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Retrieval of the floe size and melt pond statistics of Arctic sea ice using high-resolution SAR

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In this paper we present the recent works on retrieving sea ice floe size distribution and melt pond statistics (pond size and shape) by using high-resolution SAR. The results contains the image analysis from TerraSAR-X data as well as airborne-SAR system deployed on a helicopter in the Chukchi Sea of the Arctic Ocean. Our study highlights promising results in retrieving these important but difficult parameters, as well as discussing limitations we have for the retrieval.