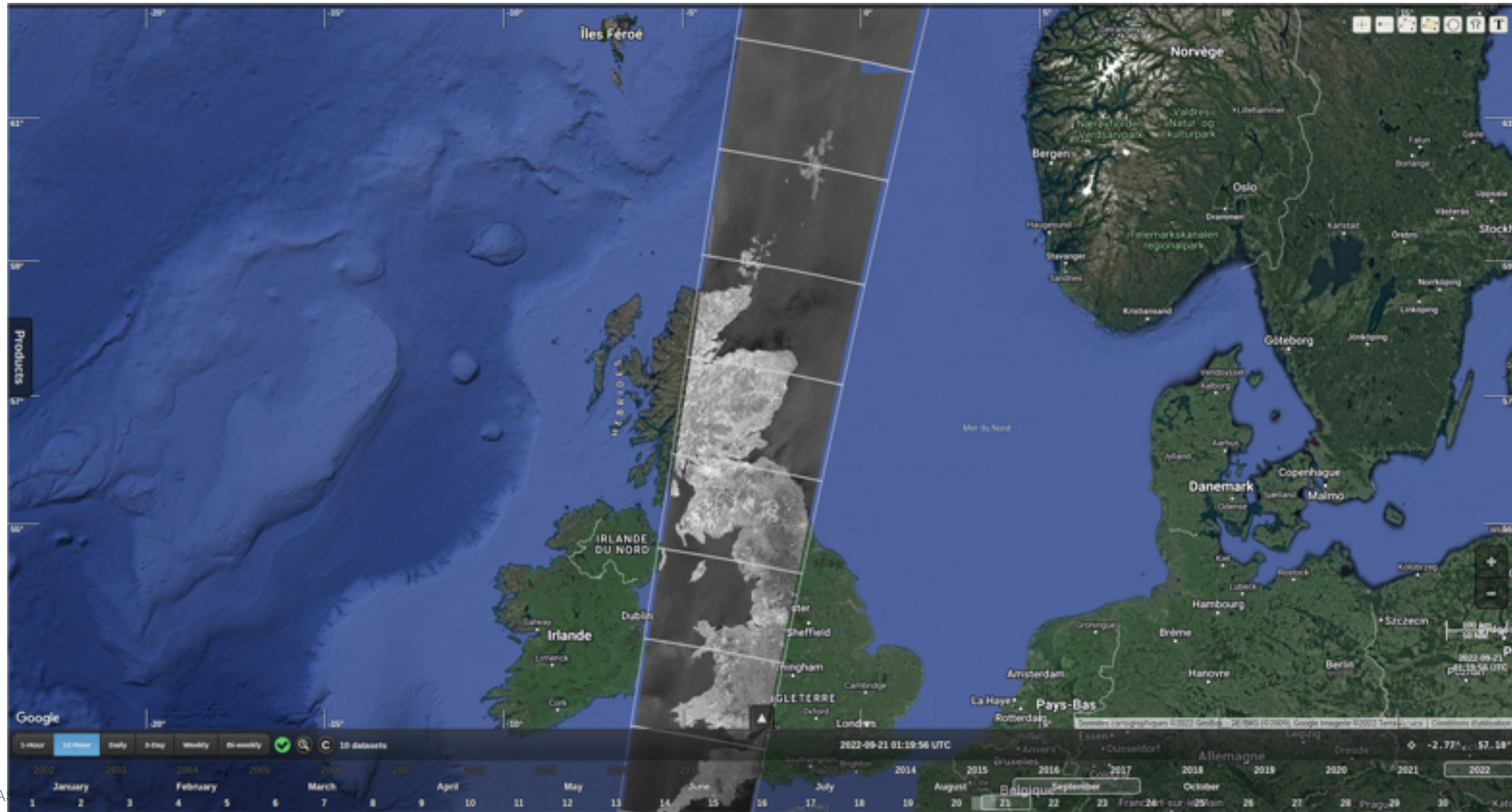


Tidal current wave interaction and resulting wave breaking mapping in coastal area using Sentinel1

Fabrice COLLARD, Sylvain HERLEDAN
OceanDataLab

Sentinel1 Sea surface roughness



ESA UNCL



Sentinel1 Sea surface roughness



ESA UNCLASSIFIED - For ESA Official Use Only



Sentinel1 processing

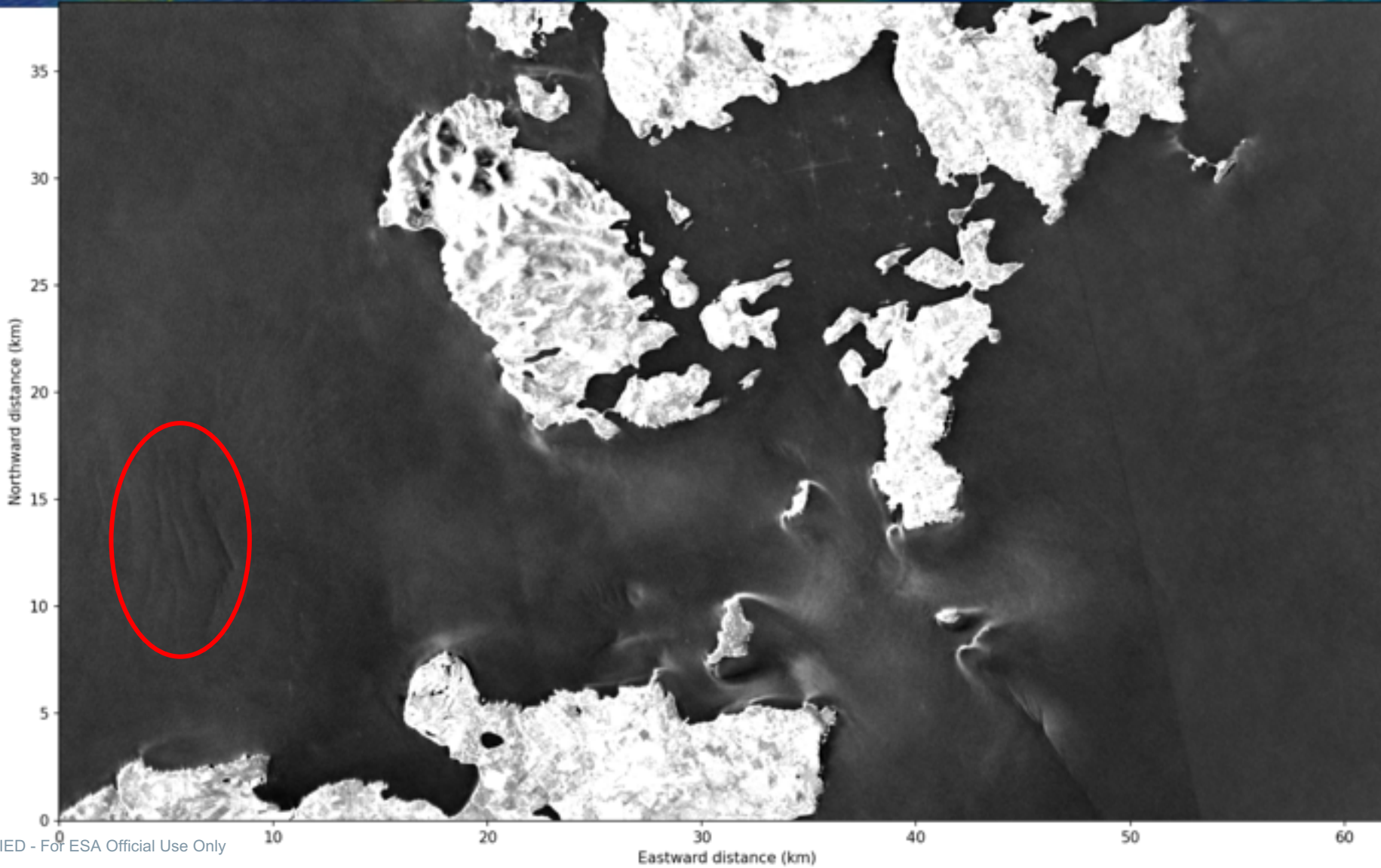


- Accumulation of Sea surface roughness for 5 years (June 2017 to May 2022) relative to the tidal phase (1 hour sampling)
- Separation ascending/descending tracks (L1 geolocation error related to orbit phase)
- conditioning with sea state not yet implemented (in situ to be received from user soon)

5 years ascending tracks only

mean SSR for Tidal phase relative to high tide : 9.3h

119 observations



ESA UNCLASSIFIED - For ESA Official Use Only



Local fine bathymetric dependance

Rechercher une adresse ou un li



5 years ascending tracks animation



Animated gif (5 years ascending tracks)

https://ftp.odl.bzh/odl/woc/theme4/20220513_orkneys_rel_ssr_asc.gif

https://ftp.odl.bzh/odl/woc/theme4/20220513_iroise_rel_ssr_asc.gif



- Processing can be done anywhere with Sentinel1 coastal coverage
- Sentinel-1 Sea surface roughness to breaking wave probability to be validated (against in-situ data from France Energie Marine from la Jument lighthouse wave breaking imaging)
- conditioning with sea state to be implemented (in situ state data to be received from user soon)