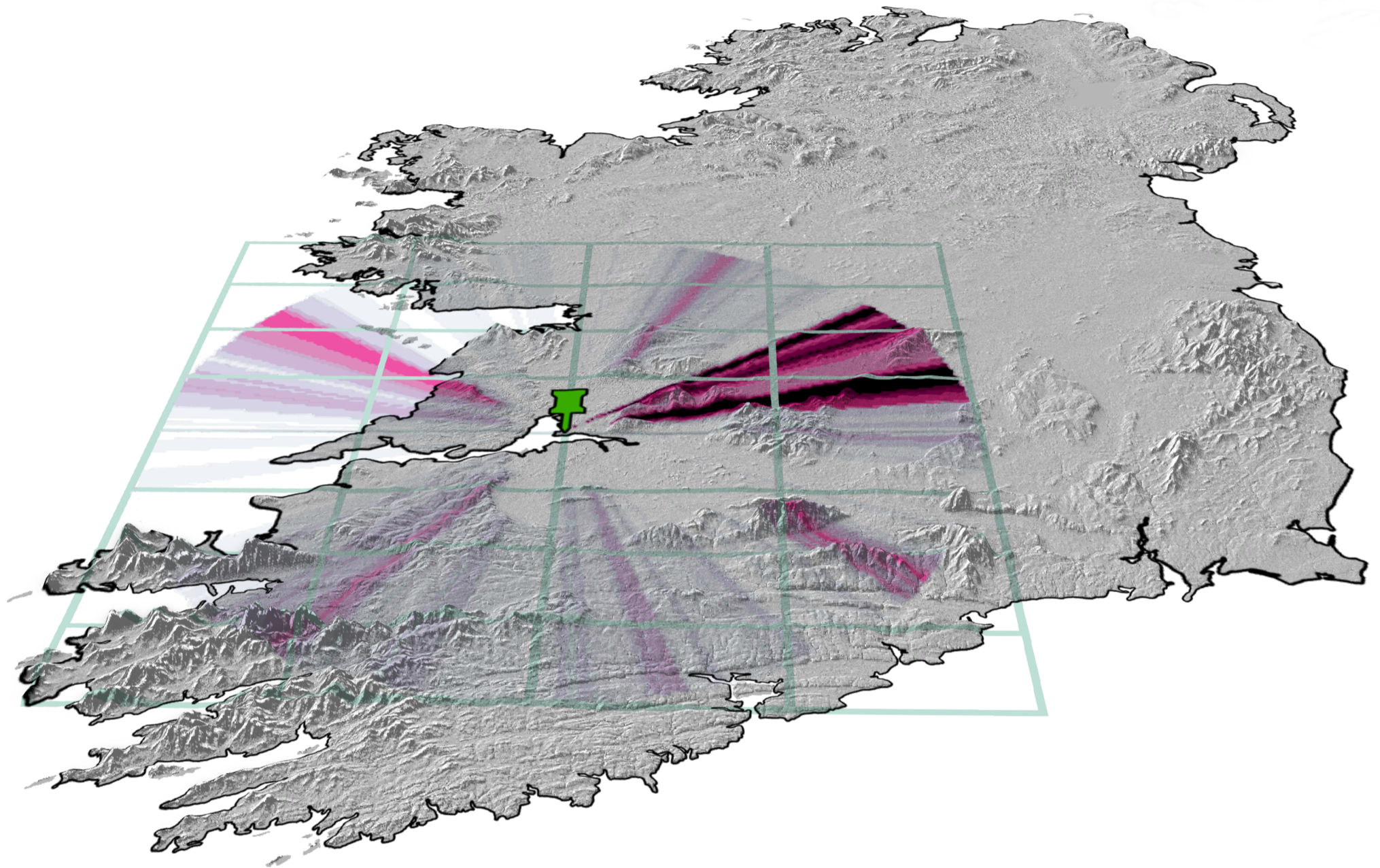


Radar blocking topography: What Shannon cannot see



Radar is an acronym for "Radio Detection And Ranging". It is a military technology developed in the 1940s. It has been rapidly applied to meteorology, as it detects hydrometeors (water related atmospheric phenomena such as precipitation or clouds) with a high spatiotemporal resolution. However, ground radar beams can be totally or partially blocked by hills, mountains, human-made structures and others, resulting in weakening or losing the signal. It compromises the quality of data from the radar.

Here we can see the blocking signal of Shannon's radar located in County Clare's airport, in the Fergus river flood plain, close to Fergus's mouth into Shannon estuary. The beam blockage (visible in shades of purple, with darker shades indicating more blockage, is overlaid with a hillshade map, to emphasise the impact of the relief on the radar beam. As the map shows, high proximity of an obstacle to the source of the radar leads to the largest proportion of the beam blocked (as seen in the north-east of Shannon), more distant obstacles, however, can also affect the beam. This is especially visible south of Shannon, where the blockage aligns perfectly with the surrounding relief.

Projection: Irish Transverse Mercator

Datasets used:
ESA STRM Digital Elevation Model

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