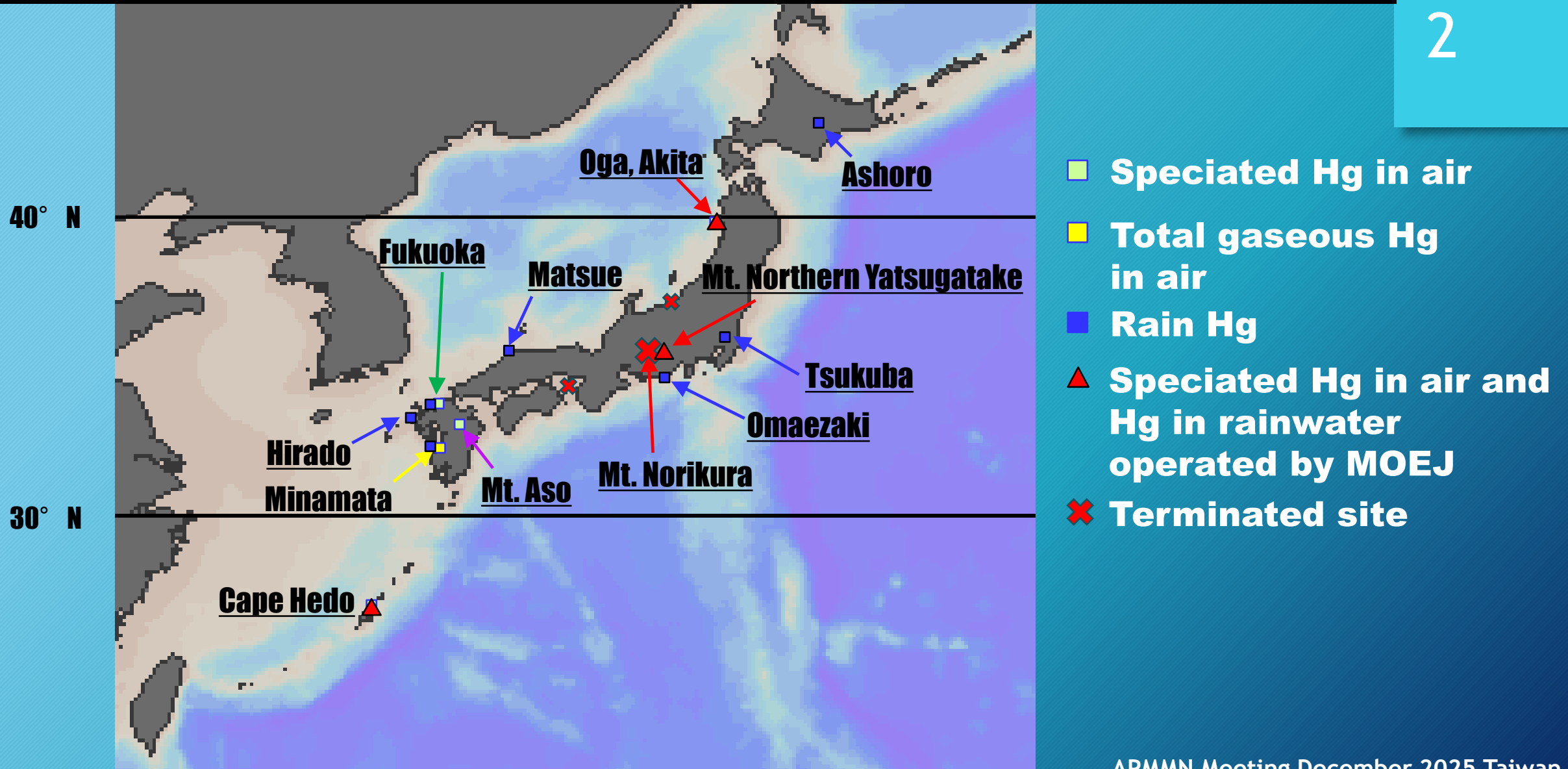


Continuous Atmospheric Mercury Monitoring Activities in Japan 2025

Kohji Marumoto
NIMD, Japan

Current Japanese atmospheric mercury monitoring network

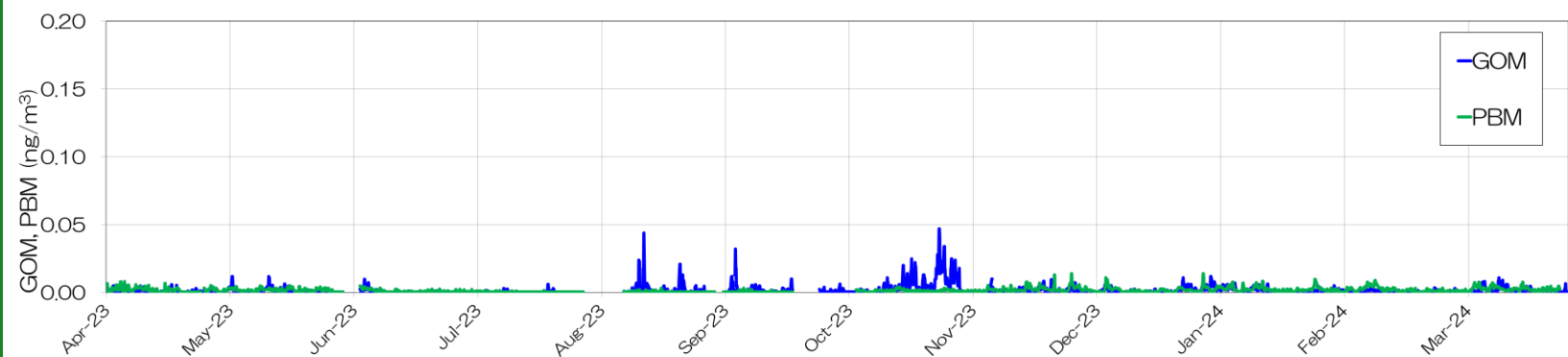
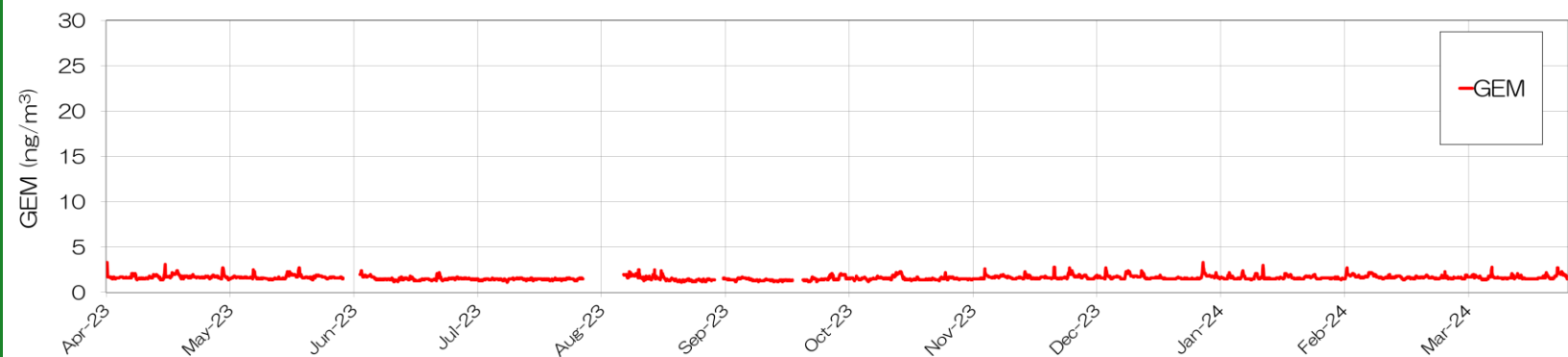
2



Observations of Mercury Species at Cape Hedo

3

Cape Hedo, FY2023 (Apr 2023-Mar 2024)

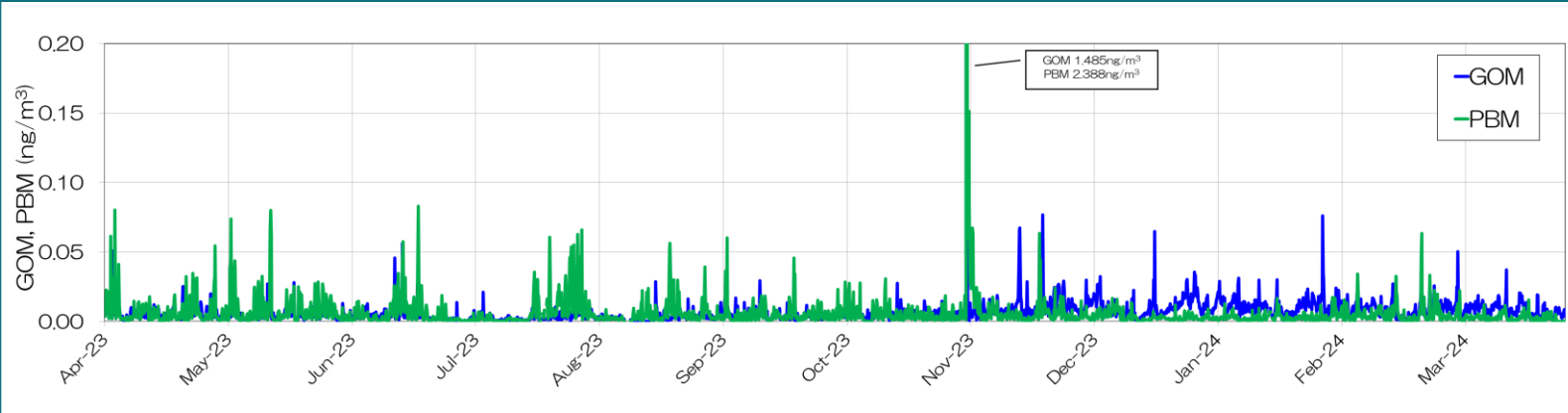
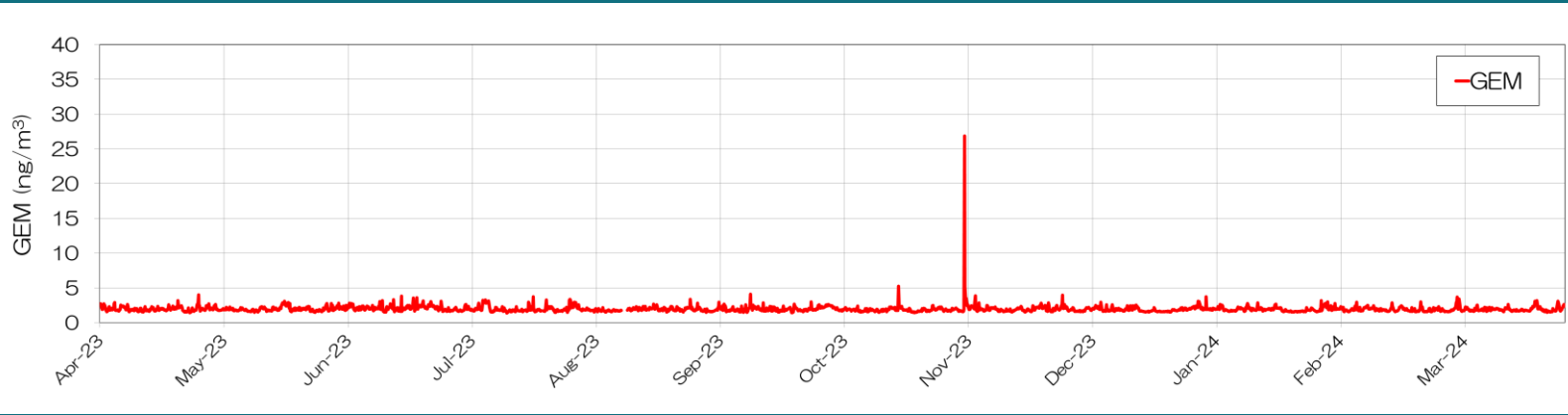


Annual mean (ng/m³)

	GEM (ng/m³)	GOM (ng/m³)	PBM (ng/m³)
FY2023	1.6	0.002	0.002

Observations of Mercury Species at Fukuoka

Fukuoka, FY2023 (Apr 2023-Mar 2024)



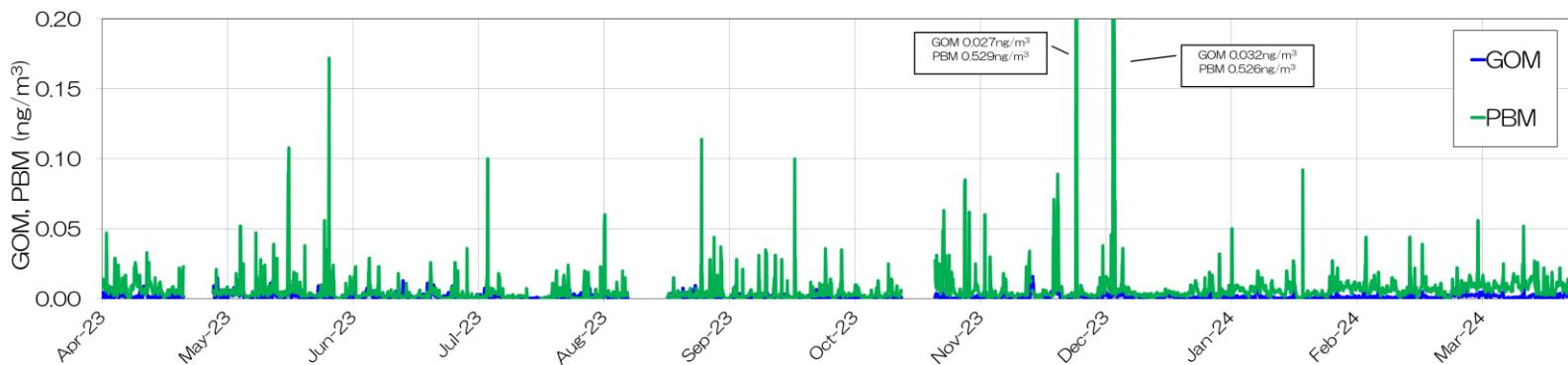
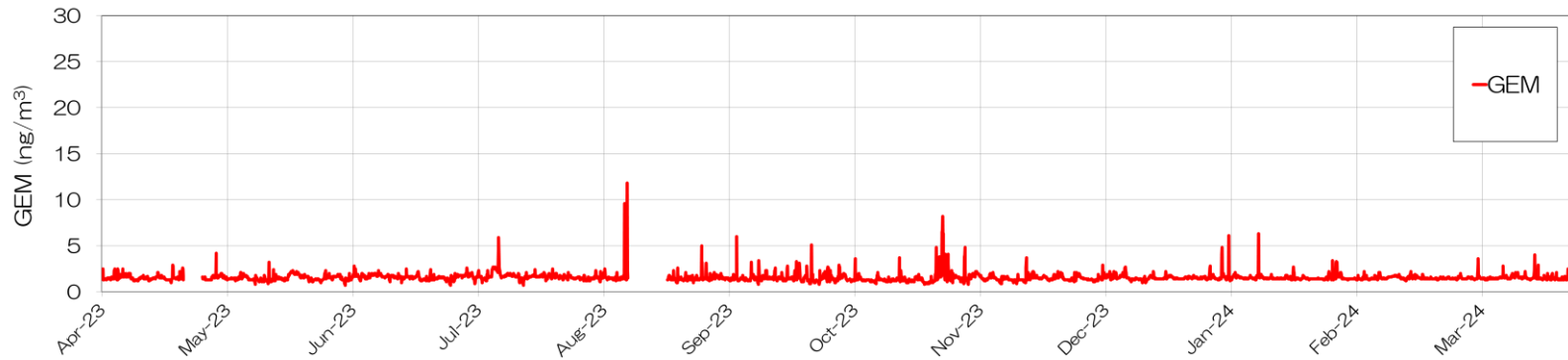
Annual mean (ng/m³)

	GEM (ng/m³)	GOM ng/m³	PBM (ng/m³)
FY2022	2.0	0.007	0.007

Observations of Mercury Species at Oga, Akita

5

Oga, FY2023 (Apr 2023-Mar 2024)

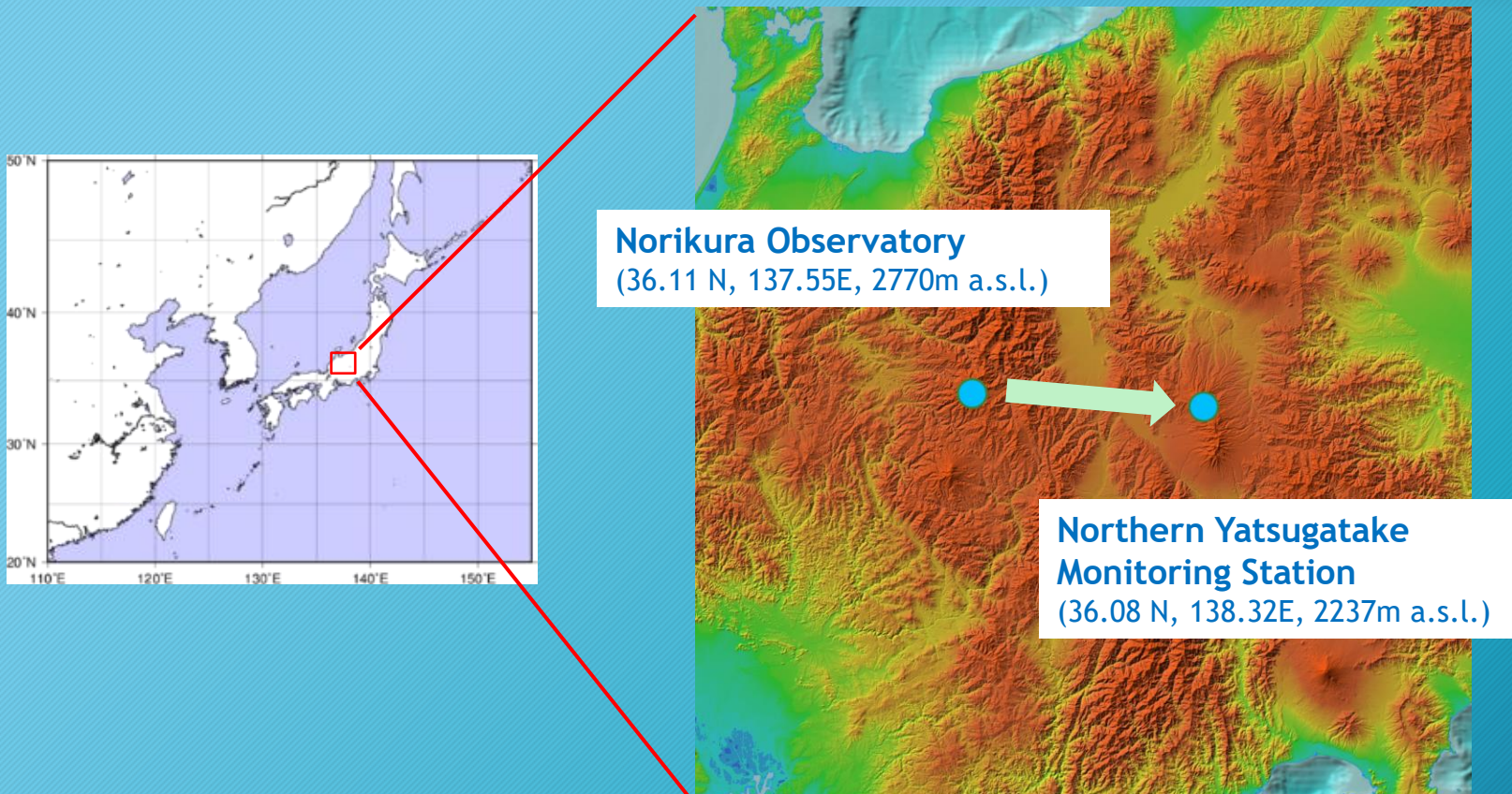


Annual mean (ng/m³)

	GEM (ng/m³)	GOM ng/m³)	PBM (ng/m³)
FY2023	1.5	0.002	0.007

Relocation of High-Altitude Atmospheric Monitoring Station

6



- The previous site (Norikura Observatory) could only conduct monitoring during summer (July to September).
- The site was relocated to one capable of year-round observation (Northern Yatsugatake Monitoring Station).
Monitoring (speciated atmospheric mercury and wet deposition) began in October 2025.

Northern Yatsugatake Monitoring Station

7



Annual Average Total Hg Concentration in Wet Deposition at All Sites in Japan

**FY2023
(Apr 2023-
Mar 2024)**

Hirado
6.6 ng/L
(2010 mm)
13.3 ug/m²/yr

Fukuoka
9.2 ng/L
(1455 mm)
13.4 ug/m²/yr

Matsue
7.5 ng/L
(1733 mm)
12.9 ug/m²/yr

Oga
5.3 ng/L
(2299 mm)
12.2 ug/m²/yr

Cape Hedo
4.0 ng/L
(1958 mm)
7.8 ug/m²/yr

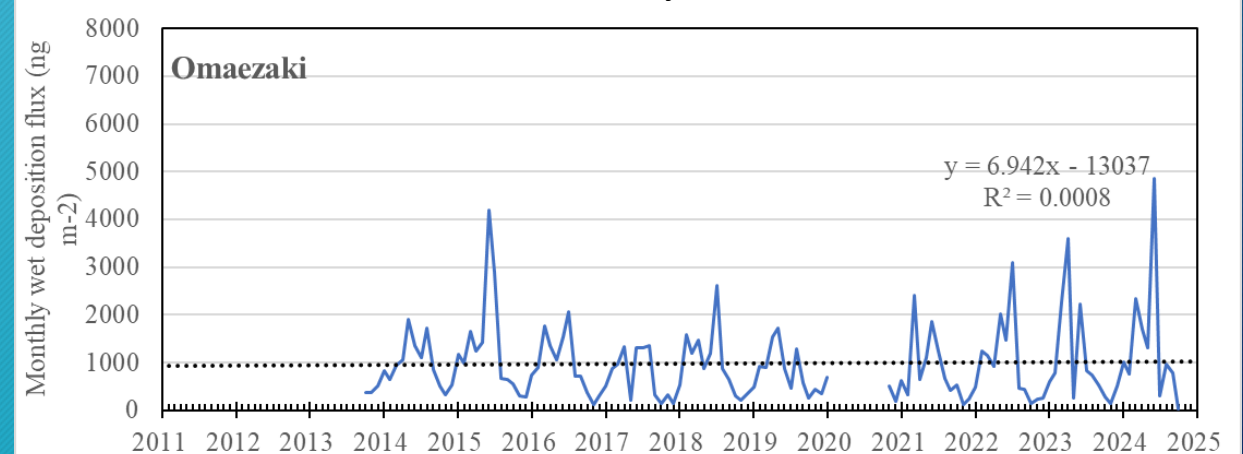
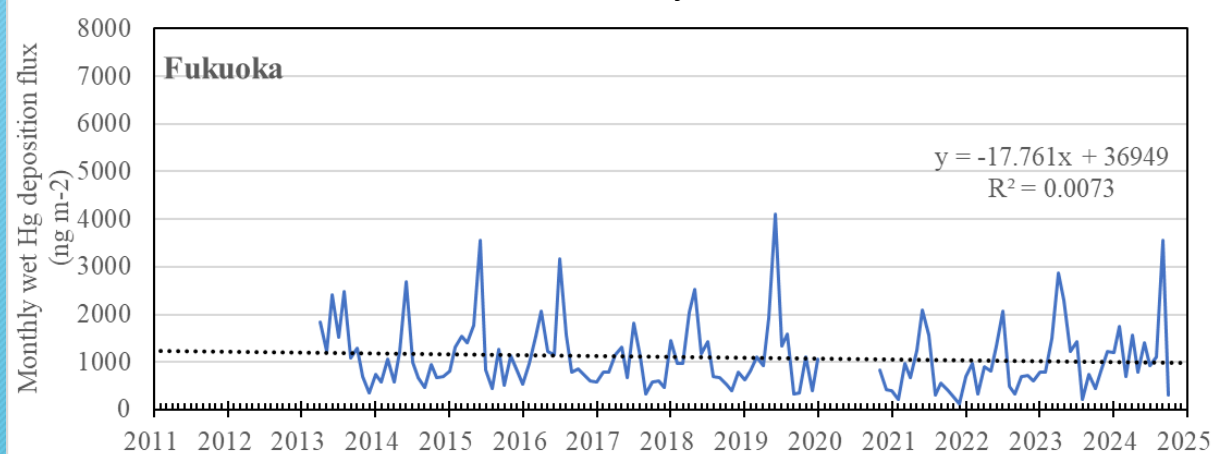
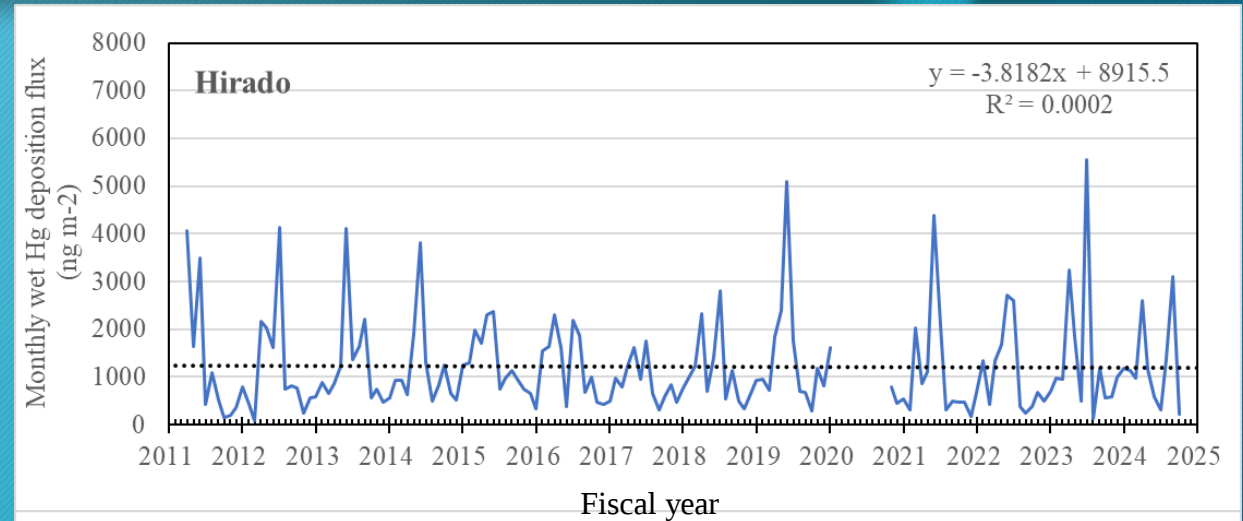
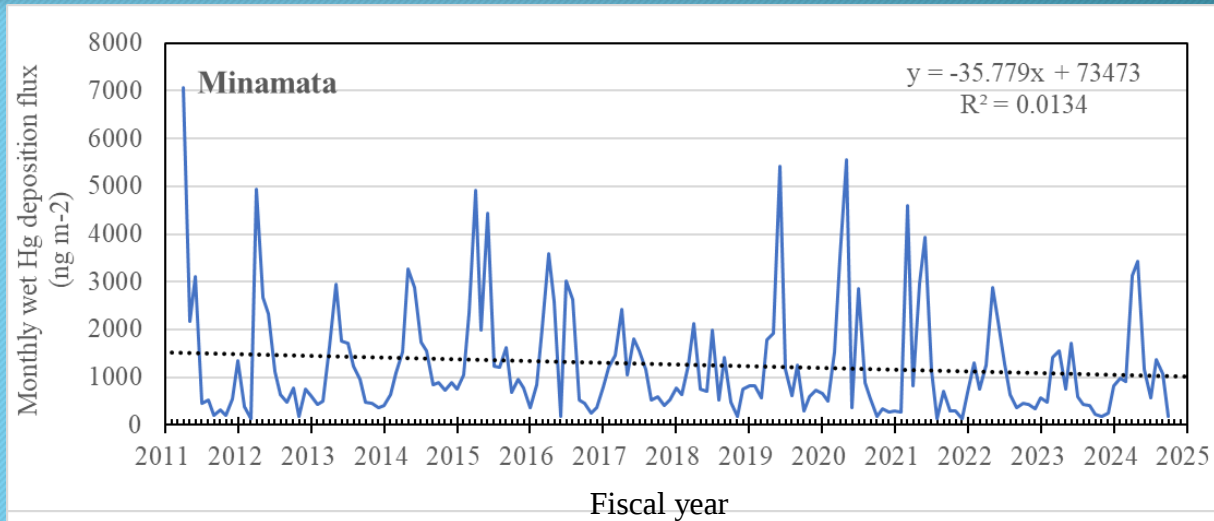
Minamata
6.7 ng/L
(2168 mm)
14.5 ug/m²/yr

Omaezaki
6.0 ng/L
(2290 mm)
13.8 ug/m²/yr

Tsukuba
8.3 ng/L
(1160 mm)
9.6 ug/m²/yr

Long-term variations of wet Hg deposition

9



Summary

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- ✓ Atmospheric GEM concentrations had been declining until around 2020, but have plateaued in recent years.
- ✓ Observations of atmospheric speciated mercury at high altitudes have been relocated to the Yatsugatake observation site, which allows year-round monitoring. Observations have already started in October 2025.
- ✓ Monthly wet mercury deposition fluxes are higher during the rainy summer season and lower during winter which has small rains. Since the observations began, no trend of increase or decrease has been observed.
- ✓ Monitoring of wet mercury deposition has started in April, 2025 at Ashoro Town located in the central Hokkaido. Since there are no mercury emission sources in the vicinity of this site, it is designated as a background site.

Thank you for your kind attention !

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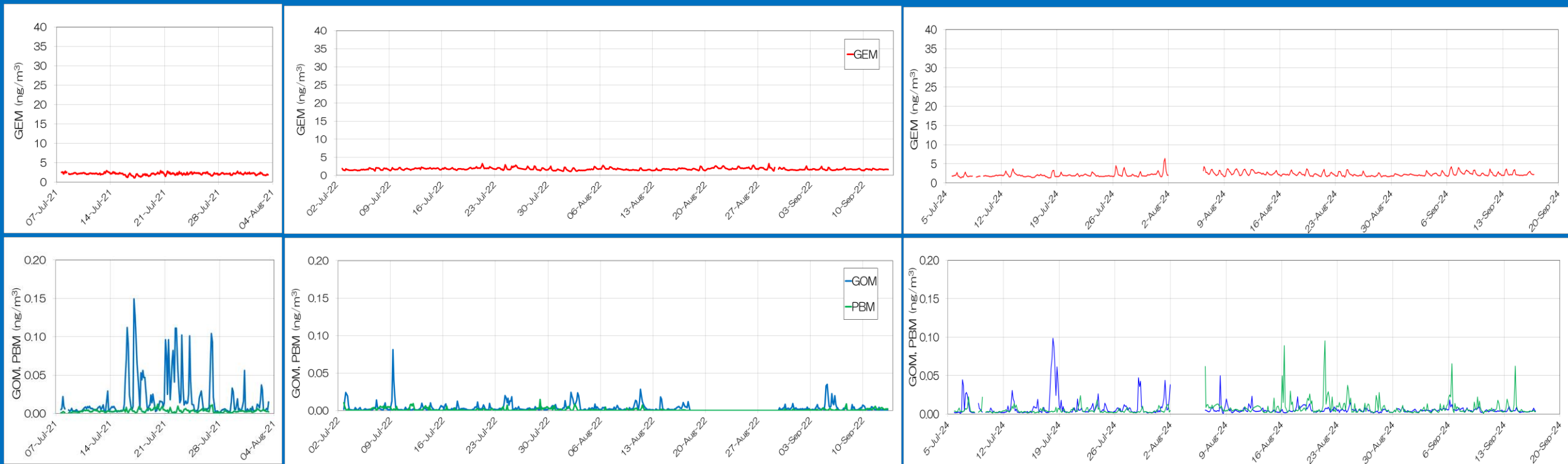


Ashoro site

Atmospheric Mercury Monitoring on High-Altitude Site (Mt. Norikura)

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Speciated Atmospheric Mercury



Observation in 2023 could not be performed due to land slide caused by heavy rainfall.

Atmospheric Mercury Monitoring on High-Altitude Site

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Wet Deposition

