Halam Year 5 and 6 pupils using the Faulkes Telescope - Oct 18 2023

M1 - Crab Nebula

180 sec exposure



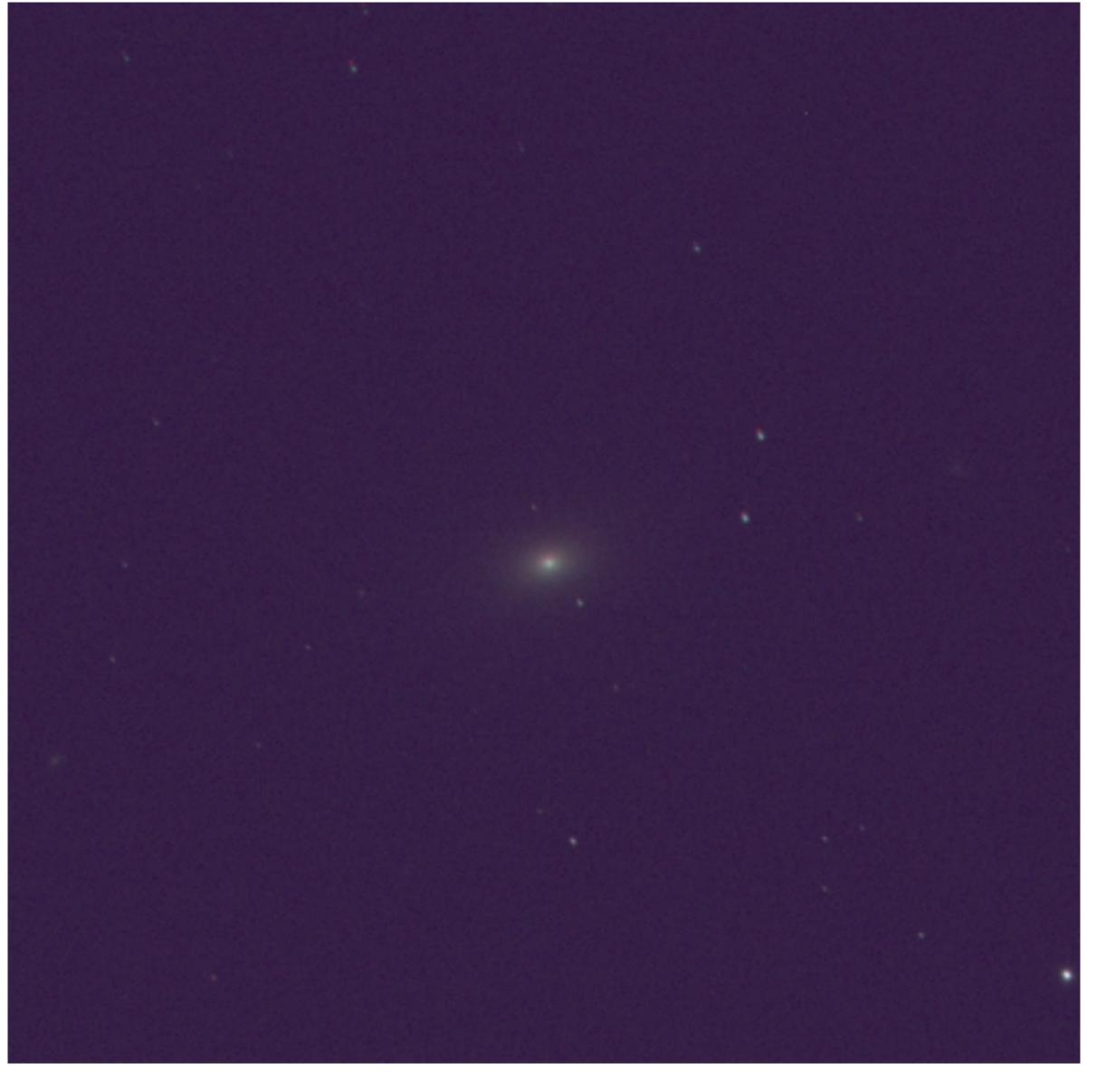
Crab Nebula is a supernova remnant in the centre and a pulsar wind nebula. It is in the constellation Taurus. Discovered by John Bevis in 1731, it matches the location of a supernova explosion recorded by Chinese astronomers in 1054. It is about 6500 light years from earth, has a diameter of 11 light years and is expanding at a rate of 1500 km/sec. At the centre of the nebula is the Crab Pulsar, a neutron star 28-30 km across rotating at 30 times a second and emitting pulses of radiation from gamma rays to radio waves. It can be seen with binoculars.

NGC1325 — 60 sec exposure

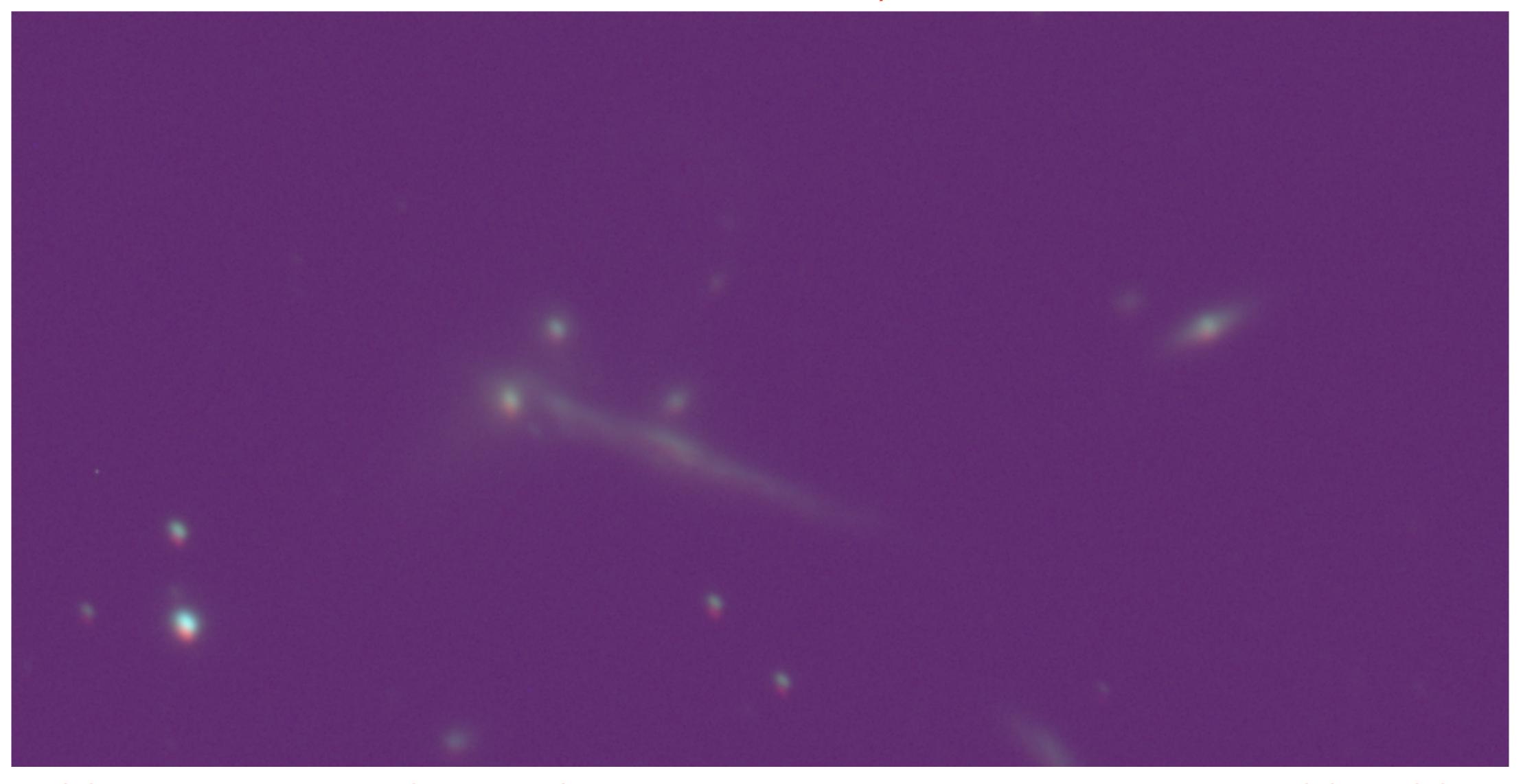


NGC1325 is a spiral galaxy found in the constellation Eridanus. The light we can see in this image has been travelling for 75 million years starting its journey when dinosaurs roamed the earth. It was discovered by William Herschel in 1799 and is a member of a cluster of some 200 galaxies. It is moving away from the Milky Way with a velocity of 1500 km/s.

NGC1426 — 30 sec exposure



NGC1426 is an elliptical galaxy in the constellation Eridanus and is part of a cluster of 200 galaxies. It is approximately 59 million light years from earth.

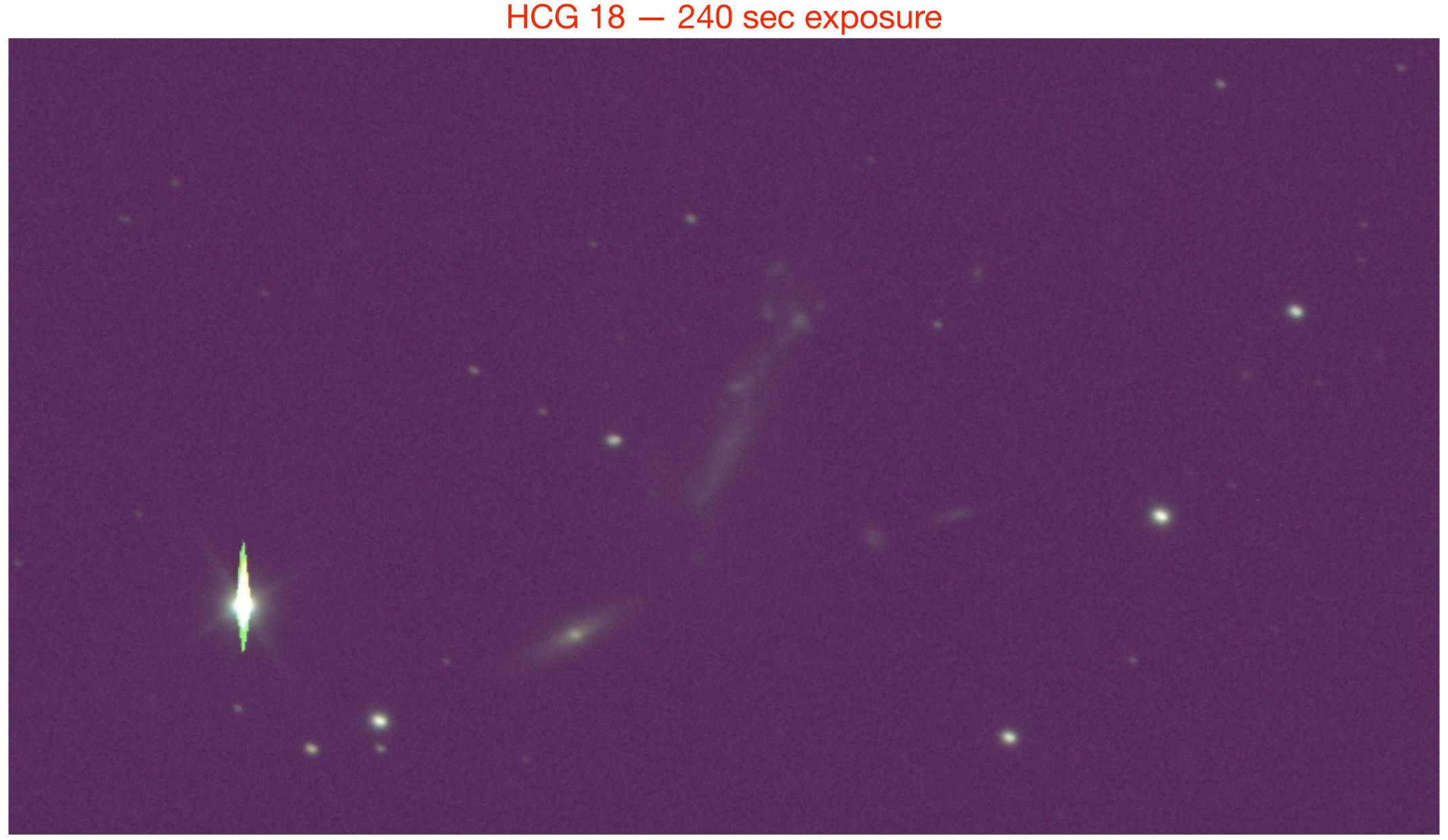


HGC 26 — The Hickson Compact Group is a collection of galaxies. There are 100 HGCs. HGC26 consists of seven galaxies forming a compact group where gravity is strong and is causing the merger of some of the galaxies.

Berkeley 73 group — 10 sec exposure



Berkeley 73 is an open star cluster. Such clusters are found in the Milky Way and have between tens and thousands of stars in them. The stars were formed from the same gigantic molecular cloud and so have the same age of around 3-4 billion years or so. They are loosely bound objects and easily break up if they interact with other open clusters, lasting a few million years.



HGC 18 was thought to consist of four galaxies forming a compact group, but in 1999 is was discovered that it was a single irregular galaxy UGC 2140 in the constellation Aries and had many star forming regions within it - goes to show the research never stops.

NGC 1589 — 45 sec exposure



NGC1589 is a simply stunning spiral galaxy and is a staggering 168 million light years away from us in the constellation Taurus. We see it side on, it's central bulge shining and it has a diameter of 160,000 light years. It was discovered by William Herschel on Dec 19 1783 — wow!

NGC 2681 — 10 sec exposure



NGC2681 is a lenticular galaxy (in-between a spiral and elliptical galaxy) in the constellation Ursa Major. It is 50 million light years from us, and has a diameter of 55,000 light years. The supermassive black hole at its centre has a mass of around 60 million suns. We are looking at it face on - beautiful isn't it!