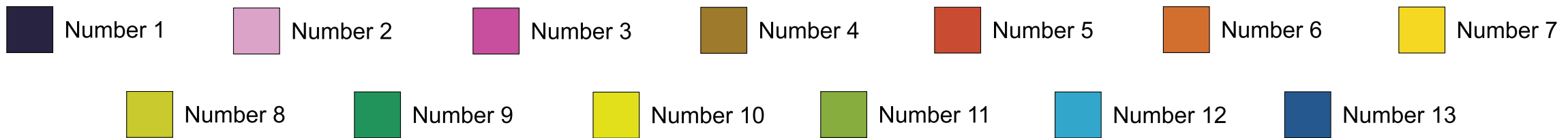
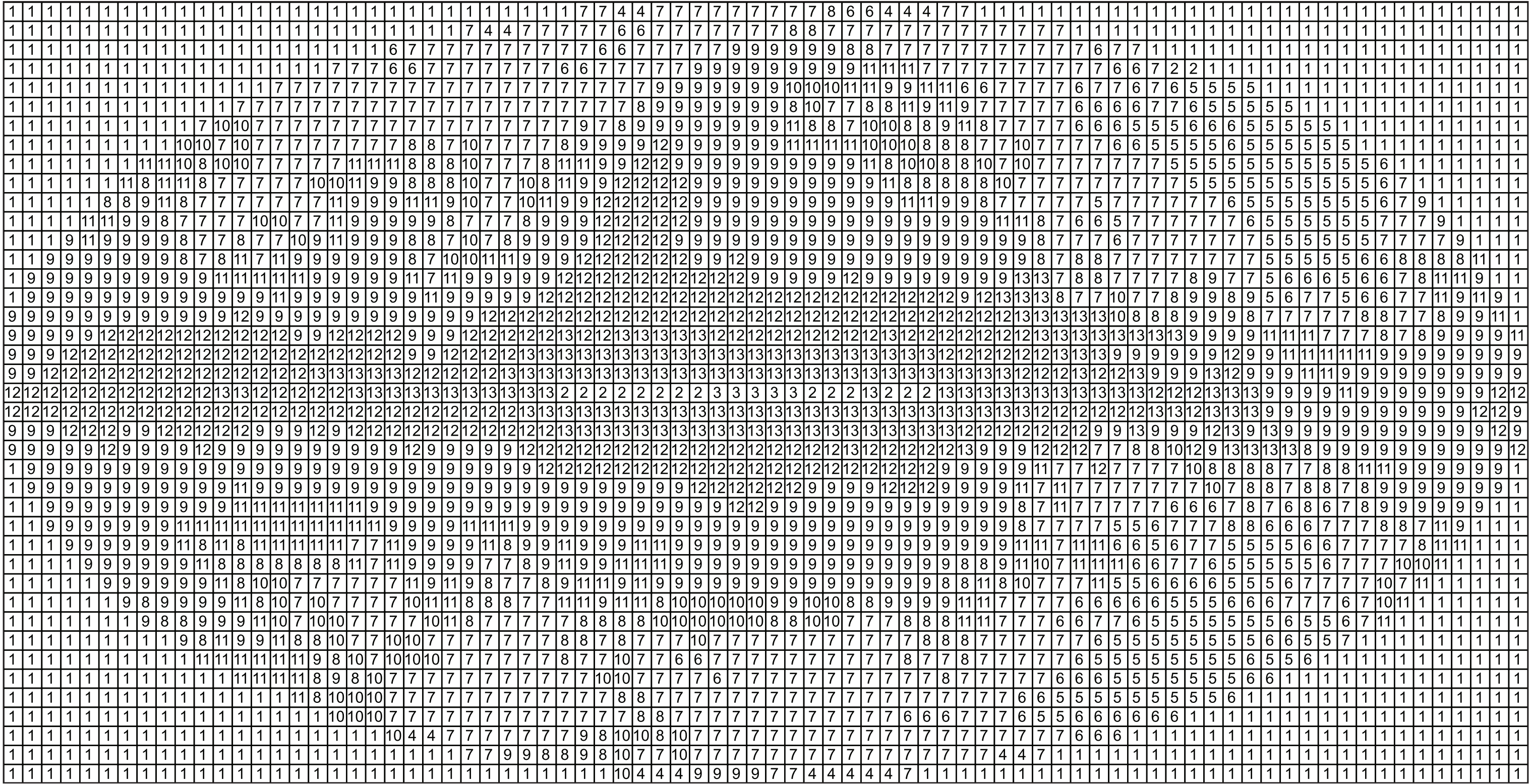
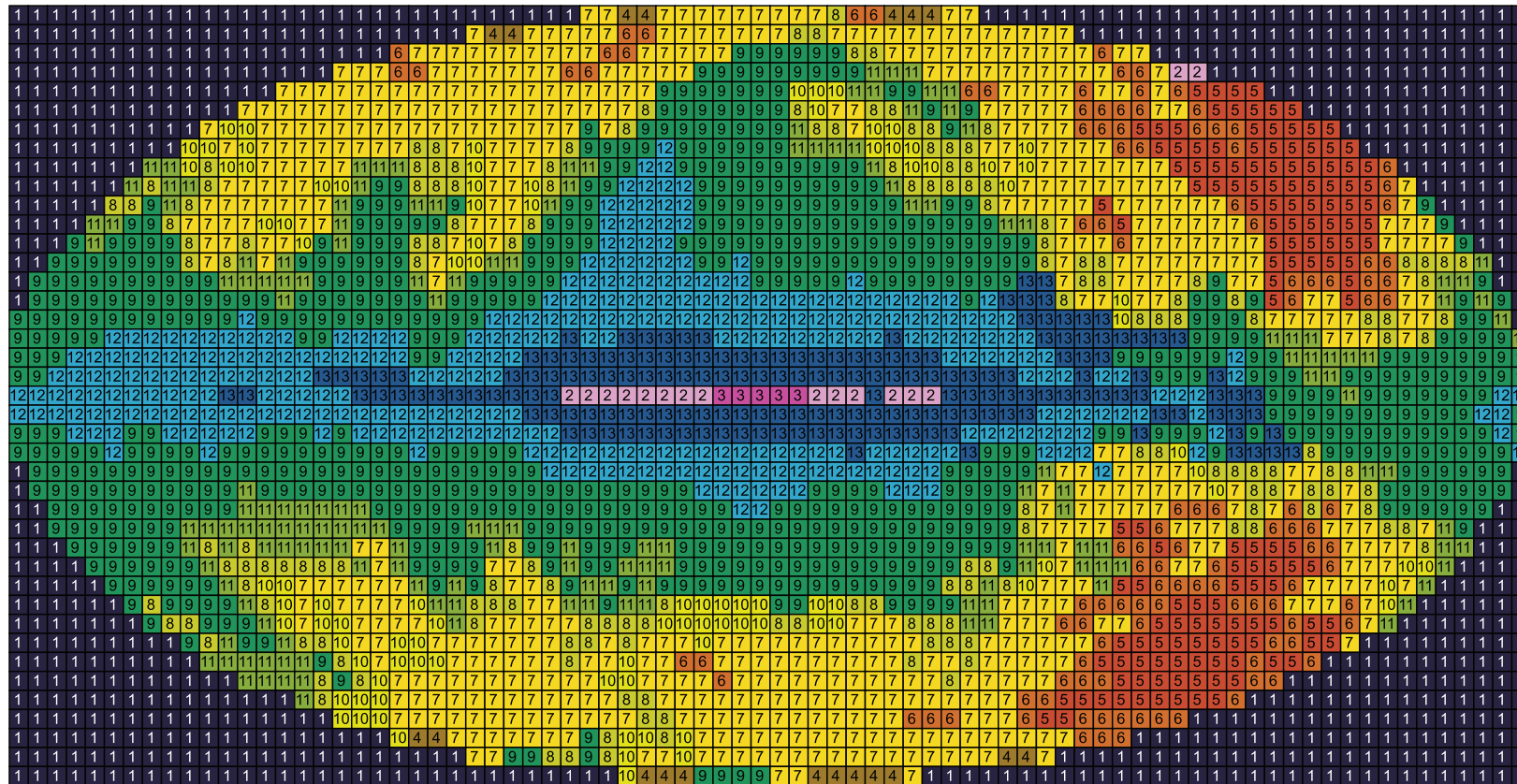


See what the sky looks like in radio waves!



SKAO Colour-by-numbers: Milky Way edition



This colour-by-numbers activity helps to explain how radio telescopes work.

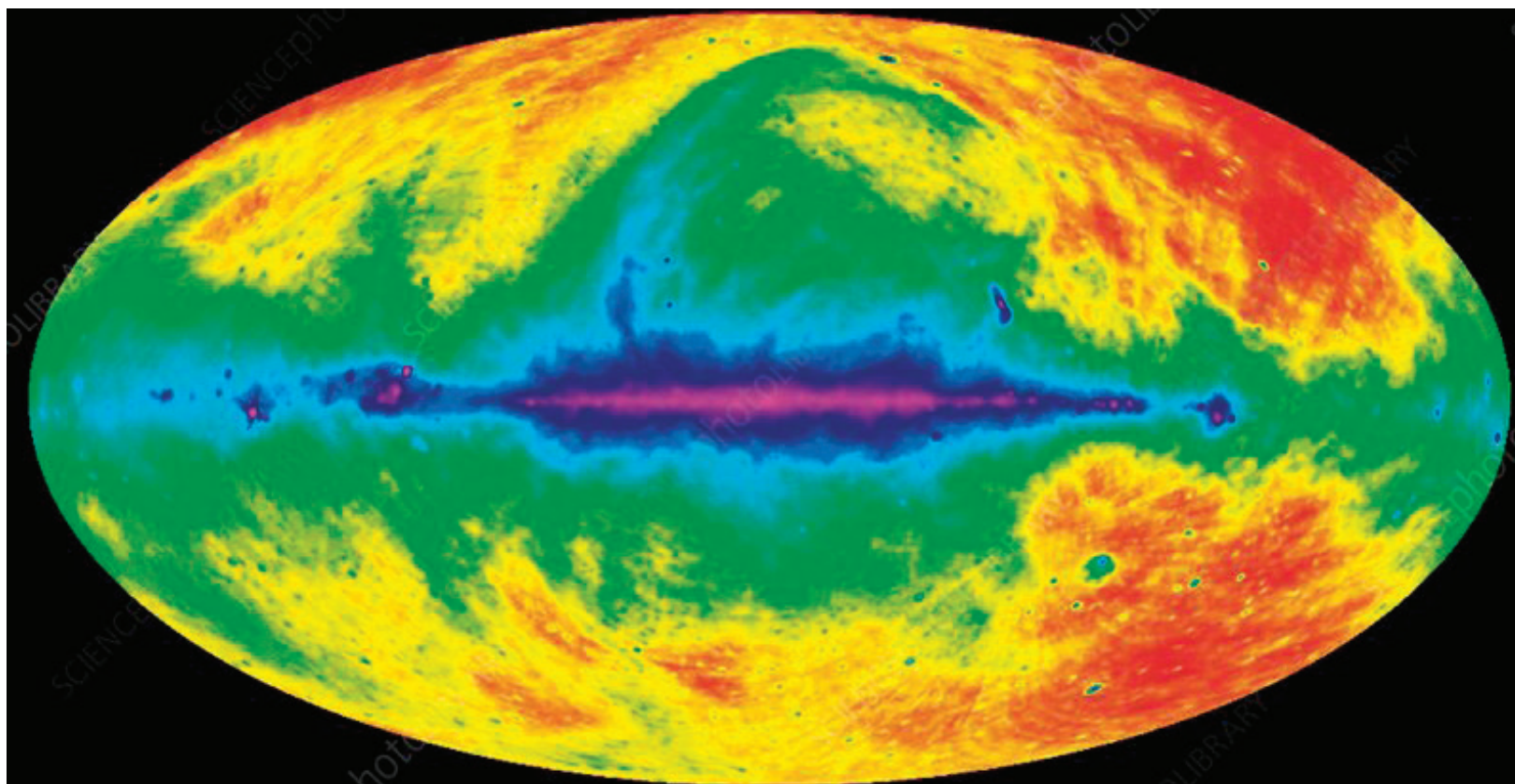
Radio telescopes can see radio waves emitted by objects in space – these waves are a type of light that is invisible to human eyes. The telescopes use antennas to collect the radio waves and turn them into data.

Each piece of the sky contains different pieces of information depending on what's there – things like gas, stars and even bursts of energy from around black holes!

Supercomputers can combine all these pieces of data to create detailed pictures of the sky.

Imagine it a bit like pixels on a screen – adding more pixels gives us a more detailed picture!

Modern radio telescopes – like the ones the SKAO is building – use many antennas working together to create one giant telescope, which can see more objects, and in more detail, than ever before.



This image shows how the whole sky looks like in radio light!

The colours represent how strong the radio waves are, from the faintest (red) to brightest (magenta).

The brightest signal, the horizontal band across the middle of the image, represents our Milky Way galaxy as we see it from Earth, with the centre of the galaxy in the middle.

This image was created by the Max Planck Institute for Radio Astronomy in Germany with one of their radio telescopes. Max Planck are one of the SKA Observatory's many international partners, and have been helping to develop our own telescope so we can observe the sky using radio waves too!