Satellite detection of an unusual intrusion of salty slope water into a marginal sea


- SMAP ocean surface salinity data track advection of unusually warm salty surface water into the Gulf of Maine in winter 2017-2018
- SMAP results confirmed by buoy measurements inside the Gulf as well as glider data on shelf
- Such dense and salty surface water hasn’t been observed in Jordan Basin in the last 15 years and is linked to shelf/slope interactions with a GS Gulf Stream meander and warm core eddy
- New SMAP results demonstrate an all-new monitoring capability along the US East coast

In situ salinity anomalies at Buoy M01 inside Gulf of Maine with SMAP SSSA data (symbols)