NGC 7331 and Stephan's Quintet

High overhead on autumn evenings and still well displayed as darkness falls in December, is the constellation of Pegasus. Pegasus is home to only one Messier object, the globular cluster M15, although there is a fine galaxy that Messier and his colleagues missed, the close coiled spiral NGC 7331 discovered by William Herschel in 1784. This Sbc galaxy is visible in large binoculars and particularly impressive in a 300mm or larger telescope when it appears about 8×2 arcminutes in size, with a bright oval core and faint stellar nucleus. Photographers and imagers will also be able to capture hints of the tight spiral structure.

Deep Sky Section member Jeremy Shears imaged the galaxy from Bunbury, Cheshire with his Takahashi FS102 refractor and Starlight Xpress SXV-M7 CCD camera. Also shown on Jeremy's image are some of the companion galaxies to NGC 7331. The brightest of these, NGC 7335, is magnitude 14.7 and will probably need a 400–500mm telescope to be detected visually from typical UK dark skies.

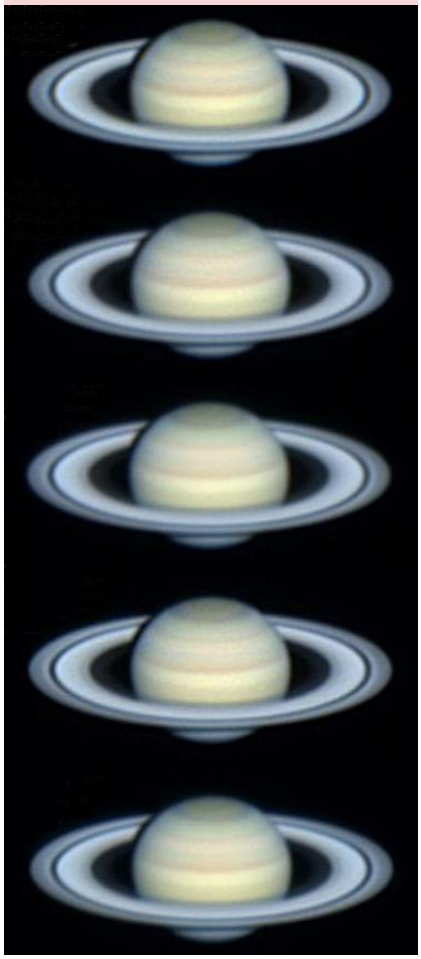
For those people without 'go-to' telescopes, NGC 7331 is traditionally the jumping off point for star-hopping to Stephan's Quintet, the cluster of 5 faint galaxies discovered visually by Jean Marie Stephan with the 40cm refractor at Marseilles Observatory in 1877 – the first compact group of galaxies discovered. They are all challenging objects visually, needing dark skies and a large aperture. I have observed them from my previous location in Fleet, Hampshire, using a 355mm Dobsonian, but there was a tendency for all the galaxies to merge into one. The galaxies, NGC 7317, 7318A, 7318B, 7319 and 7320 all lie within a circle just over 3.5 arcminutes across, so high magnification and averted vision will be needed to separate them clearly.

The group is also known as Hickson 92 in Paul Hickson's listing of compact galaxy groups, and Arp 319 in Halton Arp's listing of galaxies which appear gravitationally connected but in which there are discordant redshifts. The brightest member of the group, NGC 7320, has a visual magnitude of 12.6 and a lower redshift. It is now believed that this galaxy is much closer to us than the rest of the group and its apparent connection with the other galaxies is a line of sight effect. Jeremy's image of the

Bright galaxy NGC 7331 imaged by Jeremy Shears, Bunbury, Cheshire with a Takahashi FS102 f/8 refractor and Starlight Xpress SXV-M7 CCD camera, 8 min. exposure. North is at the top and west to the right.

The new apparition of Saturn begins

This sequence of five images of Saturn was taken by Toshihiko Ikemura, a resident of Nagoya City, Japan on 2005 September 18 between 19:30:02 and 20:10:38 UT, using a 310mm Newtonian with an ATK-2C electronic camera and IR blocker. Taken early in the 2005–'06 apparition of Saturn, the sequence shows regions of the planet north of the rings becoming visible for the first time in a number of years, as the latter begin to close. The newly exposed regions appear to have a blue cast. *Communicated by David Graham, Saturn Section.*



group shown here is a 15 minute exposure using the same equipment as for NGC7331.

I would be delighted to receive further images of all the galaxies mentioned here and visual reports, both successes and failures, would be particularly welcome. When sending in observations please remember to include all instrument and exposure details along with field orientation, field size, date, time and observing conditions.

Stewart L. Moore,
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Stephan's Quintet, also imaged by Jeremy Shears.