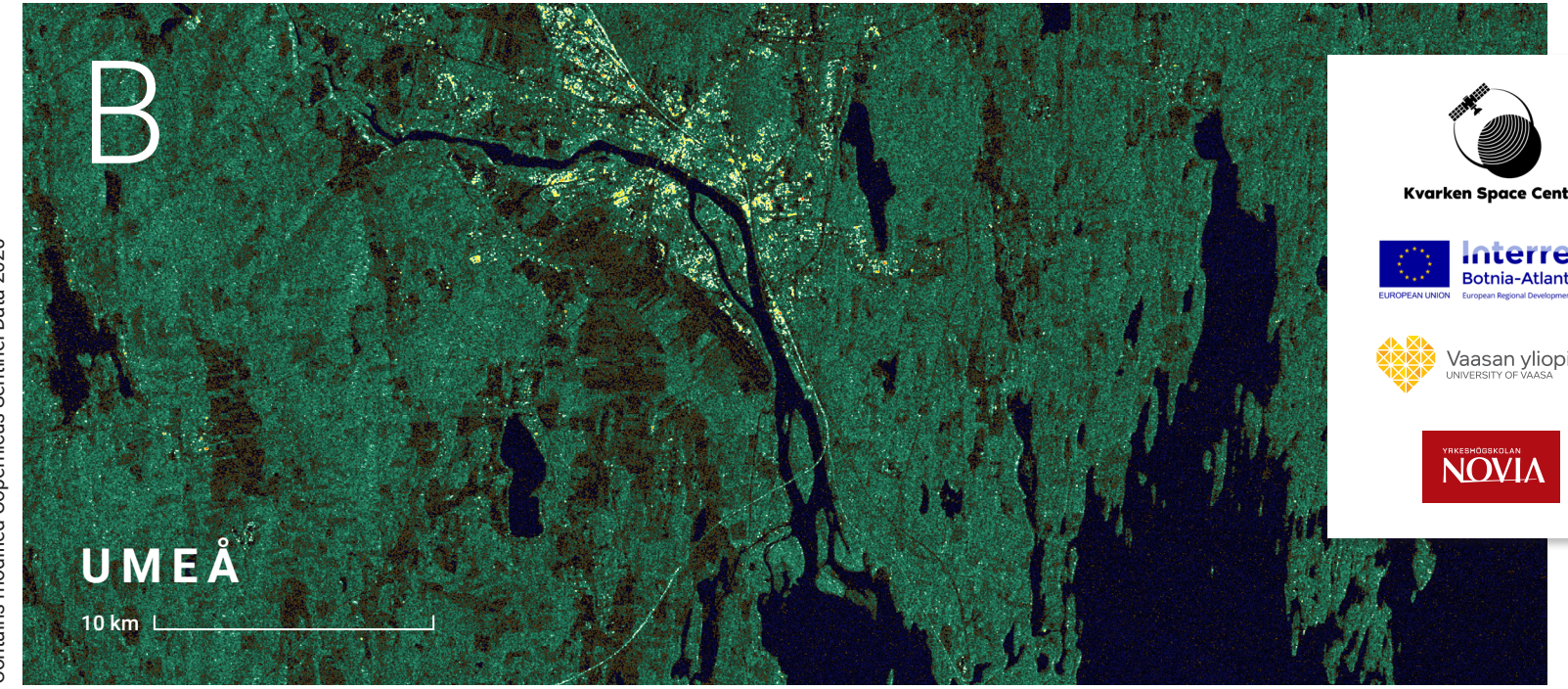


Contains modified Copernicus Sentinel Data 2020

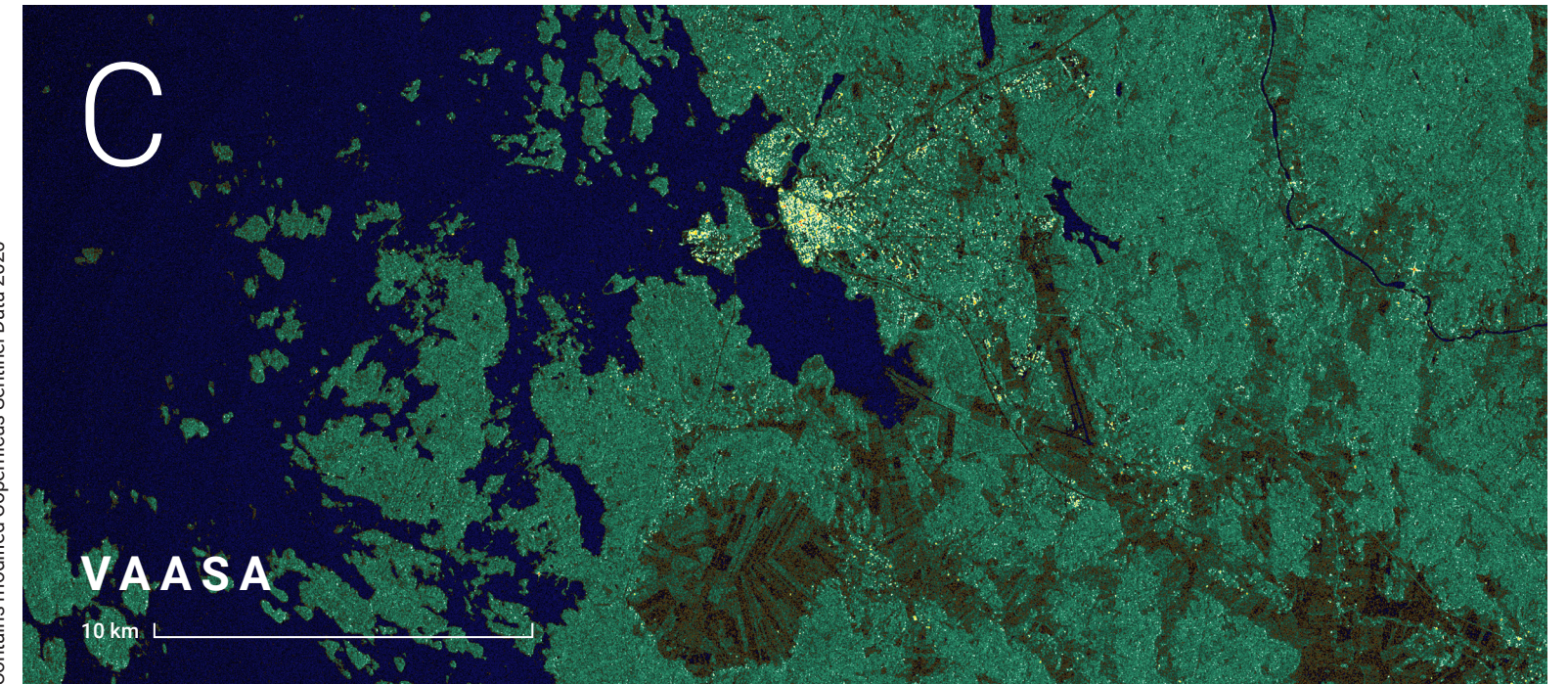
Radar Signals are Similar to Sunlight

ESA Sentinel-1 Interferometric Wide Swath Mode Images with False Colors

Usually the light from the sun reflects off the surface of the planet and the colors are seen with our eyes. Today we show how humans can use radars on satellites. Radars can send and receive "light" different from the light the sun gives out. It's like the radars emit their own light but us humans cannot see it. The wavelengths of that "light" are wrong for our eyes. We have to use false colors to show the radar information.



Contains modified Copernicus Sentinel Data 2020



Contains modified Copernicus Sentinel Data 2020



It tells us something about the shape and structure of the objects at the surface where the reflections happen. The images above are from ESA's Sentinel-1 satellites showing radar information over the Kvarken area between Finland and Sweden. In figure A, yellow dots show

the locations of large ships seen in routes going north and south in the middle of the Kvark. Also, lots of ships can be seen in the channel going into Umeå. For this image there were many pictures used to make just the one picture. Seven years worth of pictures were used. In some

places you can see the ships make neat lines because its unsafe to go outside the shipping channels in those areas. In figures C and B, we look at pictures of the areas surrounding Vaasa and Umeå. In C you can see the sign of a meteorite used for farming. The radar informa-

tion tells the different farm plots have crops with different size and structure. In B, a river running through the city of Umeå can easily be seen. You can see, just like with the ships, the objects making up the cities reflect the radar signals differently than the countryside areas.