

## **The Observer's Challenge Objects**

Submitted by Larry McHenry, Pittsburgh, PA, USA. <http://stellar-journeys.org>

May: NGC 4088 – intermediate spiral galaxy (SAB) – Ursa Major; mag<sub>v</sub>=11.5; Size = 5.8' x 2.2'  
RA: 12h 05m 34.2s Dec: +50° 32' 21"

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The 44° inclined spiral galaxy **NGC4088** is located in the constellation of Ursa Major - 'The Great Bear', about 3.4° from the bright Big Dipper bowel star +2.5 mag Gamma Ursa Major (Phad). This bright, deep-sky galaxy is about 51.5 million light-years distant, with a diameter of about 65,000 ly. It is considered to form a physical pair with nearby spiral galaxy NGC4085, and are both members of the M109 galaxy cluster. NGC4088 is also cataloged as peculiar galaxy Arp18, (Spiral with detached segments), and displays a number of prominent knots in its spiral arms.

NGC4088 (H1 206) was discovered on the night of March 9th, 1788 by William Herschel using his 20 ft reflector, from his home at Slough near Windsor Castle. (NGC4085 was discovered a year later on April 12<sup>th</sup>, 1789).

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

*Left-hand video-observation:* 06/04/2013, from the Cherry Springs Star Party at Cherry Springs State Park, PA, using a 6" RC optical tube @ f5 on a GEM mount, with a CCD analog B/W camera and IR filter, 20-second single unguided exposure. (North is up in the cropped image) NGC4088 is above center, while the much smaller and more highly inclined spiral galaxy NGC4085 is below center.

*Right-hand video-observation:* 05/30/2022, from the Cherry Springs Star Party at Cherry Springs State Park, PA, using an 8" SCT optical tube @ f6.3 on a GEM mount, with a CMOS color camera and broadband filter, 180-second guided exposure, live-stacked for 30 minutes. (North is up in cropped image) Dwarf spiral galaxy MCG92092 in lower left corner.



Using EAA techniques: the odd-shaped inclined spiral stands out well from the star field. What appears to be a stubby, detached spiral arm with a bright HII knot extends to the NW. A number of other bright HII regions can be found in the tight arms to both the north and south of the oval core of the galaxy.