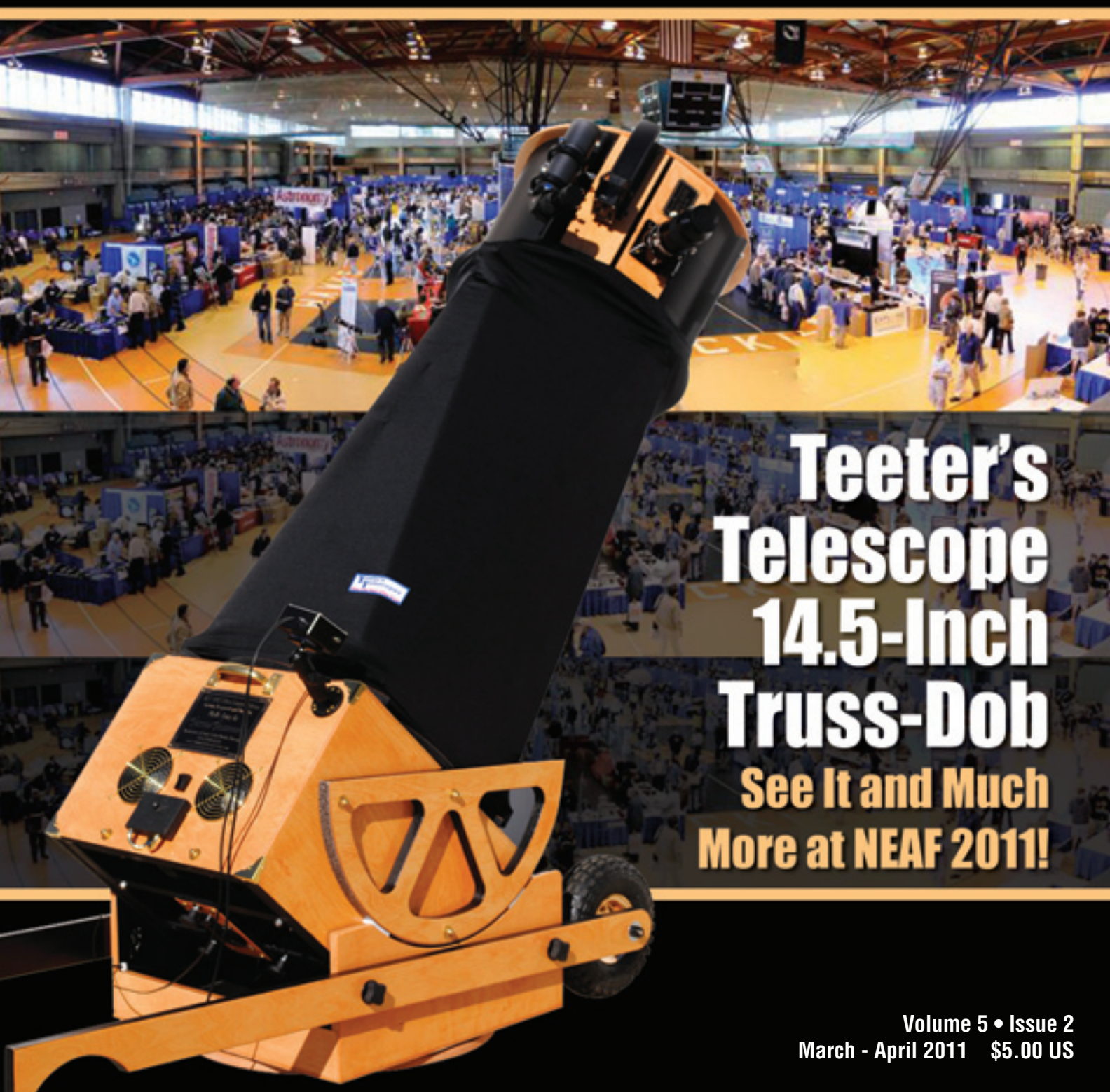
ASTRONOMY TECHNOLOGY TODAY

Your Complete Guide to Astronomical Equipment

ASTRO TELESCOPES 102-MMF/11 REFRACTOR • WILLIAM OPTICS DDG FOCUS SYSTEM
THE IPAD AS A HIGH-END TELESCOPE CONTROLLER • EASY POLAR ALIGNMENT
INEXPENSIVE ALTITUDE HUB BRAKING SYSTEM • HISTORY OF NEAF SOLAR STAR PARTY
ROLLER BEARING FOR EASY TUBE ROTATION • ATM BABY-GUIDER



Teeter's Telescope 14.5-Inch Truss-Dob

See It and Much More at NEAF 2011!

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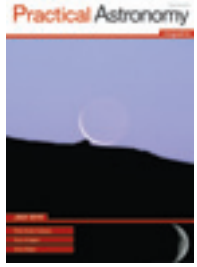
ATT Contents

Cover Story: Pages 35 - 38

Shown on the cover is the Teeter's Telescopes 14.5-Inch Truss-Dob reviewed by Phyllis Lang, owner of Knightware (maker of Deep-Sky Planner and SQM Reader software). In the background is a panoramic shot of NEAF, taken at last year's event. We first met Rob Teeter, owner of Teeter's Telescopes, at NEAF as is the case with many people in the industry. ATT has been fortunate to be a part of NEAF for the last 5 years and we can tell you that there is no other event that allows enthusiasts greater access to industry leaders. You can literally spend the entirety of both days visiting with vendors and still not have enough time to talk to them all. People fly in from all over the world to attend NEAF and if you can do so, we assure you that, for those of us who are really into astro gear, there is no better trip to take. NEAF has grown in both size and stature, becoming the largest and most eagerly anticipated astronomical products trade show in the world. And with this being its 20th anniversary, you can expect it to not only exceed last year's show in experiences and attendance, but also in products and information available. Leading the charge again this year is Alan Traino, who with each new edition of NEAF seems to top his previous efforts. We hope to see you there!

In This Issue

Industry News



ATT Contributing Writers

Barlow Bob is a Central New York banker, with a passion since 1990 for promoting amateur solar astronomy and spectroscopy. He is a member of the Rockland Astronomy Club in Suffern, NY. For the last 19 years, he has provided safe solar observing through a variety of solar filters and spectroscopes at the Northeast Astronomy Forum (NEAF). In 2006, the annual solar star party he created became the official NEAF Solar Star Party.

Tim DeBenedictis works with Southern Stars (formally Carina Software). He graduated from MIT in 1993 with a degree in Earth, Atmospheric, and Planetary science, and has worked at a number of Silicon Valley technology firms since then. Southern Stars has given Tim a chance to combine his work experience with a lifelong love of astronomy.

Austin Grant, a high-school Chemistry and Biology teacher, is a self-described perpetual hobbyist, experienced in such areas as building computers and repairing arcade equipment. Austin stumbled into astronomy several years ago and it soon became his primary interest. Being a child of the digital age, it didn't take long for him to find digital astro-imaging and he sold his last pinball machine to fund his current imaging rig. Austin shares his passion for stargazing with his students and is in the process of building a school astronomy club.

Phyllis Lang is a software engineer and owner of Knightware, maker of Deep-Sky Planner and SQM Reader software. She has been a visual observer since 1985, has built 2 Dobsonian telescopes, and taught telescope mirror-making at North Carolina State University for 17 years.

Tony Simon has been an amateur astronomer for 41 years; living in Genoa, Ohio. Refractors are his main telescopes of choice. He has seen 6 total solar eclipses and is starting to get into astrophotography. As a former carpenter and machinist he loves to use these skills in the hobby of astronomy.

Rick Saunders an amateur astronomer, inveterate tinkerer and member of the Royal Astronomical Society of Canada, London Centre. His passion is DSLR imaging and on cloudy nights he spends his time designing and building equipment to help further that passion.

David Snay is a retired software engineer living in central Massachusetts. He graduated from Worcester Polytechnic Institute and has been an astronomer and astrophotographer for more than 10 years. David currently pursues fine art photography, specializing in traditional black/white images.

Erik Wilcox lives off the grid on the Big Island of Hawaii, and has been observing for over 20 years. When he's not viewing from his dark backyard sky, he works for a natural foods chain, and spends his spare time hiking, kayaking, snorkeling, and performing music. He also runs the astronomy forum at: www.starstuffforums.com.

Contents

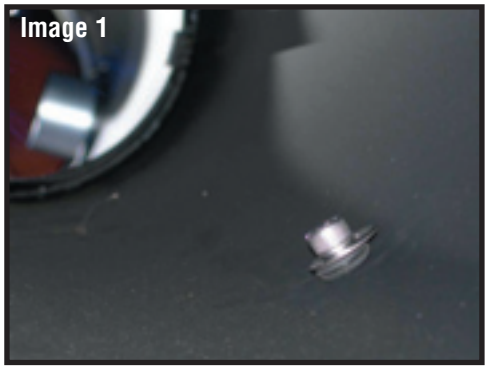
New Products

ASTRO TIPS

tips, tricks and novel solutions

Just Add a Roller Bearing for Easy Tube Rotation

By Tony Simon



A friend wanted to make his Orion 8-inch EQ mounted Newt a rotating-tube scope, so I came up with an idea using just one roller bearing attached to his tube. The total cost was less than $20.00. The only tools needed are a tape measure, drill, and bit. This should be something any amateur can do with no problem.

Once we had the tube positioned for balance within the rings and after some careful measuring, a hole was drilled into the tube to attach the roller bearing. We took out the mirror for safety and that was a good time to clean it. Make sure your drill bit is sharp and use a pilot hole of about 1/8 inch, then go to the finish-size hole. In this case, I needed a 5/16-inch hole for the Allen-head bolt. I put a rubber washer up against the tube to conform to its curve on both the inside and outside of the tube as seen in **Image 1**.

In **Image 2** you will see the bearing doing its job. It is on a slight angle because of the rubber washer, but that does not affect the smooth action of the bearing when rotating the tube. All you do is loosen the tube rings, rotate the tube to the desired position and tighten the rings when repositioned. As you rotate the tube the bearing takes the load and also acts to keep the tube from sliding down.

Images 3-5 show different rotated positions. Image 3 is the centered position, Image 4 is rotated 90 degrees to the west, and Image 5 is rotated 90 degrees to the east.

Another thing you may need to do is replace the felt on the upper (moveable) rings with a different material. On my buddy's scope, we used flexible cutting-board material (0.190 inch thick) which is very smooth and slippery and allows better motion. One problem with the scope I worked on was that the tube wall was thin and not true in circularity. Using the flexible cutting-board material provided extra space for the high spots as the tube rotated and, being very slippery, cut down on friction as well. The thinner material did not affect the clamping pressure when the rings were retightened.

My friend has been very pleased with the results he gets. At star parties, the scope better accommodates all sizes of viewers and sky positions. AT

Submit Your Astro Tip!

Astronomy Technology Today regularly features tips, tricks, and other novel solutions. To submit your tip, trick, or novel solution, email the following information:

- A Microsoft Word document detailing your tip, trick or novel solution.
- A hi-resolution digital image in jpeg format (if available).

Please send your information to
tips@astronomytechnologytoday.com