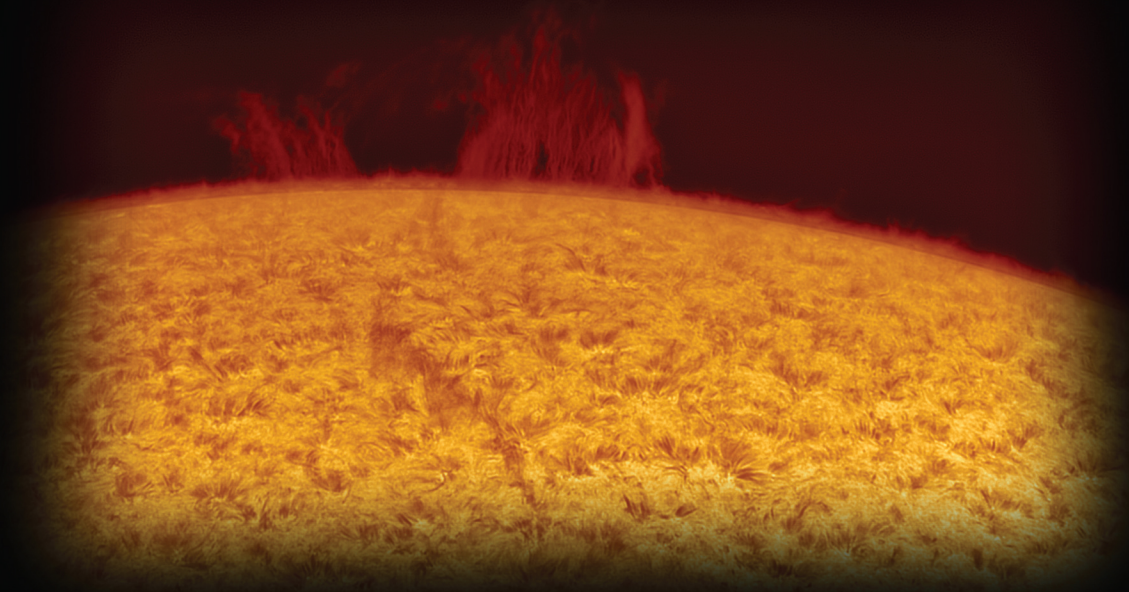


Company Seven

ASTRO-OPTICS DIVISION
MONTPELIER, MD 20709-2587
301-953-2000 • WWW.COMPANY7.COM



DAYSTAR FILTERS

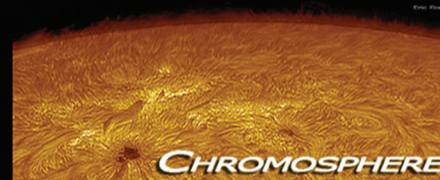
World Leader in Solar Filter Manufacturing for 40 years



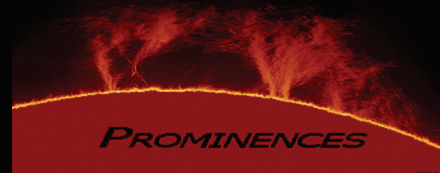
DAYSTAR FILTERS

Features of the Sun in Hydrogen Alpha

By observing the sun with a narrow bandpass filter tuned to 6562.8\AA , we can observe the behavior of the Sun's **Chromosphere**. The chromosphere is like a shell of gas around the Sun's photosphere, always moving and changing. The chromosphere's structure behaves differently in active regions than quiet areas, where magnetic field lines are stronger. Thought to be tied to the photosphere, the chromosphere is governed by magnetic forces and, yet it still has its own IntraNetwork (IN) of material oscillating every 5 minutes.



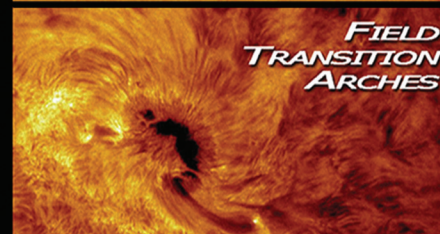
On the limb, even a rather wide filter of 1\AA or more will show **prominences**, a detail of the chromosphere projected against the dark black contrast of space. To observe the details of chromosphere on the face of the sun, we need a narrower filter to eliminate more off-band light of the photosphere and continuum. We need a filter less than 1.0\AA . The narrower the filter's bandpass, the more contrast we will see - down to 0.4\AA , where prominence structure is reduced due to high velocity and subsequent wing shift.



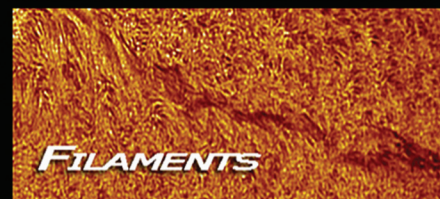
Spicules dominate the chromosphere in non-active regions and have been studied exhaustively. They are barely visible, last only about 15 minutes, and resemble a "burning prairie". Some jets can be seen shooting 10,000 km up from the Sun's limb at velocities of about 30km/sec. Studied exhaustively, they present a number of observing challenges, as they are too small to resolve and move so quickly as to present wing-shift challenges.



Field Transition Arches (FTA's) connect P and F spots - elements of opposite polarity. Inside an active region, where sunspots are originally linked by a FTA, a shear boundary forms. Field Transition Arches are different from filaments in that they are thin and not very dark. The FTA usually has plage or granular structure underneath.

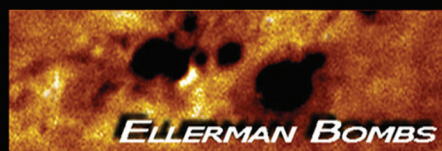


Filaments appear as large, dark eyebrows across the surface of the Sun. With a brightness of about 10% of the disk due to scattering, they appear dark on the surface, but on the limb, show as a prominence.

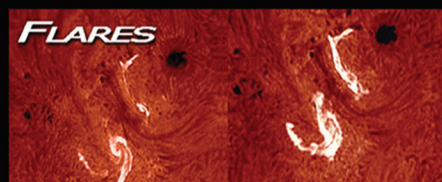


Active Region Filaments (ARF) differ from Quiescent Region Filaments (QRF). ARF are darker, smaller and have more coherent fibril structure along their axis. A sheared magnetic field runs parallel to this axis, permitting a sizeable flare. QRF may produce a big Coronal Mass Ejection (CME). An ARF may erupt and reform several times.

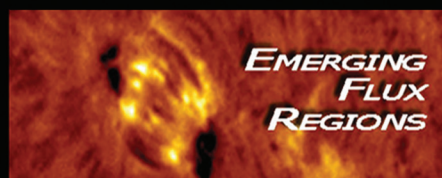
Plages: Most of the active region area is occupied by plage. Considerable atmospheric heating takes place in the plage. It is bright in everything from H α to the Calcium H and K lines. This heating is thought to account for an absence of spicule. While absent over plage, spicules are prominent around its edges.



Ellerman Bomb: A remarkable feature of Emerging Flux Regions is the Ellerman bomb. Bright points with very broad H-alpha wings ($\pm 5\text{\AA}$) that are low in the atmosphere so they are not visible on H alpha centerline. Called 'moustaches' for their appearance on spectrograph, they appear spectroscopically like wide moustaches with a gap in the middle. This strange and tiny feature typically occurs at the center of the EFR or in the edges of spots - where the field is breaking the surface.



Solar Flares are intense, abrupt releases of energy which occur in areas where the magnetic field is changing by flux emergence or sunspot motion. Stresses in lines of force build up slowly and are released in flares. They occur most frequently at neutral lines where a filament is supported by horizontal sheared field lines. This event can only take place along a magnetic inversion line. When many lines of force are involved, two ribbons of emission appear, brightening simultaneously.



Emerging Flux Regions: An area on the Sun where a magnetic dipole, or "flux tube" is surfacing on the disk, eventually producing a bipolar sunspot group. Each pole of an EFR is often marked by pores or small developing sunspots. Surges or even small solar flares can sometimes occur in EFRs. An EFR emerges with small bright H region with little surges, then weak arch filaments (AFS) over bright plage connect small spots on each dipole. Growth is rapid, forming in just a few hours.

DAYSTAR FILTERS SolaREDi 80 mm

Hydrogen Alpha Solar Telescope



0.7Å	SolaREDi 80 Telescope:	\$3500
0.6Å	SolaREDi 80 Telescope:	\$4800
0.5Å	SolaREDi 80 Telescope:	\$6000
0.4Å	SolaREDi 80 Telescope:	\$7400
0.3Å	SolaREDi 80 Telescope:	\$9000



Includes:

- Complete fully controlled tunable 80mm Hydrogen Alpha Solar Telescope
- 2" dual speed Crayford style focuser
- Mounting rings with Vixen dovetail
- 100% safe Thousand Oaks filtered solar finder scope
- 2" x 1.25" drawtube reduction adapter
- DayStar 0.5X focal reducing diagonal
- 20mm Plossl eyepiece
- Pelican Storm hard case



**FOR BEST RESULTS, DAYSTAR DOES NOT RECOMMEND IMAGING WITH DSLR OR ANY COLOR CCD CAMERA FOR BEST RESULTS, IMAGE HYDROGEN ALPHA WITH A B&W CAMERA.*

DAYSTAR FILTERS

SR-127mm

Hydrogen Alpha Telescope



Daystar Filters

SR-127 Hydrogen Alpha Solar Telescope

Complete fully controlled tunable
127mm Hydrogen Alpha Solar Telescope
Objective by ISTAR Optical
4064mm Focal Length
Tele Vue telecentric negative lens

Robust 2" ISTAR dual speed Crayford style focuser

Fully integrated Daystar Quantum Filter
Digital readout and precision tuning control
Accurate to 0.01Å tuning.
12VDC power can run off batteries

Mounting rings with Vixen dovetail
Daystar universal solar finder
2" x 1.25" drawtube reduction adapter
Custom fabricated hardwood case.

*Available in Prism or
Frosted Pearl (shown)*

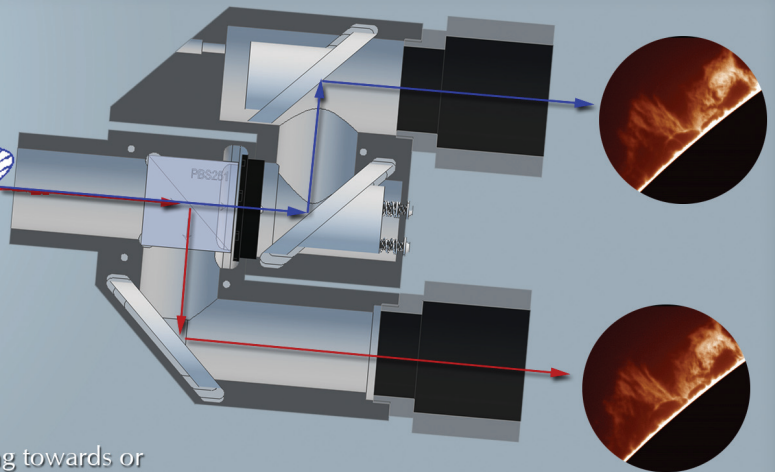
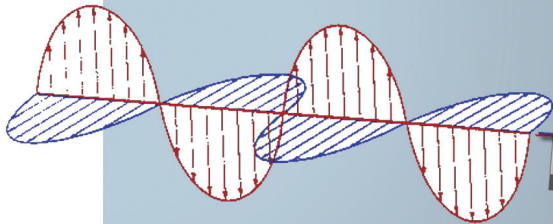
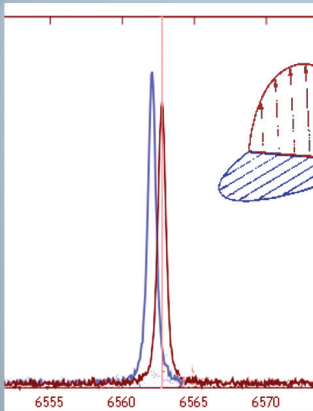
Made in USA

0.7Å	SR-127 Solar Telescope:	\$4995
0.6Å	SR-127 Solar Telescope:	\$6000
0.5Å	SR-127 Solar Telescope:	\$7400
0.4Å	SR-127 Solar Telescope:	\$8600
0.3Å	SR-127 Solar Telescope:	\$10200

**FOR BEST RESULTS, DAYSTAR RECOMMENDS IMAGING HYDROGEN ALPHA WITH A B&W CAMERA RATHER THAN A DSLR OR ANY COLOR CCD CAMERA FOR BEST RESULTS.*

DAYSTAR FILTERS

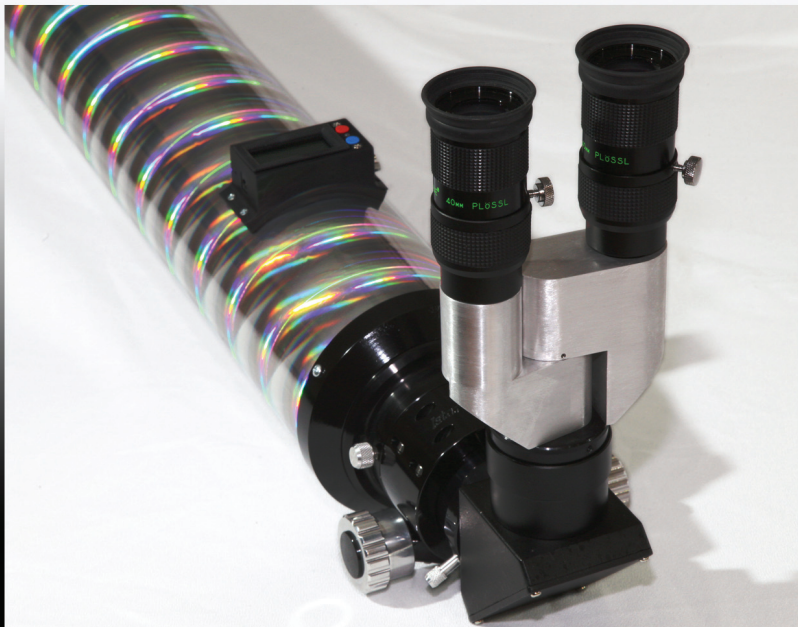
Dual Bandpass Doppler Telescope



Each solid-state Etalon yields two transmission peaks; one on each polar axis.

In exceptionally rare etalons, those peaks occur within 1Å of each other.

Doppler shifted light is traveling towards or away from us at extremely high velocity. With our unique bino-viewer containing a polarizing beamsplitter, we can send light from each axis (and each transmission peak) to a different eyepiece. On band light passes to one eyepiece. Blue wing shifted light passes to the other. This creates a perfectly aligned and tuned comparison image; utilizing both on-band light and doppler shifted light. Both eyes (or cameras) work together to re-image both differing views into one comprehensive image. It's sharper, higher contrast and has more detail. As each eyepiece represents different velocities toward the eye, an effect of depth is also created.



Daystar Filters Dual Bandpass Dopplerscopes are sold as complete, dedicated instruments.

127mm Doublet Achromat refractor
Objective by ISTAR Optical
4064mm Focal length
Tele Vue telecentric negative lens

Dual speed 2" crayford focuser

Fully integrated internal bandpass filter
One peak tuned to emission line
One peak tuned to ~0.5Å blue wing shifted
Quantum precision control 12VDC tuning
Serial port tuning and control interface

Slotted 2 inch diagonal and snouts
designed to maintain polarized alignment

1.25" DayStar binoviewer
Polarized beamsplitting, individual eye focus

Available in all wavelengths 350nm - 675nm

Daystar Filters Dual Bandpass Dopplerscopes are offered in 0.8 - 0.3Å FWHM range. Scopes will be offered as unique etalon crystals become available. For more information, please contact our offices directly.

DAYSTAR FILTERS

Hydrogen Alpha ION Filter



ION Pricing:

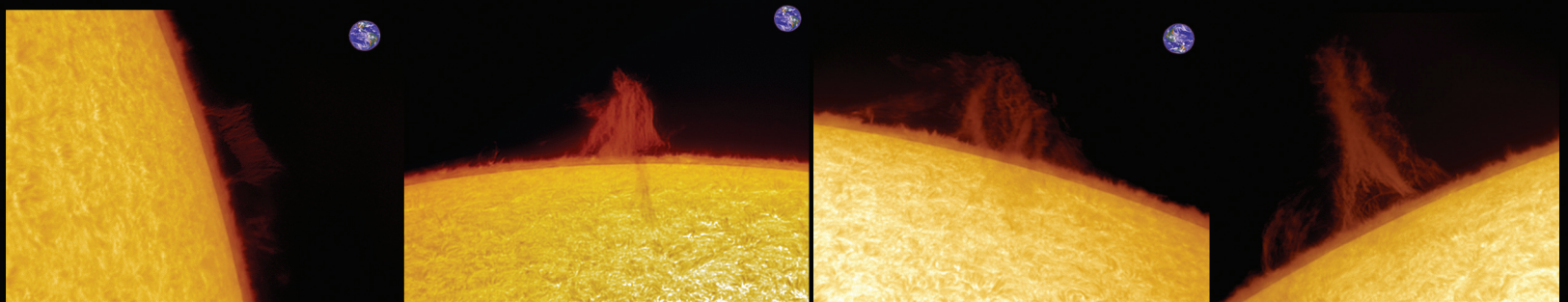
- ION 0.8 Hydrogen Alpha Filter : \$1800.00
- ION 0.7 Hydrogen Alpha Filter : \$2100.00
- ION 0.6 Hydrogen Alpha Filter : \$2700.00
- ION 0.5 Hydrogen Alpha Filter : \$3350.00
- ION 0.4 Hydrogen Alpha Filter : \$4000.00
- ION 0.3 Hydrogen Alpha Filter : \$4950.00

ION Features:

- Hydrogen Alpha Solar Filter for rear mounting on existing telescopes.
- Telescope compatibility: Refractor, SCT
- Always on band, ovenized filter housing to maintain etalon temperature regardless of ambient temperature.
- Single-turn knob with 'center position detent' for wing shift adjustment of +/- 0.5 Å in 0.1 Å steps.
- Status LED indicates when filter is on band or settling to temperature.
- Vibration-free Dual MagLev fans for increased climate range.
- Clear and usable exit aperture: 20mm.
- Provides non-vignetted full disk views on telescopes up to 70 mm aperture.
- May be used on large aperture telescopes; subject to limited field of view.
- Accepts standard Quantum plates, providing mounting to T-thread, SCT thread, or 2" drawtube, for use with eyepieces or cameras.
- Compatible with standard DayStar ERFs or UV/IR cut filters
- Compatible with Quantum (3") plates

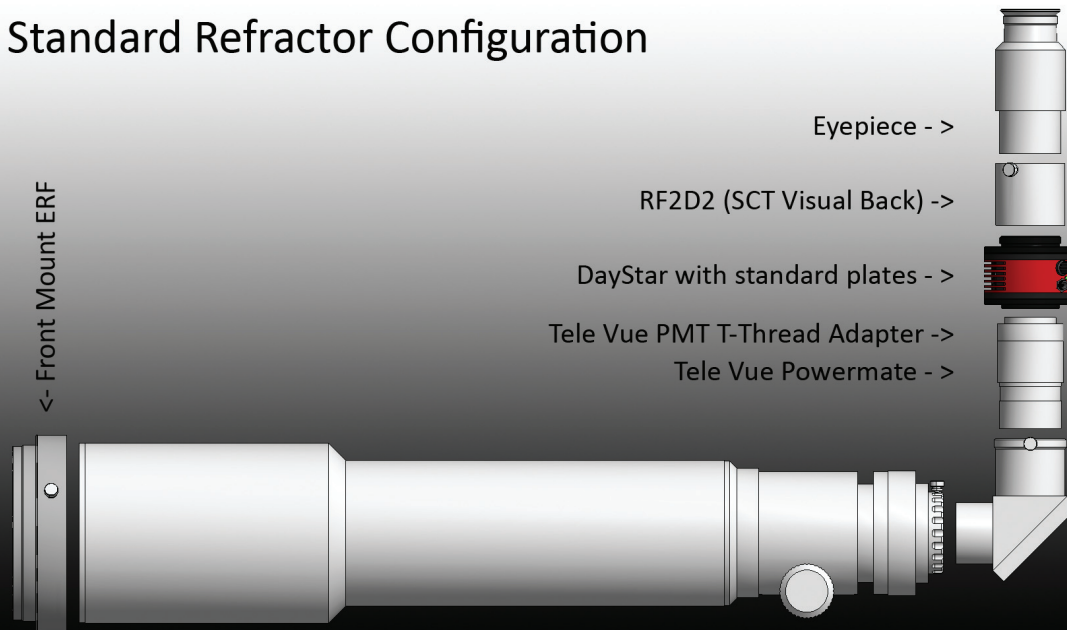


photos by Michael OConnell



DAYSTAR FILTERS

Standard Refractor Configuration



- Energy rejection pre-filter blocks UV light to protect telescope from overheating.
- Rear mounted requires ~ F/30 parallel light
- F/30 is reached with the appropriate barlow
- Tele Vue Powermate barlows offer true telecentric results. Other barlows will give a hot spot and vignetting.
- PMT adapters are suggested with Powermates
- DayStar comes with SCT male threaded back plate.
- RF2D2 visual back provides a drawtube
- We recommend Tele Vue Plossl eyepieces like the 55mm

Available DayStar Filter Accessories:

Filter Drawtubes and Snouts				Extra Daystar Filter End Plates			
Part No.	Description	Thread size	Price	Part No.	Description	Thread size	Price
GM-1D1	Front Male 1.25" OD drawtube -1.375	1.375x24	\$ 40.00	Q3GF1F	Quantum/ION Front flat plate	1.375x24	\$ 40.00
GM-2DT	Front Male 2" OD drawtube - T-thread	2 x 24	\$ 50.00	Q3GFTF	Quantum/ION Front flat plate	T-thread	\$ 40.00
GF-2SCT1	Front Female 2" SCT ring - T-thread mount	1.375x24	\$ 50.00	Q3GF2F	Quantum/ION Front flat plate	2 x 24	\$ 40.00
RF-1D1	Rear Female 1.25" ID drawtube - 1.375	1.375x24	\$ 40.00	Q3GW2F	Quantum/ION Front WEDGE plate	2 x 24	\$ 40.00
RF-2D2	Rear Female 2"ID drawtube - SCT	2 x 24	\$ 50.00	Q3RFCTM	Quantum/ION Rear Combo Plate	T-thread & 2x24	\$ 40.00
Viewing Aids				End Dust Caps			
Part No.	Description	Size	Price	Part No.	Description	Size	Price
MG0408	Interference Eliminator	T-Thread	\$ 395.00	1FCAP	1.25" female plastic cap	1.25 OD	\$ 4.00
SR60AI	SolaREDi Aperture Iris	0-60mm	\$ 395.00	1MPLUG	1.25" male plastic plug	1.25 ID	\$ 4.00
SR60FEX	SolaREDi Extended Foot	Vixen x 6"	\$ 45.00	TMPLUG:	T-thread Male Quantum Cap	T-Thread	\$ 12.00
				2FCAP	SCT/2" female rubber cap	2"	\$ 12.00



SCT Configuration
Off-Axis
Reduced Aperture



Refractor Configuration
On-Axis
Reduced Aperture



Refractor Configuration
On-Axis -w/ Barlow lens
Full Aperture

Powermate Chart:

- F/15 = 2X Powermate
- F/11- F/12 = 2.5X Powermate
- F/7- F/8 = 4X Powermate
- F/5.5 - F/6 = 5X Powermate

Don't know your F/Ratio?

Divide its Focal Length by the Aperture
1200mm EFL / 150mm = F/7.89

DAYSTAR FILTERS

QUANTUM SE
Hydrogen Alpha Filter

Hydrogen Alpha Filter Assembly

- Fully blocked Optical Filter from X-Ray to beyond 2.0 microns
- Precision Electronically tuned housing maintains Center Wave Length tuning accurate to 0.01Å
- Yellow/Green On/Ready indication light
- May be used on any aperture telescope 50mm - 1000mm
- Digital wavelength readout display
- Offers precision wavelength wing shift tuning of +/- 1.0Å
- Serial Port offers remote operation via Windows control software
- Operates on 12VDC with included 110-240VAC wall adapter
- Includes 6 ft. power extension cord
- Can operate off battery power or even solar panel.
- 10 year warranty

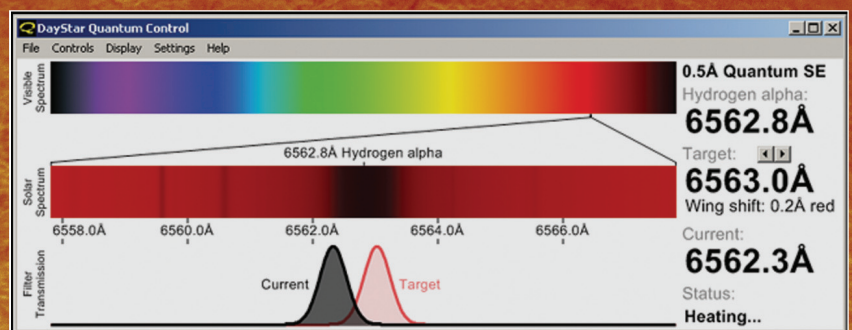


0.7Å Quantum SE: \$3500
0.6Å Quantum SE: \$4800
0.5Å Quantum SE: \$6000
0.4Å Quantum SE: \$7400
0.3Å Quantum SE: \$9000

- Superior solid-state etalon technology
- Adaptability in a choice of platforms
- Unlimited Resolution

The Quantum SE grade series are designed for most amateur and some academic applications. These filters meet the critical DayStar quality control criteria applicable in all visual and some photographic environments

Each Quantum filter is loaded with 38 years of DayStar quality experience. Our proven optical design has stood the test of time; with many filters still in service after more than 30 years.



DayStar Quantum Control Software allows owners to operate status, ON/OFF and wing shift of up to 4 filters remotely via serial cable.

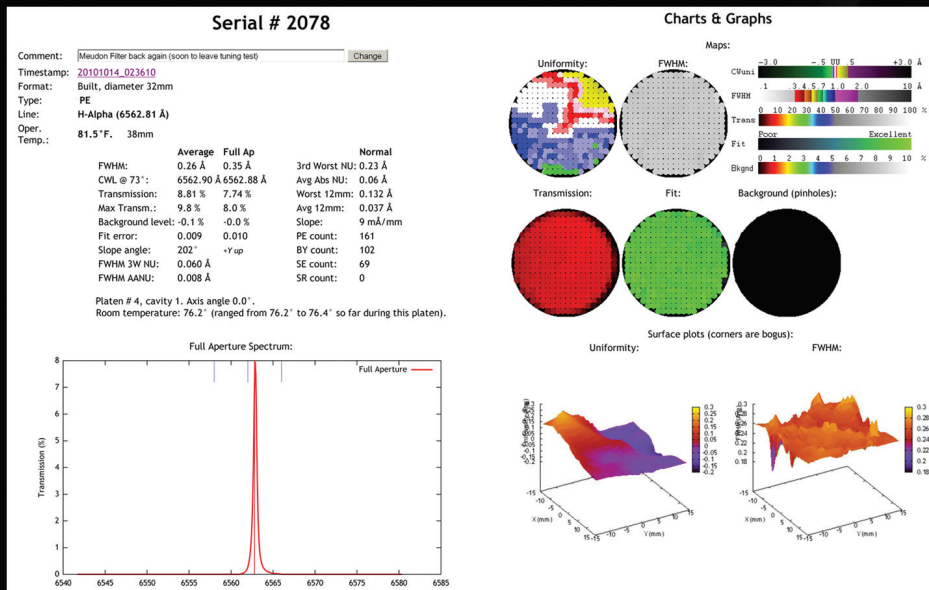
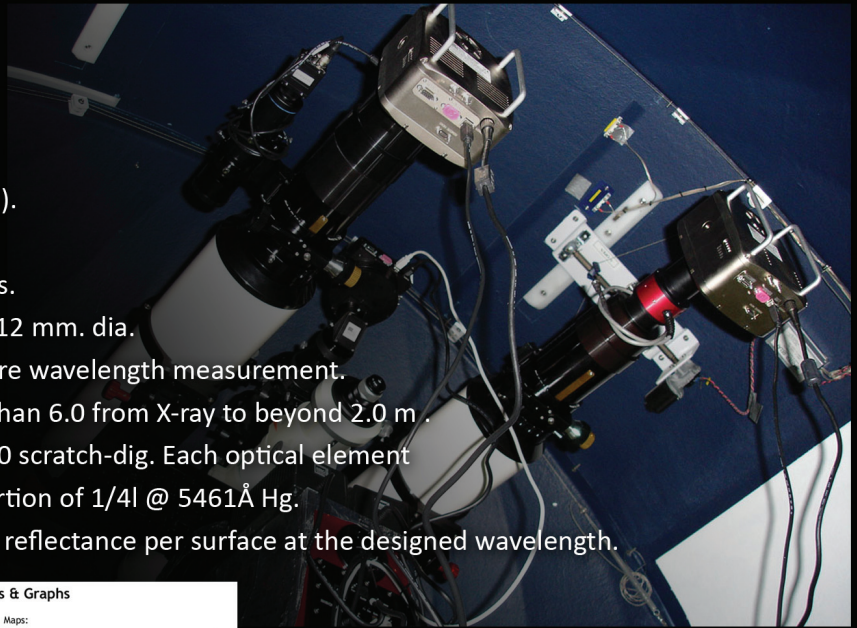
DAYSTAR FILTERS

Hydrogen Alpha **QUANTUM PE** Grade Filters

Our Quantum PE grade series is designed for professional research studies and applications in which precision homogeneity and onband transmittance values across the substrate surface are required. These filters require additional quality control steps and additional fabrication and testing time.

Specifications:

- Clear and usable aperture: 32 mm. (1.25").
- Bandwidth measurement: Full aperture 32 mm. (1.25").
- Fully blocked transmittance: 4%-10% of polarized light.
Lower values correspond to narrower bandwidth filters.
- Spectral uniformity: The mean peak wavelength of all 12 mm. dia. areas shall be within ± 0.05 angstrom of the full aperture wavelength measurement.
- Off-band rejection: Average optical density is greater than 6.0 from X-ray to beyond 2.0 μ m.
- Optical components: BK-7 grade A, fine annealed 60-40 scratch-dig. Each optical element other than the etalon has a maximum wave front distortion of $1/4\lambda$ @ 5461Å Hg.
- Air-glass interfaces are V-coated for a maximum of 0.2% reflectance per surface at the designed wavelength.



QUANTUM PE Pricing:

Quantum PE 0.8 = \$ 4625.00
 Quantum PE 0.7 = \$ 6000.00
 Quantum PE 0.6 = \$ 7000.00
 Quantum PE 0.5 = \$ 9000.00
 Quantum PE 0.4 = \$11000.00
 Quantum PE 0.3 = \$14000.00

Note: Filters for use in Pupil-plane applications require custom quotation.

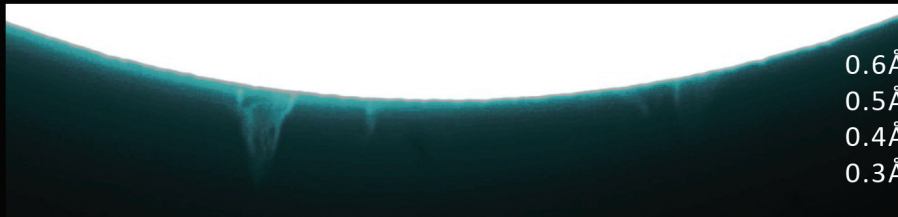
Daystar Filters is pleased to offer new, high resolution spectrographic scanning services for all our Quantum PE clients. Our new, specially engineered spectroscopic testing equipment provides high resolution mapping of all new DayStar Filters we manufacture.

PE grade filters are manufactured and qualified to a spectral uniformity in CWL (Central Wavelength) accuracy of ± 0.05 angstrom*. Our high resolution etalon mapping equipment offers qualification certified accurate by independent testing with etalon transmission sample sizes of 5mm, 2mm or 1mm sample sizes with certification printouts available on new PE filter purchases.



DAYSTAR FILTERS

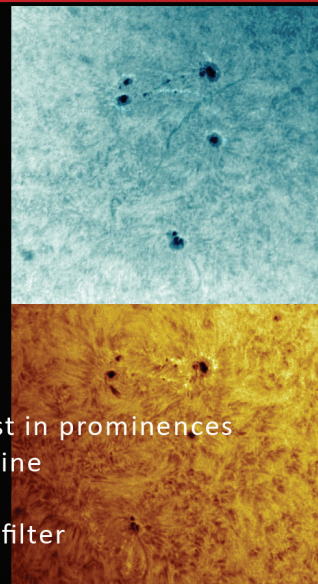
HYDROGEN BETA FILTERS



0.6Å CWL: 4861.34Å - \$4800
0.5Å CWL: 4861.34Å - \$6000
0.4Å CWL: 4861.34Å - \$7400
0.3Å CWL: 4861.34Å - \$9000

Another interesting line to observe the sun: Hydrogen Beta line of 4861.34Å. The human eye is twice as efficient at the 4861Å line than at Hydrogen Alpha's 6563Å. This makes a large perceived difference for visual only observers, offering impressive contrast in prominences. At a lower energy level, the H beta line also shows different surface detail than the H alpha line.

H beta filters require F/30 light. Daystar recommends use on refractors with IDAS UV/IR cut filter.



CALCIUM II H VISUAL FILTERS

5.0Å CWL: 3968.5Å - \$4000

Designed for the amateur visual observer, the Calcium II H-line wavelength is significantly easier to see than K-line. It is 30Å higher into the visual spectrum. The H-line offers the same view and features as K-Line.

Ca II filters are designed for use at F/15 - F/20. Daystar Recommends use on Refractors only with IDAS UV/IR cut filter.

CALCIUM II K LINE FILTERS

2.0Å CWL: 3933.7Å - \$5800

Research grade Ca II K-Line filters are used primarily for academic studies of altitude of the solar atmosphere.

Quantum control is ideal for tuning within the K-Line to subordinate lines of Calcium for photographic studies. CCD sensors have high sensitivity in this wavelength and image well.

Ca II filters are designed for use at F/15 - F/20. Daystar Recommends use on Refractors only with IDAS UV/IR cut filter.



SODIUM D LINE FILTERS



0.4Å SE GRADE TSCANNER: \$4500.00

0.4Å PE GRADE QUANTUM: \$7200.00

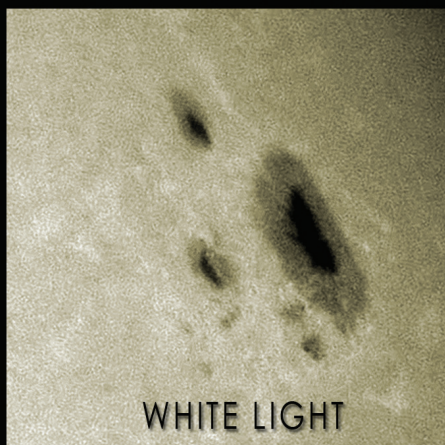
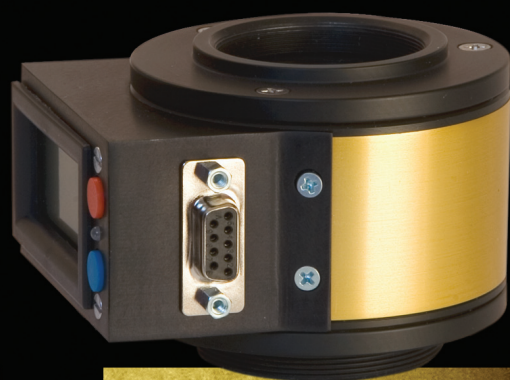
Sodium D Line filters are used at Mt. Wilson for doppler shift studies. Sodium D line filters are also used to observe emission lines of Io and long period comets. Amateur observers use sodium line filters for advanced sunspot detail studies in high resolution.

HELIUM D3 LINE FILTERS

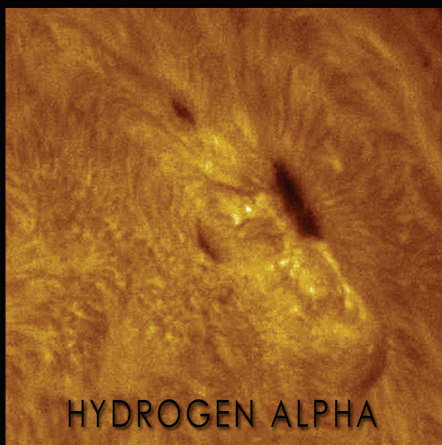
0.4Å He D3 PE GRADE: \$12000.00

0.3Å He D3 PE GRADE: \$15500.00

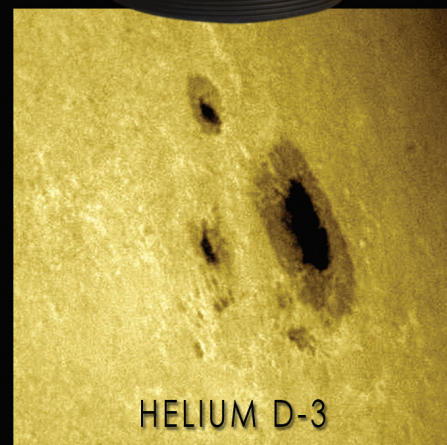
Only from Daystar; He D3 filters reveal a different view of prominences, plages, very fine granulation and sunspot penumbral detail as Helium and Hydrogen react in active regions on the Sun. He D3 line reveals fine detail in super-granulation and studies also reveal flare footprint emissions. Isolating He D3 requires extremely high precision uniformity and tuning.



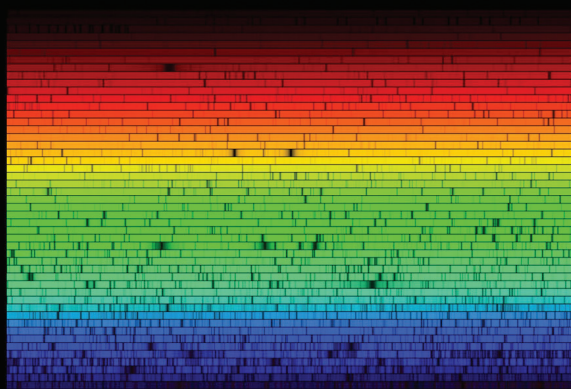
WHITE LIGHT



HYDROGEN ALPHA



HELIUM D-3



CUSTOM WAVELENGTHS:

DayStar Filters manufactures custom wavelength or bandpass filters for research applications from time to time.

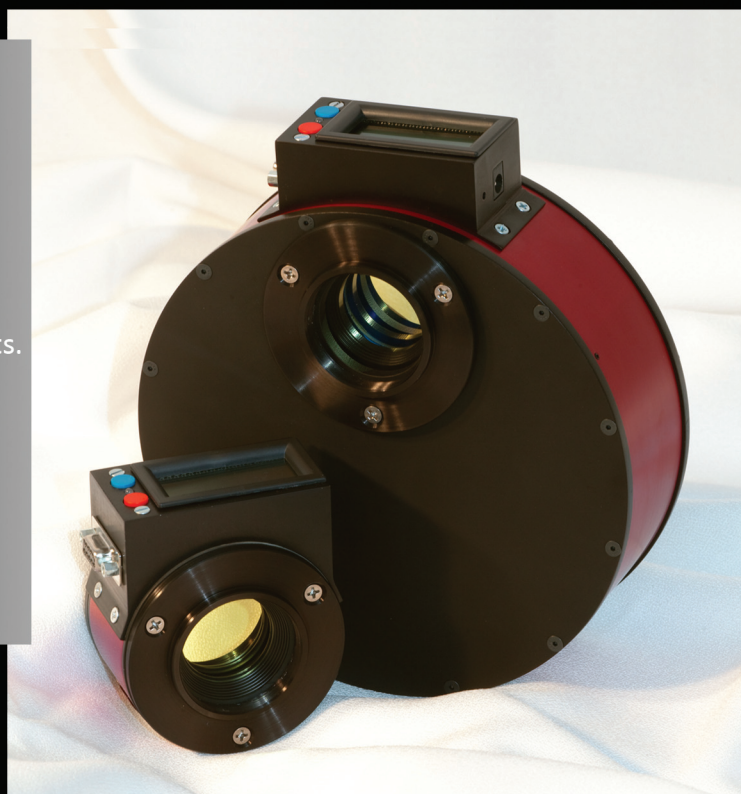
DayStar Filters manufactures filters from 375 - 750nm wavelength in bandpasses from 0.2Å to 10Å

DayStar Filters is currently working to introduce Hydrogen Beta wavelength filters. *See our website for details.*

SOLAR SYSTEM FILTER WHEEL

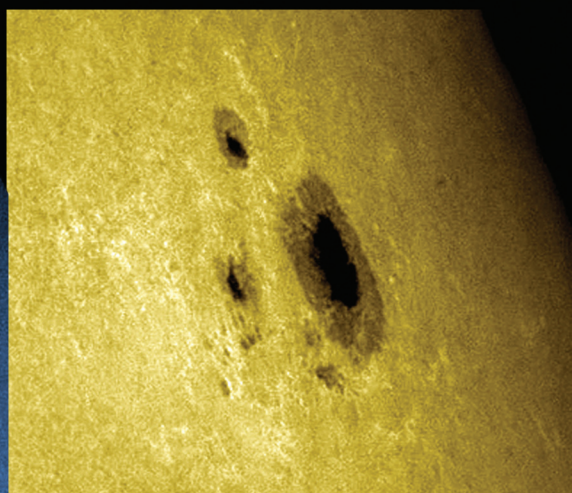
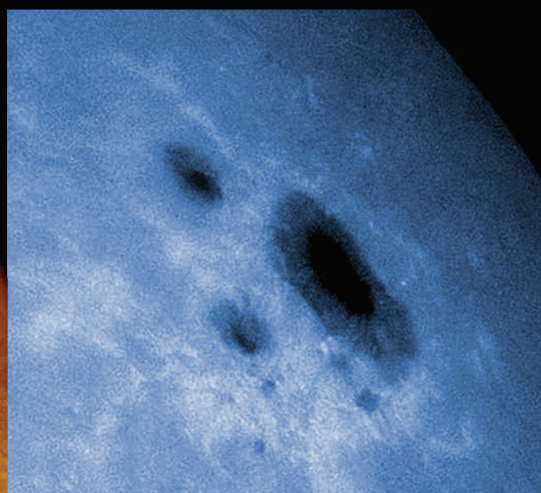
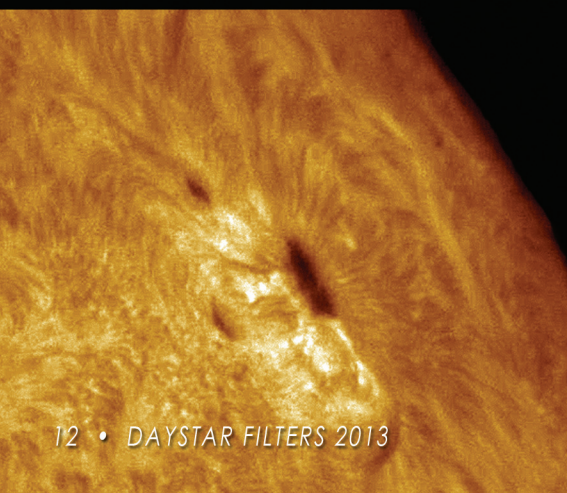
Compare and Contrast at the Push of a Button

- Employ up to 4 separate Optical Filters in one streamlined filter wheel unit
- Push Button filter switch
- Push Button wing shift tuning.
- Same precision Quantum Control as single filter units.
- Package Ha, Ca II, Na or He D3
- Fully remotely operable, no compromises.
- Old filters may be moved into the *Solar System Filter Wheel*.
- Start with 2 or 3 filters and add more later.
- Custom configured to your project needs.



Sample Packages:

Move your existing filters into the Filter Wheel:	\$ 4950.00
Your existing filter plus an additional 0.7Å SE Ha:	\$ 8450.00
.5Å SE Ha / .7Å SE Ha:	\$14450.00
.5Å SE Ha / .7Å SE Ha / 5.0Å Ca II H Line:	\$18450.00
.5Å SE Ha / .4Å SE NaD Line / 2Å Ca II K Line:	\$19000.00
.7Å SE Ha / .5Å SE Ha / .4Å SE Ha:	\$21850.00
.7Å SE Ha / .5Å SE Ha / 5.0Å Ca II H / 2.0Å Ca II K Line:	\$24250.00
.7Å SE Ha / .6Å SE Ha / .5Å SE Ha / .4Å SE Ha:	\$26650.00
.7Å PE Ha / .5Å PE Ha / 5.0Å Ca II H / 2.0Å Ca II K Line:	\$29750.00
.7Å SE Ha / .4Å PE Ha / 5.0Å Ca II K Line / 0.3Å PE He D3:	\$40750.00



DAYSTAR FILTERS

SOLAR SYSTEM FILTER WHEEL

Limit Switch: used for positional accuracy
The Solar System always knows what position it is in.

Up to 4 cavities in each filter wheel:
Wheels with less than 4 full cavities are loaded with blanks for safety.

Q3GFTF: Same DayStar mounting plates mate to T-thread or SCT.

Wheel Gears: Assembly rotates when smaller gear rotates against larger gear

Heater control board:
Simultaneously controls heat tuning of all cavities.
ALL FILTERS ARE ALWAYS ON-BAND

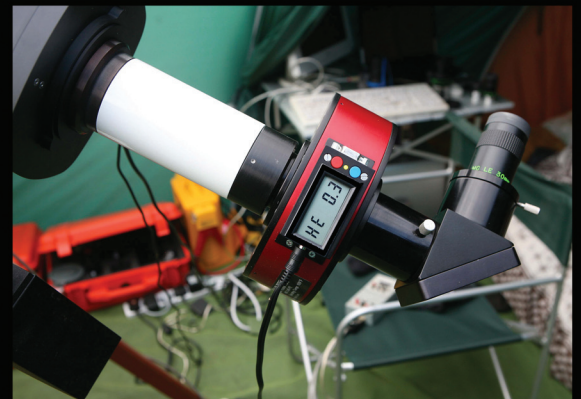
Serial Port: Offers remote operation of wheel functions from remote computer. Change position, Wing shift. Sleep. Button Lockout.

Quantum Control Faceplate:
Control functions of position, wing shift from buttons with LCD readout.

Fully Computerized Solar Filter System of the future:

Perfect for researchers who need instant comparison of one wavelength or bandpass vs. another.

Great for outreach to demonstrate differences between wavelengths or bandpasses and various features not possible with one filter.



DAYSTAR FILTERS RESEARCH CLIENTS

DayStar Filters continues to offer world class professional products to the research market. Notable recent work includes:

2010-2012: Harvard / Smithsonian
Astrophysical Observatory
Sounding rocket suborbital mission

2009-2010: National Solar Observatory
Gong project at 6 installations:

- Big Bear / MLSO / Cerro Tololo /
- El Teide / Learmonth / Udaipur

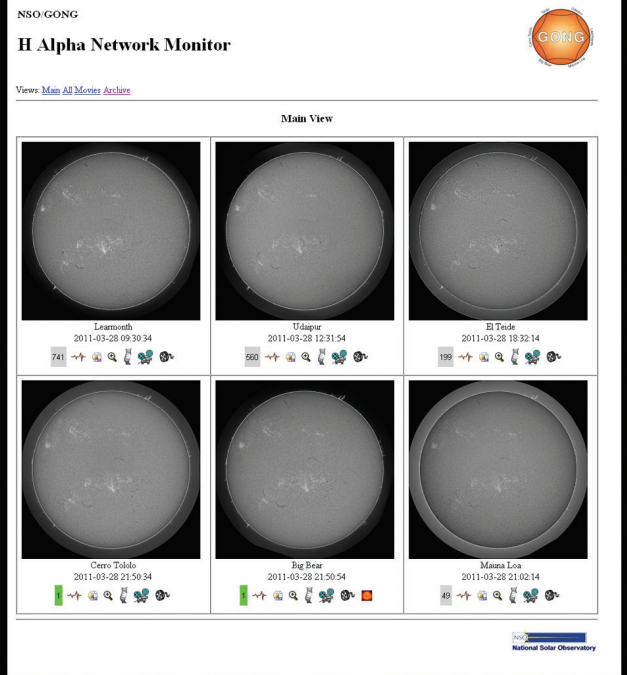
2009-2010: Meudon Observatory, France
0.3Å pupil plane research filter

2010: Yunan Astronomical Observatory
1 meter solar telescope

Other prominent clients include:

Mt. Wilson, Macdonald Observatory, NASA Goddard, Kitt Peak, Pulkovo, EST and others.

DAYSTAR FILTER FLEW ON
NAVAL RESEARCH LAB'S HRTS
SPACE LAB 2, SPACE SHUTTLE
CHALLENGER MISSION: STS-51F



RESTORATION SERVICES

- BLOCKERS AND TRIMMERS REPLACED: \$750.00
- QUANTUM HOUSING UPGRADE: \$750.00
- T-SCANNER - ION HOUSING UPGRADE: \$900.00
- CLEAN AND CHECK SERVICE: \$250.00



HALLE (LYOT STYLE) FILTER POWER CONTROL UPGRADE: \$1150.00

Many Daystar filters have been in operation for over 25 years. All new products carry a 5 or 10 year transferrable factory warranty. Older filters which may experience aging can be fully restored to like-new condition. After 10-15 years, filters may darken and require new blockers and trimmers. Etalons may be upgraded to narrower bandpass. Heaters may also be upgraded to new body styles of Quantum and ION. Repairs come with a limited 10 year factory warranty*.

* Blocker and Trimmer warranty not available on filters still in older ATM style housings.

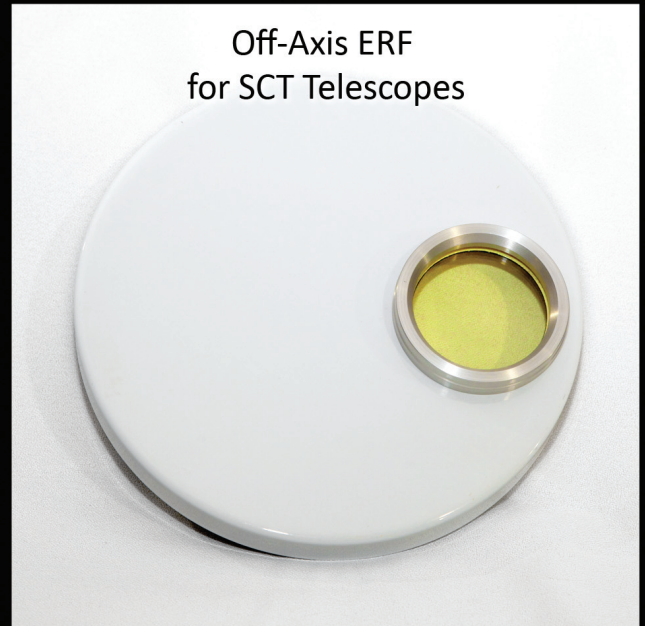
Energy Rejection Filters

An Energy Rejection Filter is used over the front objective of telescopes using rear mounted ION and Quantum filters. All Energy Rejection Filters are priced by clear aperture.

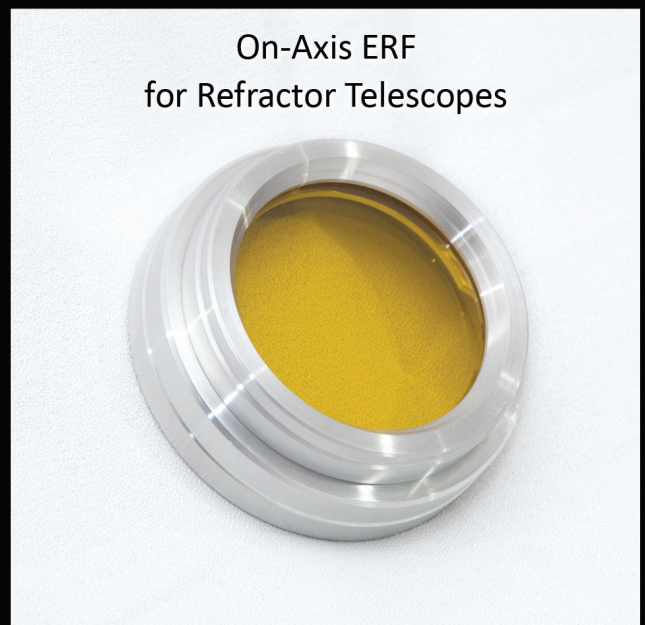
Includes: glass, cell, telescope end cap, felt & Nylon Set Screws.

DayStar SKU#	Instrument	Clear Ap in mm	Tube OD in mm	Price
E-160N125	Astro Physics 130mm	130	160	\$ 750.00
E-190N150	Astro Physics 155mm	155	190	\$ 900.00
E-105N90	Astro Physics 92mm	92	100	\$ 450.00
E-150N100	Astro Tech 111mm	111	149	\$ 600.00
E-120N100	Borg 100ED/101ED	100	115	\$ 505.00
E-140N125	Borg 125mm	125	140	\$ 750.00
E-150N100	Celestron Advanced 100mm	100	146	\$ 505.00
E-190N150	Celestron Advanced 150mm	150	181	\$ 900.00
E-320F100	Celestron C-11	90	317	\$ 450.00
E-405F120	Celestron C-14	114	400	\$ 600.00
E-150N125	Celestron C-5	125	152	\$ 750.00
E-233F63	Celestron C-8	63	233	\$ 350.00
E-273F80	Celestron C-9.25	80	273	\$ 400.00
E-150N100	Celestron Omni 102mm	100	145	\$ 505.00
E-305F80	Meade LX200 - 10"	80	305	\$ 400.00
E-347F100	Meade LX200 - 12"	100	349	\$ 505.00
E-405F120	Meade LX200 - 14"	114	406	\$ 600.00
E-445F120	Meade LX200 - 16"	125	447	\$ 750.00
E-233F63	Meade LX200 - 8"	63	233	\$ 350.00
E-290F90P	Mewlon 250	90	290	\$ 450.00
E-160N125	Orion 130mm Spaceprobe	130	167	\$ 750.00
E-95N70	Orion 60mm Observer	60	94	\$ 350.00
E-105N70	Orion 70 Refractor	70	110	\$ 350.00
E-120N100	Orion ED 102mm	100	116	\$ 505.00
E-105N80	Orion ED 80mm	80	104	\$ 400.00
E-150N125	Orion EON 120mm	125	147	\$ 750.00
E-105N80	Orion Short tube 80mm	80	104	\$ 400.00
E-140N100	StellarVue 102mm	102	123	\$ 505.00
E-140N100	StellarVue 105mm	100	135	\$ 505.00
E-140N100	StellarVue 110mm	110	140	\$ 505.00
E-140N100	StellarVue 115mm	115	140	\$ 600.00
E-160N125	StellarVue 130mm	130	157	\$ 750.00
E-95N70	StellarVue 70mm	70	93	\$ 350.00
E-105N80	StellarVue 80mm ED	80	103	\$ 400.00
E-120N90	StellarVue 90mm	90	114	\$ 450.00
E-150N100	Takahashi FS 102mm	100	146	\$ 505.00
E-85N60	Takahashi FS-60mm	60	82	\$ 350.00
E-120N80	Takahashi FSQ-85mm	80	114	\$ 400.00
E-120N90	Takahashi Sky 90mm	90	114	\$ 450.00
E-190N150	Takahashi TOA 130mm	130	181	\$ 750.00
E-215N150	Takahashi TOA 150mm	150	212	\$ 900.00
E-150N125	Takahashi TSA 120mm	120	145	\$ 720.00
E-140N100	Tele Vue 102mm	100	127	\$ 505.00
E-95N70	Tele Vue 76mm	75	95	\$ 350.00
E-120N80	Tele Vue 85mm	85	114	\$ 400.00
E-140N100	Tele Vue NP 102mm	100	127	\$ 505.00
E-160N125	Tele Vue NP 127mm	127	160	\$ 750.00
E-140N100	Vixen AX103mm	100	140	\$ 505.00
E-120N100	Vixen ED 100mm	100	116	\$ 505.00
E-140N100	Vixen ED 115mm	115	140	\$ 600.00
E-120N80	Vixen ED 80mm	80	116	\$ 400.00
E-105N80	Vixen ED 81mm	80	101	\$ 400.00
E-120N100	WO FLT 110mm	110	115	\$ 505.00
E-140N125	WO FLT 132mm	125	141	\$ 750.00
E-120N90	WO Megrez 90mm	90	120	\$ 450.00

Off-Axis ERF
for SCT Telescopes



On-Axis ERF
for Refractor Telescopes



UV/IR Cut Filter Energy Rejection for Refractors:

In Refractor applications, a rear-mounted UV/IR cut filter may sometimes be used for energy rejection instead of or in conjunction with front mount ERF filters.

When UV/IR Cut Filter is used for energy reflection, it must be threaded onto the element which first encounters concentrated light. If the telescope has near-focus elements which prohibit introduction of the UV/IR Cut Filter before them, then a UV/IR ERF cannot be used.

UV/IR Cut Filter ERF's are not suggested for reflector telescopes or oil-spaced triplets.

DAYSTAR SOLAR FILTERS

2013 Catalog

80mm SolaREDi telescopes from \$3500

127mm SR127 Solar Telescope from \$4995

.7Å ION Solar filters from \$2100

.5Å ION Solar Filters from \$3350

7Å Quantum Filters from \$3200

.5Å Quantum Filters from \$6000

World's First 4-cavity Solar Filter Wheel

Ca II K Line, Ca II H Line,

Na D Line, He D3 Line, H Beta

DAYSTAR FILTERS
by Company Seven

Company Seven

ASTRO-OPTICS DIVISION

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