Nebulae that emit with an H-alpha wavelength can be captured beautifully with the enhanced transmission characteristics of the optical filter (IR cut filter).

For the D810A, transmission characteristics of the optical filter (IR cut filter) placed in front of the image sensor have been reassessed for astrophotography. With a general digital SLR camera, transmission of reddish light in the visible light range is restricted to reproduce the colors of subjects properly, because the H-alpha spectral line (wavelength: 656.28 nm) is located within this range. Hence, nebulae that emit with the H-alpha wavelength can be captured only palely. On the contrary, the optical filter (IR cut filter) of the D810A achieves high transmission of reddish light in the visible light range, quite close to the infrared range. As a result, transmission of the H-alpha spectral line has been increased by approx. four times, compared to the D810, achieving the reproduction of nebulae that emit with the H-alpha wavelength beautifully in red as astrophotographers expect.

The highest resolving power among Nikon’s digital SLR cameras achieves outstanding high-resolution astrophotographs.

The D810A employs a FX-format CMOS sensor without optical low pass filter, realizing superior definition and smooth tonal gradation similar to the D810. With 36.3 effective megapixels, this camera captures breathtaking astro photographs. The EXPEED 4 image-processing engine delivers amazingly clear coloration and rich gradation with depth from black to white. Experience astrophotography like you have never before.

**Note:** When you shoot photos using light sources, or general subjects that feature high reflectance of significant amount of near-infrared wavelengths using the D810A, the resulting image may be more reddish than the actual color. This model is not recommended for general photography because appropriate color reproduction cannot be obtained.
• Orion   • Telescope: Takahashi TOA-130 (aperture 130 mm/focal length 1,000 mm)   • Correcting lens: Takahashi TOA-35 Reducer 0.7x (composite focal length at 698 mm)   • Equatorial telescope: Takahashi NJP Temma 2   • Image quality: 14-bit RAW (NEF)   • Exposure: [M] mode   • Sensitivity: ISO 1250/400   • Exposure time per image and number of composites: 600 s x 4 images (ISO 1250) + 60 s x 4 images (ISO 400)  

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Superior performance at the high sensitivity range with minimal noise.

A wide dynamic range is maintained throughout the sensitivity range of ISO 200 to ISO 12800. At high sensitivity setting or long exposure, the EXPEED 4 image-processing engine works to minimize noise effectively while retaining 36.3-effective-megapixel definition even for low-contrast subjects. Color fringing is also minimized so that clear images can be attained for star landscapes without using a compositing process or star field shooting from a fixed position.

* Can be decreased to Lo 1 (ISO 100 equivalent) or increased to Hi 2 (ISO 51200 equivalent).

Long-exposure manual (M*) mode that enables setting of a shutter speed up to 900 seconds, which is convenient for long-time exposure, is employed.

Long-exposure manual (M*) mode is newly added to existing P/S/A/M exposure modes. Maximum number of shots in continuous shooting is canceled at a shutter speed of 4 seconds or slower. Shutter speed setting at 4, 5, 8, 10, 15, 20, 30, 60, 120, 180, 240, 300, 600, 900 s, and Bulb and Time settings are available. Because selectable shutter speed is equivalent to actually controlled speed, this is useful for long exposure, composite and lighten composite. In particular, the calculation of total exposure time is easy when conducting lighten composite.

* When Bulb or Time is set at M mode or M* mode, or when the shutter speed is set at 60, 120, 180, 240, 300, 600 or 900 seconds at M* mode.

Live view images can be enlarged up to approx. 23× to facilitate accurate focusing.

An unlimited number of images can be shot continuously to produce beautiful light trails.

When using C1 or C2 release mode with shutter speeds of 4s or slower, unlimited continuous shooting can be performed as long as the memory card capacity and battery status permits, in JPEG image quality mode. Different from interval-timer photography, each shot is taken immediately after the preceding one so that light trails are connected smoothly when lighten composite is applied.

Electronic front-curtain shutter for reduced internal mechanical vibration.

When the electronic front curtain (selectable only in M* mode) is enabled instead of the mechanical front curtain, the camera’s image sensor can act as the front curtain of the focal-plane shutter (custom setting is required). Mechanical vibration that is usually caused by travel of the conventional front curtain of a mechanical shutter is eliminated with mirror-up shooting. Vibration caused by mirror movement is also eliminated. This method of shooting is recommended for astrophotography with minimized vibration, particularly when capturing the moon’s surface.
Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. February 2015 ©2015 Nikon Corporation