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**Abstract: Assessment of Sea Ice Conditions from
IceBridge Measurements along a
Sentinel-3A Underflight**

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Since 2009, NASA's Operation IceBridge (OIB) has been conducting annual airborne missions to monitor rapidly changing areas within the Arctic to bridge the gap between the ICESat and ICESat-2 satellite missions. On April 21, 2016, a NASA OIB airborne survey was conducted over Arctic sea ice and was timed to coincide with an overpass of the Sentinel-3A (S3A) satellite. This was the first coordinated airborne survey over sea ice while S3A was operating in SAR mode. Here we present an early evaluation of OIB measurements over Arctic sea ice, via comparison with coincident S3A measurements and MODIS imagery. Lead locations and sea ice conditions along the S3A orbit are derived from the OIB visible Digital Mapping System (DMS) imagery and compared with the S3A sigma-0 and waveform data.