

# Dundee Satellite Receiving Station

## Earth Coverage

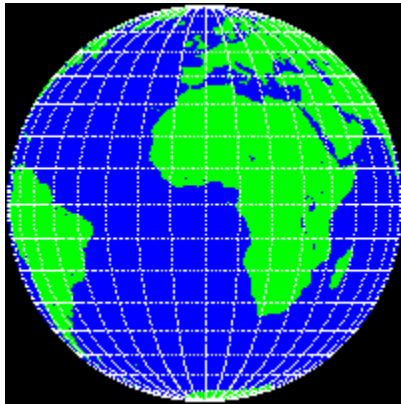
We receive from two distinct types of satellites which have very different areas of coverage:

- [Geostationary Satellites](#) - whole earth coverage
- [Polar-Orbiting Satellites](#) - frequent, archived coverage of Europe/Atlantic

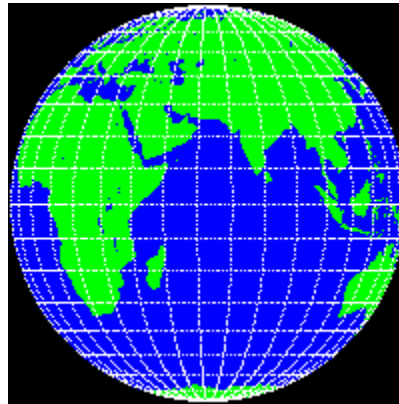
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### Geostationary Satellites

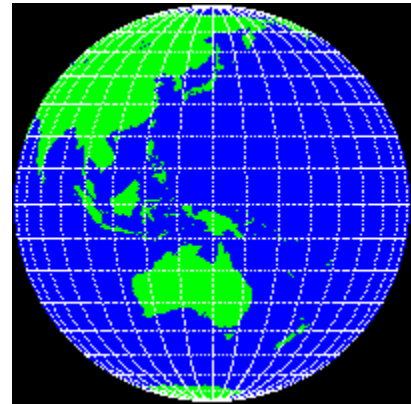
We receive re-broadcast images from geostationary satellites which cover the whole earth.



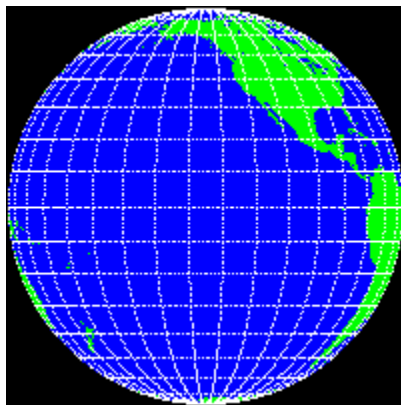
Meteosat



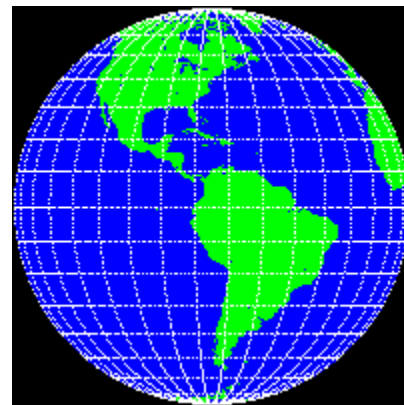
IODC



GMS



GOES-W



GOES-E

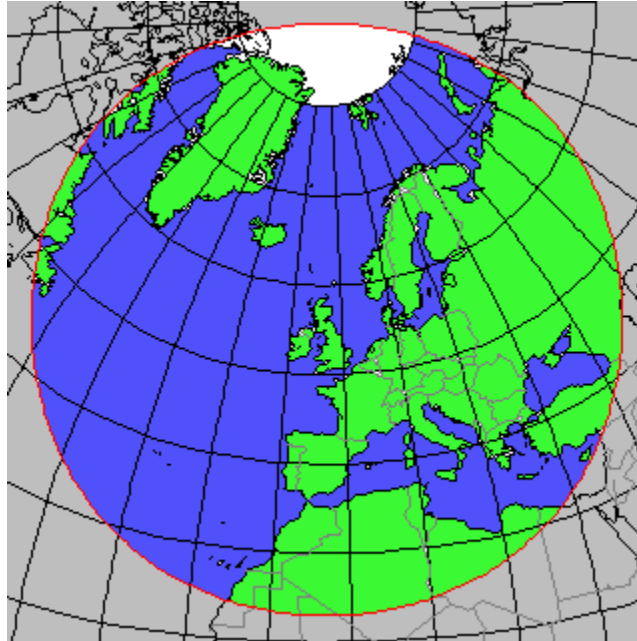
Note that these images are not corrected for earth curvature and the resolution decreases as you go further from the equator.

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### Polar-Orbiting Satellites

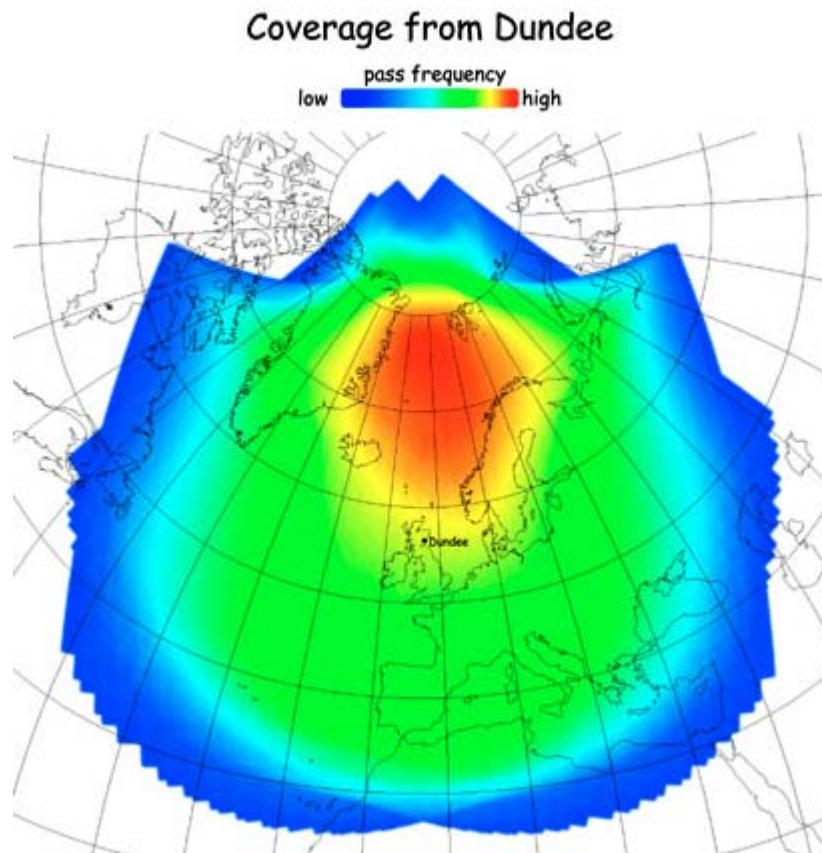
We can receive images from a large circle centred on Dundee, as shown in the map below. At the extremes we can reach as far as Newfoundland, Morocco and the Canary Islands, the Black Sea, Novaya Zemlya and Greenland.

These images are available in higher resolution than the geostationary images and can be reprojected to standard map projections.



## Frequency of Coverage

How often do we receive images of any particular area? The map below shows as red the areas which appear most often on our passes. The "colder" the colour, the less often we receive an image of it. The reason that some areas shown on the theoretical coverage diagram above do not appear on this diagram below is simply because we do not receive from every possible satellite pass.



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## Technical Information - Equator crossing angles

Each time the satellite orbits the earth it crosses the equator at a slightly different angle from the previous orbit, thus eventually giving full earth coverage. The angle determines the path across the earth and so what is seen by the satellite. It also determines whether the satellite will be visible from the receiving station. Here in Dundee we can receive from satellites crossing the equator between 300 degrees and 30 degrees (northbound), and between 170 degrees and 230 degrees (southbound). The terms northbound and southbound refer to the direction of the satellite last time it crossed the equator.

Dundee Satellite Receiving Station uses the terminology EqxW to indicate the equator crossing angle in degrees West of the Greenwich Meridian.

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## More information

- [Satellites and their orbits.](#)
- [Orbital parameters](#) explained.
- [Image projections.](#)
- [Glossary](#) - commonly used terms and acronyms.
- [Information](#) page.
- [Copyright](#) information.



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