

## *The Observer's Challenge Objects*

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February: NGC 2024 – “Flame Nebula” – Orion; mag<sub>v</sub>=10; Size = 30' x 30'  
RA: 05<sup>h</sup> 41<sup>m</sup> 54<sup>s</sup>; Dec: -01° 51' 0”

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Emission nebula **NGC2024** is located in the winter constellation of Orion - 'The Hunter'. The HII object, (Sh2-227), known as the “Flame Nebula”, (and also as the “Maple Leaf Nebula” by our northern friends), is about 1,354 light-years distant, and is about 6 light-years in diameter, and estimated to be several million years old. The glowing nebula is ionized by UV light from the nearby bright “O” class blue supergiant star Zeta Orionis, known as ‘Alnitak’, one of Orion’s three belt stars. Similar to M42, the “Great Orion Nebula”, NGC2024 is also an interstellar star factory, with a young starcluster containing several hundred stars embedded within the nebula. NGC2024 is part of the giant Orion Molecular Cloud that contains nearly every bright, dark, and reflection nebula and starcluster visible within the constellation.

NGC2024 was discovered on the night of January 1st, 1786 by William Herschel using his 20 ft reflector, at his home in Slough. Herschel described the object as: “*Wonderful black space included in remarkable milky nebulosity, divided in 3 or 4 large patches,,,*”.

### **Video-Capture/EAA:**

10/30/2020, from Big Woodchuck Observatory backyard in Pittsburgh, PA, using a 60mm refractor @ f4 on a GEM mount, with a CMOS color camera and narrowband filter, 30-second guided exposure, live-stacked for 40 minutes.

11/03/2021, from Calhoun County Park in West Virginia, using an 8" SCT optical tube @ f6.3 on a GEM mount, with a CMOS color camera and broadband filter, 60-second guided exposure, live-stacked for 15 minutes.



Using EAA techniques, the moderate bright nebula NGC2024 can be nearly swamped from the bright glare of nearby Alnitak. The embedded dark nebula gives the object a distinctive look. Most people see a flame, but I also see a maple leaf. Close-by is the fainter nebula IC434, backlighting the dark “HorseHead Nebula”. Between NGC2024 and B33 can be found the reflection nebula NGC2023.