

<b>Issue number: 6</b>			
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Version	Date	Comments	Authors
1	29-05-2026	Start of issue	Michaela Edwinson

## 1 Introduction

Starting May 2025, several glider missions in the Baltic sea have been affected by GNSS jamming. The issue display as incorrect surface locations several hundred kilometers off transect (figure 1), no GNSS fix and/or incorrect timestamps. Incorrect timestamps affect the mission by displaying surface navigational data during the dive as per figure 2. All affected missions are defined in table 1 with corresponding issue descriptions and dataset adjustment to affected cycles described in table 2.

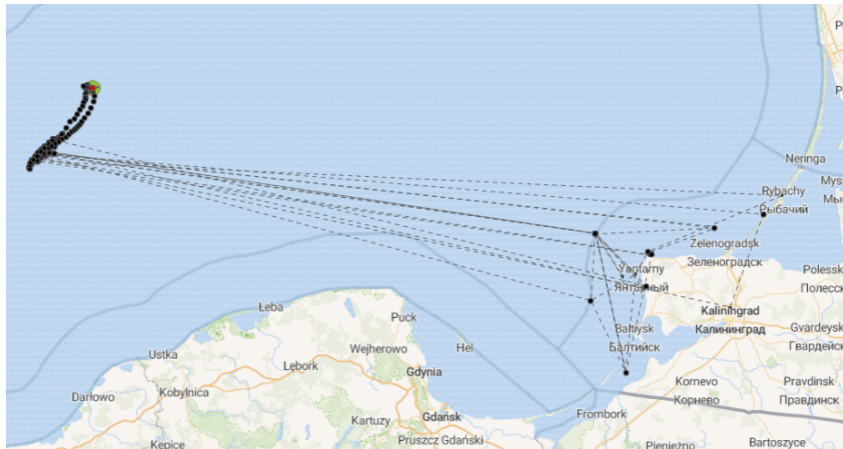
**Table 1:** Details of missions affected by GNSS jamming since June 2025. The different basins mentioned in the ‘Location’ column, follow the division made by HELCOM which is shown in figure A.1

Glider	Mission	Location	Mission Start Date	Project	Cycle (Issue Description)
SEA044	106	Bornholm Basin	2025-06-10	TurboMix	245 (A), 251 (A), 263 (A), 267 (A), 279 (A), 283 (A), 287 (A), 307 (A), 323 (A), 331 (A), 351 (A), 363 (A), 375 (A)
SEA063	88	Bornholm Basin	2025-06-10	InTail	140 (A), 181 (A), 189 (A), 197 (A), 201 (A), 205 (A), 217 (A), 516 (A)
SEA067	73	Bornholm Basin	2025-06-10	SAMBA	137 (A), 177 (A), 197 (A), 201 (A), 213 (A), 481 (C), 483 (A), 484 (A)
	83	Bornholm Basin	2026-03-14	SAMBA	435 (C), 522 (A), 586 (A)
	86	Bornholm Basin	2026-04-02	SAMBA	708 (C), 711 (A), 713 (C), 888 (A)
SEA076	37	Eastern Gotland	2025-05-17	SAMBA	618 (A), 622 (A)
SEA077	51	Eastern Gotland Basin	2026-05-25	SAMBA	45 (A)
SHW002	26	Bornholm Basin	2026-05-10	SAMBA	436 (C), 773 (B), 801 (B, C)

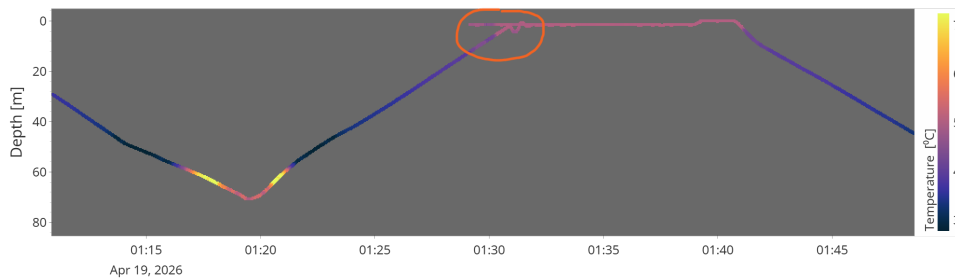
**Table 2:** Issue legend descriptions with corresponding adjustment described

Legend	Issue	Adjustment made to dataset
<b>A</b>	Incorrect coordinate	Replaced with NaN
<b>B</b>	Incorrect timestamp	None
<b>C</b>	No GNSS fix	Glider calculated estimated position through dead reckoning.

## 2 Examples



**Figure 1:** Map of surface locations (black dots) of SEA044 M106 deployed in Bornholm Basin. Positions diverting hundreds of kilometers off transect are jammed. Image taken from SeaExplorer piloting platform GLIMPSE made by SeaExplorer manufacturer Alseamar [1].



**Figure 2:** Issue description B (table 2) displayed in temperature data from SEA067 M86. Instance of incorrect timestamps is circled in orange where surface data on following dive is displayed before late dive data. Data displayed and downloaded from VOTO Glider Dashboard [2].

## References

- [1] Alseamar [2026]. Alseamar ocean science, <https://www.alseamar-alcen.com/ocean-science-sector/>.
- [2] VOTO [2026]. Voto glider dashboard, Available at <https://observations.voiceoftheocean.org/dashboard>.

## A Appendix



**Figure A.1:** Map of the Baltic Sea showing the 17 sub-basins (Map taken from <http://stateofthebalticsea.helcom.fi/in-brief/our-baltic-sea/>)