

Useful Filters for **Mercury**:

- Yellow (#12) Reveals low-contrast surface features. Reduces scattered blue light, useful for observing Mercury during daylight.
- Light Red, Red, Dark Red (#23A, #25, #29) Improves observation at twilight when the planet is low near the horizon and in daylight reduces the brightness of the blue sky to enhance surface features.

Useful Filters for **Venus**:

- Yellow-Green, Yellow, Dark Yellow (#11, #12, #15) Reveals low-contrast surface features.
- Light Red, Red, (#23A, #25, #25A) Daylight observing. It reduces the brightness of the blue sky. Occasionally deformations of the terminator are visible.
- Dark Green (#58) Enhance any bright clouds.
- Violet (#47) Observation of occasional phenomena in the upper atmosphere of Venus.
- Dark Blue (#38A) Increases contrast of subtle cloud markings.

Useful Filters for **MARS**:

Maria

- Light Yellow (#8) Enhances Martian cloud detail.
- Yellow, Dark Yellow (#12, #15) To brighten desert region, darkens bluish and brownish features.
- Orange, Light Red (#21, #23A) Further increases contrast between light and dark features, penetrates hazes and most clouds, and limited detection of dust clouds.
- Red, Dark Red (#25, #29) Gives maximum contrast of surface features, enhances fine surface detail, dust clouds boundaries, and polar cap boundaries.

Clouds and Dust storms

- Dark Green (#58) Darkens red and blue features, enhances frost patches, surface fogs, and polar projections.
- Blue, Dark Blue (#80A, #38A) and Violet (#47) Shows atmospheric clouds, discrete white clouds, and limb hazes, equatorial cloud bands, polar cloud hoods, and darkens reddish features.

Useful Filters for **Jupiter**:

- Yellow-Green, Yellow, Dark Yellow (#11, #12, #15) Penetrates and darkens the atmospheric currents containing low-hue blue tones and enhances the orange and red features of belts and zones. Also useful for studies of the polar region.
- Light Red, Red, Dark Red (#23A, #25, #29) Gives maximum contrast of surface features, blue-tinted cloud formations on Jupiter and the lighter-toned features of the disc.
- Light Green, Dark Green (#56, #58) Darkens red belts, contrast of red - blues zones and the GRS.
- Dark Blue (#38A) Increases contrast between the reddish belt structures and enhances detail of the Great Red Spot.
- Blue, Light Blue (#80, #82) Subtle pale blue filter enhances festoons and low contrast features while avoiding significant reduction of overall image brightness.

Useful Filters for **Saturn**:

- Yellow, Dark Yellow (#12, #15) Penetrates and darkens the atmospheric currents containing low-hue blue tones and enhances the orange and red features of bands and zones.
- Orange (#21) gives maximum contrast of cloud bands features, useful for studying the bluer clouds.
- Light Red, Red, Dark Red (#23A, #25, #29) Increase contrast of belts and polar region.
- Dark Blue (#38A) Studying of the zone structures of Saturn.
- Blue, Light Blue (#80A, #82A) Accentuates belts, zones, and white spots.

Useful Filters for **Uranus and Neptune**:

- Light Yellow, Dark Yellow (#8, #15) Increase contrast of dusty details.

Useful Filters for the **MOON**:

- Light Yellow, Yellow, Dark Yellow (#8, #12, #15) Used to increase contrast in lunar features.
- Light Green (#56) Enhances lunar detail.
- Blue (#80A) Contrast enhancing lunar filter.
- Light Blue (#82A) Enhances area of low contrast while avoiding significant reduction of overall brightness

By Jim Thompson

MERCURY

Planet/Sky Contrast #23A Light Red

Features #25 Red
#29 Deep Red

VENUS

Clouds #38A Deep Blue
#47 Violet
#47 Violet

Planet/Sky Contrast #25 Red
#29 Deep Red

Terminator #25 Red
#29 Deep Red

MOON

Detail #56 Light Green

Feature Contrast #8 Light Yellow
#12 Yellow
#15 Deep Yellow
#80A Blue

Low Contrast Features #82A Light Blue

Glare Reduction ND 13 Neutral Density

MARS

Clouds #15 Deep yellow

Maria #8 Light Yellow
#15 Deep Yellow
#11 Yellow-Green
#21 Orange
#23A Light Red
#25 Red
#29 Deep Red

Blue-Green Areas #12 Yellow
#23A Light Red

Dust Storms #38A Deep Blue
#56 Light Green

Polar Caps #15 Deep yellow
#25 Red
#29 Deep Red
#47 Violet
#56 Light Green
#58 Green
Deep Sky Filter

Low Contrast Features #82A Light Blue

JUPITER

Clouds #11 Yellow Green

Belts #8 Light Yellow
#15 Deep Yellow
#21 Orange
#23A Light Red
#25 Red
#29 Deep Red
#38A Deep Blue
#56 Light Green
#80A Blue

Festoons #80A Blue

Atmosphere #56 Light Green

Red-Orange Features #15 Deep Yellow
Orange-Red Zonal #8 Light Yellow
Red/Blue Contrast #11 Yellow-Green
Blue/Light Contrast #25 Red
Great Red Spot #38A Deep Blue
Red/Blue/Light Contrast #56 Light Green
#58 Green

Polar Regions #21 Orange
#23A Light Red

Low Contrast Features #82A Light Blue

SATURN

Clouds #11 Yellow Green
#12 Yellow
#25 Red
#29 Dark Red

Belts #15 Deep Yellow
#21 Orange
#23A Light Red
#38A Deep Blue
#58 Green
#80A Blue

Polar Regions #21 Red
#23A Light Red
#58 Green
#80A Light blue

Rings #47 Violet
Cassini Division #11 Yellow Green

Red/Blue Contrast #11 Yellow Green
Red/Orange Features #12 Yellow
Low Contrast #82A Light Blue

URANUS and NEPTUNE

Dusky Detail #8 Light Yellow
#15 Dark Yellow

#8 Light Yellow

Moon: Feature Contrast
Mars: Maria
Jupiter: Belts
Jupiter: Orange-Red Zonal
Uranus: Dusky Detail
Neptune: Dusky Detail

#11 Yellow-Green

Mars: Maria
Jupiter: Clouds
Jupiter: Red/Blue Contrast
Saturn: Clouds
Saturn: Cassini Division
Saturn: Red/Blue Contrast

#12 Yellow

Moon: Feature Contrast
Mars: Blue-Green Areas
Jupiter: Red-Orange Features
Saturn: Clouds
Saturn: Red-Orange Features

#15 Dark Yellow

Moon: Feature Contrast
Mars: Clouds
Mars: Polar Caps
Jupiter: Belts
Saturn: Belts
Uranus: Dusky Detail
Neptune: Dusky Detail

21 Orange

Mars: Maria
Jupiter: Belts
Jupiter: Polar Regions
Saturn: Belts
Saturn: Polar Regions

#23A Light Red

Mercury: Planet/Sky Contrast
Mars: Maria
Mars: Blue-Green Areas
Jupiter: Belts
Jupiter: Polar Regions
Saturn: Belts
Saturn: Polar Regions

#25 Red

Mercury: Features
Venus: Planet/Sky Contrast
Venus: Terminator
Mars: Maria
Mars: Polar Caps
Jupiter: Belts
Jupiter: Galilean Moon Transits
Saturn: Clouds

#29 Dark Red

Mercury: Features
Venus: Planet/Sky Contrast
Venus: Terminator
Mars: Maria
Mars: Polar Caps
Jupiter: Belts
Jupiter: Galilean Moon Transits
Saturn: Clouds

#38A Dark Blue

Venus: Clouds
Mars: Dust Storms
Jupiter: Belts
Jupiter: Great Red Spot
Jupiter: Disc
Saturn: Belts

#47 Violet

Venus: Clouds
Mars: Polar Caps
Saturn: Rings

#56 Light Green

Moon: Detail
Mars: Dust Storms
Mars: Polar Caps
Jupiter: Belts
Jupiter: Atmosphere
Jupiter: Red/Blue/Light Contrast

#58 Green

Venus: Clouds
Mars: Polar Caps
Jupiter: Red/Blue/Light Contrast
Saturn: Belts
Saturn: Polar Regions

#80A Blue

Moon: Feature Contrast
Jupiter: Belts
Jupiter: Rilles
Jupiter: Festoons
Jupiter: Great Red Spot
Saturn: Belts
Saturn: Polar Regions

#82A Light Blue

Moon: Low-Contrast Features
Mars: Low-Contrast Features
Jupiter: Low-Contrast Features
Saturn: Low-Contrast Features

ND13 Neutral Density

13% Transmission
Moon: Glare Reduction
Double Stars: Bright Primary