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A set of Baader Planetary color filters with a diameter of $\varnothing = 1.25$ "ensures the highest level of image brightness, as well as allows to significantly reduce the amount of scattered light in the observation device without sacrificing image sharpness at high magnifications required for observing delicate details on planetary targets. All filter surfaces are mechanically polished to optical quality in accordance with the requirements of flat-parallel tolerance at the fractional part of the wavelength of light. This tolerance far exceeds the performance of substrates produced in flame polishing technology used in the production of cheaper filters. Mechanical polishing guarantees perfect parallelism of both surfaces of the substrate with an accuracy of $30 \text{ \text{''}}$ (arc second), which completely excludes the possibility of a double image effect. In addition, all optical surfaces of the filters are coated with high-quality, seven-layer Phantom Group anti-reflection coatings, which significantly reduce losses associated with reflection of light rays from the filter surface to a level of only 0.25%.

Dark blue filter The dark blue filter is used to observe Jupiter's shield. By cutting off the red and orange, it darkens details such as stripes, it allows you to see the Great Red Spot. For these objects, it allows you to highlight sharp boundaries between light zones and stripes. For Mars observations, this filter is useful for observing polar caps darkening the factorial surface of the planet and creating a high contrast between the surface and the caps. Sometimes dust storms are also visible in this filter. Saturn improves the visibility of delicate details, the planet's rings are also more contrasting. In the case of Venus, using such a dark filter can improve image quality. This is the filter that creates the best chance for visual observations of the delicate structures created by the clouds. When observing comets, the blue filter improves the visibility of the ion braid.

Light blue filter The light blue filter is one of the most used filters. This is without a doubt the best filter for observing Jupiter and Saturn. On Jupiter, the details of the equatorial belts and the Great Red Spot are strengthened. On Saturn, lanes as well as polar regions are visible. The filter is very useful for observations of Mars - it allows you to see high clouds from time to time, it also improves the visibility of polar caps darkening the surface of the planet. Recommended for observing Mercury where it improves the visibility of difficult to observe details on the surface of this planet. In the case of Venus, the filter allows you to see delicate structures in the cloud cover. An interesting application of the filter may be observing double stars with a clear color difference. The more strongly orange component can be darkened by a blue filter, which makes separating the system into components easier. The filter improves the visibility of details on the moon's disk, and also reveals the ion braid when observing comets.

Green filter One of the basic filters for observing Mars. As it has a color opposite to the color of the planet's surface, it creates a huge contrast between the polar caps and the rest of the Martian shield. Dust storms that occur sometimes are also visible on this contrasted planet. On the planet Venus, there is a chance to see weak structures in the upper cloud cover. The filter cuts off both blue and red, which significantly improves the visibility of the stripes on the disc of Jupiter and Saturn. On Saturn, lighter details in the lanes are also brightened, as well as the polar regions. An increase in the sharpness of detail is noticeable when observing the moon.

Yellow filter This filter is useful for observing Mars by highlighting bluish dark areas of the Martian surface such as the sea and canals. These objects contrast strongly with the bright desert areas. The visibility of the edge of dust clouds during dust storms is improved. On Jupiter and Saturn, the visibility of all bluish colored details is improved. Works well in observing bright zones between belts and polar areas. When observing through large telescopes, you can count on improving the visibility of details on planets such as Uranus and Neptune. The yellow filter improves the visibility of the dust braid when observing comets, and also improves the contrast when observing the Moon for telescopes with a main mirror diameter greater than 15 cm.

Orange filter This filter is great for observing the planet Mars. It darkens the areas tinted greenish, in particular, improves the visibility of the borders of the Martian seas. When observing Jupiter and Saturn, it is possible to observe additional details in the belts of these planets. The orange filter greatly improves the contrast when observing the moon. It may be interesting to use the orange filter for daily observations of planets such as Venus or Mercury - this filter darkens the background of the sky. When observing large diameter telescopes, this filter will help to distinguish

structures in the dust plait and in the comet's head. When observing the sun, it is used if you want to get the correct color reproduction when using a solar filter from mylar. Note: this type of filter is not suitable for observing the Sun without the use of an additional film or Baader Planetarium AstroSolar? objective filter with an optical density of not less than $OD = 5.0$. For telescopes with large apertures, the image of the Sun at full aperture may seem very bright. Red filter The red filter strongly blocks green and blue. This property is very useful for observing the planet Jupiter. The bluish structures visible there are clearly darkened and clearly stand out from the rest of the disc. Useful for observing polar caps and Martian seas, provided it is used with a telescope with a diameter of the main mirror above 20 cm. Interesting effects are obtained when observing the planet Venus. This filter reduces the strong light of this planet, as well as allows the visibility of certain structures in the cloud cover. The filter is useful for observing the inner planets in a bright sky - Mercury can be observed earlier and higher above the horizon thanks to the darkening of the sky background, and the situation is similar with observations of the planet Venus. SET COMPOSITION # 2458302 filter Baader Planetarium dark blue # 2458303 filter Baader Planetarium light blue # 2458304 the Baader Planetarium green filter # 2458301 Yellow Baader Planetarium filter # 2458306 Baader Planetarium orange filter # 2458307 Baader Planetarium red filter