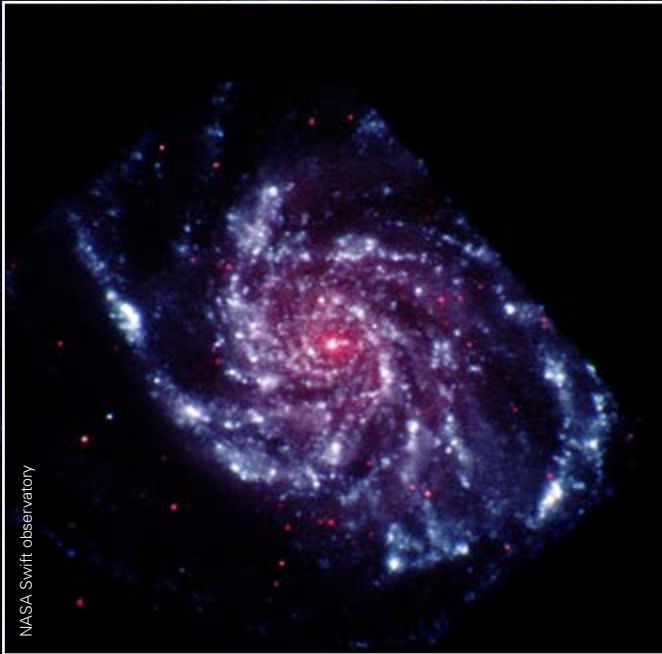
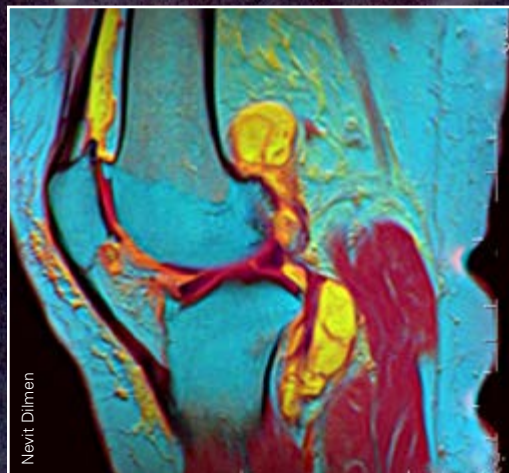
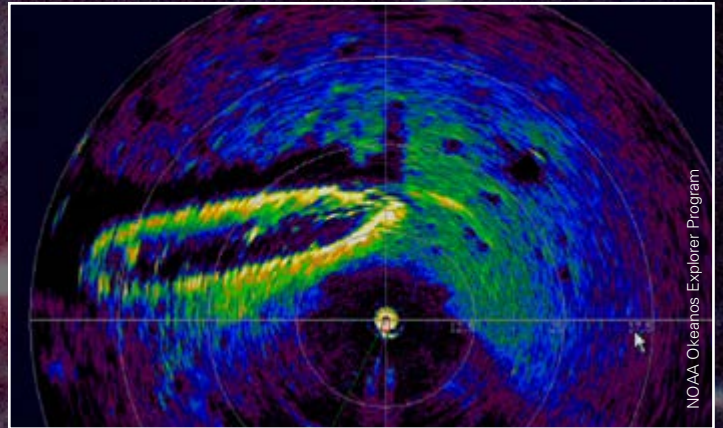


FALSE COLOUR

Our eyes detect visible light, just a small region in the electromagnetic spectrum. Using scientific instruments, we can detect many other types of radiation. Different colours are used to represent the different wavelengths of this invisible radiation. The result is images which we find it easier to interpret.



◀ This image of the pinwheel galaxy M101 was constructed from multiple images taken at different wavelengths, including ultraviolet. Here, the shortest wavelength **ultraviolet** rays are represented as blue, and the longest visible light wavelengths as red. The bright patches in the spiral arms show where hot, young stars are forming.



▲ Sonar is like radar but using **sound waves** (which are not electromagnetic waves). Here, the wooden hull of an 18th century sailing ship sits on the seabed. It shows up clearly because colour is used to indicate the depth of the water.

◀ **Radio waves** are detected to make a magnetic resonance imaging (MRI) scan of a knee (left). By adding colour, different parts of the joint are more easily identified.



Infra-red radiation is detected to make a thermogram. Colour is used to show how the temperature varies across the scene.



Land use in Hong Kong can be deduced by analysing the wavelengths of **visible light** and infra-red reflected from the ground. After image processing, vegetation is coloured green while urban areas are pink.