

# HOT Products for 2016

By the Editors of *Sky & Telescope*

*Each year S&T editors scour the marketplace searching for what we consider to be some of the year's most exciting new products. To make our list, a product must not only be new but should also introduce new technologies or processes, provide a solution to an old problem, or simply deliver exceptional value. Our Hot Products list for 2016 includes a variety of gadgets ranging from robotic telescope mounts to cameras, observing aids, and, of course, telescopes and eyepieces. This year many products caught our eye because of their exceptional value — equipment that offers features and performance at a cost well below that of similar items in the past. We hope you enjoy reading about these innovative products that piqued our interest as of late 2015.*

**1** **PARAMOUNT TAURUS**  
Software Bisque [bisque.com](http://bisque.com)

With their ability to track the sky uninterrupted from horizon to horizon without having to “flip” the telescope at the meridian, fork mounts have long been a favorite of astrophotographers. The Paramount Taurus, the first-ever fork mount from Software Bisque, is designed for today's astrographs in the 20- to 24-inch range (0.5- to 0.6-meter) and weighing up to 400 pounds (180 kg). It has all of the robotics and advanced features available throughout the storied Paramount line of German equatorial mounts.

**U.S. price: starting at \$35,000**





2

**2 QUATTRO IMAGING NEWTONIANS**

Sky-Watcher USA [skywatcherusa.com](http://skywatcherusa.com)

As with visual observing, Newtonian reflectors have traditionally delivered the biggest bang for the buck when it comes to astrophotography. Coupled with the latest coma correctors, Newtonians deliver deep-sky imaging performance on par with premium astrographs. And this line of 8-, 10-, and 12-inch f/4 Imaging Newtonians offers outstanding value. Look for our test report later this year.

U.S. price: \$610, \$770, and \$1,199



3

**3 ZWO ASI224MC CAMERA**

ZWO [astronomy-imaging-camera.com](http://astronomy-imaging-camera.com)

Built around Sony's IMX224 digital sensor with 3.75-micron pixels and extended near-infrared sensitivity, this 1.2-megapixel, color, USB 3.0 camera has quickly become the camera de jour for planetary imagers. We've been especially wowed by images of the gas giants Jupiter, Saturn, Uranus, and Neptune made with the ASI224MC shooting through ZWO's new \$99 CH4 methane-band filter, which, like the camera, is an exceptional value.

U.S. price: \$359



4

**4 LOW-COST BAHTINOV FOCUSING MASKS**

Farpoint Astronomical Research [farpointastro.com](http://farpointastro.com)

Designed for astrophotographers shooting with conventional lenses on DSLR cameras, these plastic focusing masks will ensure your images have pinpoint stars. Masks are available for lenses that accept standard thread-in filters from 52- to 82-millimeter diameters. We've seen comparable products costing 4 to 5 times more.

U.S. price: \$12.95



5

**5 SPECTRA-L200**

JTW Astronomy [jtwastronomy.com](http://jtwastronomy.com)

Spectroscopy is a small but growing aspect of amateur astronomy. The new Spectra-L200 compact spectrograph delivers a level of performance similar to units costing considerably more. It works with a wide range of astronomical CCD cameras and autoguiders.

U.S. price: 1,650 euros (about \$1,850)

**VLB LASER COLLIMATOR ACCESSORY**

Howie Glatter [collimator.com](http://collimator.com)

Laser collimators are great for aligning telescope optics, but as anyone who has used one knows, sometimes the laser beam's brightness can be so overpowering that it makes alignment difficult. Enter Howie Glatter's variable-laser-brightness accessory. This modified battery cap/switch fits all past and present Glatter laser collimators and lets you tune the laser's brightness to an appropriate level for the task at hand.

**U.S. price: starting at \$20**

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**TRUSS-TUBE DOBSONIANS**

Explore Scientific [explorescientific.com](http://explorescientific.com)

This trio of well-designed Dobsonians promises to pack a lot of observing pleasure into scopes that break down into easily managed pieces for transport and storage, thanks in part to sub-assemblies that nest within larger components. The line includes 10- and 12-inch f/5 models and a 16-inch f/4.5.

**U.S. price: \$700, \$1,000, and \$1,950, respectively**

7

**ULTRASTAR**

Starlight Xpress [www.sxccd.com](http://www.sxccd.com)

Starlight Xpress has a well-deserved reputation for its line of high-quality, compact autoguiders that slip into standard 1¼-inch focusers. The newest addition to the line, Ultrastar uses Sony's 1.45-megapixel ICX825 CCD with an impressive 75% quantum efficiency and a generous 8.98-by-6.71-mm imaging area. The low-noise chip allows the camera to double as a deep-sky imager.

**U.S. price: \$995**

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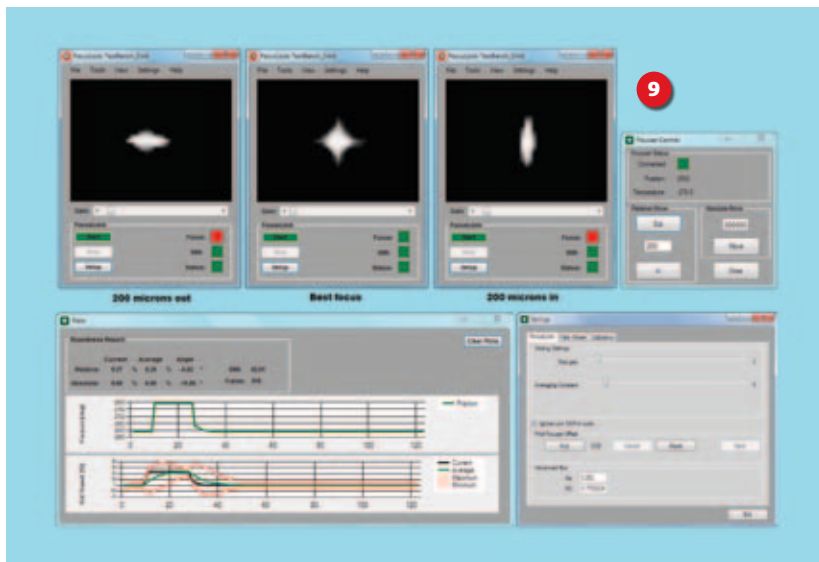
**SHARPLock SOFTWARE**

Innovations Foresight [innovationsforesight.com](http://innovationsforesight.com)

Anyone doing imaging with Innovations Foresight's ONAG on-axis guider (a 2012 Hot Product, which was reviewed in our December 2012 issue, page 60) can now shoot pictures with autofocusing maintained throughout the exposure. Unlike other systems that rely on predetermined focus settings, SharpLock software monitors a real-time star image in the field being photographed and issues corrections to any ASCOM-compliant focuser.

**U.S. price: \$100 software license after a 60-day free trial**

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**10 DELITE EYEPIECES**

Tele Vue [televue.com](http://televue.com)

While the DeLite name is a nod to these eyepieces' origins as smaller and more economical versions of Tele Vue's highly acclaimed Delos eyepieces, the name also describes observers' reactions to using them. Reviewed in our September 2015 issue, page 64, the DeLites feature long eye relief, 62° apparent fields, and the superb optical performance we've come to expect from Tele Vue.

**U.S. price: \$250**



11

**11 ASTRO-TECH ED TRIPLET REFRACTORS**

Astronomics [astronomics.com](http://astronomics.com)

Every year brings a wave of new refractors to the astronomy market, but these models in the Astro-Tech line stand out for their feature/cost ratio. Having three-element objectives made with extra-low dispersion glass, these 80-mm f/6, 115- and 130-mm f/7 refractors are priced well below the competition. All come with a 2-inch, dual-speed focuser, 2-inch dielectric-coated mirror diagonal, tube rings, and a Vixen-style dovetail bar.

**U.S. price: \$749, \$1,299, and \$1,799, respectively**



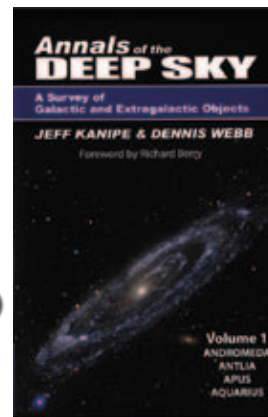
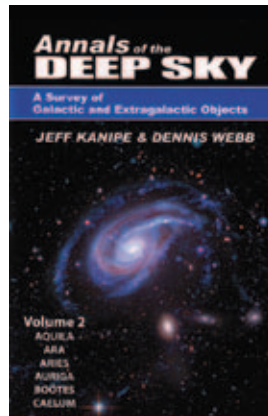
12

**12 IPANO CAMERA PLATFORM**

iOptron [ioptron.com](http://ioptron.com)

This programmable, robotic camera platform is designed for photographers shooting the new breed of large-scale, gigapixel panoramas, but it is equally well suited to astrophotographers seeking to assemble night-sky time-lapse sequences and panoramas from their DSLR frames. It will carry cameras and lenses weighing up to 11 pounds (5 kg) and is powered by internal rechargeable batteries.

**U.S. price: \$999**



13

**13 ANNALS OF THE DEEP SKY**

Willmann-Bell [willbell.com](http://willbell.com)

*Annals of the Deep Sky* is destined to become an observing guide that ranks among such 19th-century classics as Smyth's *Cycle of Celestial Objects* and Webb's *Celestial Objects for Common Telescopes*. Billed by some as the next-generation *Celestial Handbook* (Robert Burnham's 20th-century opus), *Annals* is reviewed in our December 2015 issue, page 65. Authors Jeff Kanipe and Dennis Webb go far beyond what is seen in the eyepiece and cover the history, lore, and scientific background of the objects they write about. The first two volumes of *Annals* are out, and more are on the way.

**U.S. price: \$24.95 each**

**GEMINI FOCUSING ROTATOR**

Optec [optecinc.com](http://optecinc.com)

High-end imaging systems often include a motorized focuser and a camera rotator to help compose images and locate suitable guide stars. This ASCOM-compliant combination focuser/rotator from Optec is noteworthy for its robust construction, generous 3¾-inch aperture, and extremely low profile, requiring just 2¼ inches of back focus in the imaging train, making it a particularly useful accessory for remote imagers.

U.S. price: \$2,995

14



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**INFINITY 90 REFRACTOR**

Meade Instruments [meade.com](http://meade.com)

We're always on the lookout for quality, entry-level telescopes within the price range of beginning amateur astronomers. As our Test Report in the December 2015 issue, page 54, explains, this 90-mm f/6.7 refractor fills the bill, especially considering that it comes ready to use with a sturdy tripod and a good selection of accessories well suited to viewing the Moon, planets, brighter deep-sky objects, and terrestrial scenes.

U.S. street price: about \$200

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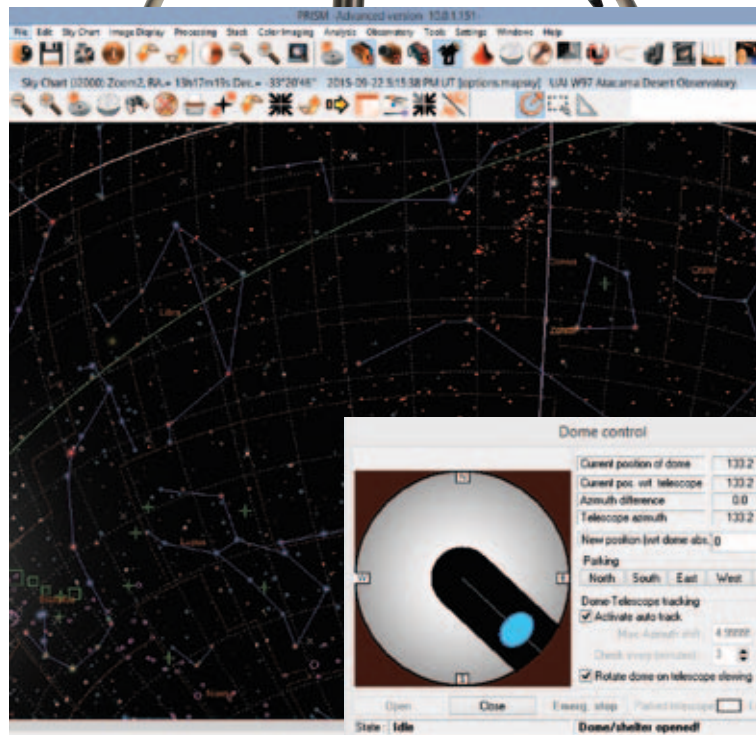
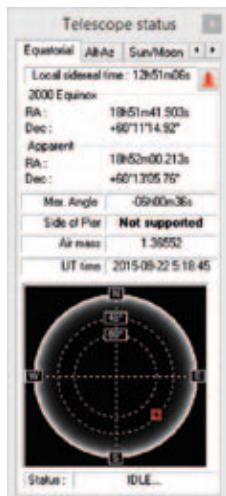
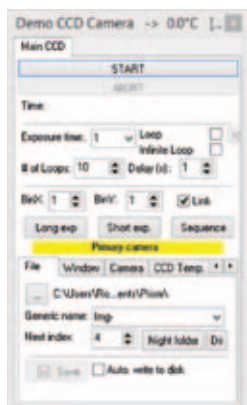
**PRISM+ SOFTWARE**

Prism America [prism-america.com](http://prism-america.com)

Long an extremely popular program in France, Prism+ is now available with a newly revamped English-language interface. The richly featured program does everything from help plan observations to controlling telescopes, cameras, and complete observatories. And once your observations are done, Prism+ will help process and analyze the data. There are algorithms for doing astrometry, photometry, image blinking, supernova searches, and much more.

U.S. price: from \$299

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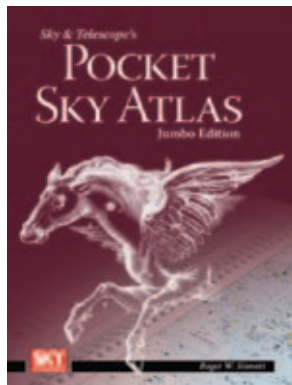


## 17 TRUSS-TUBE IMAGING NEWTONIANS

Astronomics [astronomics.com](http://astronomics.com)

As alluded to earlier, Newtonian reflectors are experiencing a revival for deep-sky astrophotography thanks to modern, high-performance coma correctors. These 10- and 12-inch f/4 Newtonians are designed for imaging. Each features a carbon-fiber truss-tube assembly for focus stability in changing temperatures, quartz mirrors with enhanced-aluminum coatings offering 96% reflectivity, and a pair of Losmandy-style dovetail mounting bars.

**U.S. price: \$1,795 and \$2,195, respectively**



## 18 JUMBO POCKET SKY ATLAS

Sky & Telescope [skyandtelescope.com](http://skyandtelescope.com)

It wouldn't be Hot Products if it didn't include something from our own fold, and this year we're especially proud of our newest release, the jumbo edition of our highly popular *Pocket Star Atlas*. In addition to all the features of the original printed on larger, 8¼-by-11½-inch pages, the new edition has six additional close-up charts of particularly interesting star fields.

**U.S. price: \$39.99**



## 19 NIKON D810A CAMERA

Nikon [nikon.com](http://nikon.com)

Nikon has released its first-ever DSLR made especially for the astronomy market. Based on its flagship "prosumer" model, the 36.3-megapixel D810A has extended red sensitivity for capturing the astronomically important hydrogen-alpha wavelength. Special features such as low-light live preview for focusing, and pre-set exposures up to 15 minutes, are just two of the new astrophotography-friendly aspects of the camera. Look for our Test Report on the D810A in next month's issue.

**U.S. price: \$3,800, body only**



## 20 IOPTRON CEM25-EC

iOptron [ioptron.com](http://ioptron.com)

This updated version of the ZEQ25 equatorial mount that was favorably reviewed in our March 2014 issue, page 61, is now available with high-resolution encoders and new electronics that reduce the drive's periodic error to less than 0.5 arcsecond. It has the potential to eliminate the need for guiding with modest-focal-length setups and multi-minute exposures, making it a possible game changer for some types of astrophotography.

**U.S. price: \$1,899**

**MINI LIGHTBRIDGE**

Meade Instruments [meade.com](http://meade.com)

Meade's popular line of LightBridge Dobsonian reflectors is shrinking, but only in terms of aperture and price! Three new tabletop models, with parabolic primary mirror apertures of 82-, 114-, and 130-mm, promise to put a lot of observing pleasure in a compact, portable, and easy-to-use package. Each features a 1¼-inch rack-and-pinion focuser, a red-dot finder, and two eyepieces. And there's also Meade's reputation for quality.

**U.S. price:** approximately \$60, \$150, and \$200, respectively

**MORPHEUS EYEPIECES**

Baader Planetarium [baader-planetarium.de](http://baader-planetarium.de)

Another eyepiece design that caught our attention this year is the Morpheus series from Baader Planetarium. These dual-format (1¼- and 2-inch) oculars are available in 4.5-, 6.5-, 9-, 12.5-, 14-, and 17.5-mm focal lengths that boast a generous 76° apparent field. Additional features in the series include glow-in-the-dark markings and T-threads beneath the rubber eyeguard.

**U.S. price:** \$239

**2017 SOLAR ECLIPSE BOOKS**

Astropixels Publishing  
[astropixels.com/pubs](http://astropixels.com/pubs)

As every amateur astronomer knows, the continental United States will experience its first total solar eclipse in more than 38 years when the Moon's shadow sweeps a path from Oregon to South Carolina on August 21, 2017. Whether you're an experienced eclipse chaser planning to go on your own or as part of an organized tour, or just someone curious about the event (and all of its associated hoopla), you'll find what you need to know in one or more of these expertly done books.

**U.S. price:** \$14.99 to \$34.99

**SOLAR OBSERVING HOOD**

TeleGizmos [telegizmos.com](http://telegizmos.com)

Simple, effective, and downright cool in more ways than one, this dual-layer cover has a polyethylene outer surface that reflects the Sun's heat and an opaque inner layer that provides a darkened environment for solar observers and photographers. It is especially helpful for those people working with hydrogen-alpha scopes.

**U.S. price:** \$34.95

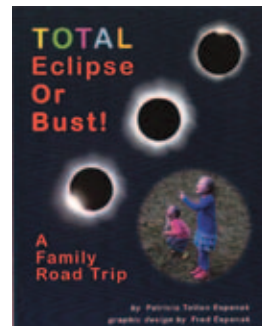
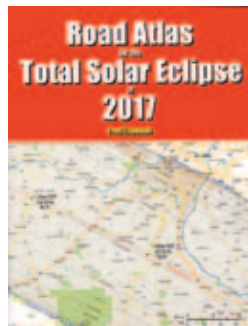
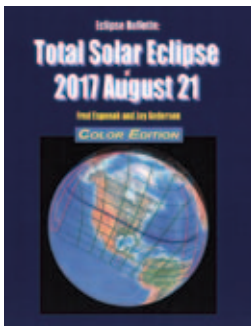
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