AMSR2 Detection of Thin Sea Ice Product (TSI) Defect Report
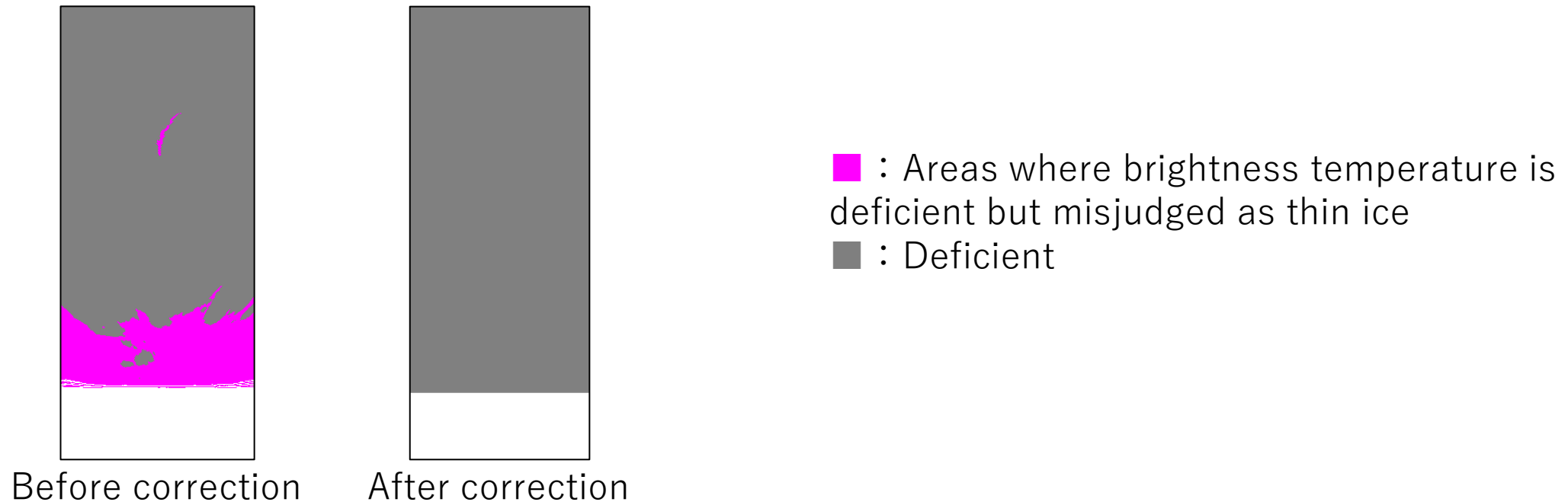
2023/8/1
JAXA/EORC

\<Detail of the problem\>
In the thin ice detection algorithm that generates TSI products, the check flow for the brightness temperature deficit had an error in the decision formula.
In the area north of 30 degrees north latitude, which is the target of the thin ice detection algorithm, the problem occurred in 4% of all observation passes (the number of defective passes was 4761 out of 117595 total observation passes) (see TSI_Defect_Product_List.txt). Therefore, reprocessing was conducted for the entire observation period. The product accuracy validation results were not affected.

\<Comparison before and after correction 2012/07/17 209A\>

Before correction   After correction

■ : Areas where brightness temperature is deficient but misjudged as thin ice
■ : Deficient

＜Validation result＞
In the target area (Ascending sea ice concentration >90%) during the validation period from 2013 to 2016, the failure occurred in one pass (GW1AM2_201504011535_092A_L2RGTSILX1100100.h5). In this case, one pixel was revised from 0 to missing (out of TB range) due to this defect.
Since the defects occurred in the left area shown below and were not in the defined validation target area, there was no impact on the validation results.

Failure point
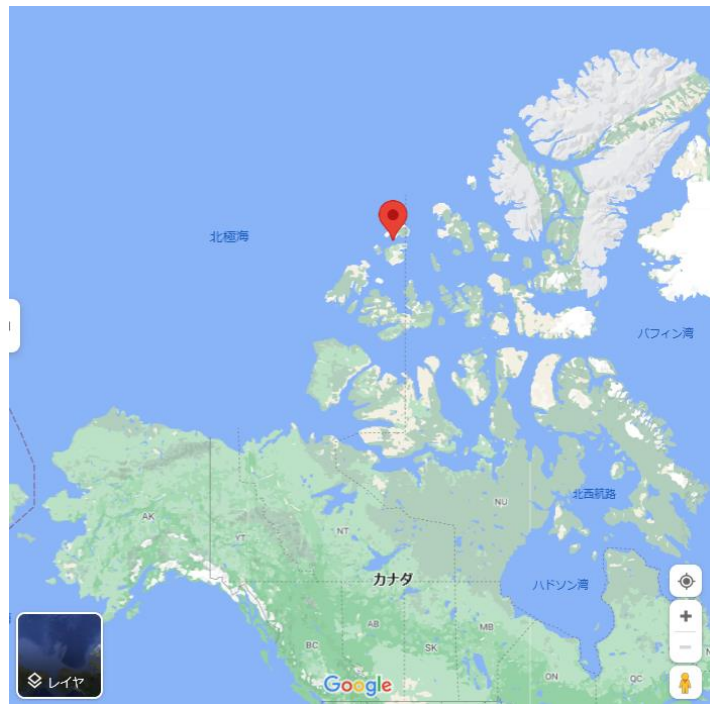
Validation Area
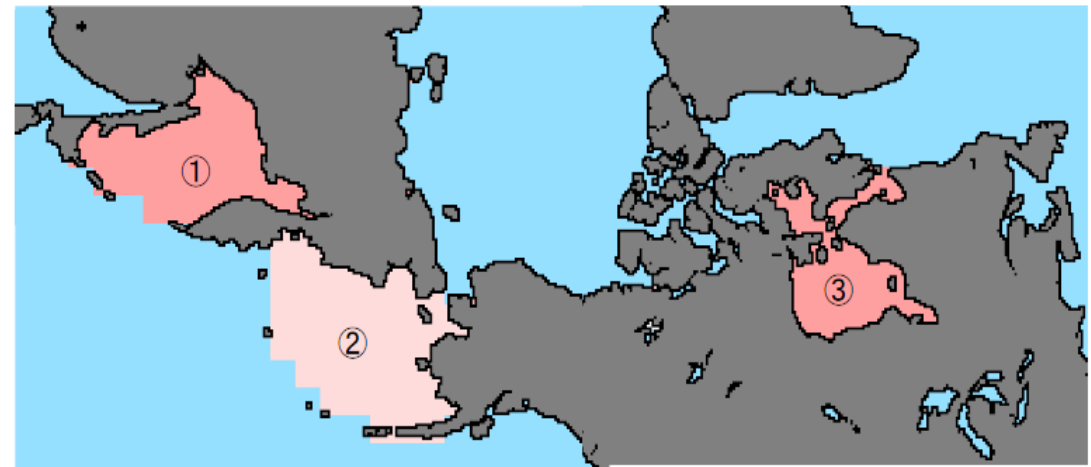
① Okhotsk Sea, ② Bering Sea, ③ Hudson Bay