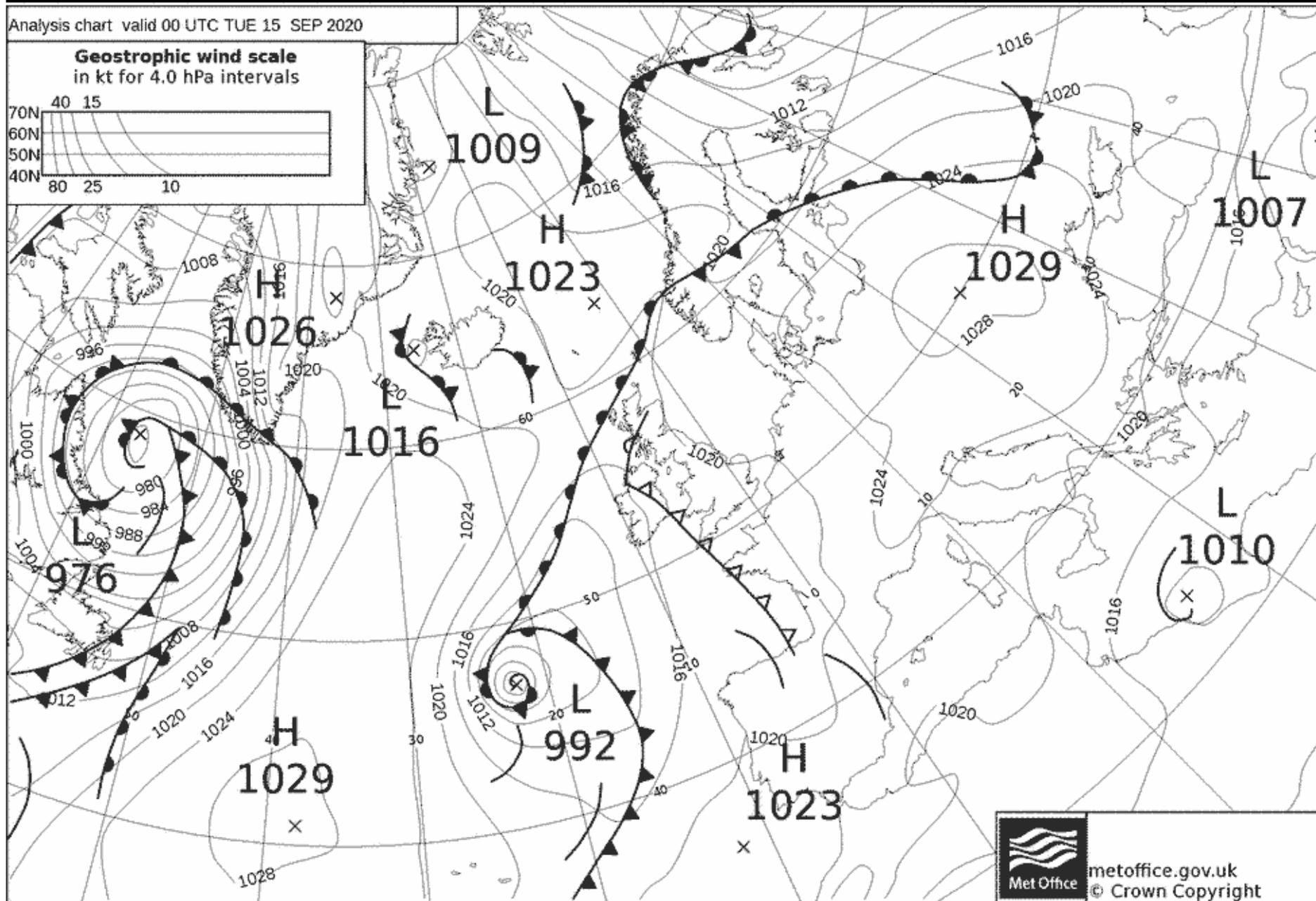
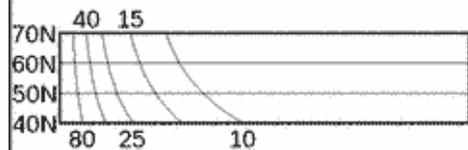


Analysis chart valid 00 UTC TUE 15 SEP 2020

Geostrophic wind scale
in kt for 4.0 hPa intervals



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Tuesday 15th September 2020

A complex weather pattern of pressure and fronts in the North Atlantic Ocean and Western Europe.

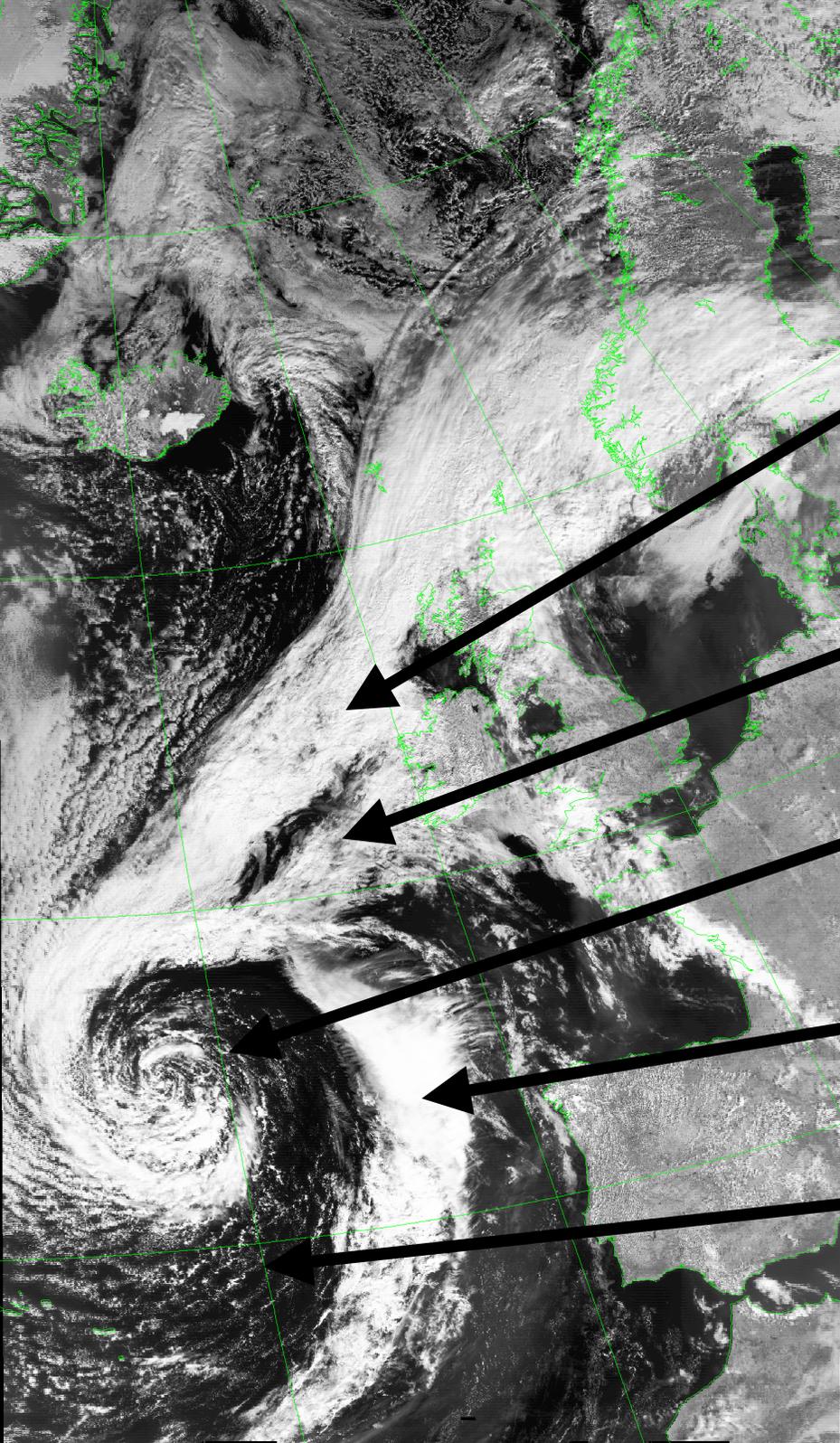
A minor frontal system sits over Ireland and the south west of England and an intense occluded depression (992 mb) is located around 47 degrees north, 32 degrees west. This system is set to move north eastwards towards the UK bringing strong winds, cloud and rain over the next 24-48 hours.

To the west of this intense occlusion is a ridge of high pressure (1029 mb) which will bring a period of calmer, settled weather with less cloud and little chance of rain.

Even further west is a very intense and complex occluded system of 976 mb. This should track generally westwards over the next few days, but may begin to dissipate in strength and intensity as the depression fills and temperature differences reduce.

The following page shows the satellite cloud patterns for the same time as the above synoptic weather chart. It is interesting to see how the pattern of cloud relates to the pressure and frontal systems shown on the map. In particular notice the spiral pattern of cloud, typical of an occluding depression, that coincides with the deep depression 992 mb located at 47N 32W.

Satellite cloud pattern for 15th September 2020



This linear cloud feature relates to the warm front between maritime Tropical (mT) air to the south and maritime Polar (mP) air to the north. The gradual uplift of air here gives a broad belt of stratiform cloud and steady rainfall.

The less bright colour of the cloud here represents the thinner stratus cloud associated with the warm sector of the depression: maritime Tropical (mT) air between the warm and cold fronts.

The vortex or spiral of cloud here represents the centre of the low pressure system as air circulates in an anti-clockwise direction.

This bright linear feature of cloud is found along the line of the cold front. Here cold mP air undercuts the warmer mT air

A spiral of clear air associated with maritime Polar (mP) air circulating into the centre of the occluded depression. This air is cold and has low humidity and therefore lower cloud amounts. There is a pattern of cumulus cloud seen in the generally clear air due to the surface warming of the mP air causing increased instability.

