Initial Water Condition Bug Fix for P-ETSS and ETSS

SCN Supporting Documents
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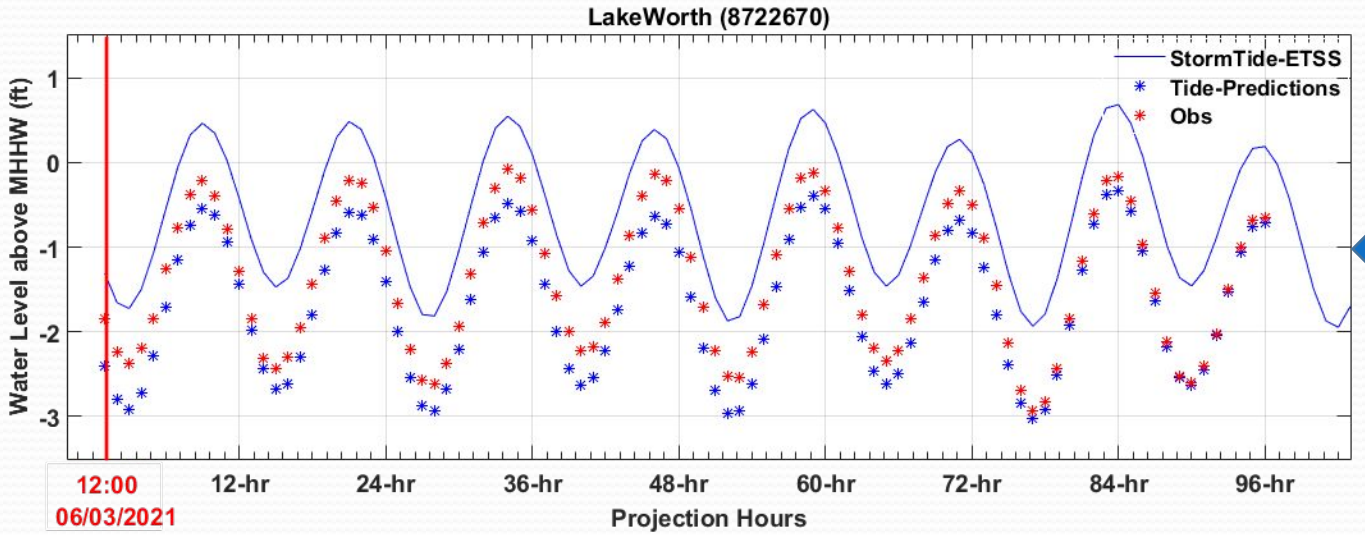
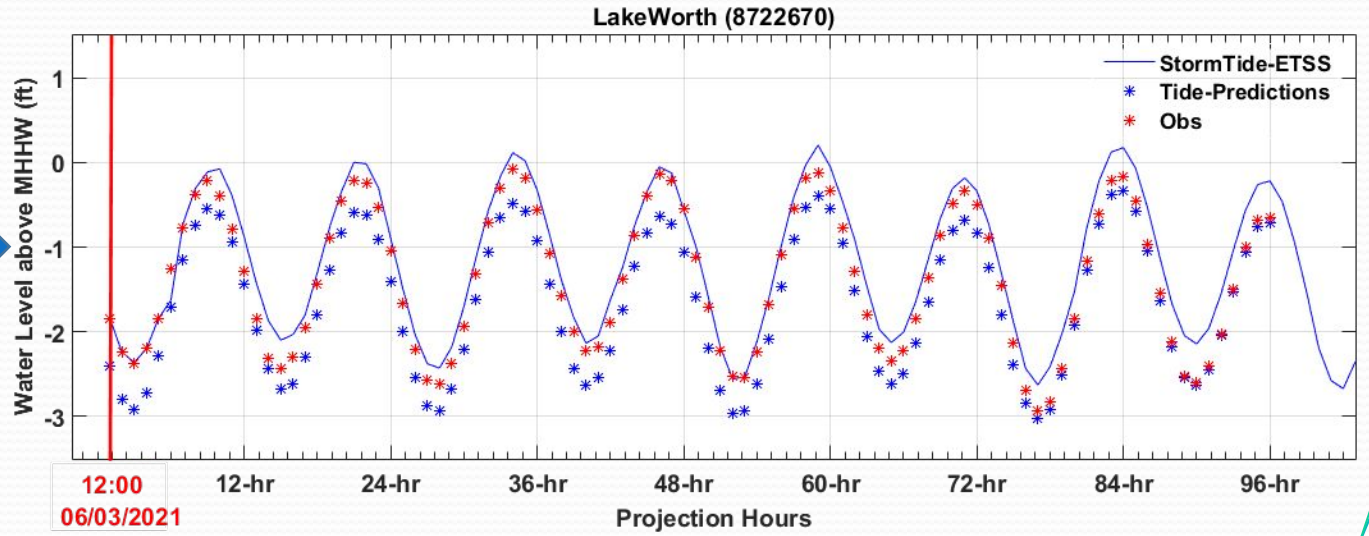
Problem: ETSS Storm-Tide Gridded Guidance Doesn't Match Station Guidance at Lake Worth Pier, FL

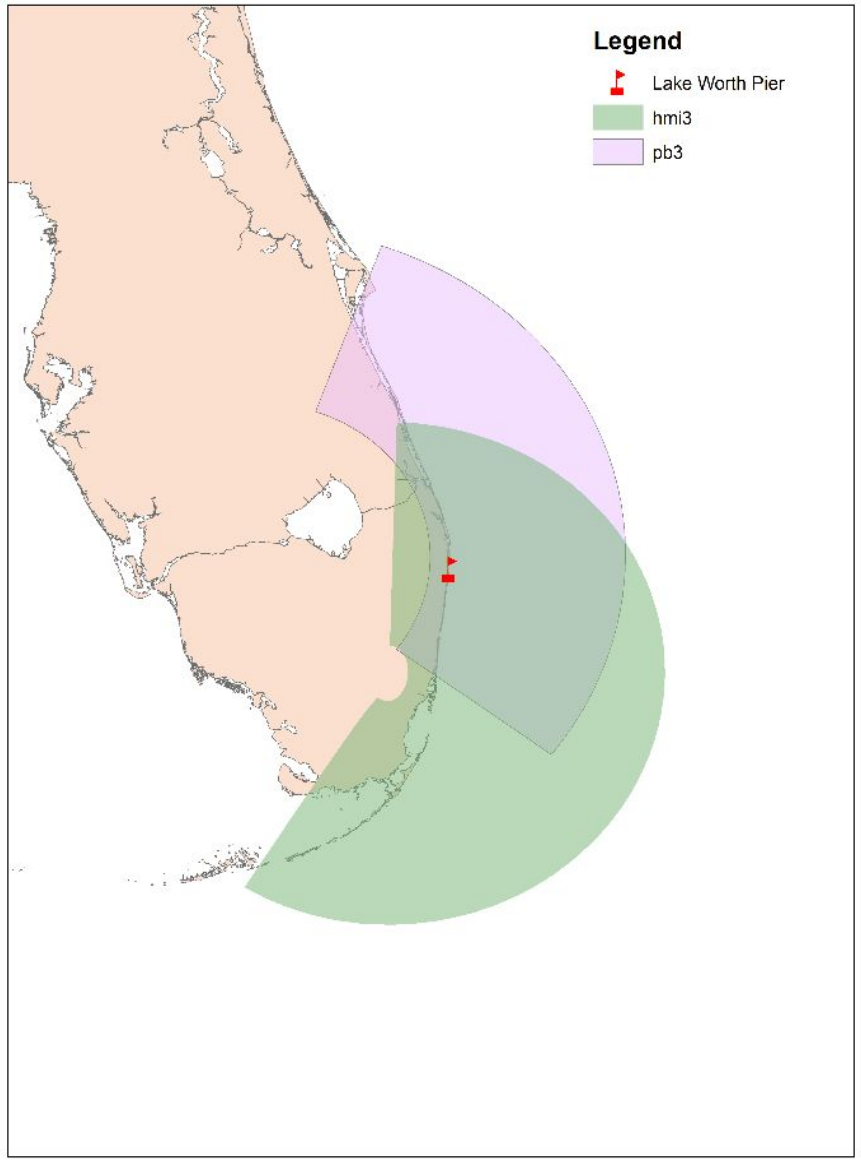


Gridded Product Result

Station Product Result



Location of Lake Worth Pier Station, and PB3 and HMI3 Basins

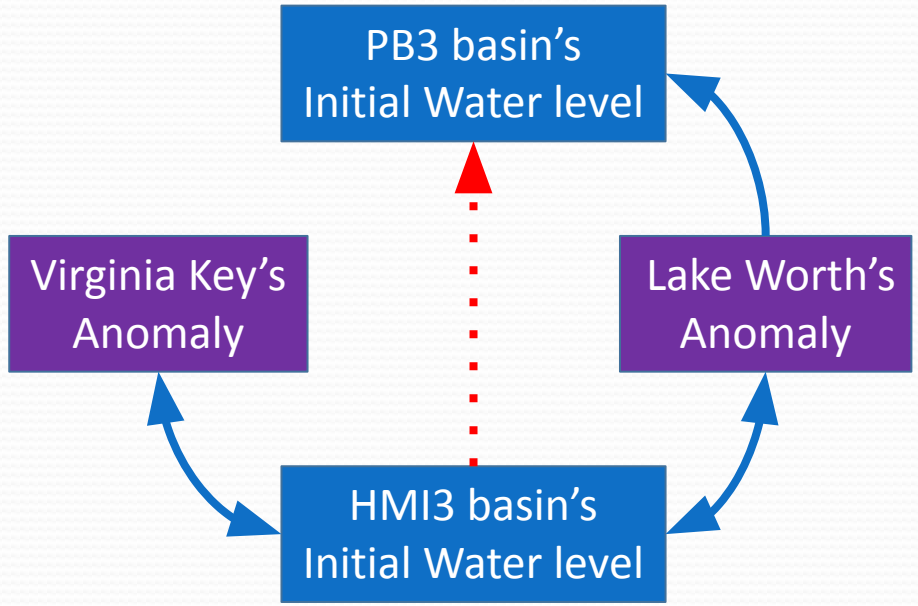


Explanation

The initial water level at HMI3 is based on the anomaly (obs - (surge + tide)) at Lake Worth Pier, FL and Virginia Key, FL. The station anomalies are based on the guidance at HMI3, which results in a feedback loop that keeps the initial water system in balance.

The initial water level at PB3 is based solely on the anomaly at Lake Worth, so it lacks the direct influence of Virginia Key and is out of sync with HMI3.

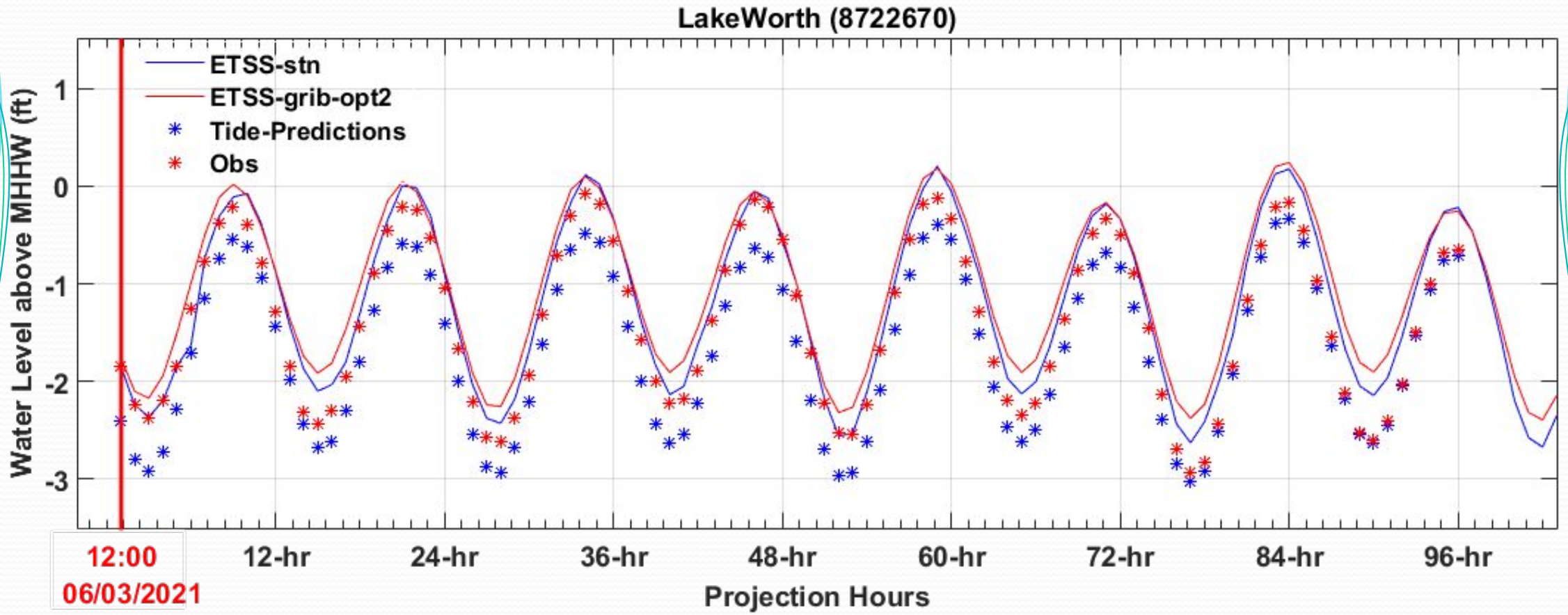
Solution - Use HMI3's initial water level for PB3.



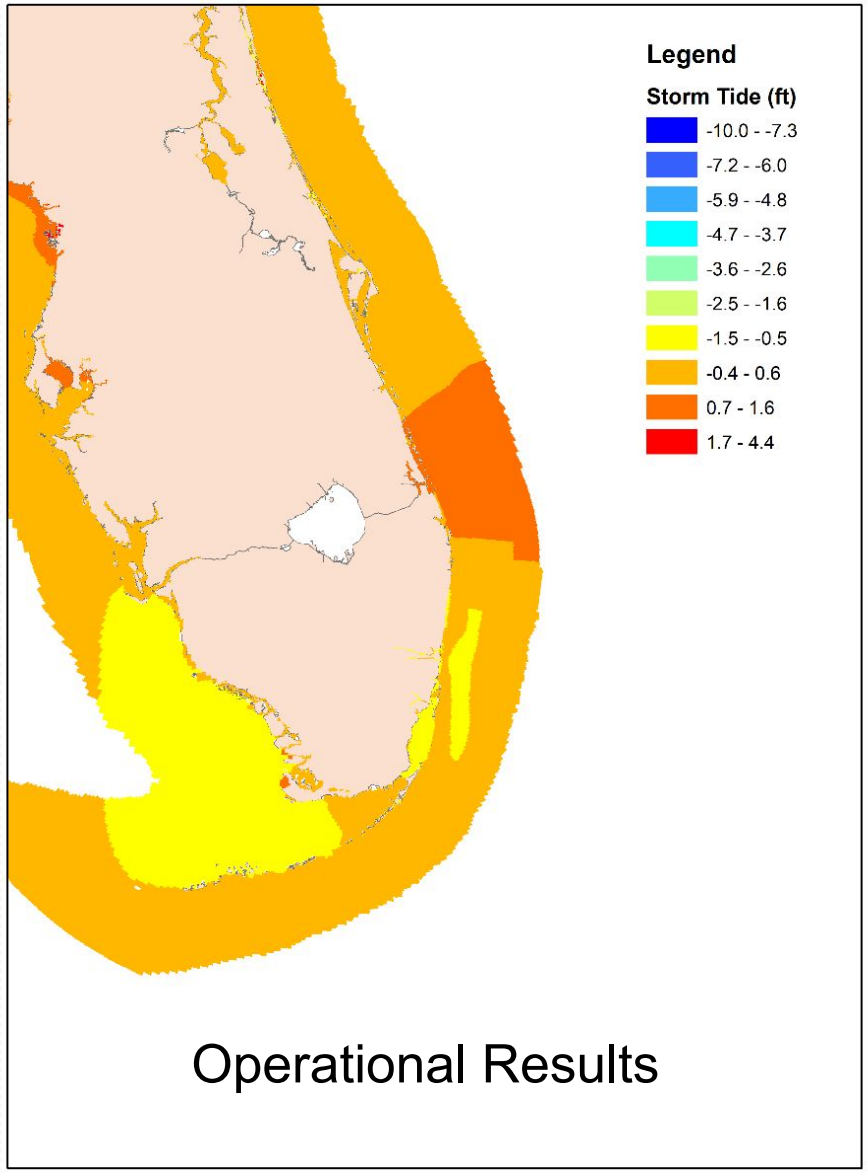
Initial Water = last cycle's value + mean anomaly from all stations within the basin; max of 2.0 ft; min of -2.0 ft

	Cycle: 1	Cycle: 2	Cycle: 3	Cycle: 4	Cycle: 5	Cycle: 6	Cycle: 7	Cycle: 8	Cycle: 9	...
PB3 Initial Water	0	0.2	0.5	0.7	1.0	1.2	1.5	1.7	2.0	2.0
Lake Worth's Anom.	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	...
HMI3 Initial Water	0	0	0.1	0	0.1	0	0.1	0	0.1	...
Virginia Key's Anom.	-0.2	-0.2	-0.3	-0.2	-0.3	-0.2	-0.3	-0.2	-0.3	...

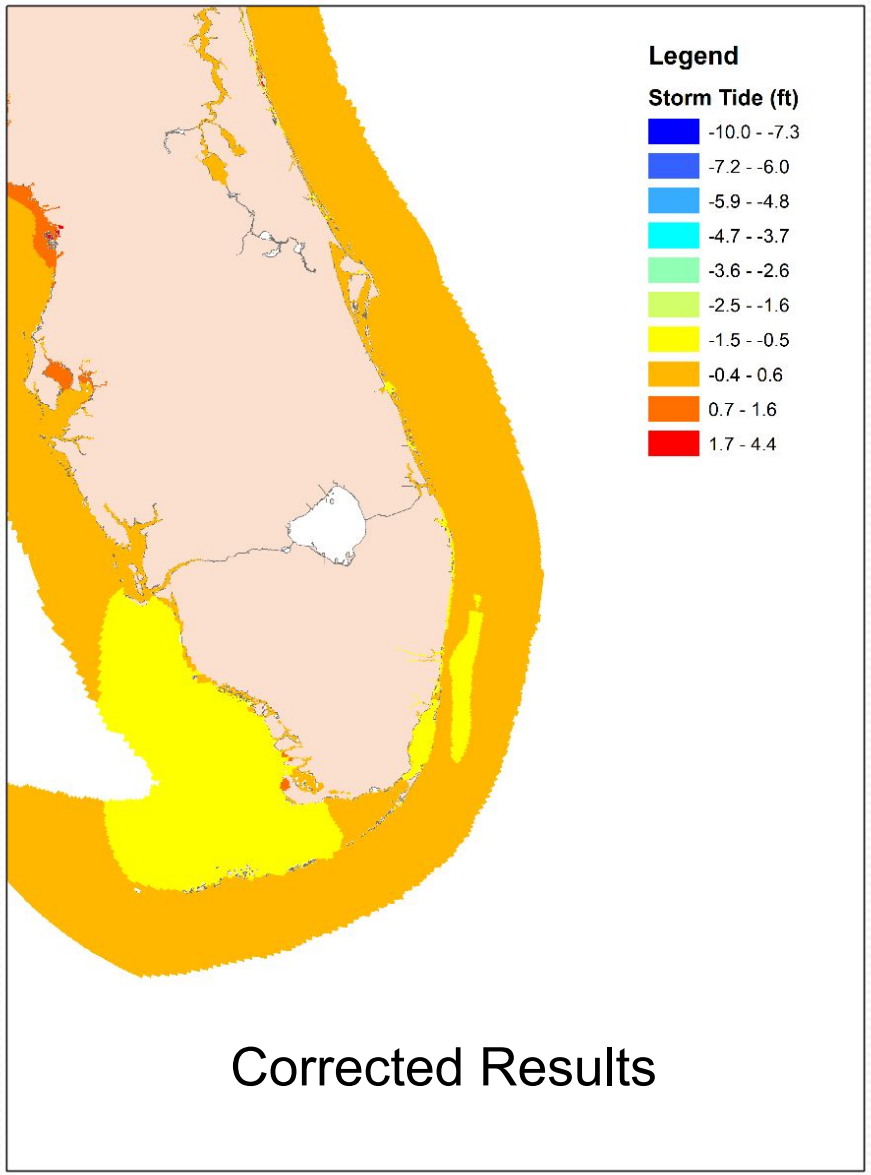
Corrected Storm-Tide Gridded Guidance vs Station Guidance at Lake Worth Pier, FL



ETSS Guidance for 17Z - Jun 3, 2021
Based on 12Z - Jun 3, 2021 Run



Operational Results



Corrected Results