SSM QC report: HydroGNSS vs SMAP

Time of issue: 30-Aug-2025 13:35:52. Reference: SMAP

First day: 2018-08-13T00:00. Final day: 2018-08-20T23:59

Day 1: 14-Aug-2018

    Percentage of SP with retrievals: 4.05 %

    Percentage of HydroGNNS product without reference colocation: 60.15 %

    Percentage of saturated (i.e., 0/50%) HydroGNNS L2 Soil Moisture: 8.36 %

    Percentage of retrievals with optimal quality: 0 %
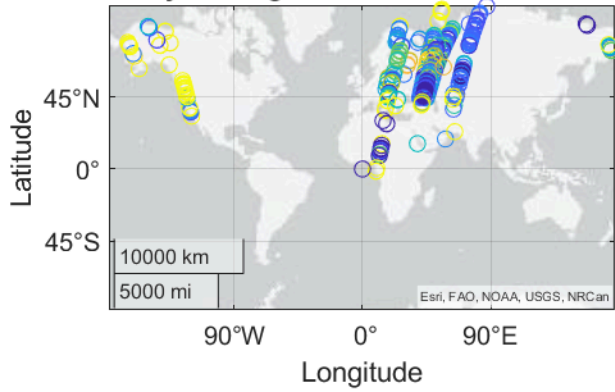
    Root mean square error: RMSE=26.55 m^3/m^3

    Unbiased root mean square error: UbRMSE=15.72 m^3/m^3

    Bias: B=-21.39 m^3/m^3

    Correlation coefficient: R=0.33

Day 2: 15-Aug-2018

    Percentage of SP with retrievals: 4.57 %

    Percentage of HydroGNNS product without reference colocation: 64.56 %

    Percentage of saturated (i.e., 0/50%) HydroGNNS L2 Soil Moisture: 8.55 %

    Percentage of retrievals with optimal quality: 0 %

    Root mean square error: RMSE=26.52 m^3/m^3

    Unbiased root mean square error: UbRMSE=17.02 m^3/m^3
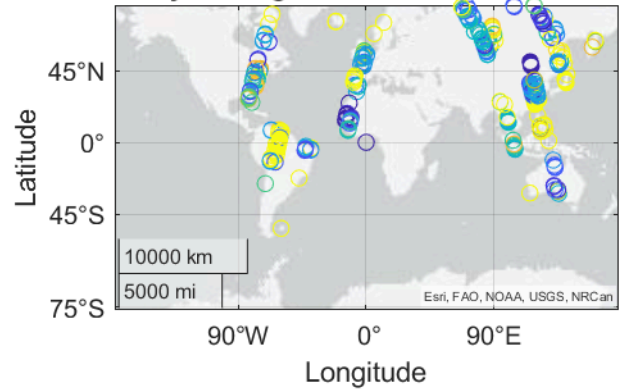
    Bias: B=-20.34 m^3/m^3

    Correlation coefficient: R=0.5

HydroGNSS L2G SSM maps
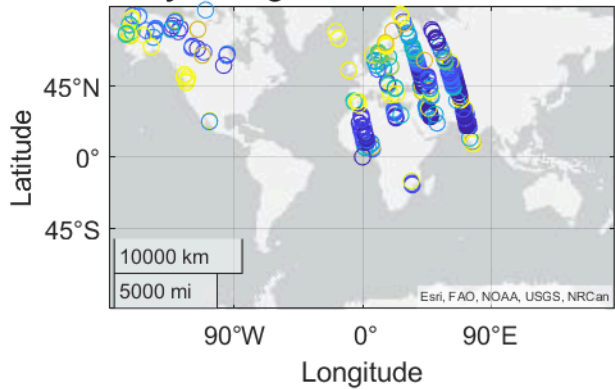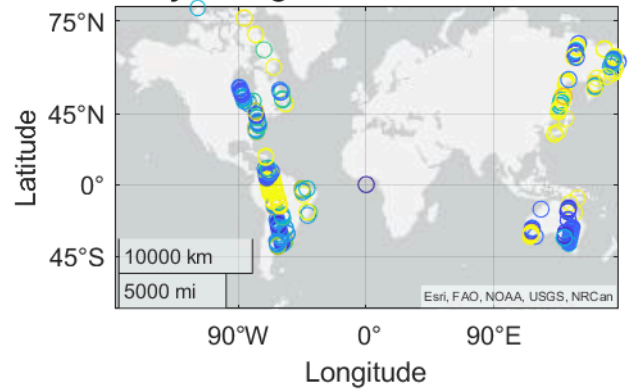
Day 14-Aug-2018 - Six hour block 3

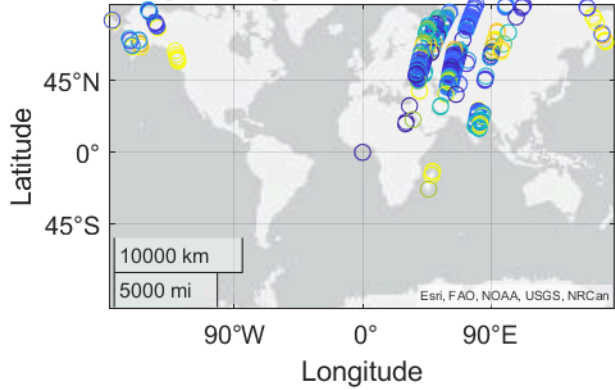### Day 14-Aug-2018 - Six hour block 4
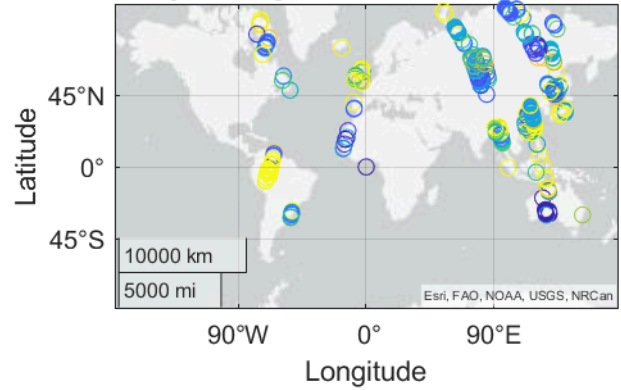
Day 15-Aug-2018 - Six hour block 1
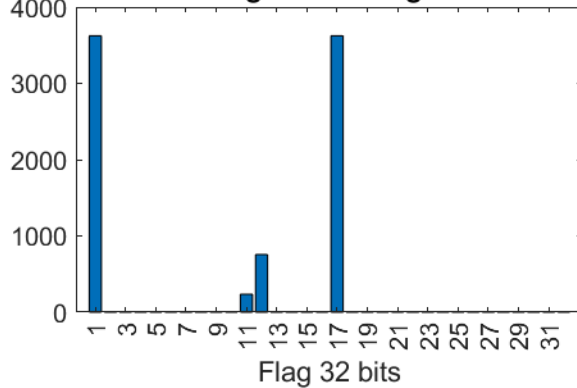
Day 15-Aug-2018 - Six hour block 2

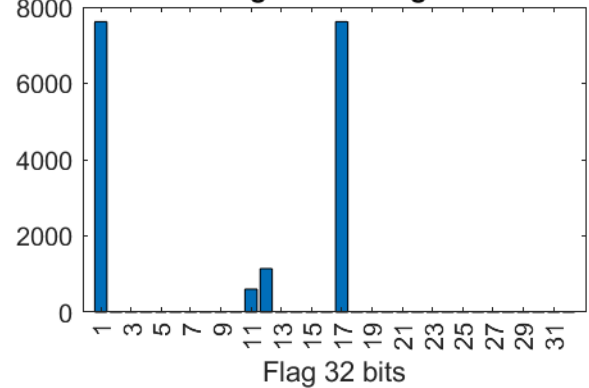### Day 15-Aug-2018 - Six hour block 3

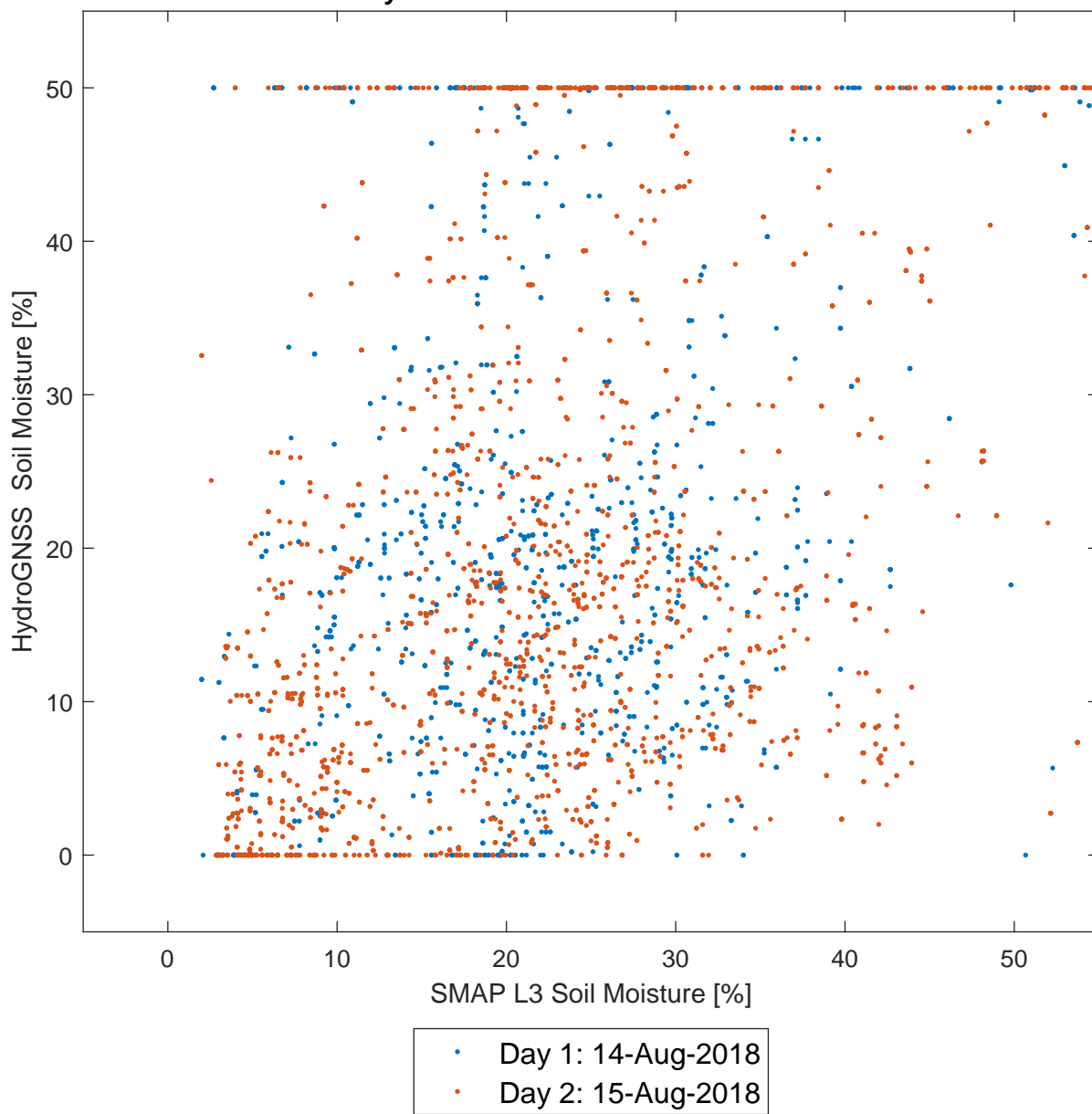### Day 15-Aug-2018 - Six hour block 4

L2 Flags on 14-Aug-2018

L2 Flags on 15-Aug-2018

HydrGNSS vs SMAP reference SSM

Map of SSM errors (Reference minus HydroGNSS) [%]