

Getting Started with Observational Astronomy

Your Guide to a New View of The Universe!



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You're into astronomy, huh? My name is Baird Thompson. When I was just a freshman in high school, i found myself in your shoes. Interested in learning about the celestial bodies above, but not sure where to start. I joined a local astronomy club and took the sky head on along with the help of other astronomy enthusiasts. Most folks who find their way into the astronomy community may see large telescopes on motorized, sky-tracking tripods, and find themselves feeling like a child watching a commercial for a new toy. If you can relate to that feeling, you are just like the rest of us. It is completely normal to have a dream telescope setup, but don't get too far ahead of yourself here. If you are new to observational astronomy, the best telescope for you is a dobsonian reflecting telescope. You do not need a large scope like the Orion SkyQuest XT10 IntelliScope Dobsonian Reflecting Telescope used in this guide; it took time to get to this. Whichever one you get, dive in with this guide and into your new view of the universe!



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Know The Night Sky

Whether you live in the countryside or under city lights, know what to look at before taking your scope out. Start with the naked eye observations before jumping right into using a telescope.



Make a List

Stars, planets, star clusters, nebulas, or galaxies. Make a list of what you want to observe for your night out. Use maps of the charted sky to determine which objects are visible. Visit skymaps.com to find free, detailed sky maps.



Learn How Eyepieces Work

Not all eyepieces will suit every object that you want to see in the same way. Some objects require more magnification than others. Contrary to what most would think, as you decrease the size (in mm) of an eyepiece, the more you magnify the object in view. Ex: for a 32 mm eyepiece, the entirety of the moon can be in view. For a 10 mm eyepiece, the view is so magnified, that you can see individual craters on the moon's surface.

Pick the Right Eyepieces

To determine which eyepieces to purchase, visit astronomy. Tools and use the field of view indicator tool. The eyepieces that typically come along with a new telescope (10 and 20 mm) are not a bad start. Don't get too caught up in thinking that you need to buy "better" eyepieces. That may come later, but don't worry about it for now.



Find The Right Finder Scope

There are different types of finder scopes to choose from, some zoom for more accuracy, some use laser dot sights, and others just shoot a laser into the sky. Depending on what objects you are targeting while observing and what your preferences, you should get a finderscope which fits your needs.

Check and Clean your Optics

Before heading out, take a look down your telescope tube and also at your eyepieces. If they need to be cleaned, follow along with our step-by-step video guide to ensure that you clean them properly.



Follow the Directions

Read every single paragraph, caption, and diagram that comes with your telescope when putting it together. Doing so inside might be best. Find a local astronomy club and ask for assistance when going out for the first time.



Set up Before Dark

You don't want to get lost in thoughts wondering how to operate your scope. Take it out before dusk and familiarize yourself with the environment and of course, your telescope.



Test Your Telescope

Of course, you are not going to give your scope a standardized test, but there are a number of things you should train on in the light before it gets dark. This includes collimating your scope, testing its balance, and double collimating the finder scope.



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Collimate the Scope

This task is easier with a second person. Place the “collimation cap” in the focuser. Using the knobs located at the bottom of your scope, move the mirror so that the dot is centered inside of the donut-shaped element on the mirror. Adjust the mirror so that the mirrors of the telescope are aligned correctly. You can follow along with our Step-by-step tutorial video to learn how to execute it.



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Align the Finder Scope

Slew the telescope and center it on a recognizable object on the horizon that is over 100 feet away. This could be a light post, road sign, or the corner of a building.



Secure Your First Find

Once it gets dark, Find the Largest, brightest, and easiest object on your Observation planning list (THE moon is a great starter object) and center it in your finder scope. Then, take a look at the object in eyepiece and adjust the focus knob for focus if needed. Enjoy the view and move on to the next object. You won't always locate all of items on your list, but you can always try again another night. mirrors of the telescope are aligned correctly. You can follow along with our Step-by-step tutorial video to learn how to execute it.



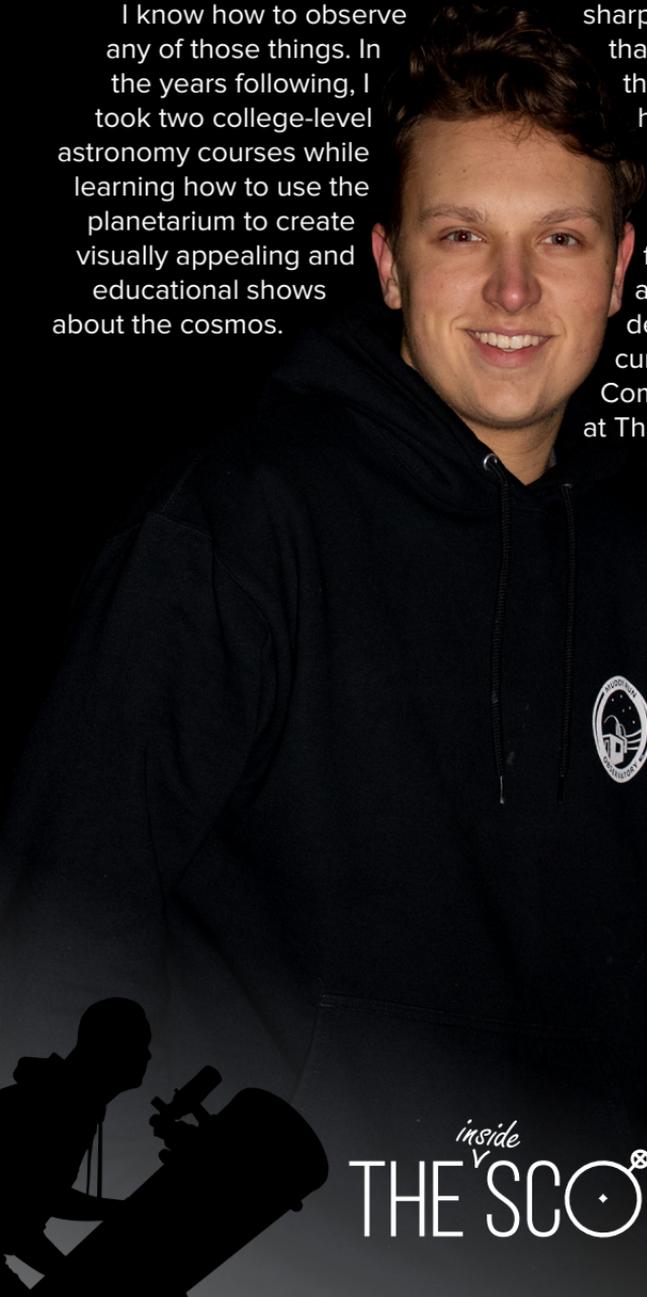
Baird Thompson

My journey with astronomy started in my freshman year of high school in a planetarium. I knew absolutely nothing about the sky, the stars, nor did

I know how to observe any of those things. In the years following, I took two college-level astronomy courses while learning how to use the planetarium to create visually appealing and educational shows about the cosmos.

Every night, I took an 8 inch dobsonian reflecting telescope outside to expand my knowledge of the worlds beyond. Around that same time, I was actively sharpening videography skills that I had gained through the years of work that I had done to practice.

The involvement of graphic design in the film industry led to my further involvement and interest in graphic design related work. I am currently studying Graphic Communications and Printing at Thaddeus Stevens, College of Technology and am loving every minute of it! After graduating Thaddeus Stevens, I am looking to continue my education in order to become a graphic communications teacher in the future. While doing so, I hope to build my business, BET Creative Media LLC. with the ability to still take part in the more creative hobbies I currently enjoy.



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