

RAIN IMPACT MODEL (RIM) FOR AQUARIUS

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– Variables

» Rain Impact Variables

- RIM_{SSS} – SSS estimated based on RIM for depths: surface (0.005m), 1 m, 3 m and 5 m
- $RIM_{SSS-anomaly}$ – SSS - HYCOM_{SSS} estimated based on RIM for depths: surface (0.005m), 1 m, 3 m and 5 m
- PS – Probability of Salinity Stratification

» Other rain parameters

- IRR – Instantaneous Rain Rate
- RA – Rain Accumulation (previous 24 hs)
- BF – Rain Beam Fill Fraction

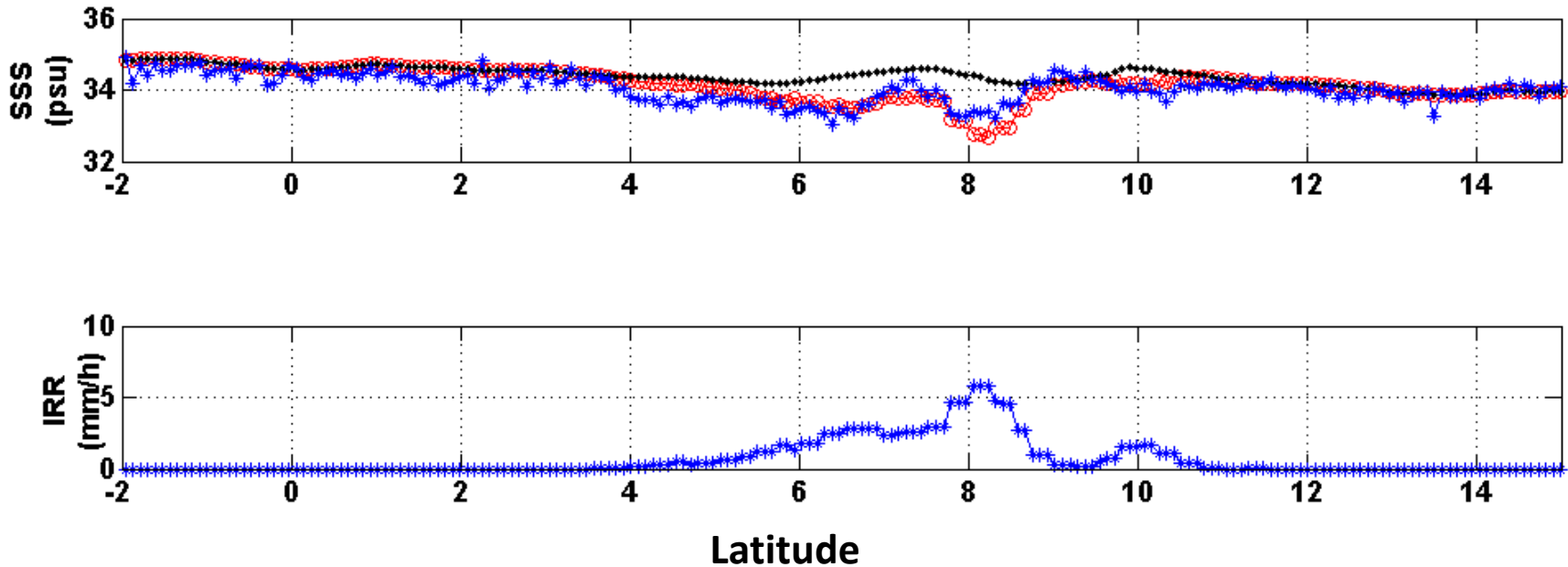
» Flagging

- $Status\ Flag$ – AQ filtering, CMORPH coverage and filtering

VARIABLES FOR V5

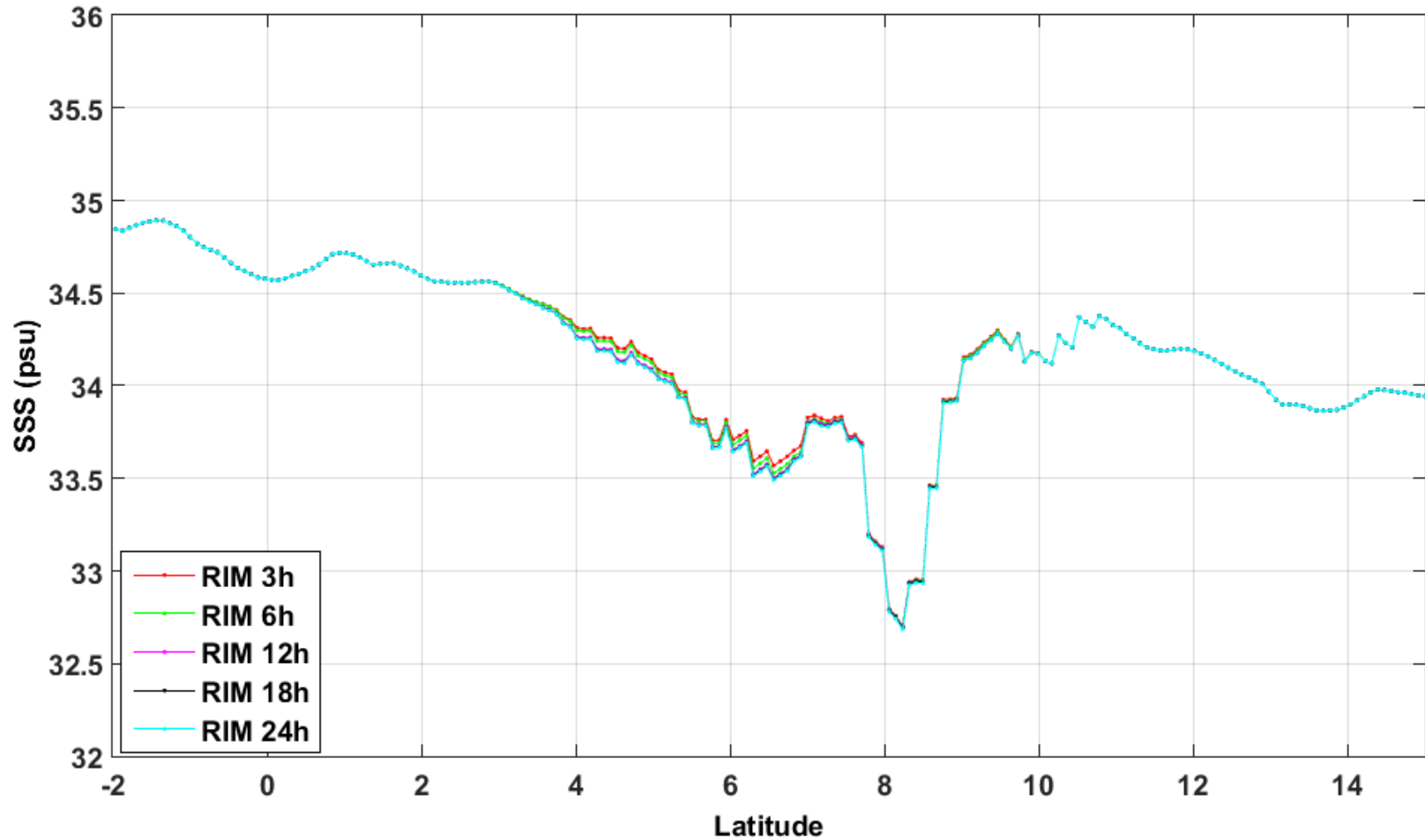
- Ancillary_Info
 - Status_flag
- Rain_Impact
 - BF_IRR
 - BF_RA
 - PSS
 - **RIM_anomSSS**
 - **RIM_anomSurf**
 - **RIM_anom1m**
 - **RIM_anom3m**
 - **RIM_anom5m**
- Rain_Product
 - IRR
 - RA

SOME ANALYSIS

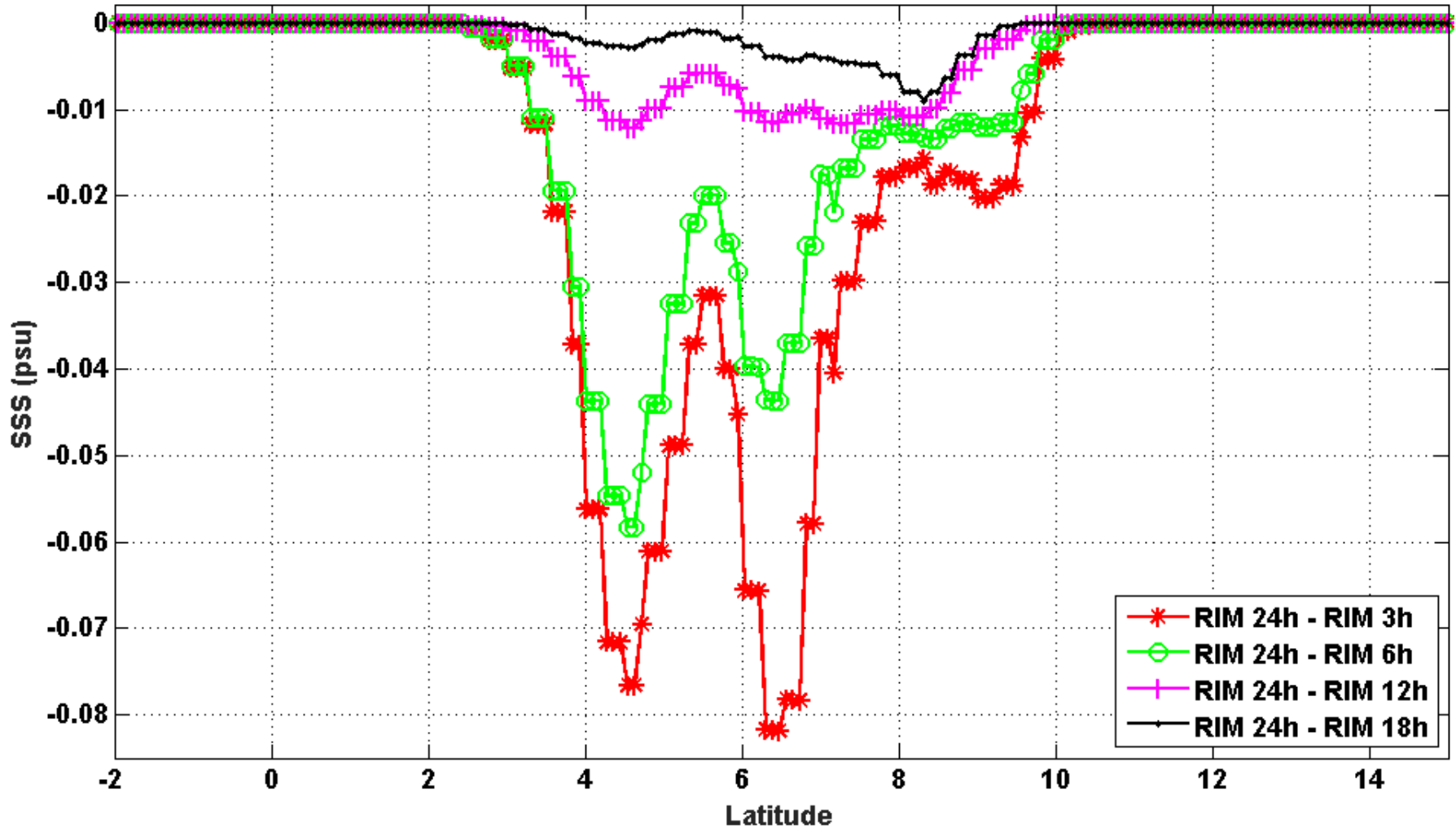


- RIM correlates well with AQ
 - Although 24 h time duration window was chosen arbitrarily
 - Then, what will be the impact of changing the window?
 - 3h, 6h, 12h and 18h prior to AQ obs time

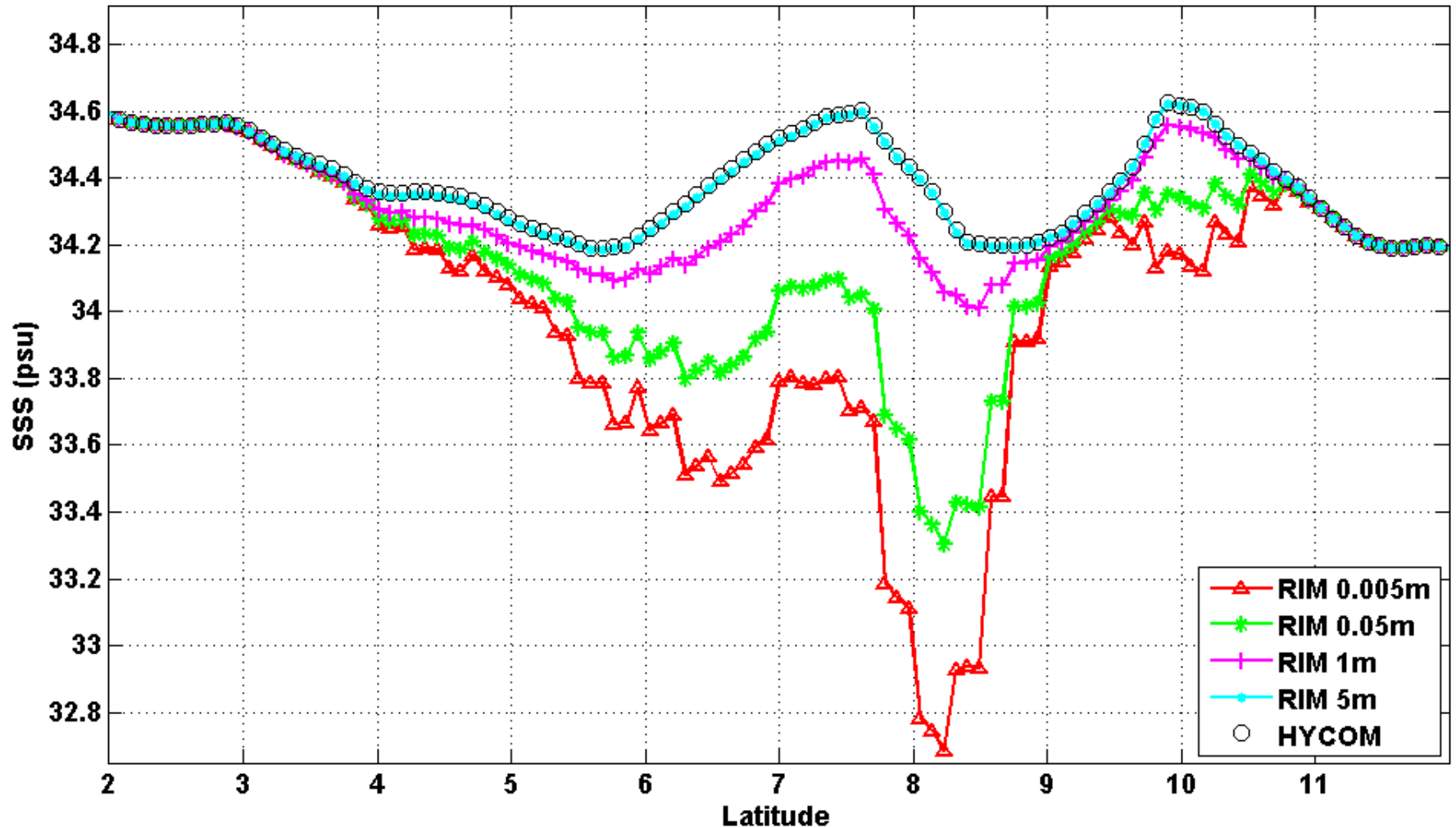
SOME ANALYSIS – RIM @ DIFF. TIMES



SOME ANALYSIS – RIM @ DIFF. TIMES



SOME ANALYSIS – RIM @ DIFF. DEPTHS



SUMMARY

- RIM correlates with AQ
- Difference between RIM 12h or RIM 18 h with respect to RIM 24 h is less than 0.01 psu
 - Results suggests that either can be used to produce RIM without impacting in the model
 - Although this results are preliminary.
 - As expected RIM @ 5 m and HYCOM are indistinguishable
- Future analysis
 - Effect of wind speed, parametrizing Kz using GOTM