Investigating how Arctic Sea Ice Ridge Topography Varies with Ice Age

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ABSTRACT

Investigating how Arctic Sea Ice Ridge Topography changes in surface deformation over time. Here, we apply the UMD-RDA to ICESat-2 data collected during the 2020-2021 year ice starts to fill in the Arctic basin this effect is dampened slightly resulting in slower increases in mean roughness from November to April. We believe this larger increase in roughness during the first months of winter. After the Arctic Basin fills in this fresh ice production decreases and the sea ice roughness of January the distributions are bi-modal with the primary mode starting at 0.135 m and decreasing to 0.035 m in period. The secondary mode increased from 0.025 m to 0.205 m from October to January. From February through April the distribution is uni-modal with the mode only increasing 2 cm from 0.205 m to 0.225 m. We believe this period. The secondary mode increased from 0.025 m to 0.205 m from October to January. From February through April the distribution is uni-modal with the mode only increasing 2 cm from 0.205 m to 0.225 m. We believe this

Surface Roughness

Ridge Intensity

Distance between Ridges

Changes in mean ridging intensity both increase ~50% between the two periods, while maximum sail height increases ~18%, months of winter. After the Arctic Basin fills in this fresh ice production decreases and the sea ice roughness of

DISCLOSURES

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