sillhöfe	363	18.5	47.4	1		1	
Steinach Siegreith	98	11.5	18.3	0		0	
Steinach Saxen	311	18.0	50.1	0		1	
Ampass	70	14.3	29.0	0		0	
Tulfes	39	13.3	26.3	0		0	

Innsbruck Frauenanger Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

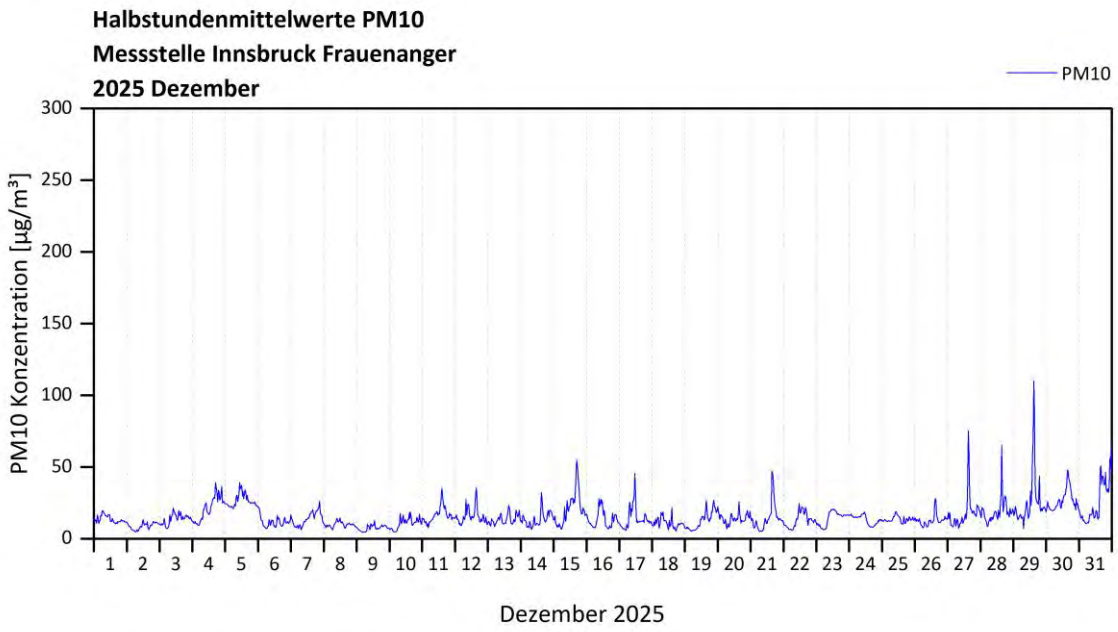
Stickstoffdioxid / Biossido di azoto



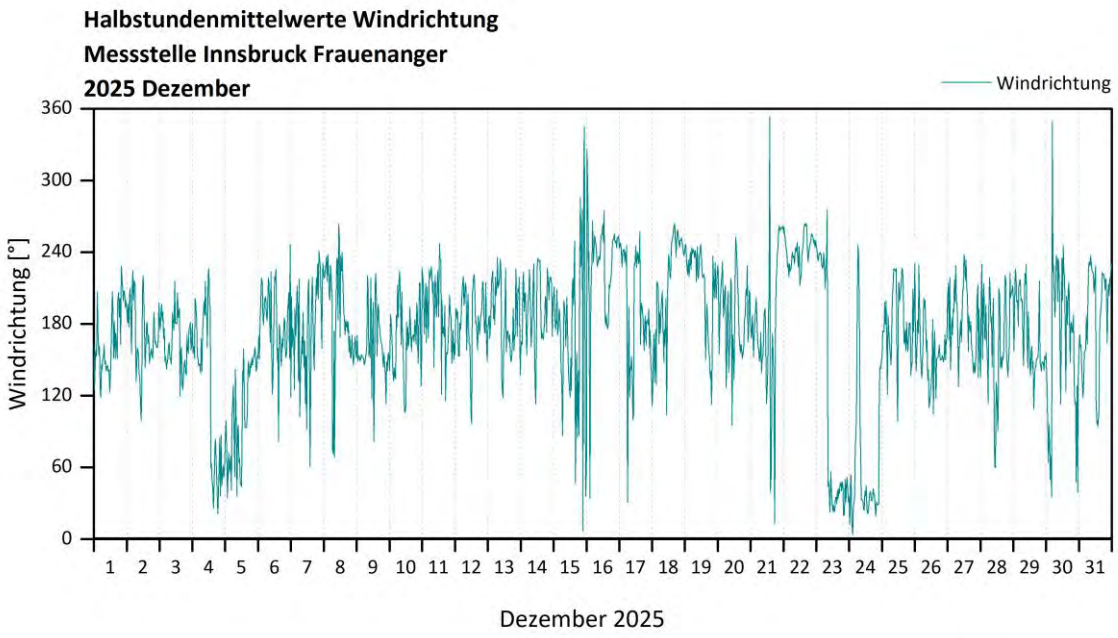
Stickstoffoxide / Ossidi di azoto



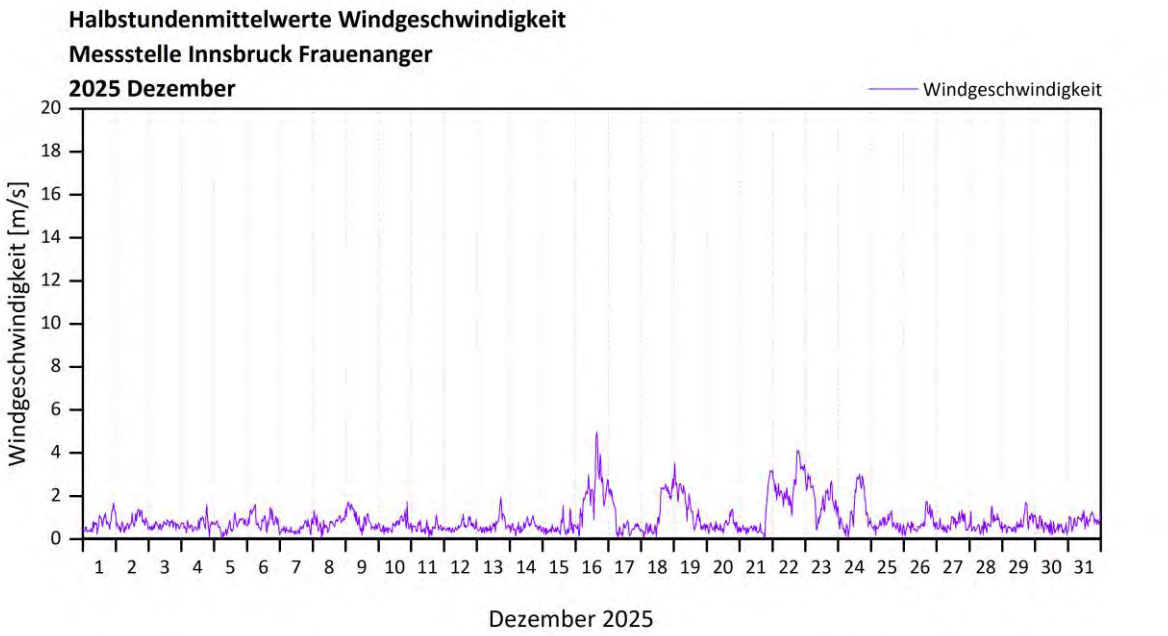
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

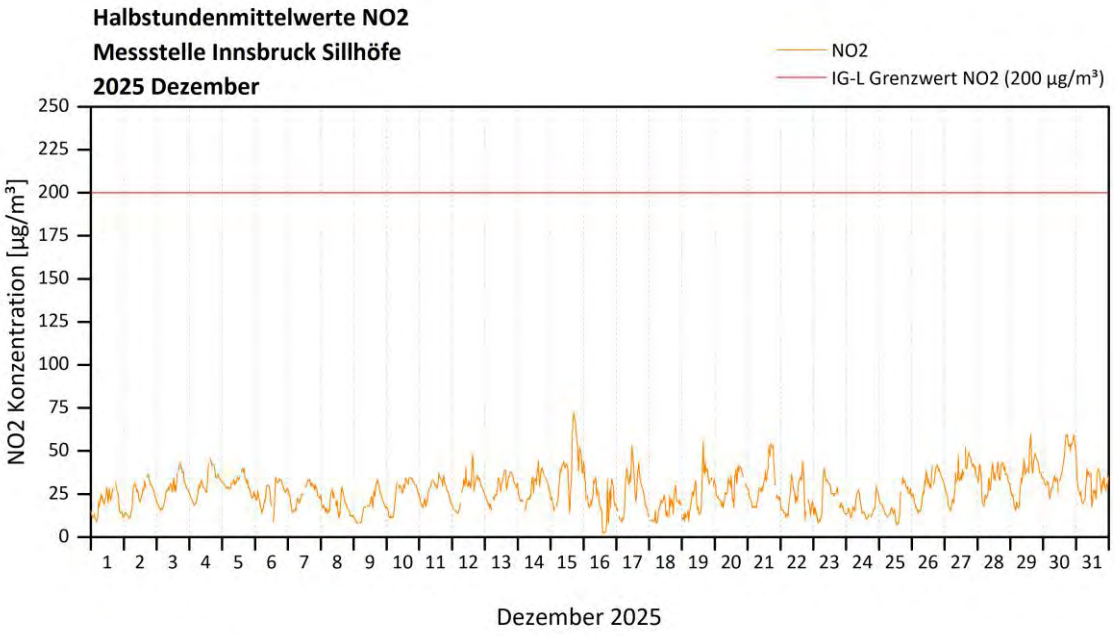


Windgeschwindigkeit / Velocità del vento

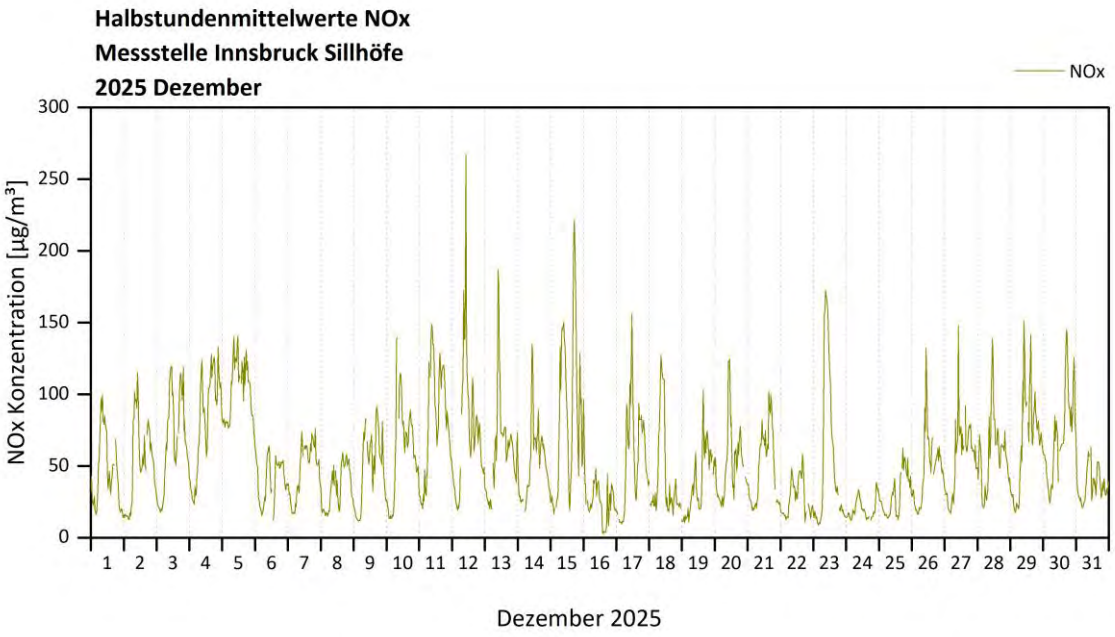


Innsbruck Sillhöfe Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

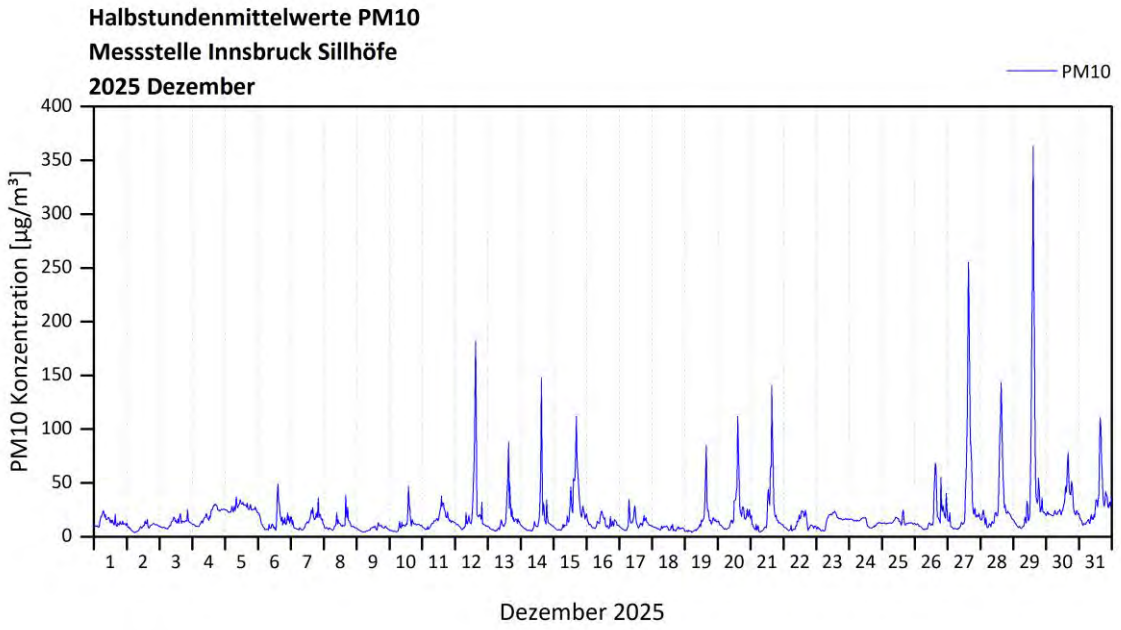
Stickstoffdioxid / Biossido di azoto



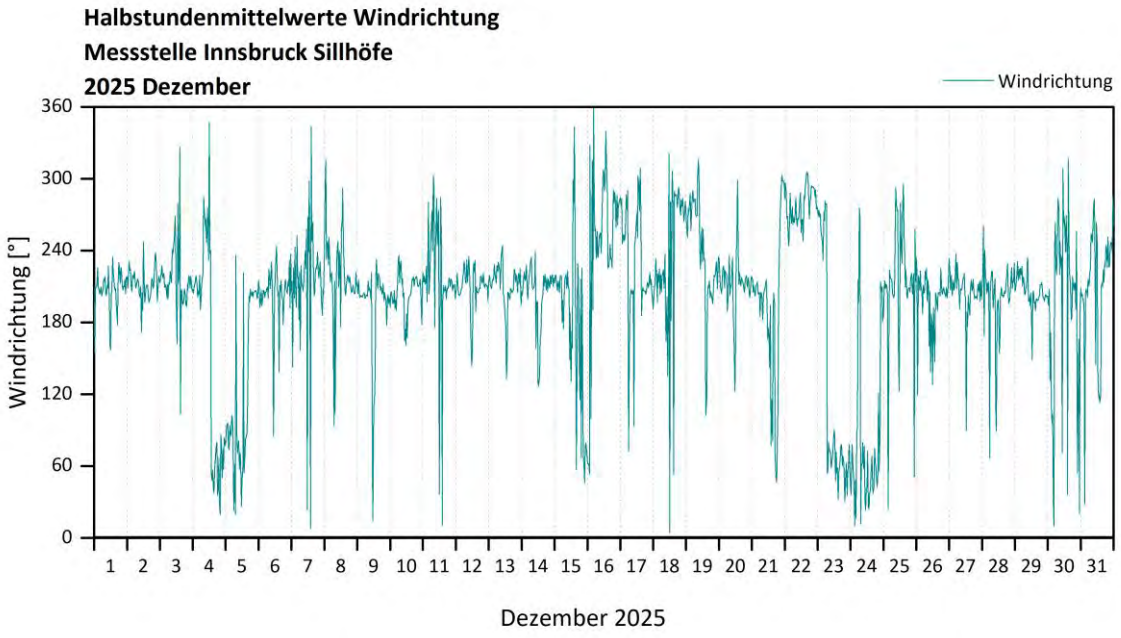
Stickstoffoxide / Ossidi di azoto



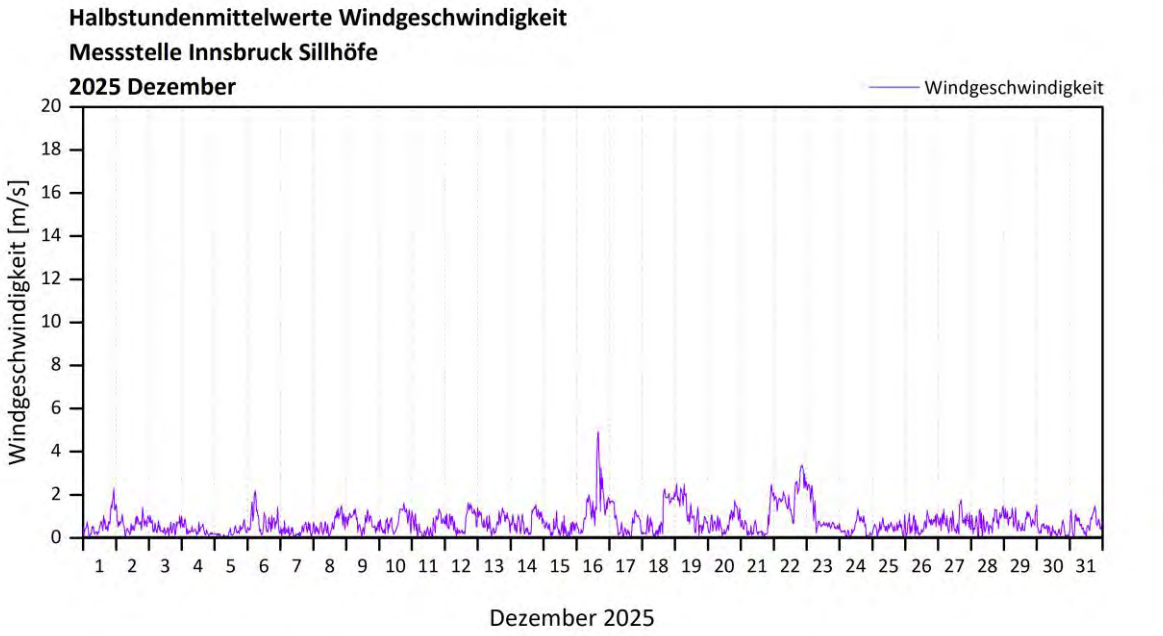
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

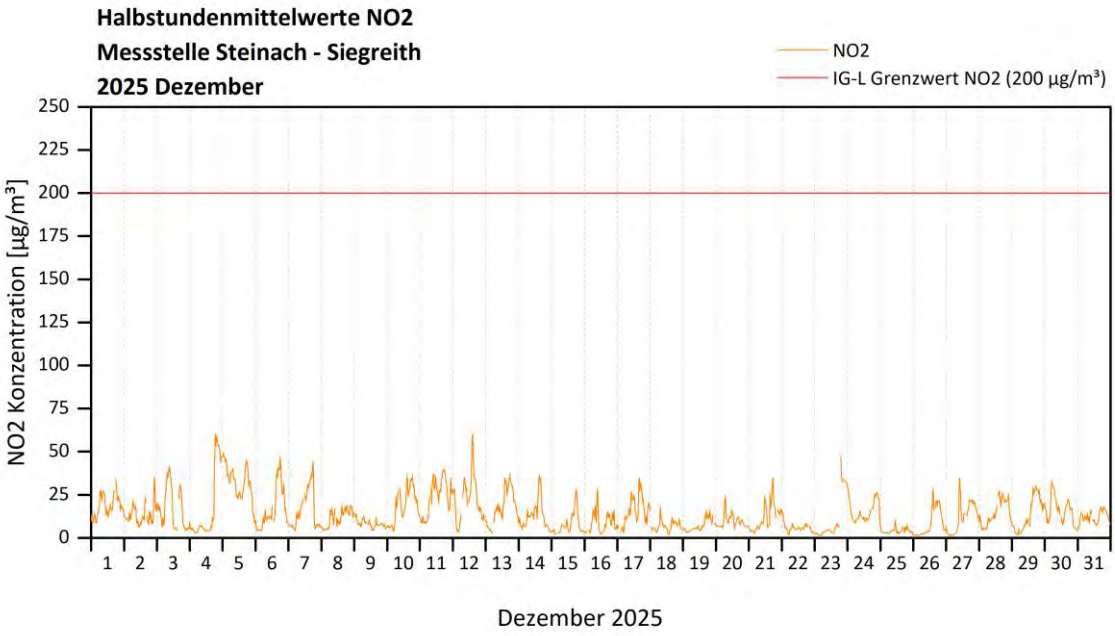


Windgeschwindigkeit / Velocità del vento

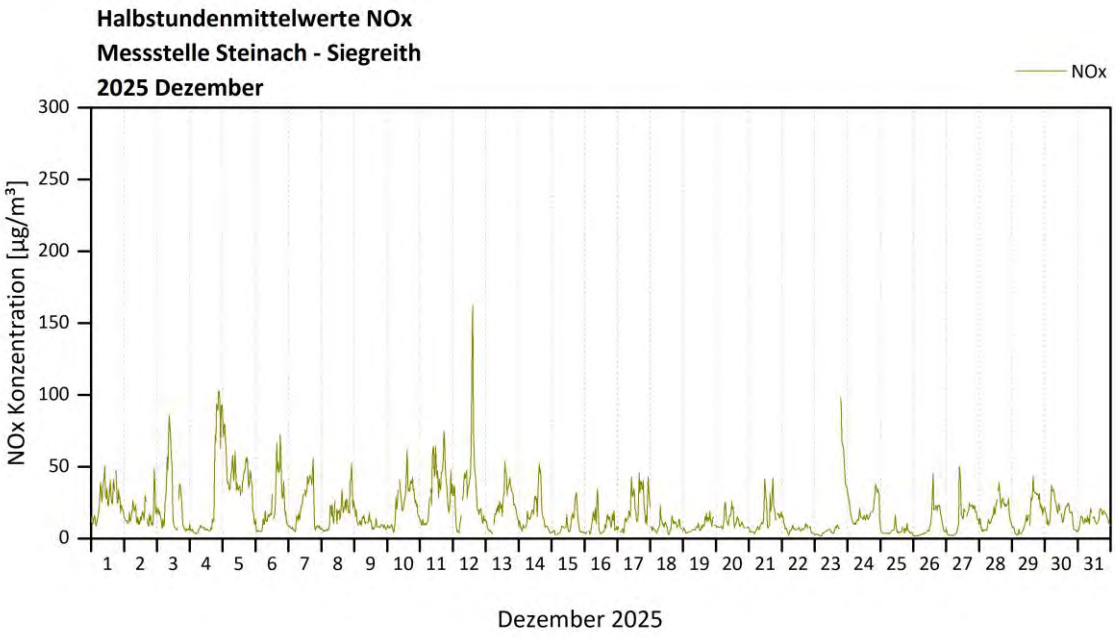


Innsbruck Siegreith Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

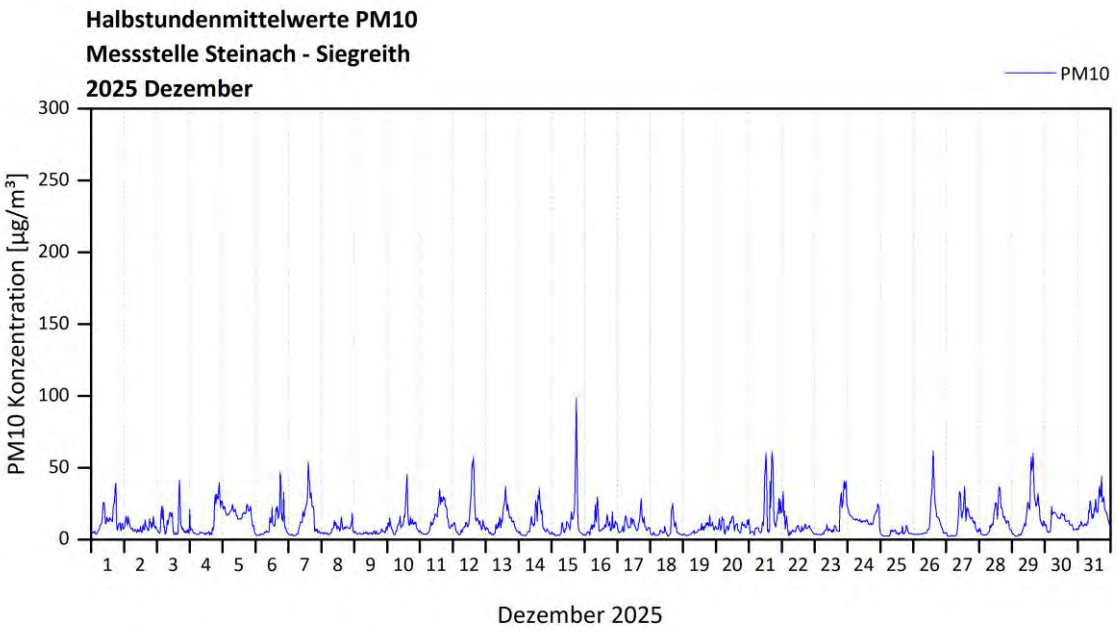
Stickstoffdioxid / Biossido di azoto



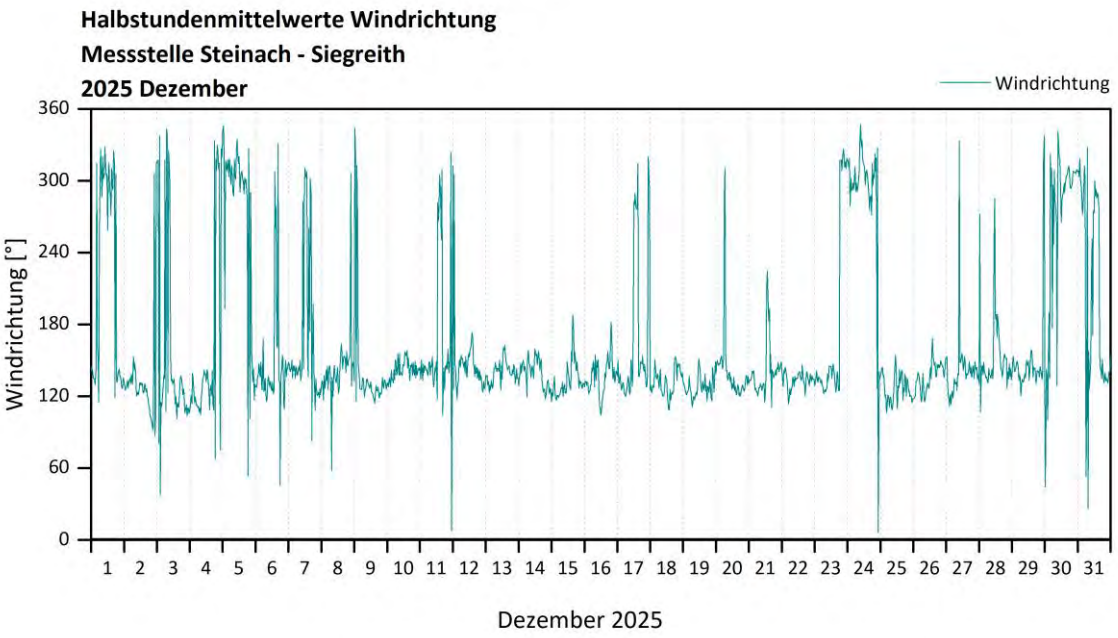
Stickstoffoxide / Ossidi di azoto



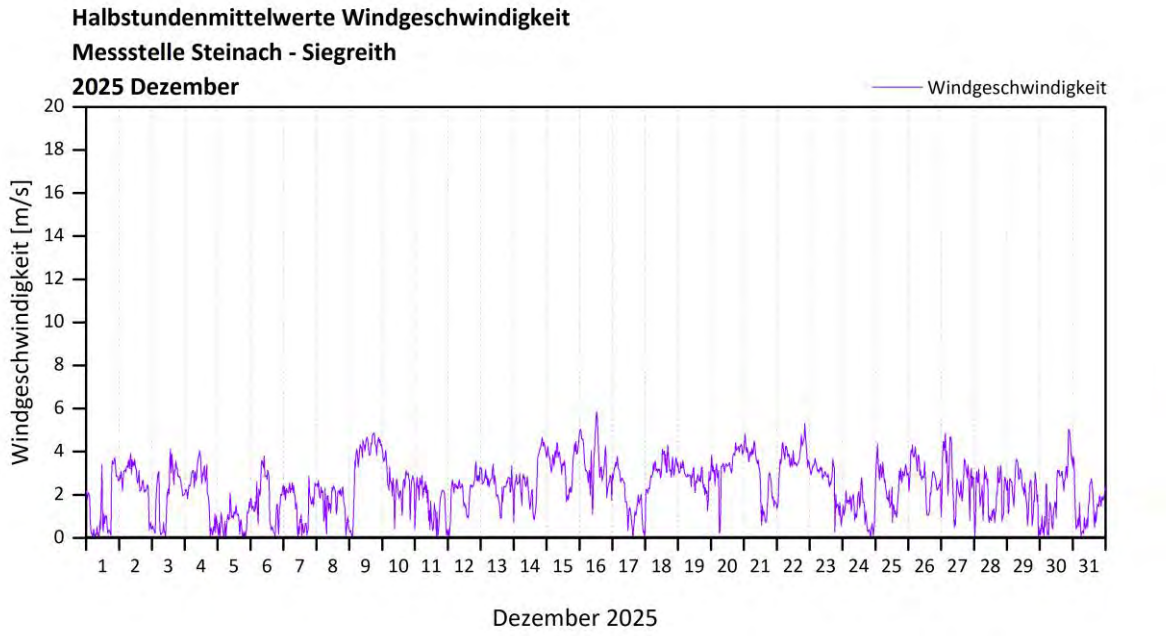
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

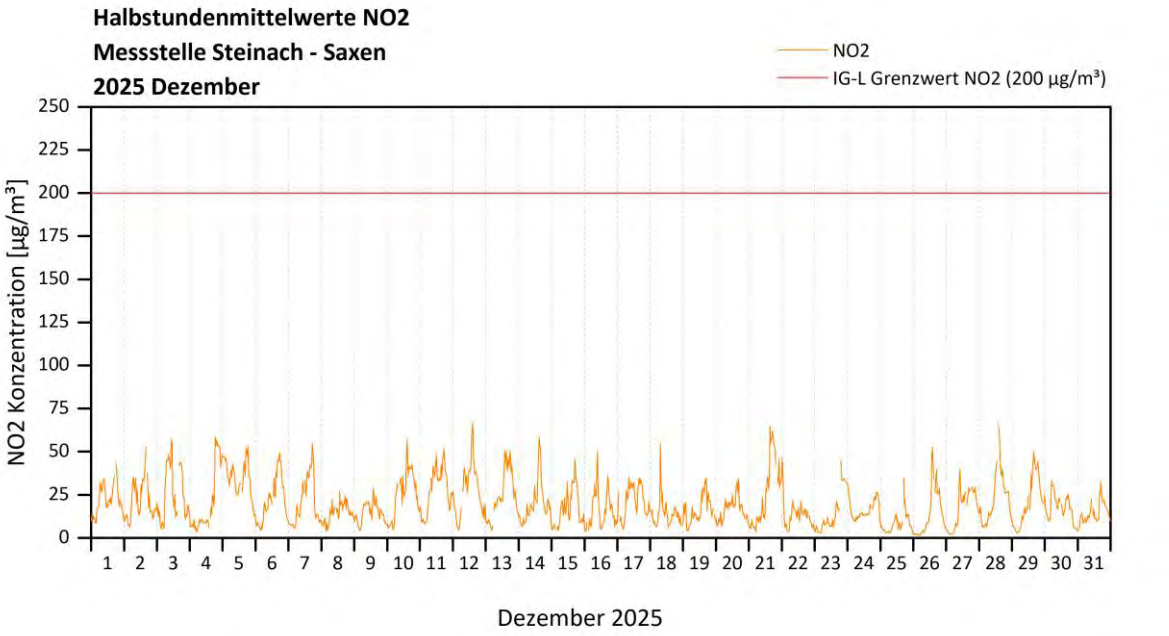


Windgeschwindigkeit / Velocità del vento

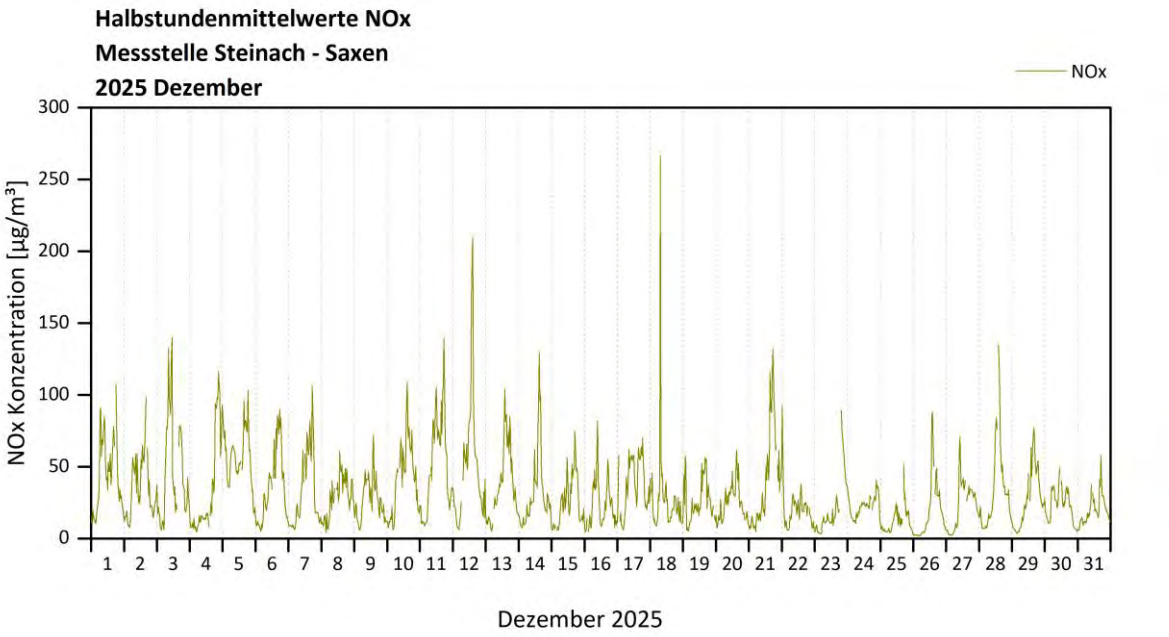


Steinach - Saxen Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

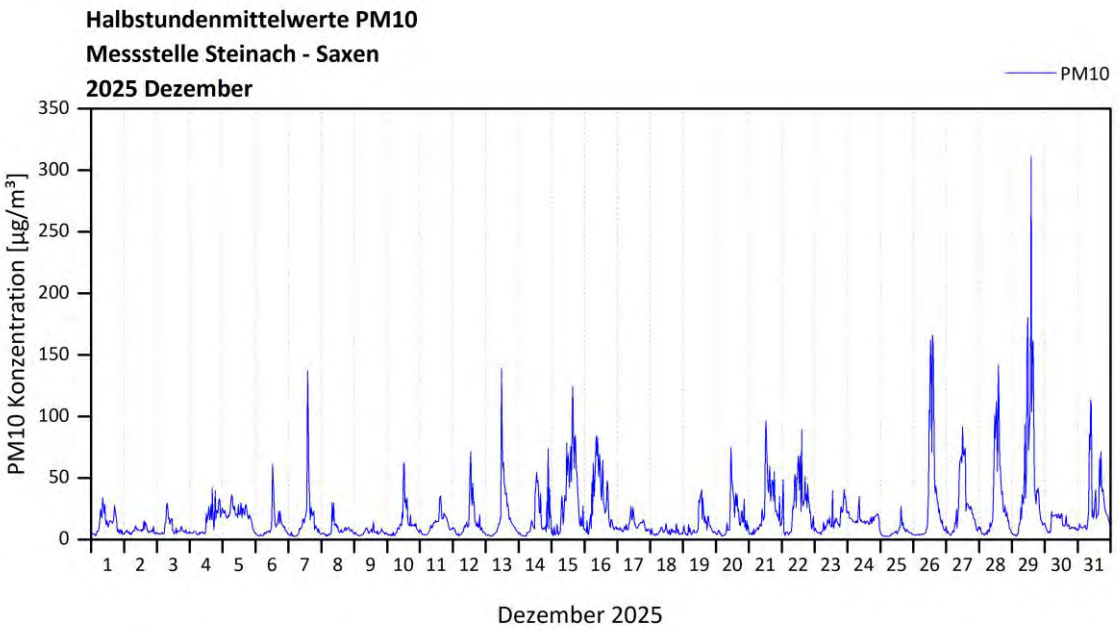
Stickstoffdioxid / Biossido di azoto



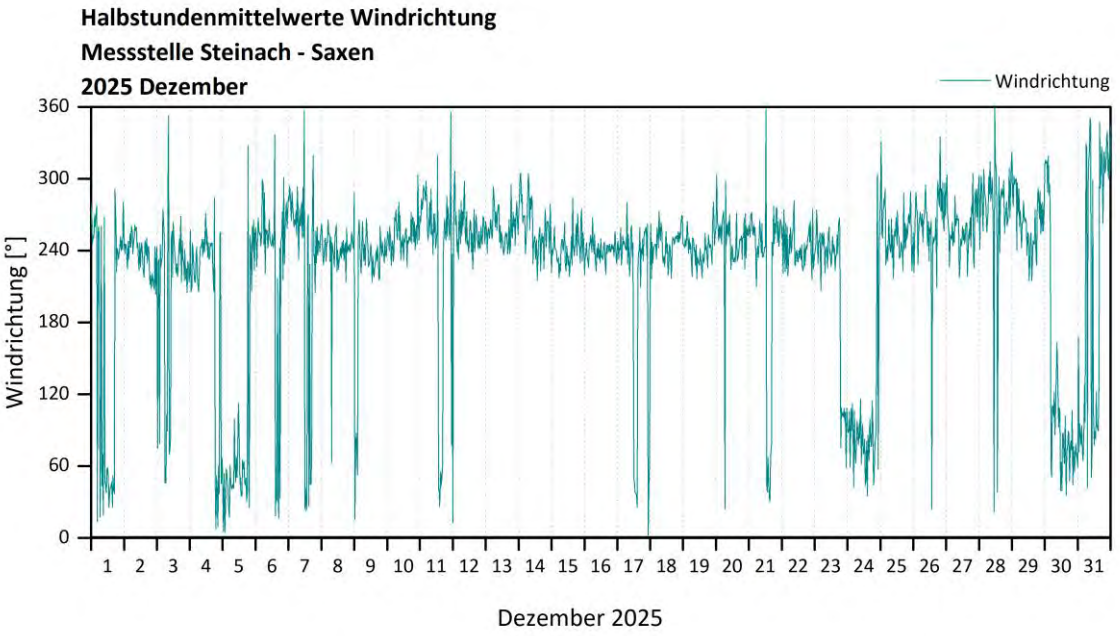
Stickstoffoxide / Ossidi di azoto



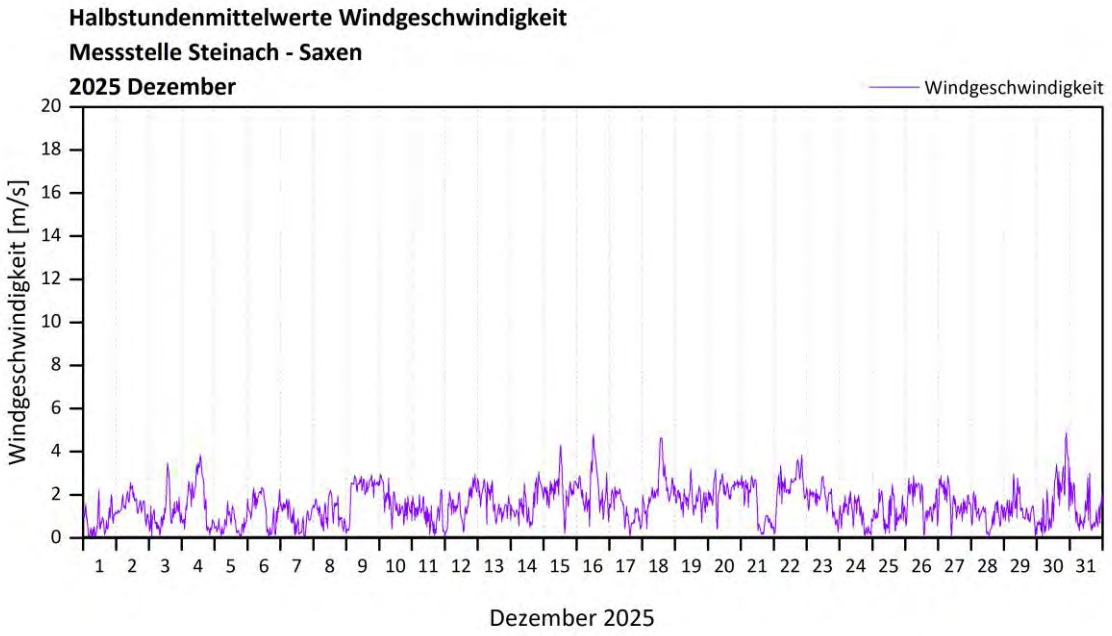
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento



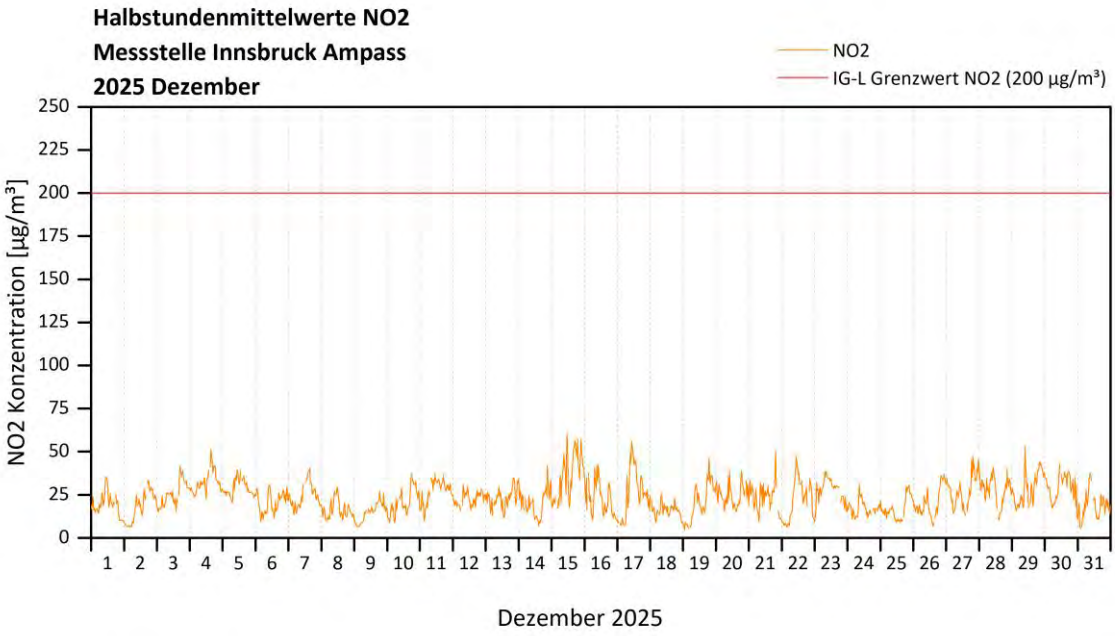
Windgeschwindigkeit / Velocità del vent



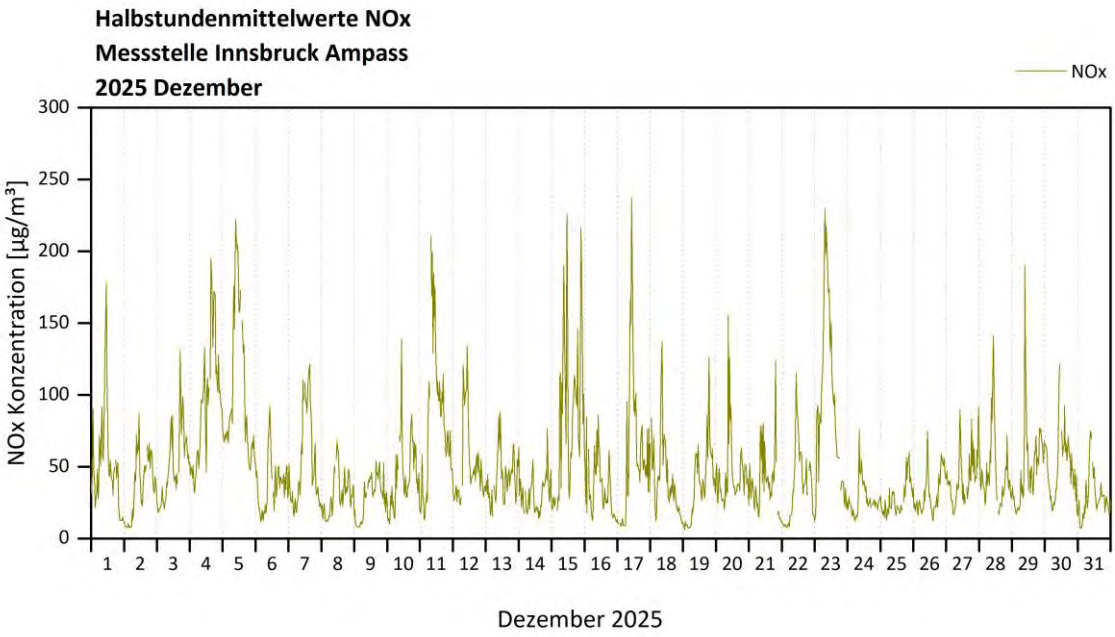
Innsbruck - Ampass

Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

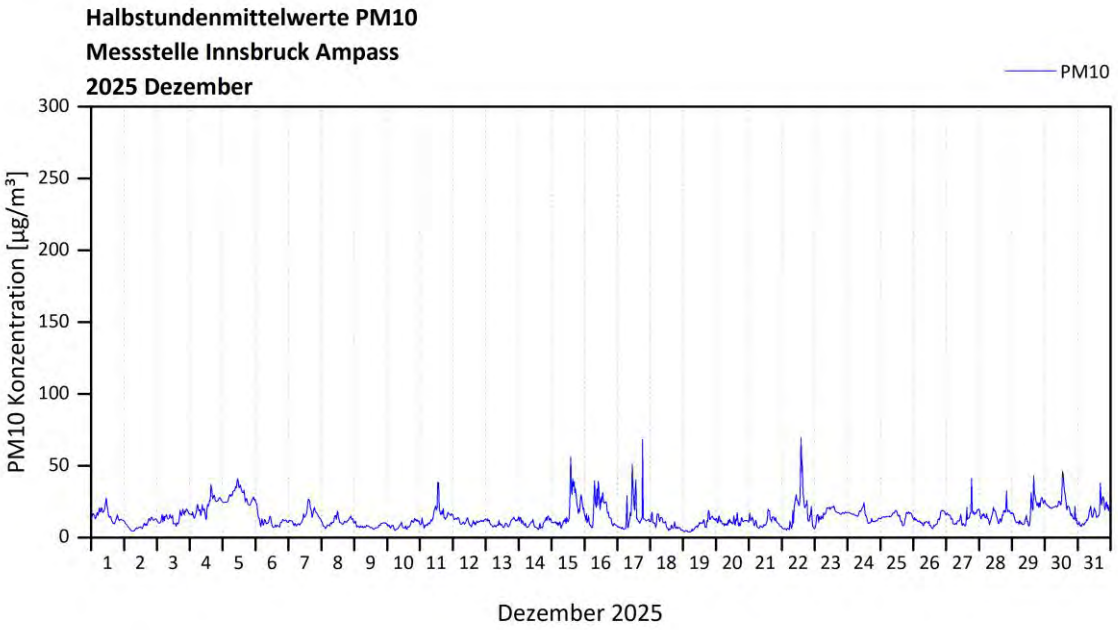
Stickstoffdioxid / Biossido di azoto



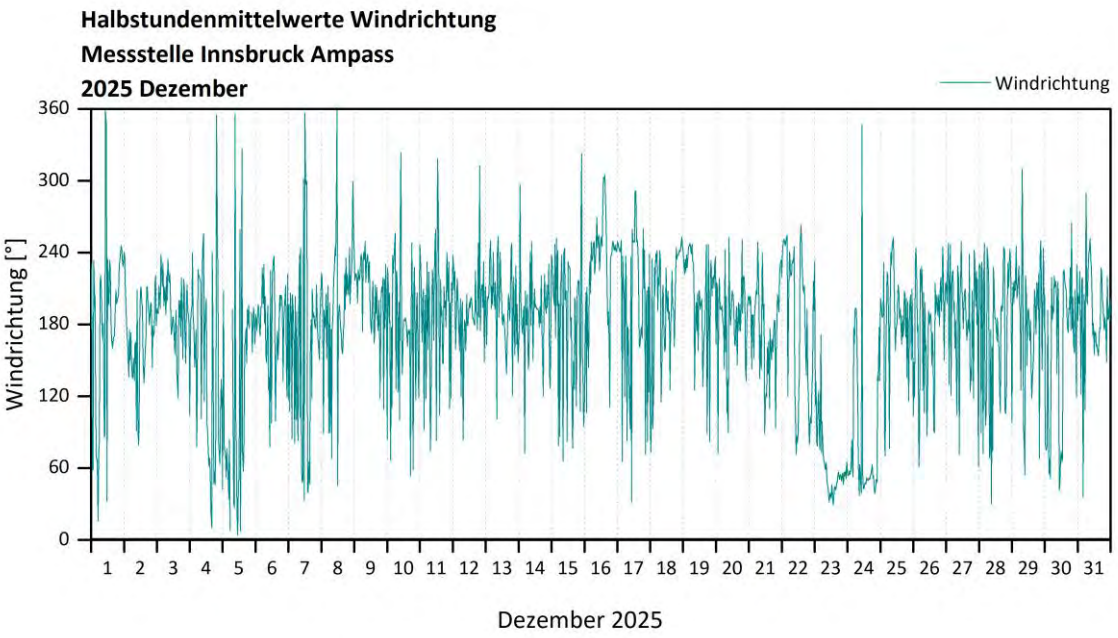
Stickstoffoxide / Ossidi di azoto



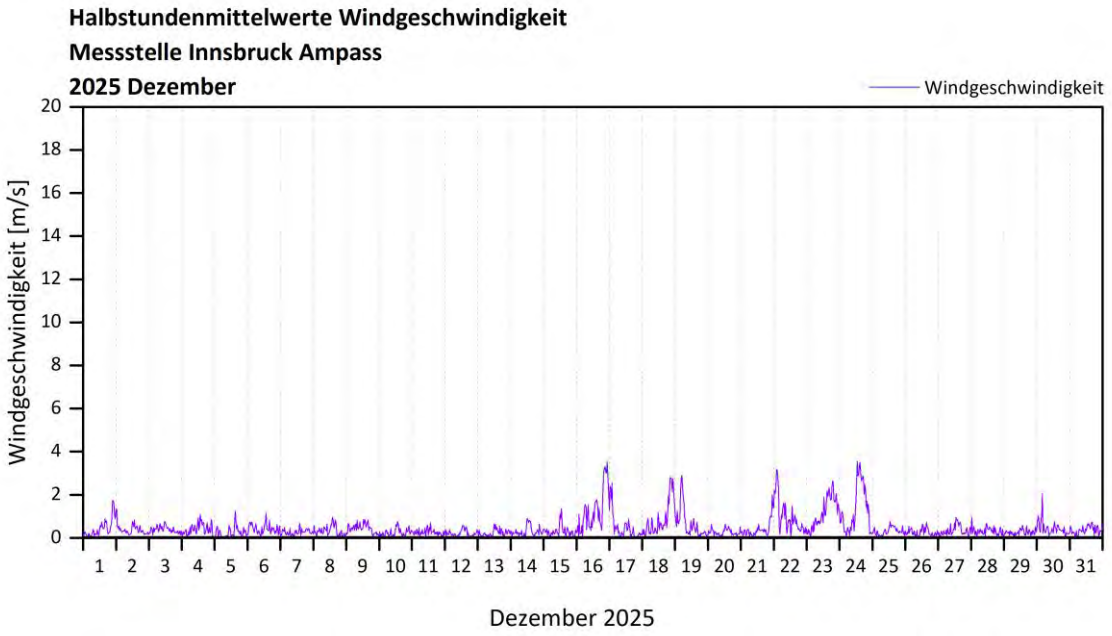
Feinstaub PM_{10} / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

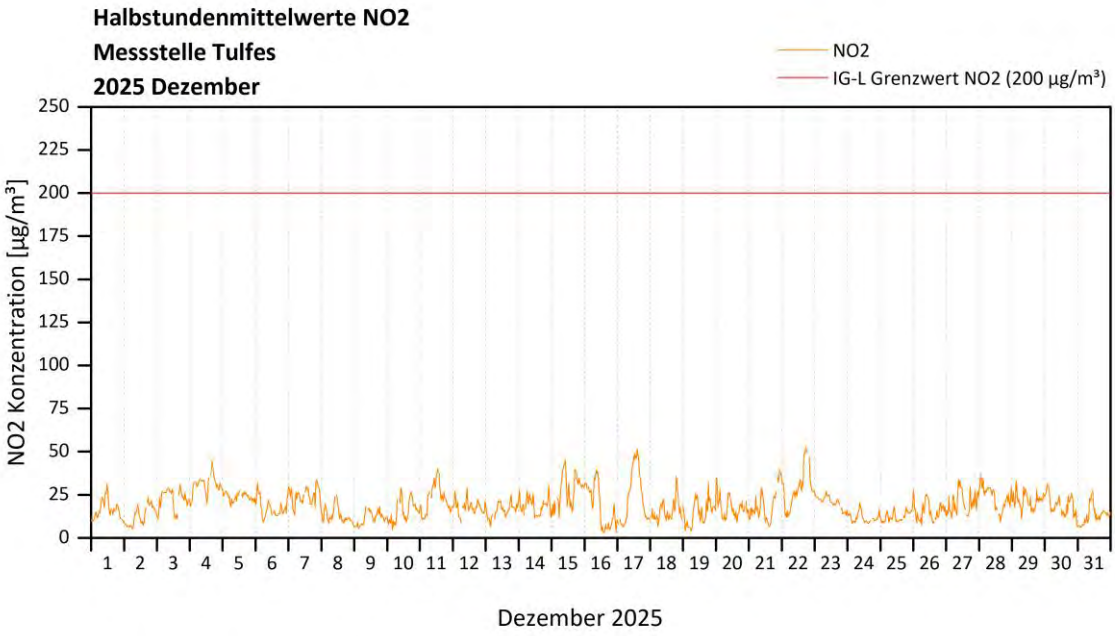


Windgeschwindigkeit / Velocità del vent

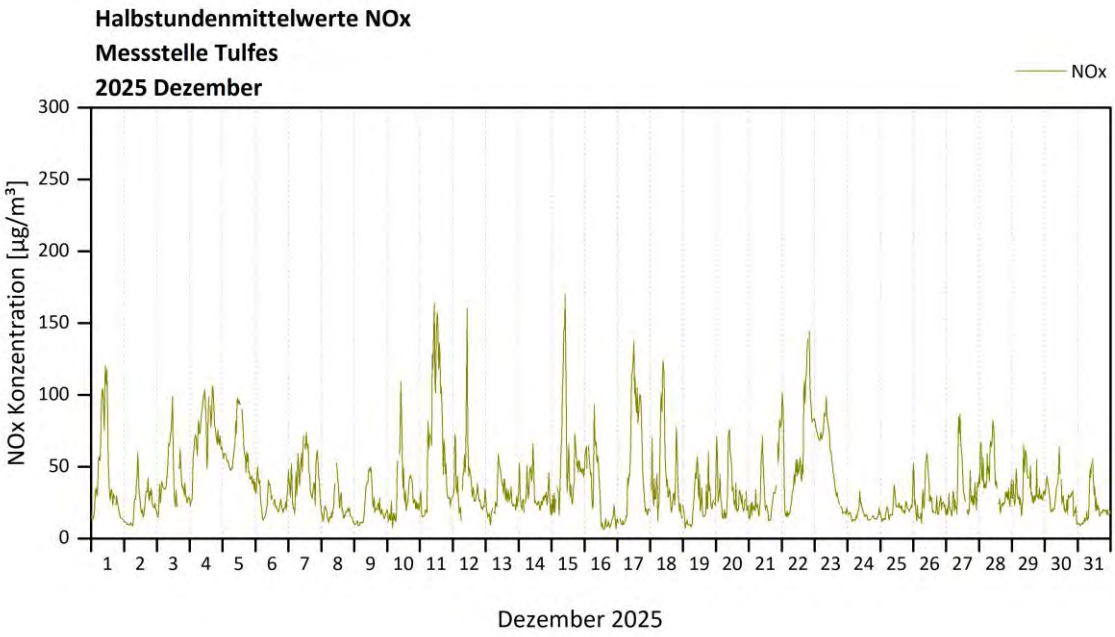


Tulfes Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

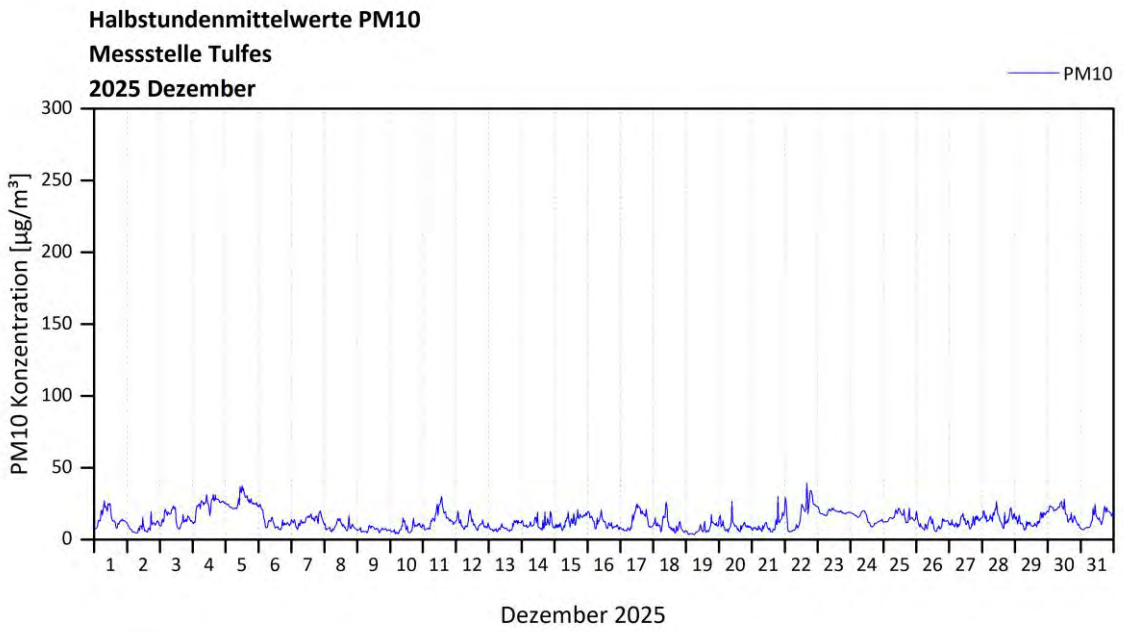
Stickstoffdioxid / Biossido di azoto



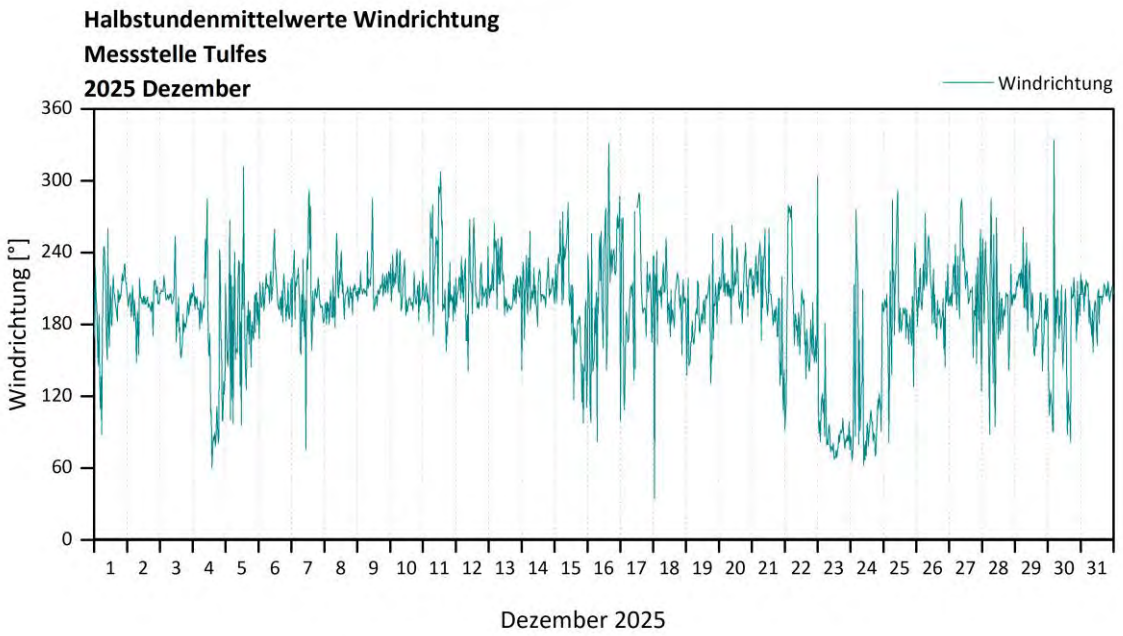
Stickstoffoxide / Ossidi di azoto



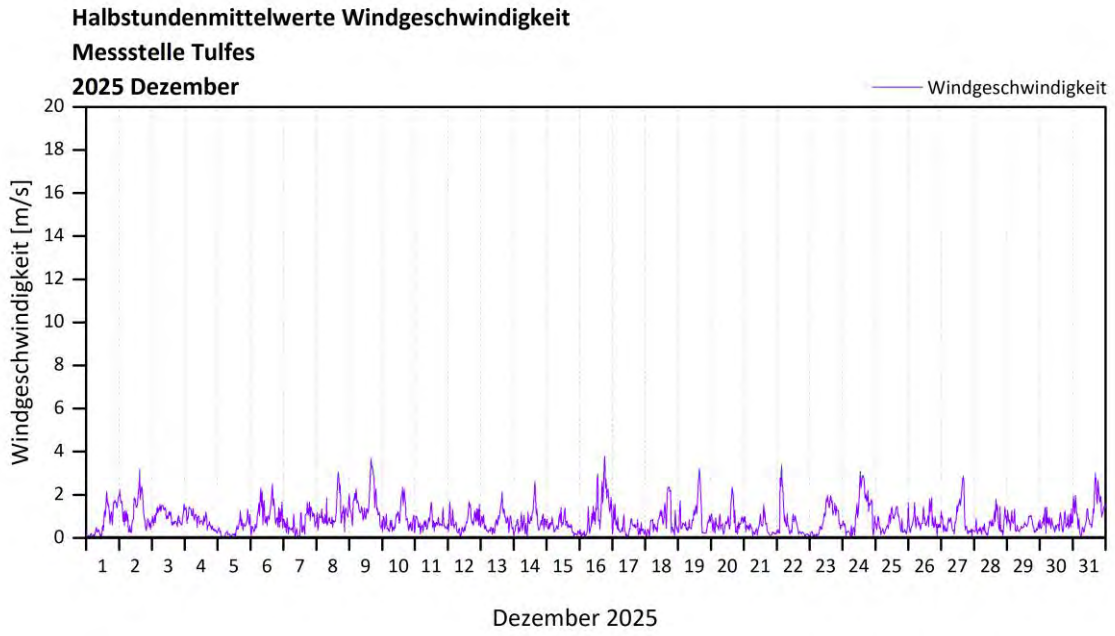
Feinstaub PM10 / Polveri sottili (diametro < 10 µm)



Windrichtung / Direzione del vento

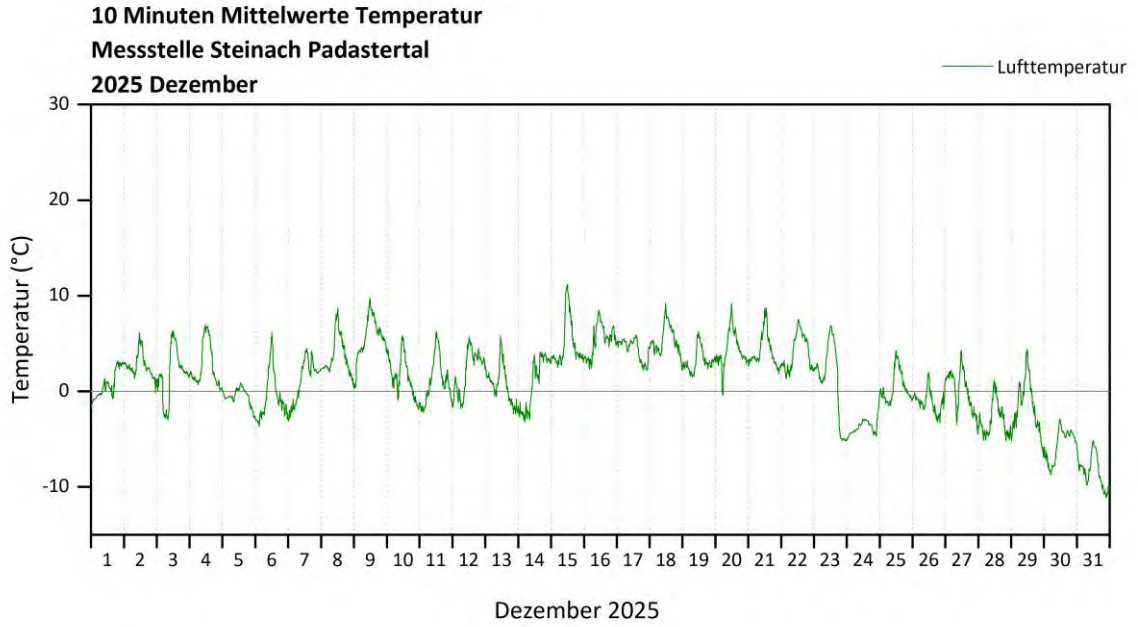


Windgeschwindigkeit / Velocità del vent

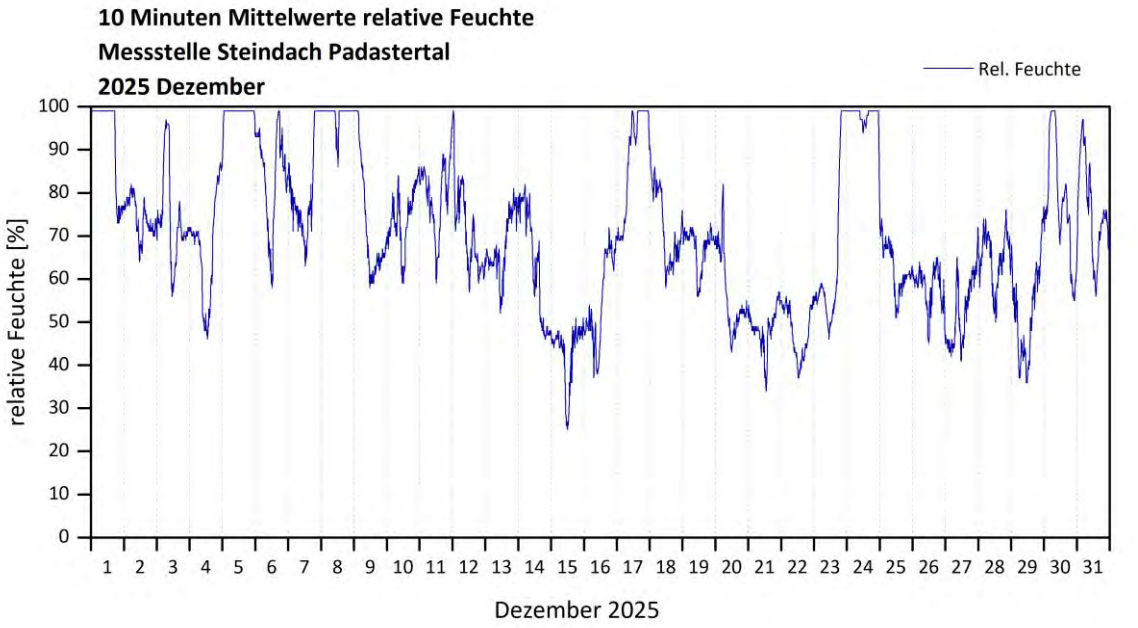


Steinach Padastertal Verlauf der Halbstundenmittelwerte / Sviluppo dei valori medi ogni mezz'ora registrati

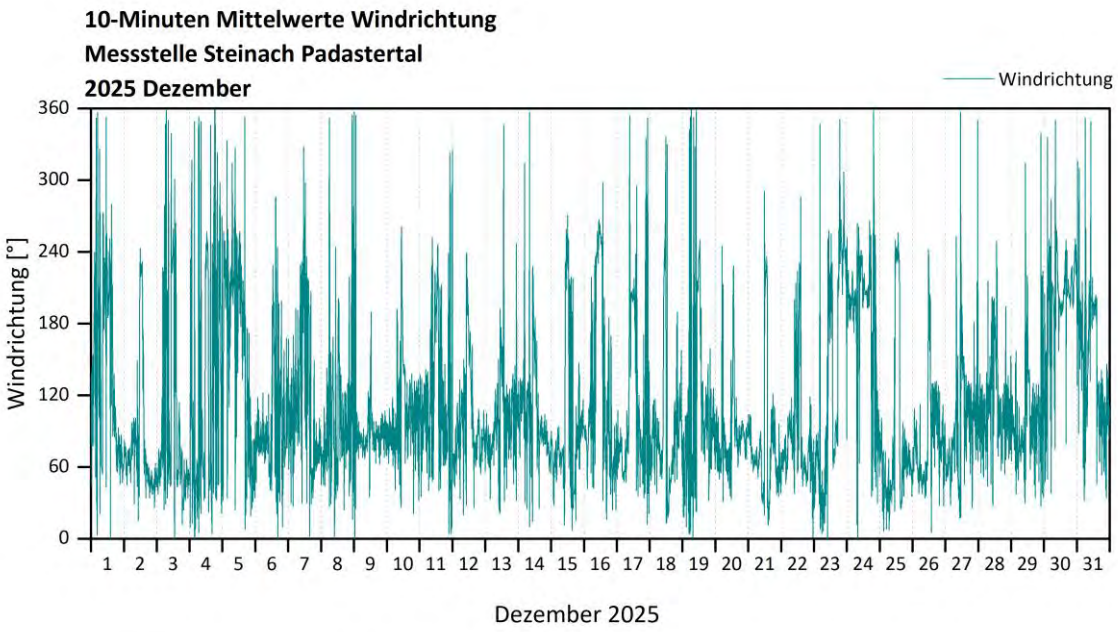
Temperatur / Temeraturà dell'aria



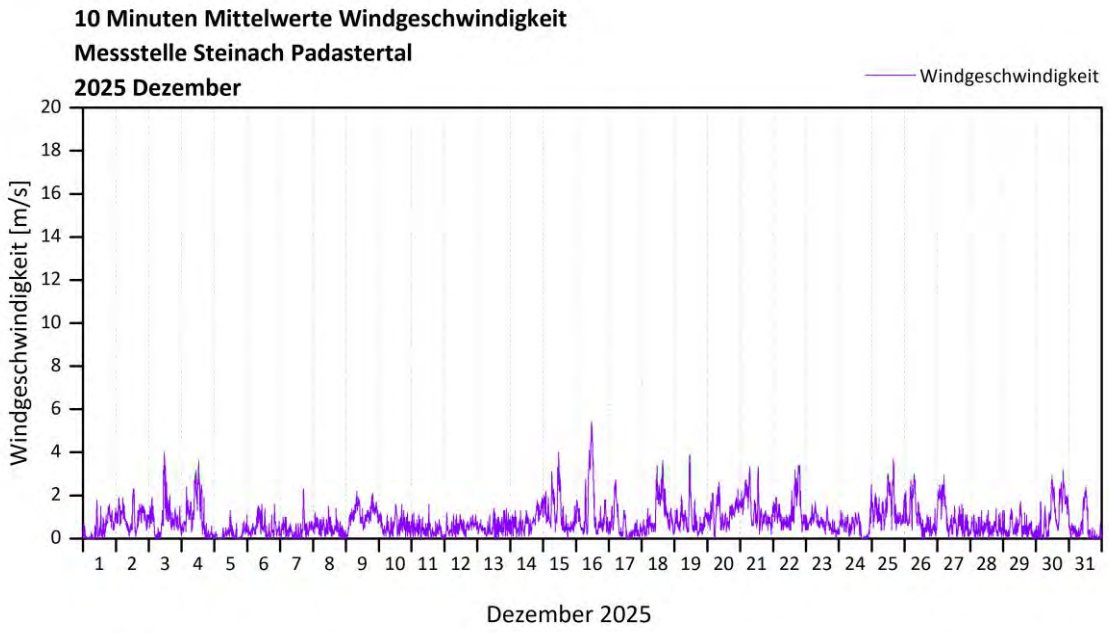
Relative Feuchtigkeit / Umidità relativa



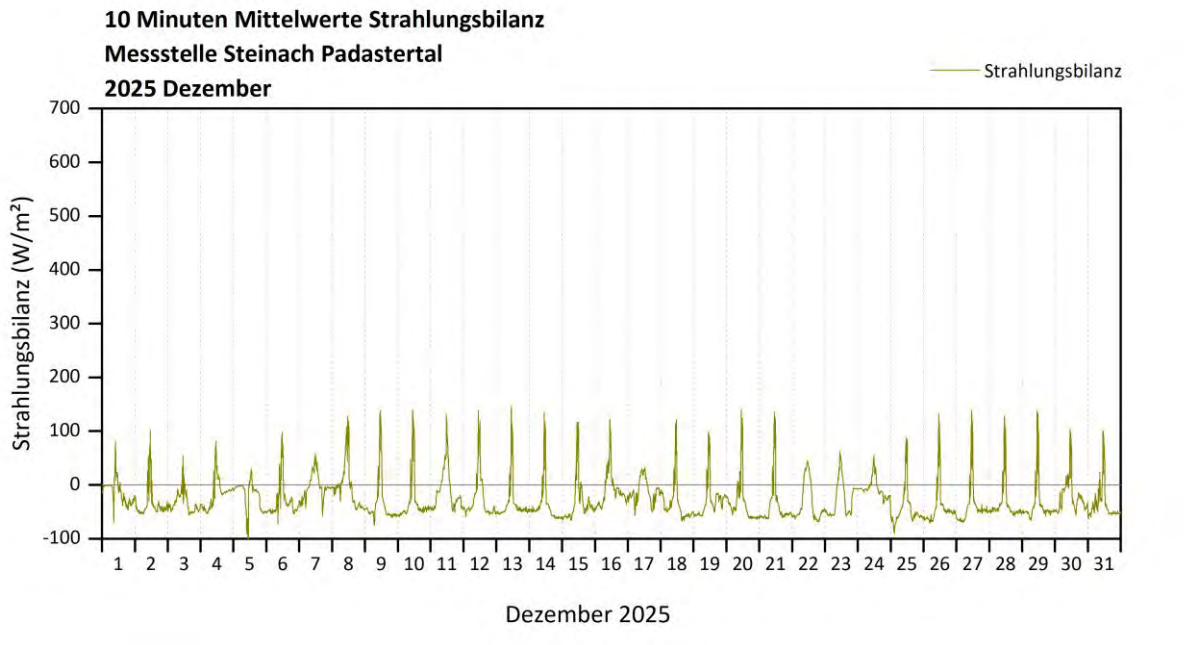
Windrichtung / Direzione del vento



Windgeschwindigkeit / Velocità del vent

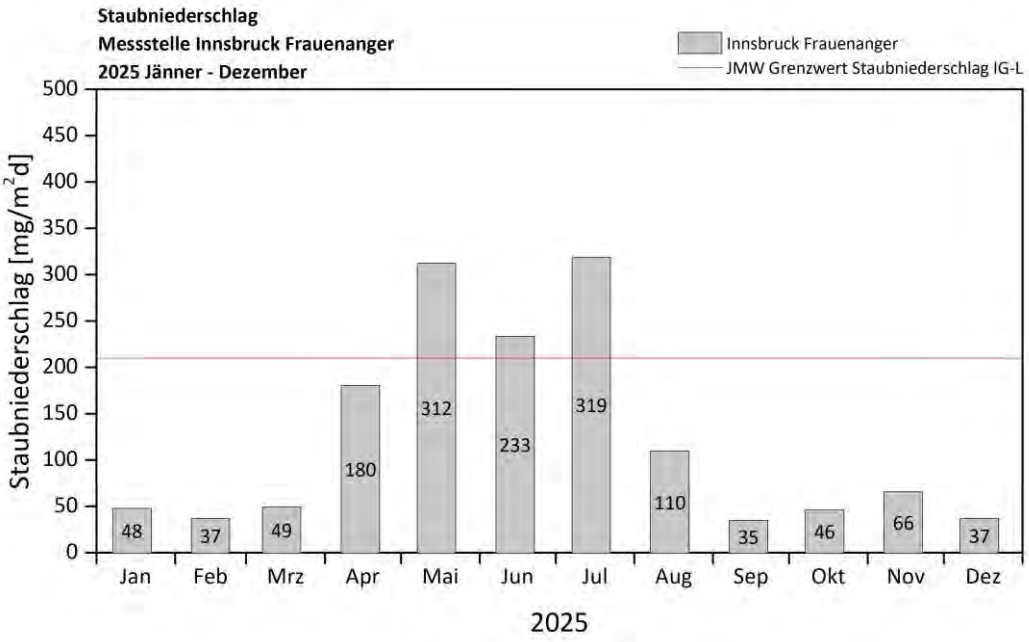


Strahlungsbilanz / Radazione

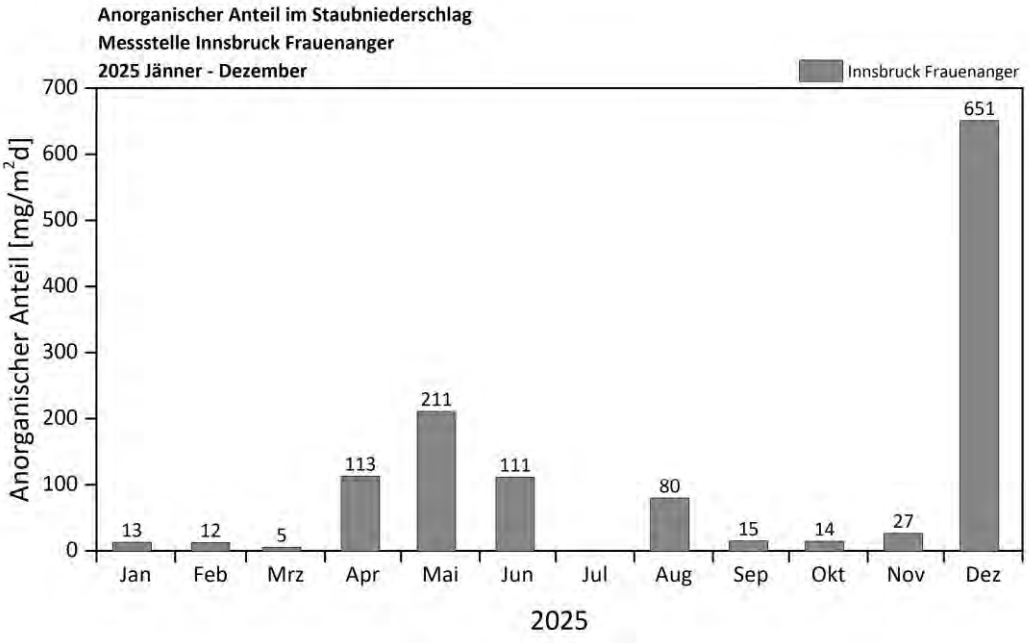


Innsbruck Frauenanger Verlauf der Monatsmittelwerte / Sviluppo delle medie mensili

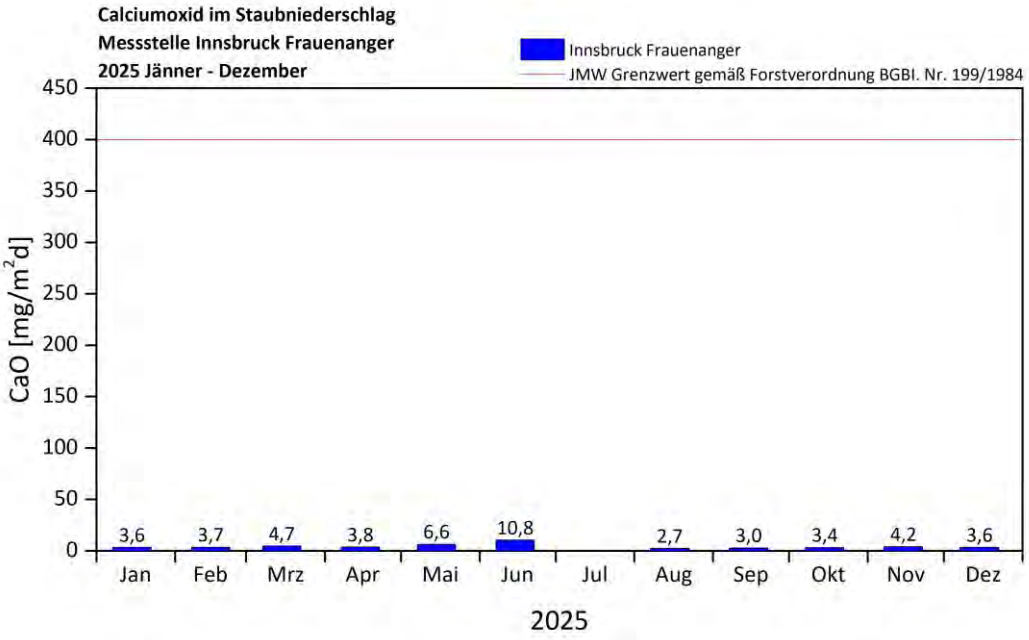
Staubniederschlag / Precipitazione di polvere



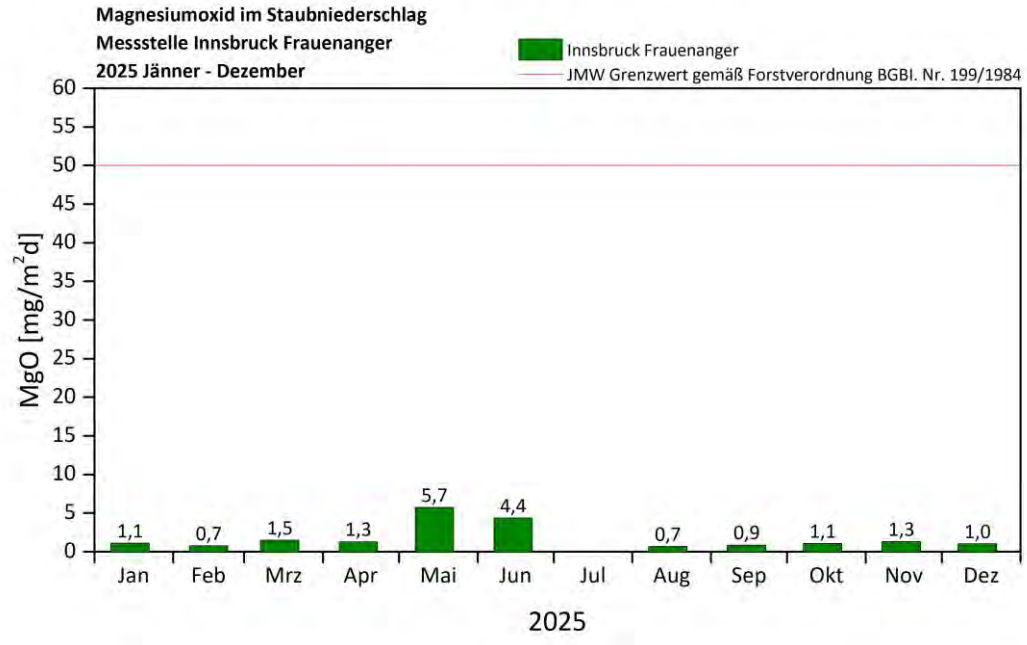
Anorganischer Anteil / Contenuto inorganico



Calciumoxid / Ossido di calcio

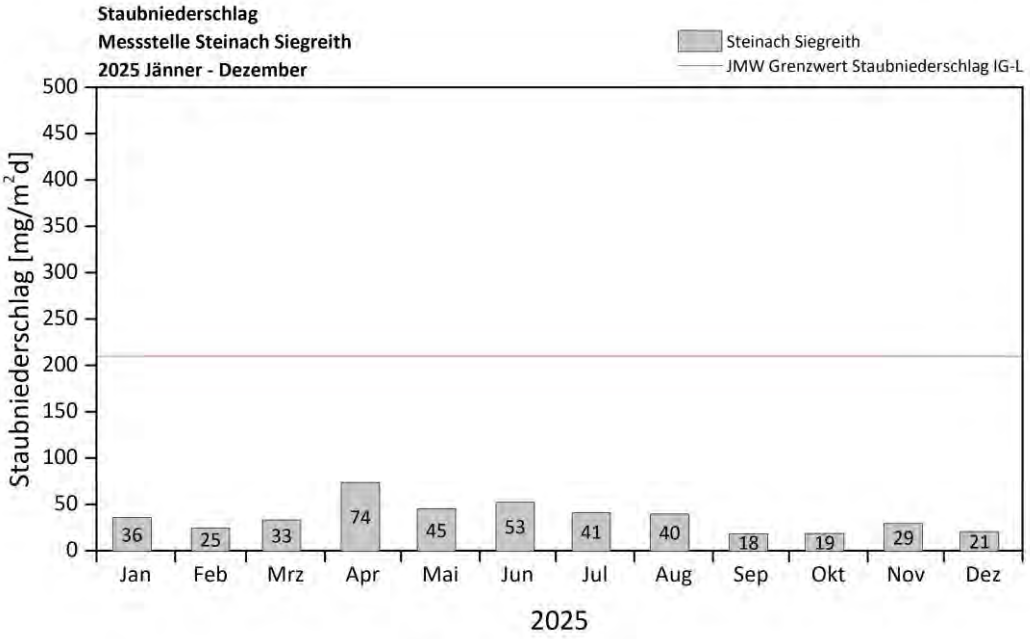


Magnesiumoxid / Ossido di magnesio

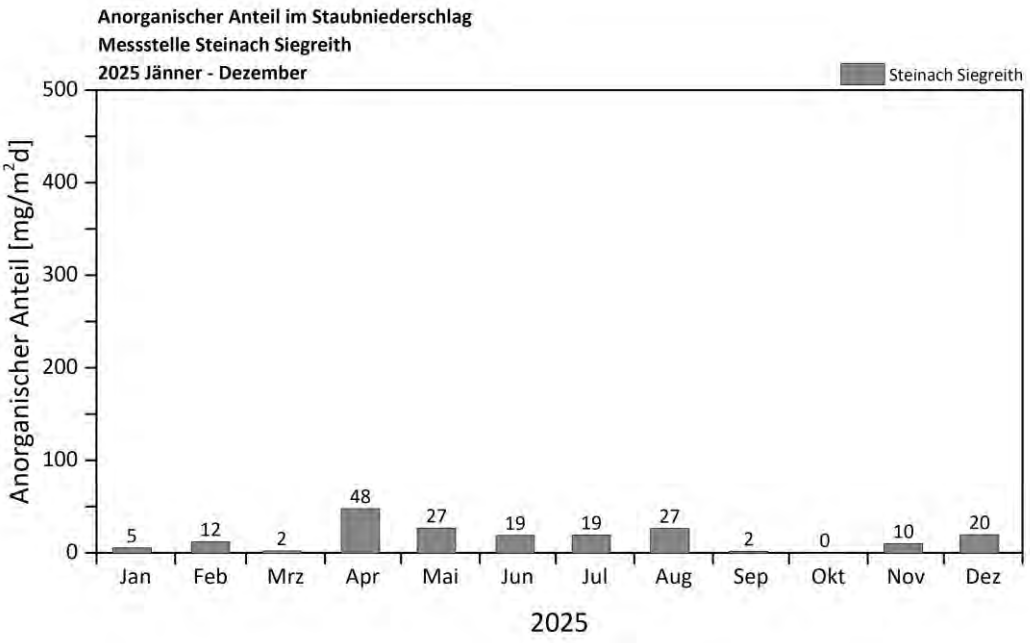


Steinach Siegreith Verlauf der Monatsmittelwerte / Sviluppo delle medie mensili

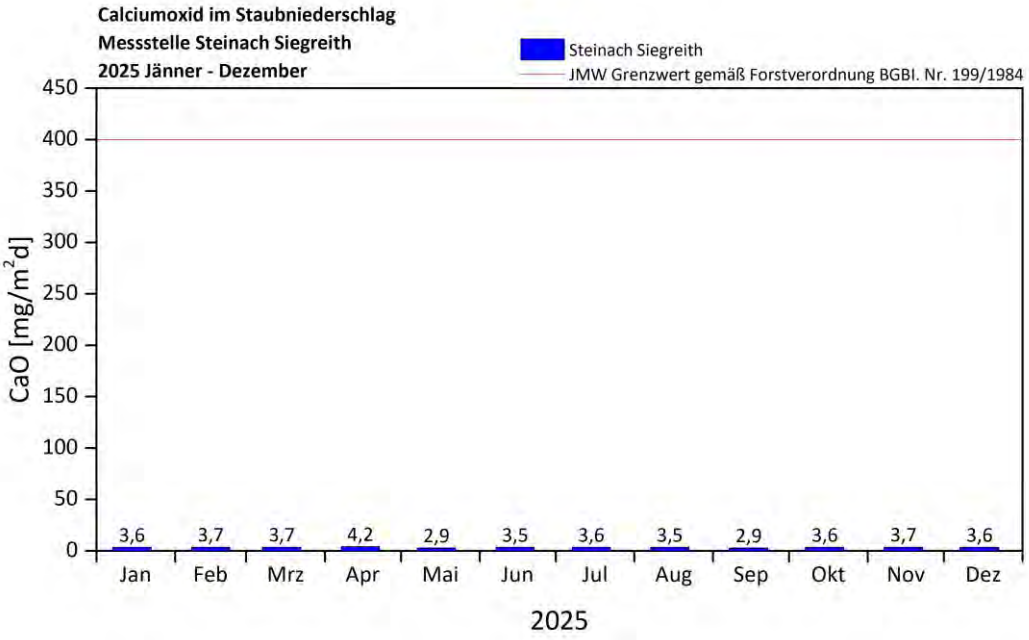
Staubniederschlag / Precipitazione di polvere



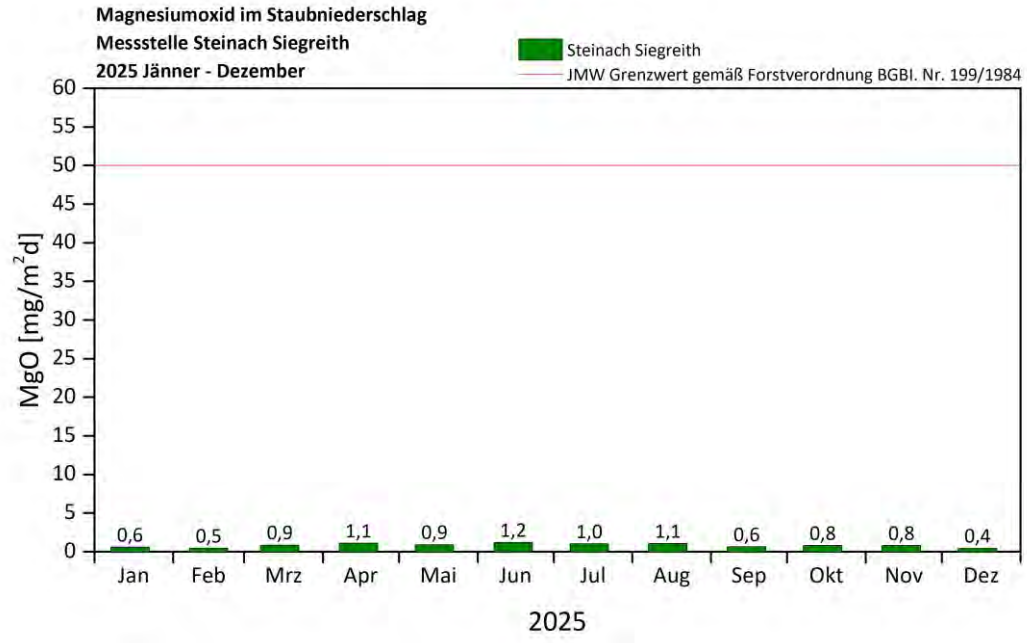
Anorganischer Anteil / Contenuto inorganico



Calciumoxid / Ossido di calcio

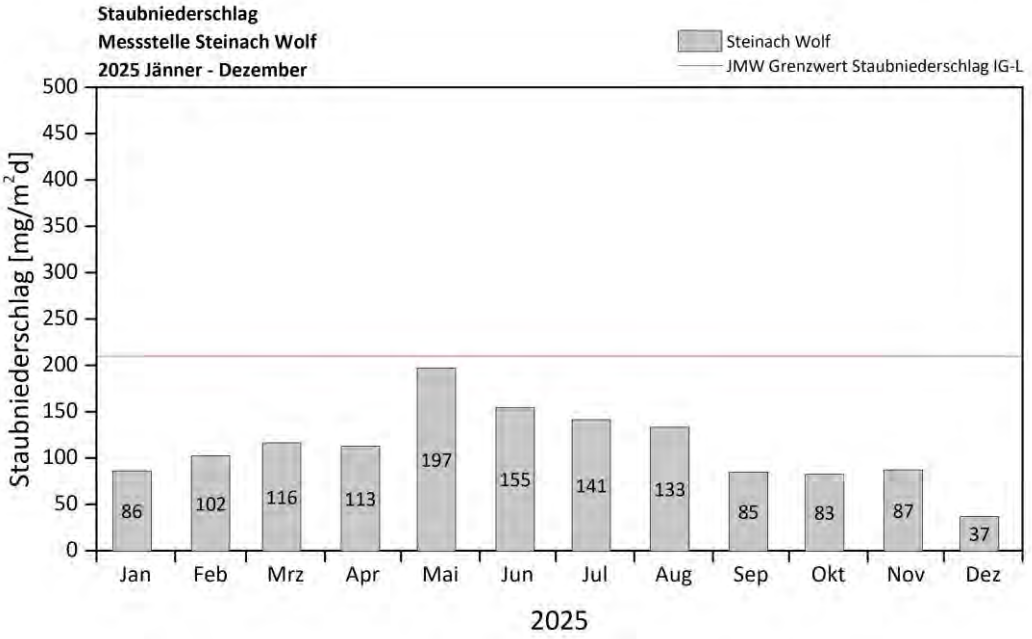


Magnesiumoxid / Ossido di magnesio

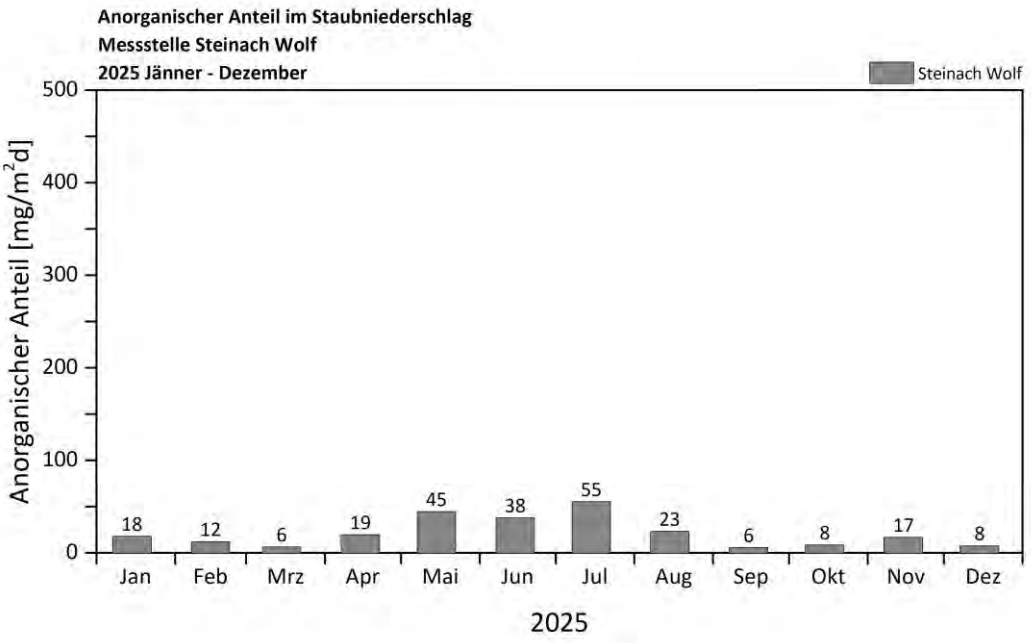


Wolf Verlauf der Monatsmittelwerte / Sviluppo delle medie mensili

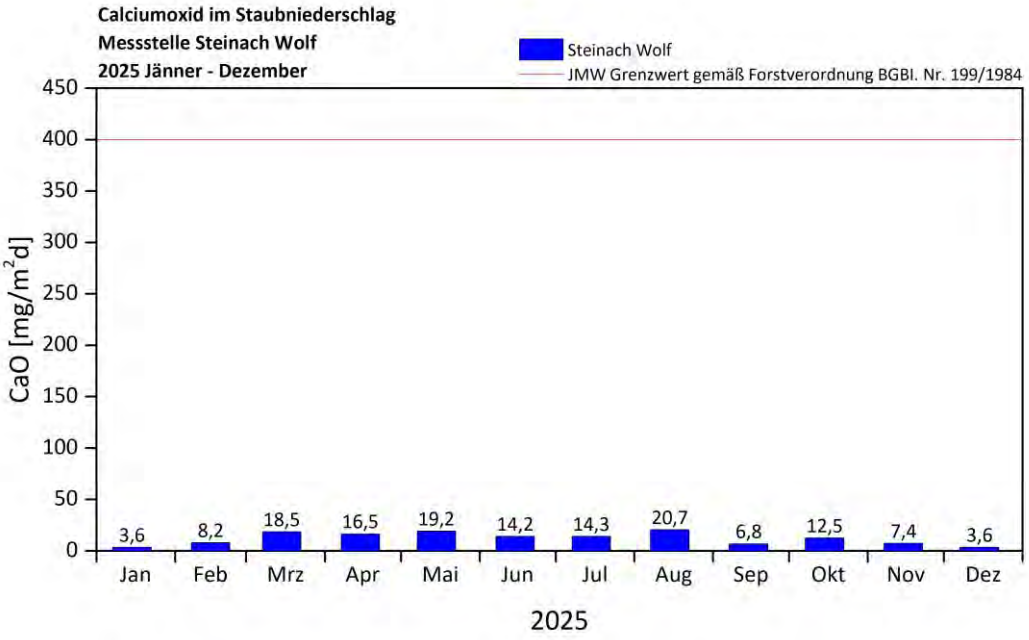
Staubniederschlag / Precipitazione di polvere



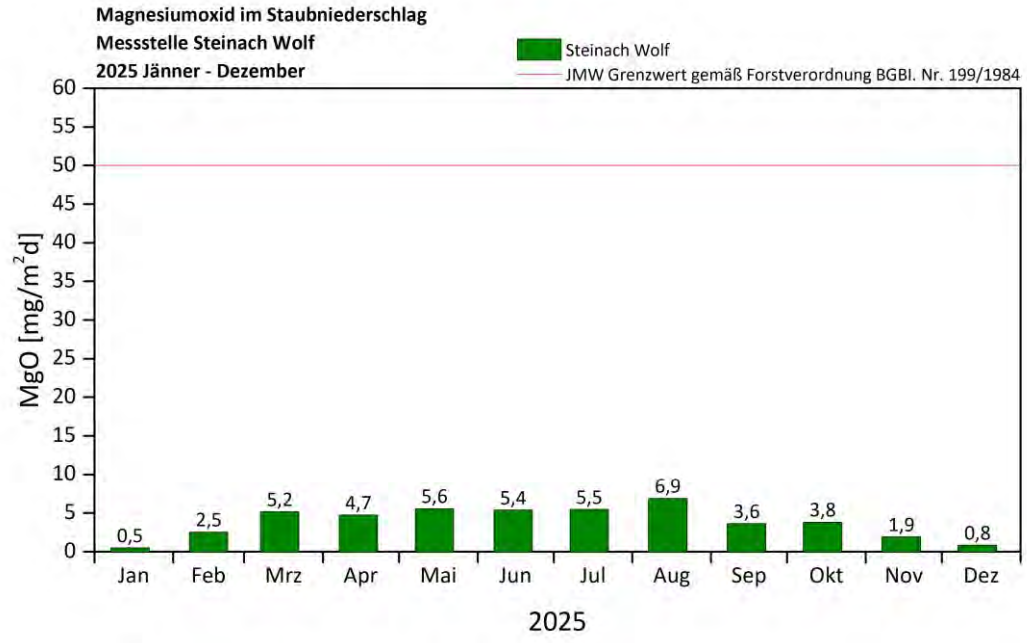
Anorganischer Anteil / Contenuto inorganico



Calciumoxid / Ossido di calcio

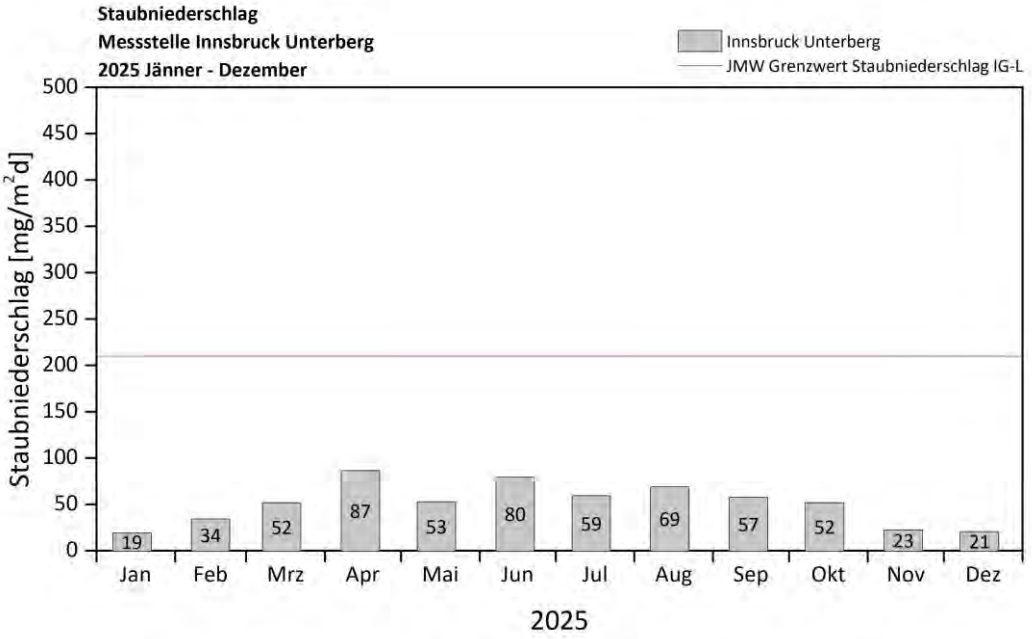


Magnesiumoxid / Ossido di magnesio

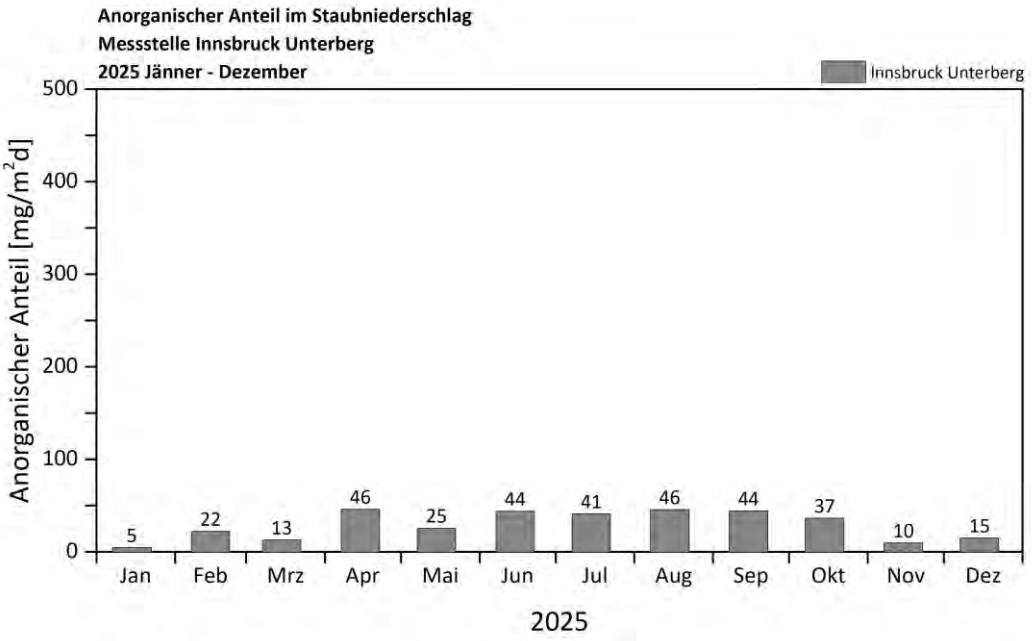


Unterberg Verlauf der Monatsmittelwerte / Sviluppo delle medie mensili

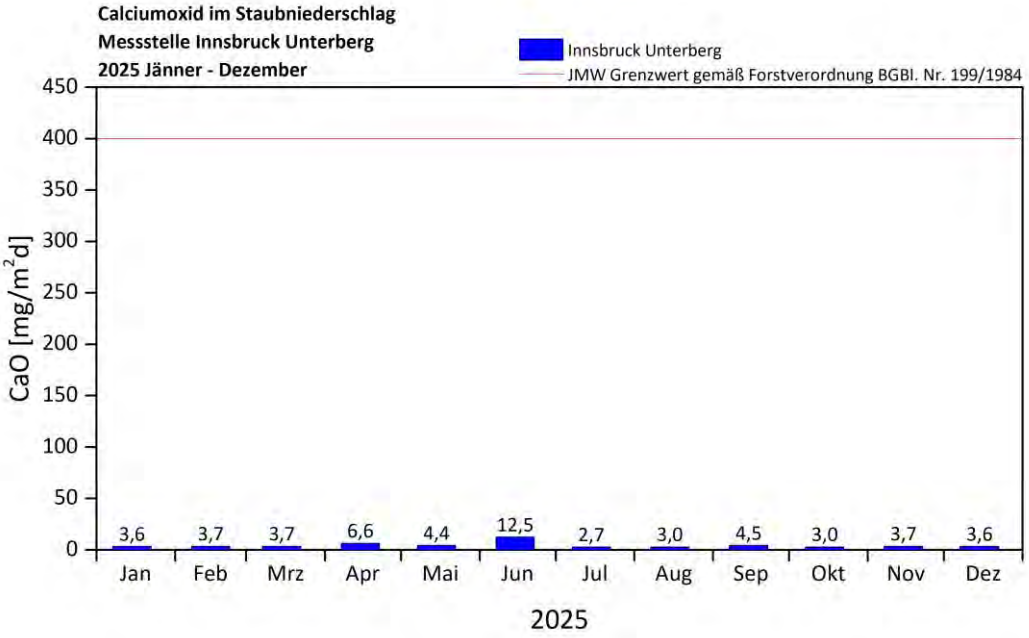
Staubniederschlag / Precipitazione di polvere



Anorganischer Anteil / Contenuto inorganico



Calciumoxid / Ossido di calcio

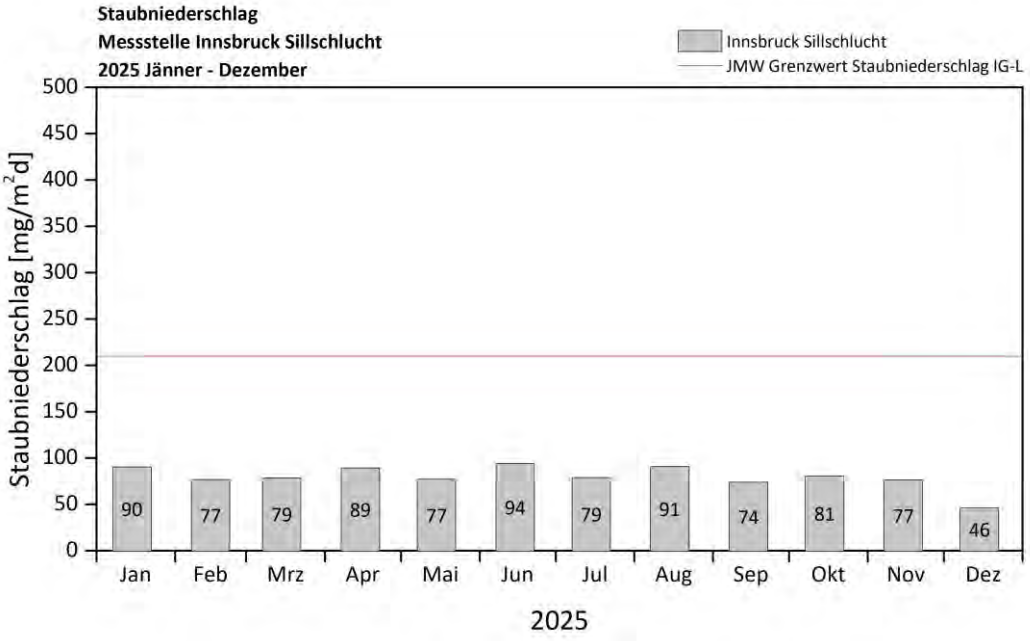


Magnesiumoxid / Ossido di magnesio

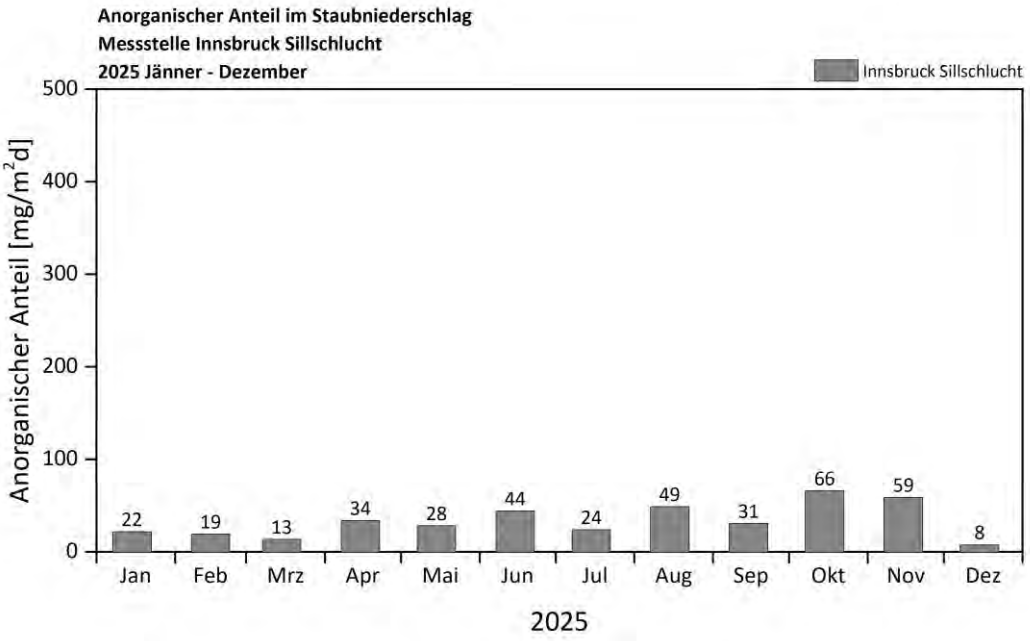


Sillschlucht Verlauf der Monatsmittelwerte / Sviluppo delle medie mensili

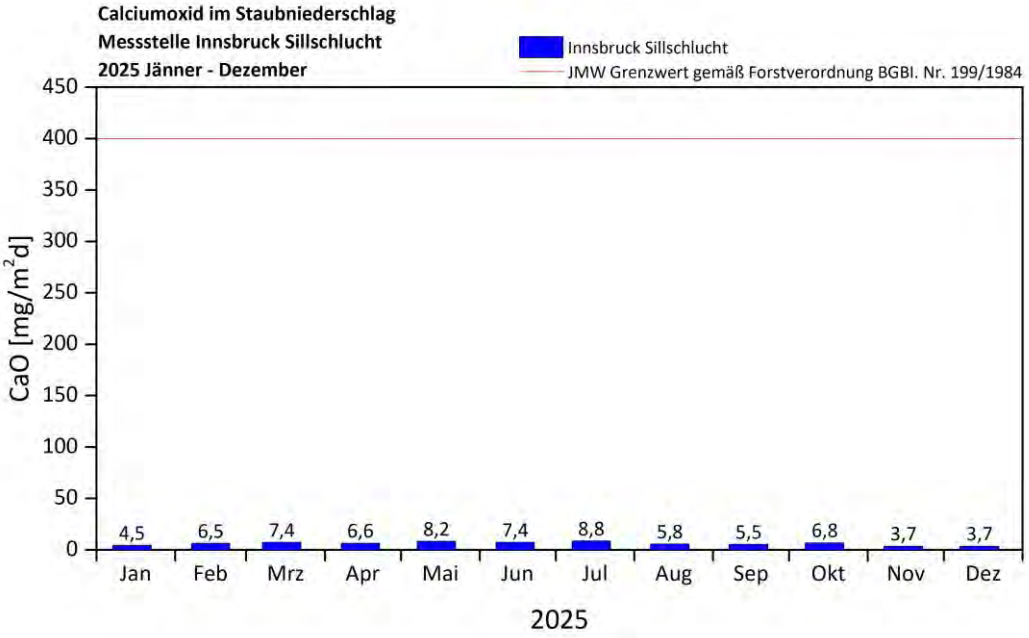
Staubniederschlag / Precipitazione di polvere



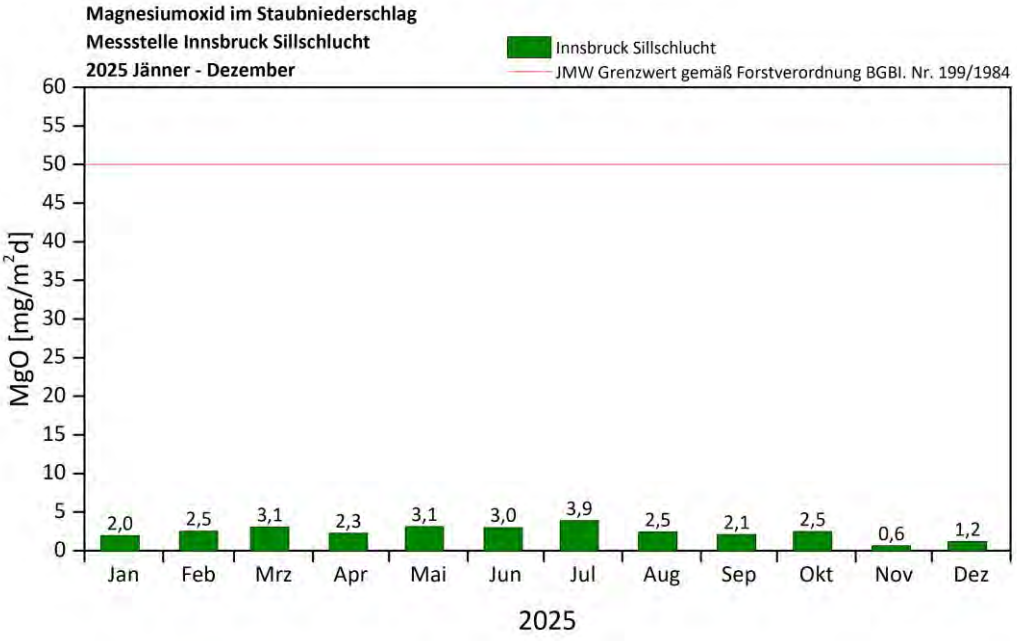
Anorganischer Anteil / Contenuto inorganico



Calciumoxid / Ossido di calcio

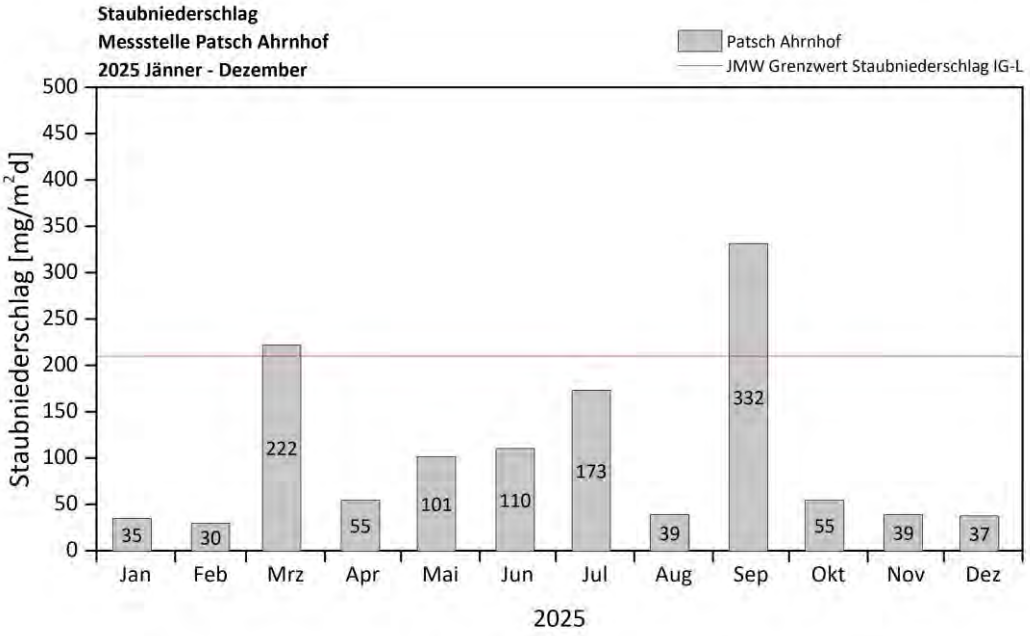


Magnesiumoxid / Ossido di magnesio

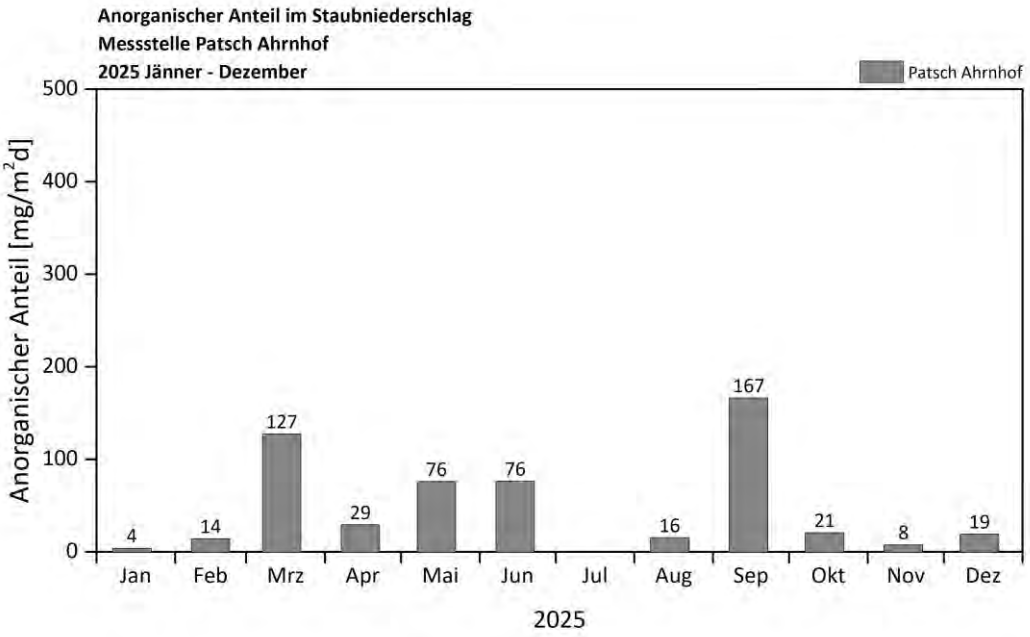


Ahrnhof Verlauf der Monatsmittelwerte / Sviluppo delle medie mensili

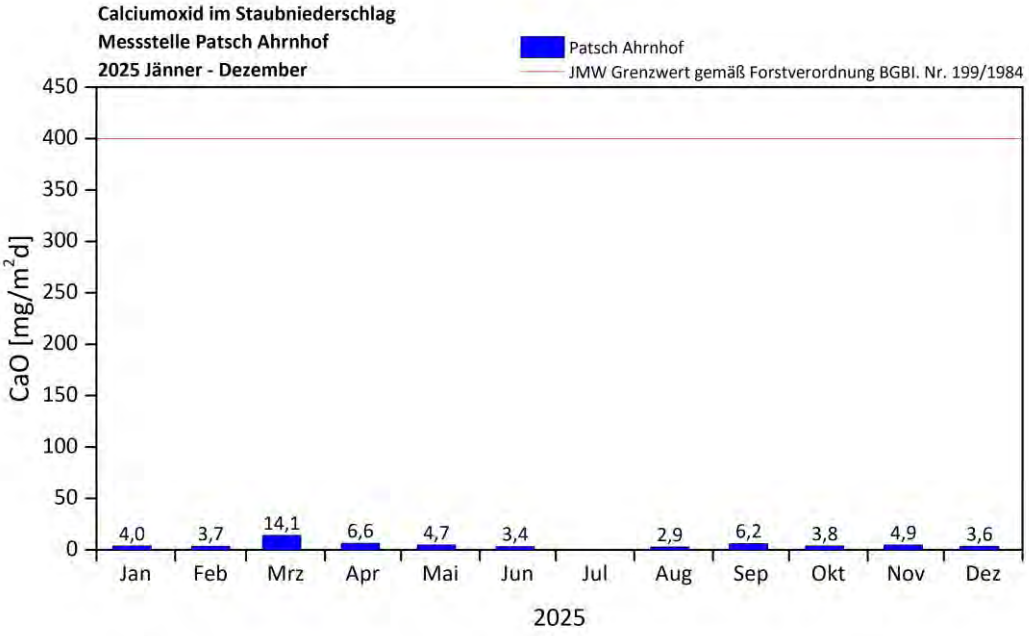
Staubniederschlag / Precipitazione di polvere



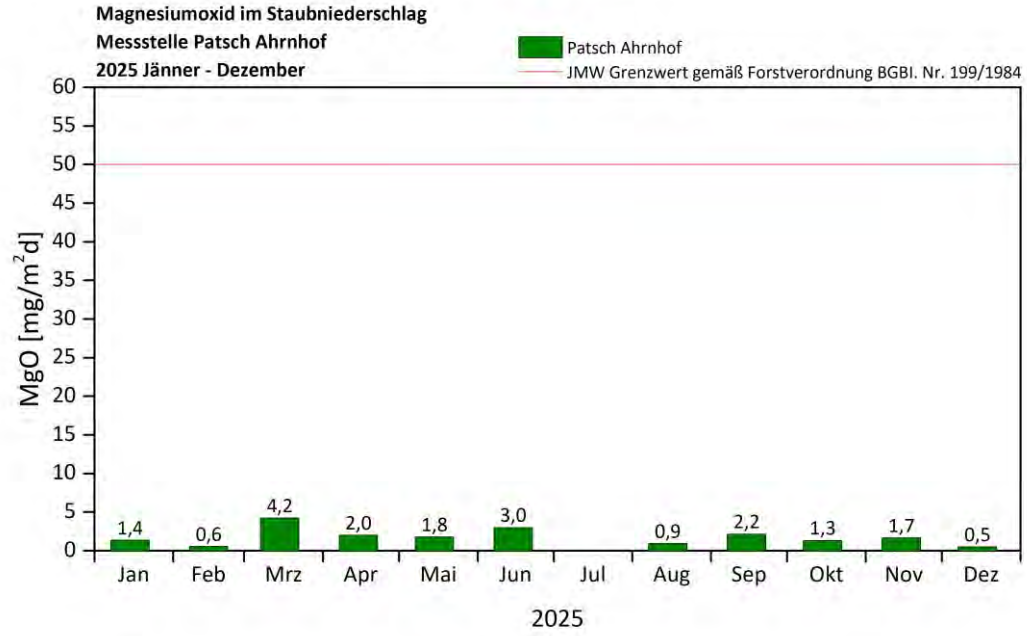
Anorganischer Anteil / Contenuto inorganico



Calciumoxid / Ossido di calcio

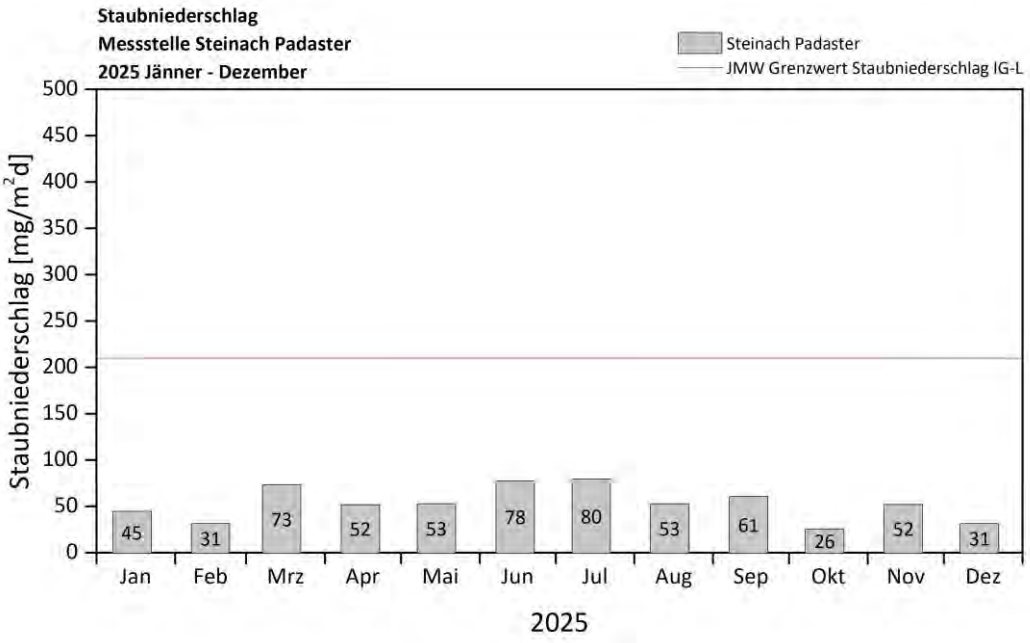


Magnesiumoxid / Ossido di magnesio

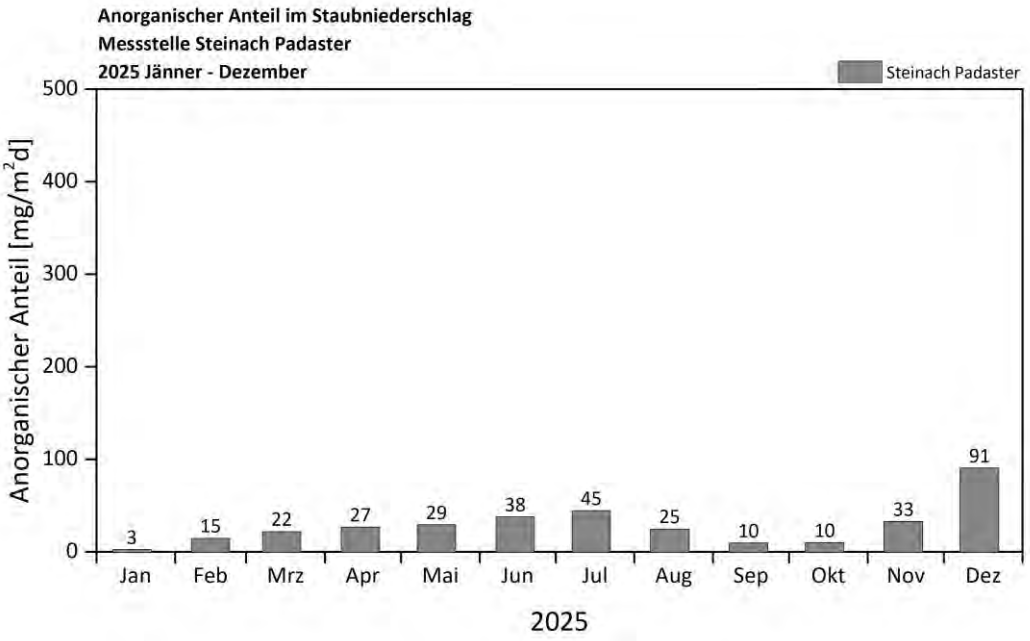


Padaster Verlauf der Monatsmittelwerte / Sviluppo delle medie mensili

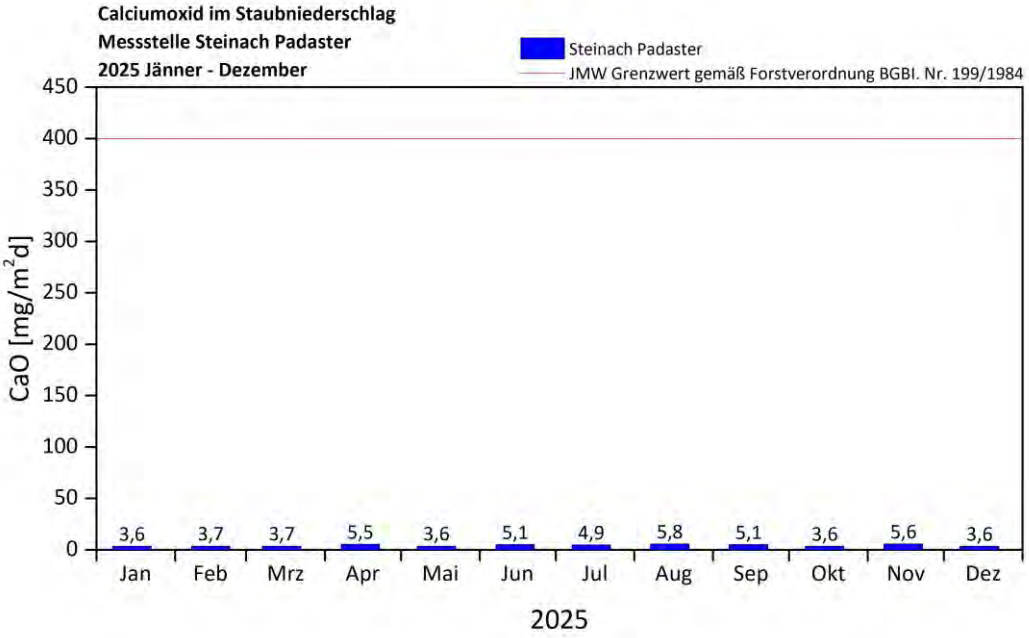
Staubniederschlag / Precipitazione di polvere



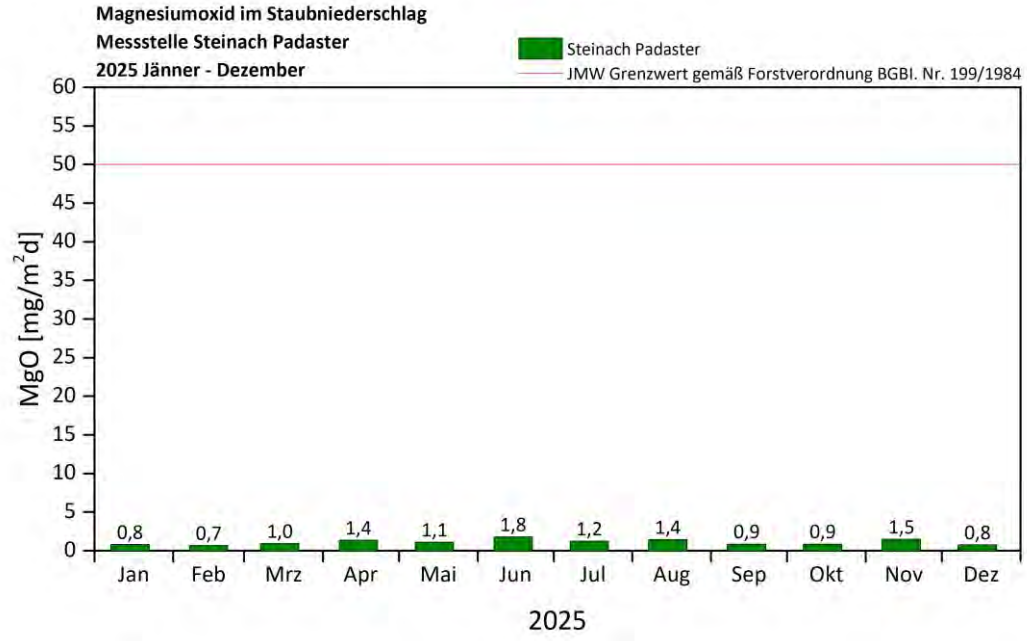
Anorganischer Anteil / Contenuto inorganico



Calciumoxid / Ossido di calcio

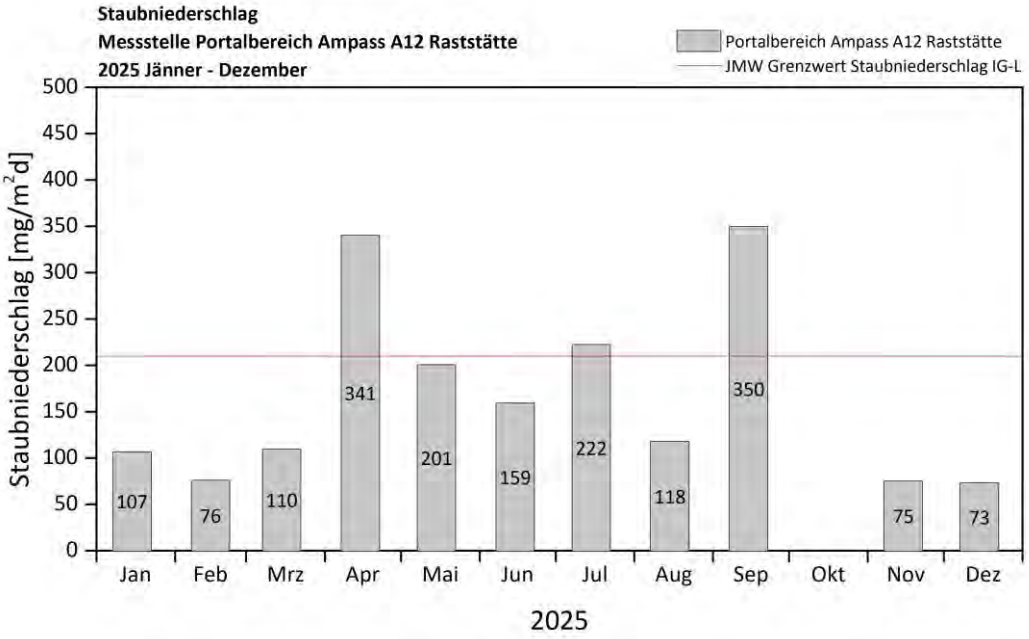


Magnesiumoxid / Ossido di magnesio



Ampass Verlauf der Monatsmittelwerte / Sviluppo delle medie mensili

Staubniederschlag / Precipitazione di polvere



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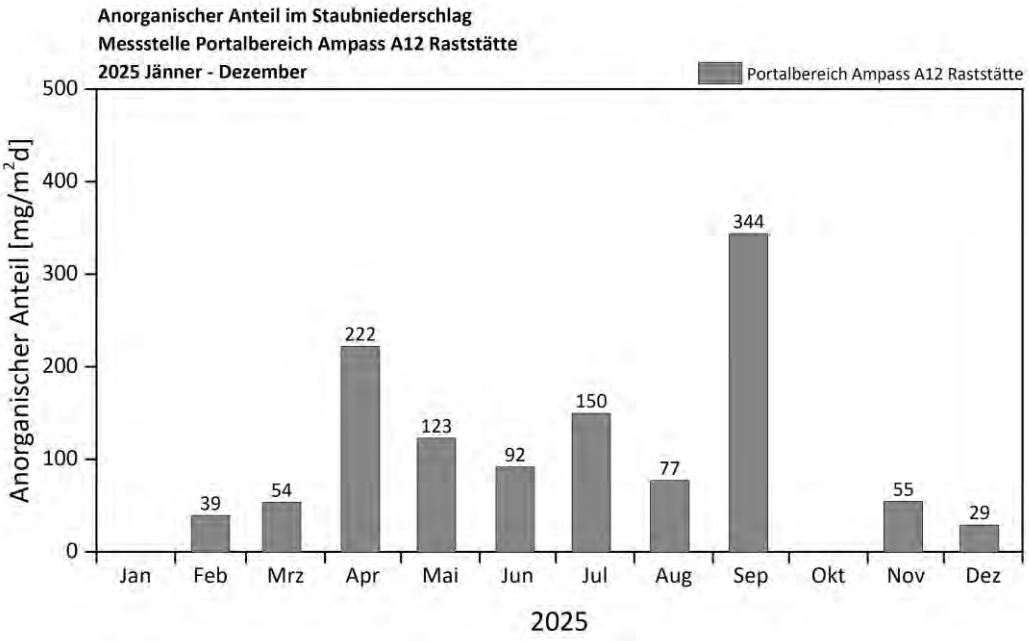
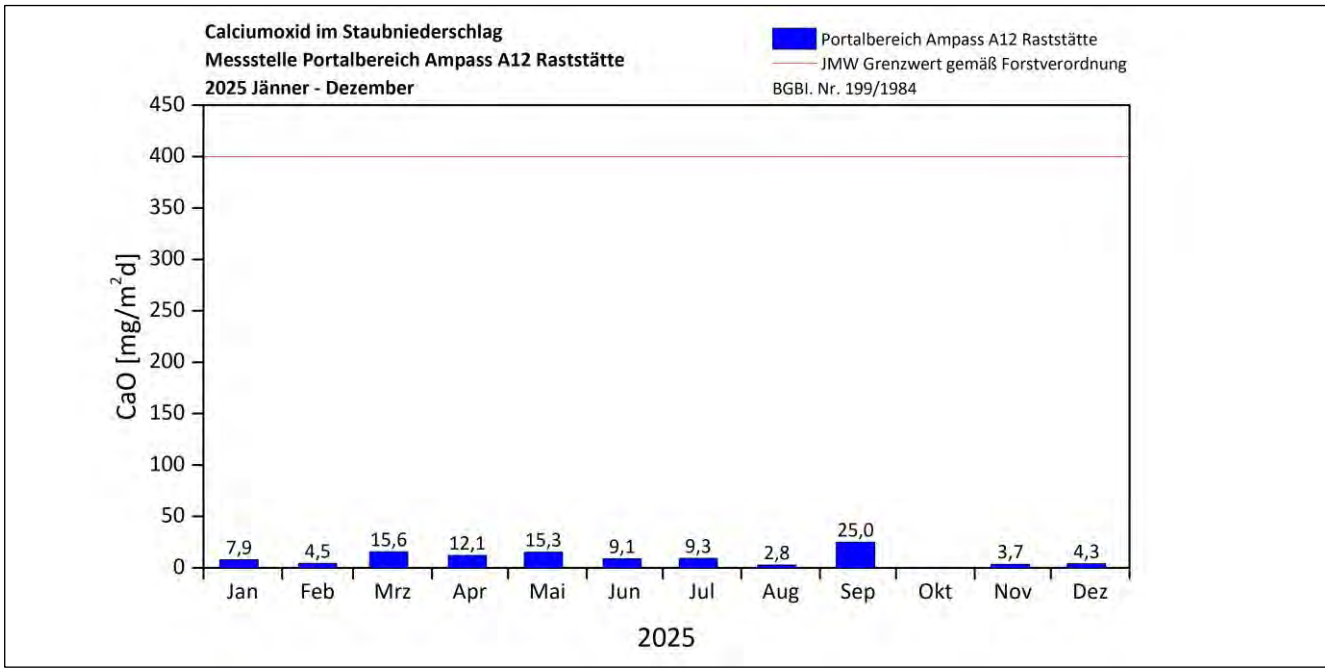


Calciumoxid / Ossido di calcio



Magnesiumoxid / Ossido di magnesio

