Bright Nebulae
Imaging Field Guide

Sharpless 2 emission · van den Bergh reflection · Lynds Bright Nebulae

Curated targets with focal length, filter, and integration recommendations

How to use this guide

This is an imaging-focused reference for the most-photographed bright nebulae in the northern sky. Each entry includes the catalog ID and aliases, coordinates, angular size, the season when it's best placed, and the month it crosses the meridian (peak altitude). The imaging notes give recommended focal length range, filter approach, typical integration time, and camera type — the specifics you actually need before pointing a rig at a target. Difficulty ratings are **imaging-difficulty**, not visual: a bright Hα target like the North America Nebula is BEGINNER even though it's invisible visually. EXPERT targets typically require 20+ hours of integration, narrowband-only signal (no Hα to lean on), and dark skies.

Imaging difficulty

- ●○○○ **Beginner** · bright signal, short integration (3–6h), forgiving of light pollution
- ●●○○ **Moderate** · standard narrowband target, 6–12h integration, OSC-friendly with duo-narrowband
- ●●●○ **Advanced** · faint OIII signal or multi-element composition, 10–20h, mono+filters preferred
- ●●●● **Expert** · OIII-only or integrated flux nebulae, 20+h required, dark skies essential

Quick imaging glossary

Hα · OIII · SII	The three main emission lines used in narrowband imaging. Hα (red, 656nm) — bright in most nebulae. OIII (teal, 501nm) — fainter, reveals shells and bubbles. SII (deep red, 672nm) — adds gold/orange tones in the SHO palette.
SHO / HOO palettes	SHO = SII→red, Hα→green, OIII→blue (Hubble palette, gold-and-teal look). HOO = Hα→red, OIII→green and blue (more 'natural' red emission). Both are post-processing choices.
Mono vs OSC	Mono cameras image one channel at a time through filters — better signal-to-noise for narrowband. OSC (one-shot color) DSLRs and dedicated cameras with duo-narrowband filters now compete well for Hα/OIII targets.
Integration time	Total summed exposure across many short subs (often 60–300s each). 'Good' signal usually means 6–10h for bright Hα; 15–30h for OIII-only; 30+h for IFN and supernova remnants.
Meridian month	When the target crosses your local meridian (due south at peak altitude) at midnight. Best altitude window for that target. Image within ~2 hours of meridian for minimum atmospheric distortion.

SHARPLESS 2 EMISSION NEBULAE

Stewart Sharpless catalog of HII emission regions

1959 · 313 objects total

Compiled at the U.S. Naval Observatory by Stewart Sharpless, the second edition of the catalog (1959) listed 313 emission nebulae across the northern and equatorial sky. These are clouds of ionized hydrogen lit by nearby hot stars — the bread and butter of narrowband astrophotography. We're including 29 of the most-imaged Sharpless objects below; many also carry NGC, IC, or popular nicknames.

Sh2-101 · Tulip Nebula ★ FEATURED

●●○○ MODERATE

emission · Cygnus · 20h 00m +35° 19' · size 16'×9' · **best Jul–Oct**, meridian Aug

Imaging **focal** 600–1200mm · **filters** Hα + OIII; SHO palette stunning · **integration** 5–8h

Camera Mono+filters preferred; OSC w/ duo-narrowband works

Notes Tulip-shaped emission with the Cygnus X-1 black hole nearby in same wide field. SHO reveals layered structure; pairs beautifully with surrounding dark dust.

Sh2-105 · Crescent Nebula, NGC 6888 ★ FEATURED

●●○○ MODERATE

emission · Cygnus · 20h 12m +38° 21' · size 18'×12' · **best Jul–Oct**, meridian Aug

Imaging **focal** 800–1500mm · **filters** Hα + OIII essential; OIII reveals the bubble · **integration** 8–15h

Camera Mono+filters strongly preferred for OIII signal

Notes Wolf-Rayet wind bubble. Bright Hα crescent surrounds faint OIII outer shell — long OIII integration is the key. Sits in rich Cygnus emission complex.

Sh2-106

●●●○ ADVANCED

emission · Cygnus · 20h 27m +37° 23' · size 3'×3' · **best Jul–Oct**, meridian Aug

Imaging **focal** 1500–2500mm · **filters** Hα + OIII or RGB · **integration** 5–10h

Camera Any setup; small target rewards long focal length

Notes Compact bipolar nebula around a young star. Looks like miniature angel wings; rare for a deep-sky object you can image at high magnification.

Sh2-115

●●●○ ADVANCED

emission · Cygnus · 21h 02m +52° 21' · size 30' · **best Aug–Nov**, meridian Sep

Imaging **focal** 400–800mm · **filters** Hα + OIII; SHO recommended · **integration** 10–15h

Camera Mono+filters recommended

Notes Faint emission with the planetary nebula Abell 71 superimposed — interesting two-target frame. Low surface brightness, needs dark skies.

Sh2-117 · NGC 7000 North America Nebula ★ FEATURED

●○○○ BEGINNER

emission · Cygnus · 20h 59m +44° 32' · size 120'×100' · **best Jul–Oct**, meridian Sep

Imaging **focal** 200–400mm · **filters** Hα bright; SHO or HOO works · **integration** 3–6h

Camera Any camera; wide-field DSLR/OSC excellent for beginners

Notes Continent-shaped emission cloud easily framed with the nearby Pelican (IC 5070). One of the easiest beginner narrowband targets — bright Hα signal, forgiving.

Sh2-119

●●●○ ADVANCED

emission · Cygnus · 21h 19m +43° 56' · size 60'×60' · **best Jul–Oct**, meridian Sep

Imaging **focal** 300–600mm · **filters** Hα + OIII; SHO · **integration** 8–12h

Camera Mono+filters preferred

Notes Often-overlooked large emission region near 68 Cyg. Includes intricate filaments and dark dust lanes. Wide field captures with surrounding Cygnus complex.

Sh2-129 · Squid Nebula (with Ou4) ★ FEATURED

●●●● EXPERT

emission · Cepheus · 21h 12m +59° 57' · size 60' · **best Aug–Nov**, meridian Sep

Imaging **focal** 400–800mm · **filters** OIII essential; OIII-only or HOO · **integration** 20–40h OIII

Camera Mono+OIII filter — the only realistic path

Notes Famously challenging. Sh2-129 is bright Hα; embedded inside is Ou4, a giant blue-green OIII squid-shaped outflow that took years to image properly. A bucket-list target for serious narrowband imagers.

Sh2-132 · Lion Nebula ★ FEATURED

●●●○ ADVANCED

emission · Cepheus · 22h 19m +56° 04' · size 75'×45' · **best Aug–Nov**, meridian Oct

Imaging **focal** 300–600mm · **filters** Hα + SII + OIII for SHO · **integration** 10–15h

Camera Mono+filters preferred

Notes Lion-profile emission complex with embedded Wolf-Rayet stars driving bright bubbles. Rich SHO palette target — gold and teal contrast from SII and OIII.

Sh2-140

●●●○ ADVANCED

emission · Cepheus · 22h 19m +63° 17' · size 10' · **best Aug–Nov**, meridian Oct

Imaging **focal** 1000–1800mm · **filters** Hα + IR; broadband for embedded stars · **integration** 8–12h

Camera Mono+filters

Notes Compact star-forming region; embedded young stars shine through bright Hα. Less commonly imaged but rewards higher resolution.

Sh2-142 · Wizard Nebula, NGC 7380 ★ FEATURED

●●○○ MODERATE

emission · Cepheus · 22h 47m +58° 06' · size 25' · **best Aug–Nov**, meridian Oct

Imaging **focal** 600–1000mm · **filters** Hα + OIII + SII; SHO classic · **integration** 8–12h

Camera Mono+filters preferred

Notes Wizard-silhouette emission with bright open cluster NGC 7380 inside. Classic SHO palette target; the wizard hat shape comes out clearly with good SII signal.

Sh2-155 · Cave Nebula ★ FEATURED

●●○○ MODERATE

emission · Cepheus · 22h 56m +62° 37' · size 50'×30' · **best Aug–Nov**, meridian Oct

Imaging **focal** 500–1000mm · **filters** Hα + OIII; SHO or HOO · **integration** 8–15h

Camera Mono+filters preferred; OSC w/ duo-narrowband acceptable

Notes Dramatic dark 'cave' carved by the bright young star inside. Pairs naturally with Sh2-157 (Lobster Claw) at 200–300mm wide field. Subtle red emission against star-rich background.

Sh2-157 · Lobster Claw Nebula ★ FEATURED

●●●○ ADVANCED

emission · Cassiopeia · 23h 16m +60° 27' · size 60'×30' · **best Aug–Nov**, meridian Oct

Imaging **focal** 400–800mm · **filters** Hα + SII + OIII; SHO for color · **integration** 10–15h

Camera Mono+filters preferred

Notes Claw-shaped emission with the bright Wolf-Rayet bubble NGC 7635 (Bubble) at one end. Best framed wide with Sh2-155 (Cave) and the Bubble in single shot.

Sh2-162 · Bubble Nebula, NGC 7635 ★ FEATURED

●●○○ MODERATE

emission · Cassiopeia · 23h 21m +61° 12' · size 15'×8' · **best Aug–Nov**, meridian Oct

Imaging **focal** 1000–2000mm · **filters** Hα + OIII essential · **integration** 10–18h

Camera Mono+filters strongly preferred

Notes Iconic stellar wind bubble blown by hot O-type star. Bright Hα; OIII reveals the spherical shell crisply. Pairs with M52 nearby for wide field at ~600mm.

Sh2-171 · NGC 7822, Cederblad 214 ★ FEATURED

●●○○ MODERATE

emission · Cepheus · 00h 03m +67° 09' · size 60'×40' · **best Sep–Dec**, meridian Nov

Imaging **focal** 400–700mm · **filters** Hα + OIII + SII; SHO standard · **integration** 8–15h

Camera Mono+filters preferred

Notes Vast emission complex with sculpted pillars and embedded young cluster. Cederblad 214 is the bright knot. Rich SHO target — great gold/teal/red contrast.

Sh2-184 · Pacman Nebula, NGC 281 ★ FEATURED

●●○○ MODERATE

emission · Cassiopeia · 00h 53m +56° 38' · size 35' · **best Sep–Dec**, meridian Nov

Imaging **focal** 600–1200mm · **filters** Hα + OIII; SHO works well · **integration** 6–10h

Camera Mono+filters or OSC w/ duo-narrowband

Notes Pac-Man shape from a dark dust intrusion biting into the bright Hα emission. Beginner-friendly narrowband; the 'mouth' is unmistakable.

Sh2-190 · Heart Nebula, IC 1805 ★ FEATURED

●●○○ MODERATE

emission · Cassiopeia · 02h 33m +61° 27' · size 150'×120' · **best Oct–Jan**, meridian Dec

Imaging **focal** 200–500mm · **filters** Hα + OIII + SII for SHO · **integration** 6–12h

Camera Mono+filters or OSC w/ dual-narrowband

Notes Heart-shape emission with embedded Melotte 15 cluster. Pairs naturally with Soul (Sh2-199) in wide-field 135mm or shorter. Iconic winter narrowband target.

Sh2-199 · Soul Nebula, IC 1848 ★ FEATURED

●●○○ MODERATE

emission · Cassiopeia · 02h 55m +60° 26' · size 150'×75' · **best Oct–Jan**, meridian Dec

Imaging **focal** 200–500mm · **filters** Hα + OIII + SII for SHO · **integration** 6–12h

Camera Mono+filters or OSC w/ dual-narrowband

Notes Embryo-shaped companion to Heart. Combine both at very wide field (85–135mm) for famous Heart-and-Soul mosaic. Rich SHO color palette.

Sh2-216

●●●● EXPERT

emission · Perseus · 04h 43m +46° 42' · size 100' · **best Nov–Feb**, meridian Dec

Imaging **focal** 200–400mm · **filters** OIII essential; very faint · **integration** 20–40h OIII

Camera Mono+OIII filter only

Notes Closest-known planetary nebula to Earth (~130 ly). Enormous angular size but extremely faint surface brightness. Real test of OIII technique and dark skies.

Sh2-220 · California Nebula, NGC 1499 ★ FEATURED

●●○○ MODERATE

emission · Perseus · 04h 03m +36° 25' · size 150'×40' · **best Nov–Feb**, meridian Dec

Imaging **focal** 200–400mm · **filters** Hα strong; HOO or SHO · **integration** 5–10h

Camera Any camera; OSC + duo-narrowband works

Notes California-shaped emission lit by hot Menkib star. Long, thin shape needs landscape framing. Bright Hα makes it easy in narrowband even with light pollution.

Sh2-240 · Spaghetti Nebula, Simeis 147 ★ FEATURED

●●●● EXPERT

supernova remnant · Taurus/Auriga · 05h 41m +28° 00' · size 180'×180' · **best Dec–Mar**, meridian Jan

Imaging **focal** 200–400mm · **filters** Hα + OIII essential; both required for character · **integration** 20–40h

Camera Mono+filters strongly preferred

Notes Massive ancient supernova remnant — filaments span 3 degrees. Extremely faint, requires dark skies and long integration. One of the highest-prestige imaging targets.

Sh2-249 · Jellyfish Nebula, with IC 443 ★ FEATURED

●●●○ ADVANCED

supernova remnant · Gemini · 06h 17m +22° 47' · size 50'×40' · **best Dec–Mar**, meridian Jan

Imaging **focal** 500–1000mm · **filters** Hα + OIII essential · **integration** 10–18h

Camera Mono+filters preferred

Notes Tentacled SNR shape with the bright bubble Sh2-249 nearby. Pairs with NGC 2174 (Monkey Head) in nearby region for wide-field framing.

Sh2-261 · Lower's Nebula

●●●○ ADVANCED

emission · Orion · 06h 09m +15° 42' · size 60'×30' · **best Dec–Mar**, meridian Jan

Imaging **focal** 400–800mm · **filters** Hα; SHO works · **integration** 8–12h

Camera Mono+filters preferred

Notes Faint extended emission in eastern Orion; underrated target. Subtle structure rewards long Hα integration.

Sh2-264 · Lambda Orionis Ring ★ FEATURED

●●●○ ADVANCED

emission · Orion · 05h 35m +09° 56' · size 300'×300' · **best Nov–Feb**, meridian Dec

Imaging **focal** 85–200mm · **filters** Hα; very wide field · **integration** 8–15h

Camera Wide-field DSLR with Hα-modified sensor

Notes Vast circular ring of emission around lambda Ori. Five degrees across — needs camera lens, not telescope. Perfect background canvas with all of Orion's other treasures around it.

Sh2-273 · Cone Nebula complex, NGC 2264 ★ FEATURED

●●○○ MODERATE

mixed · Monoceros · 06h 41m +09° 53' · size 60'×30' · **best Dec–Mar**, meridian Feb

Imaging **focal** 500–1000mm · **filters** Hα + RGB; or SHO · **integration** 8–15h

Camera Mono+filters or OSC

Notes Includes the iconic Cone Nebula, Christmas Tree Cluster, and Fox Fur Nebula in one frame. Multi-element composition — dark dust + emission + reflection.

Sh2-276 · Barnard's Loop ★ FEATURED

●●●○ ADVANCED

emission · Orion · 05h 35m -04° 00' · size 600'×300' · **best Nov–Feb**, meridian Dec

Imaging **focal** 50–135mm · **filters** Hα; modified DSLR · **integration** 10–20h

Camera Wide-field camera with Hα filter or Hα-mod DSLR

Notes Massive 10-degree arc of emission encircling the Orion complex. Camera lens required — won't fit in a telescope. Reveals the larger context of Orion's star-forming region.

Sh2-279 · Running Man, NGC 1977 ★ FEATURED

●●○○ MODERATE

reflection+emission · Orion · 05h 35m -04° 47' · size 20'×10' · **best Nov–Feb**, meridian Dec

Imaging **focal** 800–1500mm · **filters** RGB; broadband works for blue glow · **integration** 5–10h

Camera Any camera; OSC excellent

Notes Blue reflection 'running man' figure just north of M42. Always framed with M42 in classic Orion sword shot. Bright enough for short exposures.

Sh2-296 · Seagull Nebula, IC 2177 ★ FEATURED

●●○○ MODERATE

emission · Monoceros/CMa · 07h 04m -10° 27' · size 120'×60' · **best Dec–Mar**, meridian Feb

Imaging **focal** 300–500mm · **filters** Hα + OIII; SHO or HOO · **integration** 6–12h

Camera Any camera; OSC w/ duo-narrowband works

Notes Seagull-in-flight shape spans body and wings (Sh2-292/295/297 form parts). Rich Hα target with modest OIII. Beginner-friendly large narrowband target.

Sh2-308 · Dolphin Head Nebula ★ FEATURED

●●●● EXPERT

emission (WR bubble) · Canis Major · 06h 54m -23° 56' · size 40'×40' · **best Jan–Mar**, meridian Feb

Imaging **focal** 600–1000mm · **filters** OIII essential; OIII bubble around WR star · **integration** 20–40h OIII

Camera Mono+OIII filter strongly recommended

Notes Wolf-Rayet bubble of pure OIII emission — looks like blue-green dolphin or ghost. Extremely faint OIII-only target; no Hα to lean on. Showcase technical achievement.

Sh2-310

●●●○ ADVANCED

emission · Canis Major · 07h 27m -25° 24' · size 120'×120' · **best Jan–Mar**, meridian Feb

Imaging **focal** 200–400mm · **filters** Hα; modest signal · **integration** 10–15h

Camera Mono+Hα filter or modified DSLR

Notes Large faint emission around VY CMa region. One of the largest Hα regions in the southern Milky Way visible from Canada. Wide-field target.

VAN DEN BERGH REFLECTION NEBULAE

Sidney van den Bergh's reflection nebula catalog

1966 · 159 objects total

Sidney van den Bergh published this catalog of 159 reflection nebulae in 1966, while at the David Dunlap Observatory in Ontario. Reflection nebulae are dust clouds lit by nearby blue stars — they don't emit their own light, they scatter it. The result is a blue glow that broadband imagers love (no narrowband needed). We're including 12 highlights below; some are standalone targets, others are best-known parts of larger complexes (vdB 4 inside M45, vdB 142 inside IC 1396).

vdB 1

●●●○ ADVANCED

reflection · Cassiopeia · 00h 11m +58° 49' · size 5' · **best Sep–Dec**, meridian Nov

Imaging **focal** 1000–1800mm · **filters** RGB; broadband only · **integration** 5–10h

Camera Any camera; OSC excellent for blue dust

Notes Faint blue reflection around HD 224362. Subtle dust signature; rewards careful processing.

vdB 14 ★ FEATURED

●●○○ MODERATE

reflection · Camelopardalis · 03h 29m +59° 57' · size 20' · **best Oct–Feb**, meridian Dec

Imaging **focal** 500–1000mm · **filters** RGB; broadband · **integration** 5–10h

Camera Any camera; OSC excellent

Notes Pairs with vdB 15 in same field — twin blue reflection clouds in dusty Cam region. Underrated target for broadband imagers tired of narrowband.

vdB 15 ★ FEATURED

●●○○ MODERATE

reflection · Camelopardalis · 03h 30m +58° 53' · size 12' · **best Oct–Feb**, meridian Dec

Imaging **focal** 500–1000mm · **filters** RGB; broadband · **integration** 5–10h

Camera Any camera; OSC excellent

Notes Companion to vdB 14. Frame both together for a striking blue dust composition. Rich background star field adds depth.

vdB 31

●●●○ ADVANCED

reflection · Auriga · 04h 55m +30° 33' · size 5' · **best Nov–Feb**, meridian Jan

Imaging **focal** 1500–2500mm · **filters** RGB; broadband · **integration** 5–10h

Camera Any camera

Notes Compact yellow-blue reflection with surrounding dust. Less imaged than the famous nebulae but rewards patience.

vdB 38 · Hubble's Variable Nebula, NGC 2261 ★ FEATURED

●●○○ MODERATE

reflection (variable!) · Monoceros · 06h 39m +08° 44' · size 2' · **best Dec–Mar**, meridian Feb

Imaging **focal** 1500–3000mm · **filters** RGB; broadband · **integration** 3–6h

Camera Any camera

Notes Famous fan-shaped variable nebula illuminated by R Mon — changes shape over weeks. First object photographed with Mt. Palomar 200-inch. Good for re-imaging projects.

vdB 141 · Ghost Nebula ★ FEATURED

●●●○ ADVANCED

reflection (dark+reflection) · Cepheus · 21h 16m +68° 16' · size 20' · **best Jul–Nov**, meridian Sep

Imaging **focal** 800–1500mm · **filters** RGB; broadband; long integration · **integration** 10–20h

Camera Any camera

Notes Two ghostly figures in dark dust silhouetted against fainter background stars. Subtle reflection lit by embedded stars. Spooky atmosphere; popular Halloween target.

vdB 142 · Elephant's Trunk (in IC 1396) ★ FEATURED

●●○○ MODERATE

mixed · Cepheus · 21h 36m +57° 30' · size 60'×20' · **best Jul–Nov**, meridian Sep

Imaging **focal** 800–1500mm · **filters** Hα + RGB; SHO works · **integration** 8–15h

Camera Mono+filters or OSC w/ duo-narrowband

Notes Famous trunk-shaped pillar inside the larger IC 1396 emission. Star formation region; embedded young stars at trunk tip. Frame whole IC 1396 wider at 200–400mm.

vdB 152 · Wolf's Cave ★ FEATURED

●●●○ ADVANCED

reflection (dark+reflection) · Cepheus · 22h 14m +69° 56' · size 8' · **best Aug–Nov**, meridian Oct

Imaging **focal** 800–1500mm · **filters** RGB; long integration · **integration** 10–20h

Camera Any camera; mono RGB best

Notes Bright blue reflection nebula at the edge of a dark dust cloud. Striking composition: yellow star → blue reflection → black dark cloud. Photographer's favorite.

vdB 158

●●●● EXPERT

reflection · Andromeda · 00h 03m +47° 19' · size 5' · **best Sep–Dec**, meridian Nov

Imaging **focal** 1500–2500mm · **filters** RGB; broadband; long integration · **integration** 10–15h

Camera Any camera

Notes Subtle blue reflection — challenging to bring out without overexposing the central star. Test of careful processing technique.

vdB 80

●●●○ ADVANCED

reflection · Monoceros · 06h 41m +09° 24' · size 10' · **best Dec–Mar**, meridian Feb

Imaging **focal** 1000–1500mm · **filters** RGB; broadband · **integration** 5–10h

Camera Any camera

Notes Within the NGC 2264 / Cone Nebula complex — captured naturally in wider Cone framing. Adds blue reflection variety to the otherwise red region.

vdB 93

●●●○ ADVANCED

reflection · Monoceros · 07h 04m -10° 18' · size 12' · **best Dec–Mar**, meridian Feb

Imaging **focal** 800–1500mm · **filters** RGB; broadband · **integration** 5–8h

Camera Any camera

Notes Within the Seagull (IC 2177) complex — blue reflection counterpoint to the Seagull's red emission. Shows the Seagull region has both.

vdB 4 · Pleiades reflection (in M45) ★ FEATURED

●○○○ BEGINNER

reflection · Taurus · 03h 47m +24° 07' · size 60' · **best Oct–Feb**, meridian Dec

Imaging **focal** 200–500mm · **filters** RGB; broadband · **integration** 3–8h

Camera Any camera; OSC excellent

Notes Famous blue reflection around the Pleiades stars (Maia, Merope, Alcyone, Electra). Always captured when imaging M45. Long integration brings out faint dust beyond the named knots.

LYNDS BRIGHT NEBULAE — SELECTED

Beverly Lynds' bright nebula catalog (subset)

1965 · ~1,100 objects total

Beverly Lynds compiled the LBN catalog from the Palomar Observatory Sky Survey plates in 1965 — about 1,100 bright nebulae cataloged systematically by region. Significant overlap with Sharpless objects (most LBN are also Sh2), so we include just the LBN-distinctive targets: integrated flux nebulae (lit by collective Milky Way starlight rather than a single source) and unusual dust-emission combinations not well-represented in Sh2. These are the 'serious imager' targets — long integration times mandatory.

LBN 437 · Gecko Nebula ★ FEATURED

●●●○ ADVANCED

emission · Lacerta · 22h 35m +40° 13' · size 30'×15' · **best Aug–Nov**, meridian Sep

Imaging **focal** 500–1000mm · **filters** Hα + OIII; SHO · **integration** 10–15h

Camera Mono+filters preferred

Notes Lizard-shaped emission with embedded dark dust. Underrated target away from the main Cygnus crowd; rewards dark skies.

LBN 552

●●●● EXPERT

emission/dark mix · Cepheus · 21h 17m +68° 21' · size 30' · **best Jul–Nov**, meridian Sep

Imaging **focal** 500–1000mm · **filters** RGB + Hα; complex processing · **integration** 15–25h

Camera Any camera; long integration essential

Notes Faint red emission entangled with massive dark dust. Often imaged with vdB 141 (Ghost) nearby. Composition challenge — multiple element types.

LBN 762 · Angel Nebula ★ FEATURED

●●●● EXPERT

reflection+dust · Aries · 03h 23m +30° 35' · size 60' · **best Oct–Jan**, meridian Dec

Imaging **focal** 300–600mm · **filters** RGB; very long integration · **integration** 20–40h

Camera Any camera; mono RGB best for IFN

Notes Angel-figure integrated flux nebula (IFN) — illuminated by the Milky Way's overall starlight, not a single source. Extreme faintness; one of the holy-grail IFN targets.

LBN 777 · Baby Eagle Nebula

●●●● EXPERT

reflection+dark · Taurus · 04h 18m +28° 26' · size 30' · **best Oct–Feb**, meridian Dec

Imaging **focal** 500–1000mm · **filters** RGB; very long integration · **integration** 15–25h

Camera Any camera; mono RGB best

Notes Within the broader Taurus dust complex. Eagle silhouette in subtle red and brown dust. Among the harder integrated-flux nebula targets.

LBN 1138

●●●● EXPERT

emission · Leo · 10h 50m +11° 30' · size 40' · **best Mar–May**, meridian Apr

Imaging **focal** 300–600mm · **filters** Hα; modest signal · **integration** 15–25h

Camera Mono+Hα filter

Notes Faint extended emission in Leo — unusual location for emission nebula far from Milky Way plane. Only attempted by deep-imaging enthusiasts.

LBN 614 · Phantom of the Opera (Sh2-173 area) ★ FEATURED

●●●○ ADVANCED

emission/dust · Cassiopeia · 00h 35m +62° 56' · size 60' · **best Sep–Jan**, meridian Nov

Imaging **focal** 300–600mm · **filters** Hα + OIII · **integration** 10–18h

Camera Mono+filters preferred

Notes Mask-shaped emission complex; Phantom nickname from the dark cutouts that resemble theatrical masks. Often combined with NGC 7822 region in mosaic.

LBN 468

●●●● EXPERT

reflection+dark · Cepheus · 20h 45m +67° 57' · size 40' · **best Jul–Nov**, meridian Sep

Imaging **focal** 400–800mm · **filters** RGB; long integration · **integration** 15–25h

Camera Any camera; mono RGB

Notes Subtle dust complex in north Cepheus; features small reflection patches and dark cloud silhouettes. Tests broadband technique away from emission shortcuts.