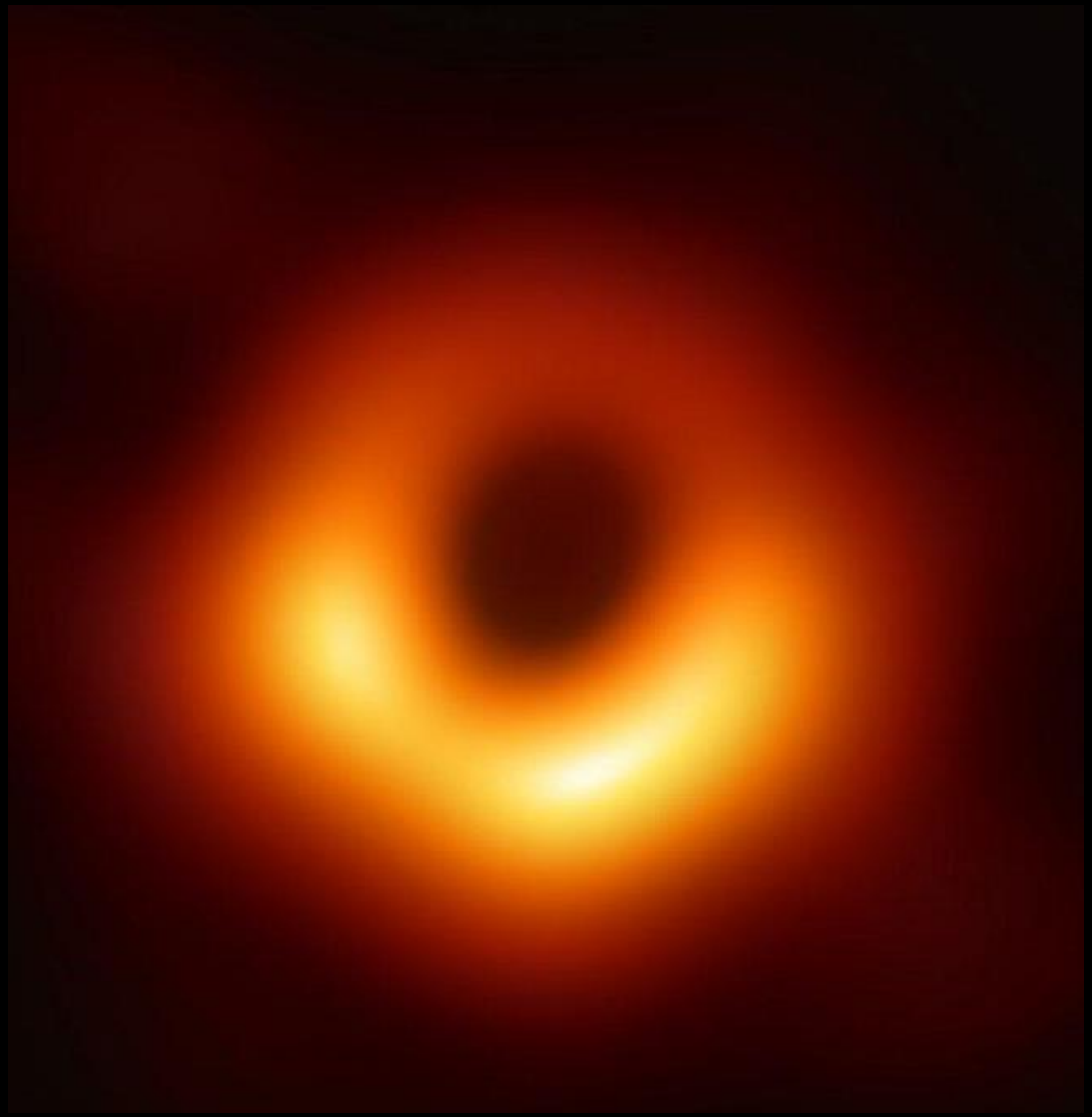
Kalamazoo Astronomical Society

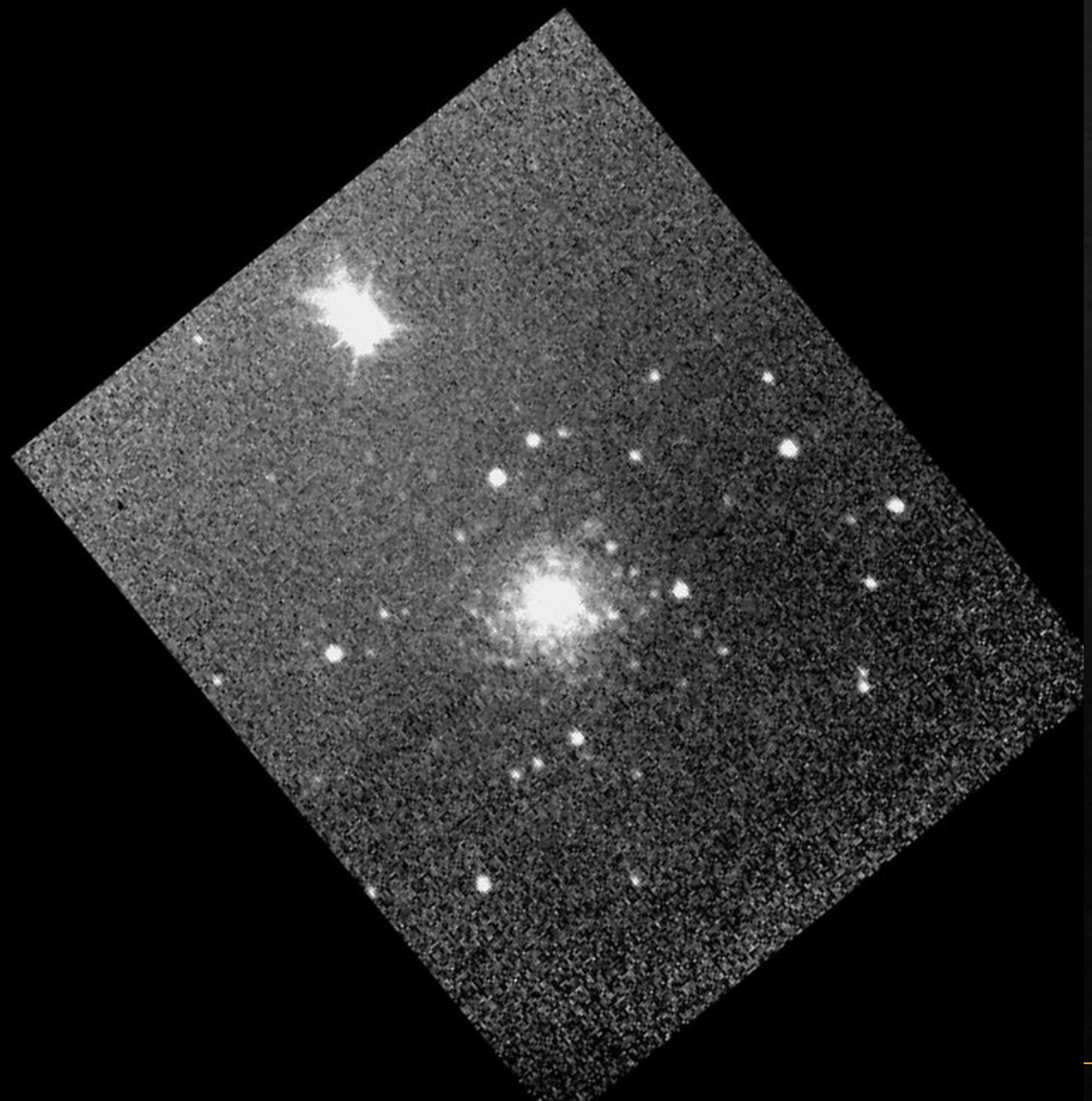
Looking Up Since 1936

September 17th 2021

To the Ends of the World with Astrophotography

by Adam Block





Nascent Pixels

- Amateurs began utilizing early CCD sensors in the 1990's
- My first digital pictures were made using an SBIG ST4 guider camera (256x256 pixels) (e.g. Ring Nebula, 1993)
- Public Outreach: Hyakutake (1996)
- Kitt Peak National Observatory (16-inch LX200)

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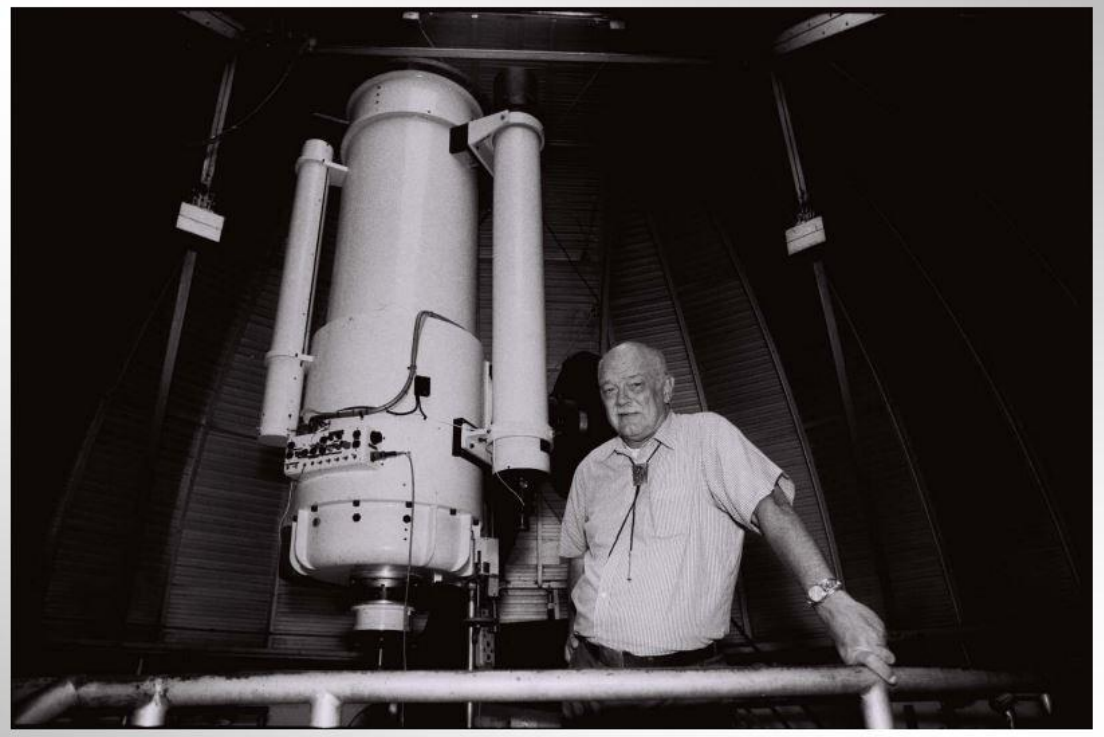
Steward Observatory Through the Years



Prof. Raymond E. White, Jr. poses with the 21-inch telescope, which would later bear his name, in 1994.

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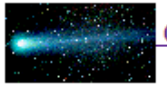
Steward Observatory Image of Comet Hyakutake

98K

Observers: Adam Block, Miwa Morita
Location: Steward Observatory, Arizona
Date: February 17, 1996 20:00 UT

The Latest Image of C/Hyakutake B2 taken with the 21" University of Arizona, Steward Observatory Campus scope and ST6 CCD camera. Image taken by Adam Block and Miwa Morita.

Instrument: 21in reflector with ST6 camera.
Exposure: 30sec
Local Time: Feb 18, 1996, 3am.
Contributors : Adam Block and Miwa Morita



Comet 1996 B2 Hyakutake Home Page

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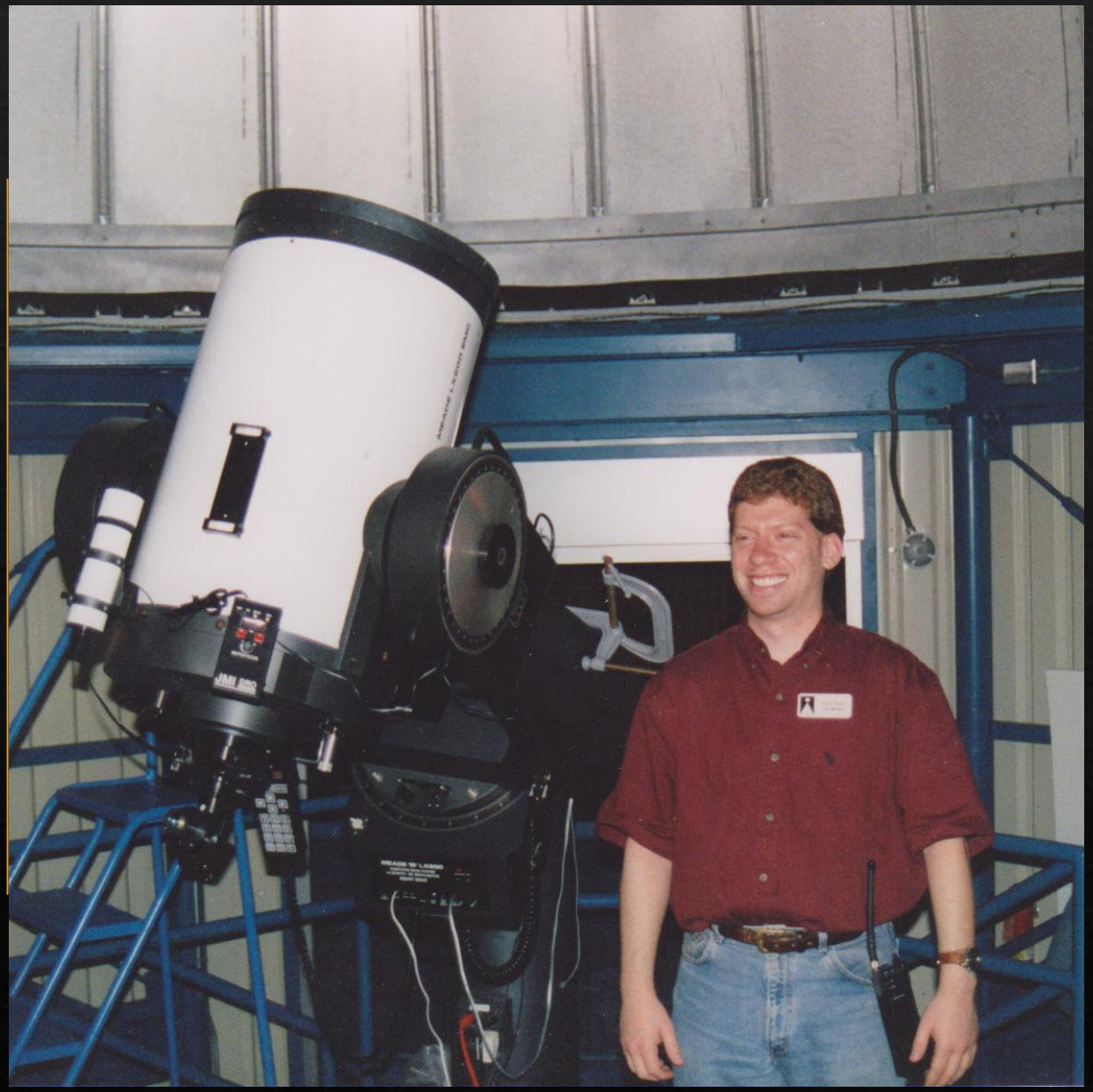

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Astronomy Picture of the Day

ach day a different image or photograph of our fascinating universe is featured, along with a brief explanation written by a pro

2001 April 27

Visitors' Galaxy Gallery
Credit: Courtesy Adam Block (KPNO Visitor Program), NOAO, NSF

left to bottom right are the lovely but distant galaxies M61, NGC 4449, NGC 4725, NGC 5068, NGC 5247, and NGC 5775/5
rming regions along the graceful spiral arms. While Virgo cluster galaxy M61 is perhaps the most striking of these spirals, the
galaxies is the small and relatively close irregular galaxy NGC 4449 (top middle). Similar to the Large Magellanic Cloud, com
(16 inch diameter) reflecting telescope and digital camera by public participants in the Kitt Peak National Observatory Visitor

Tomorrow's picture: all the Crashes

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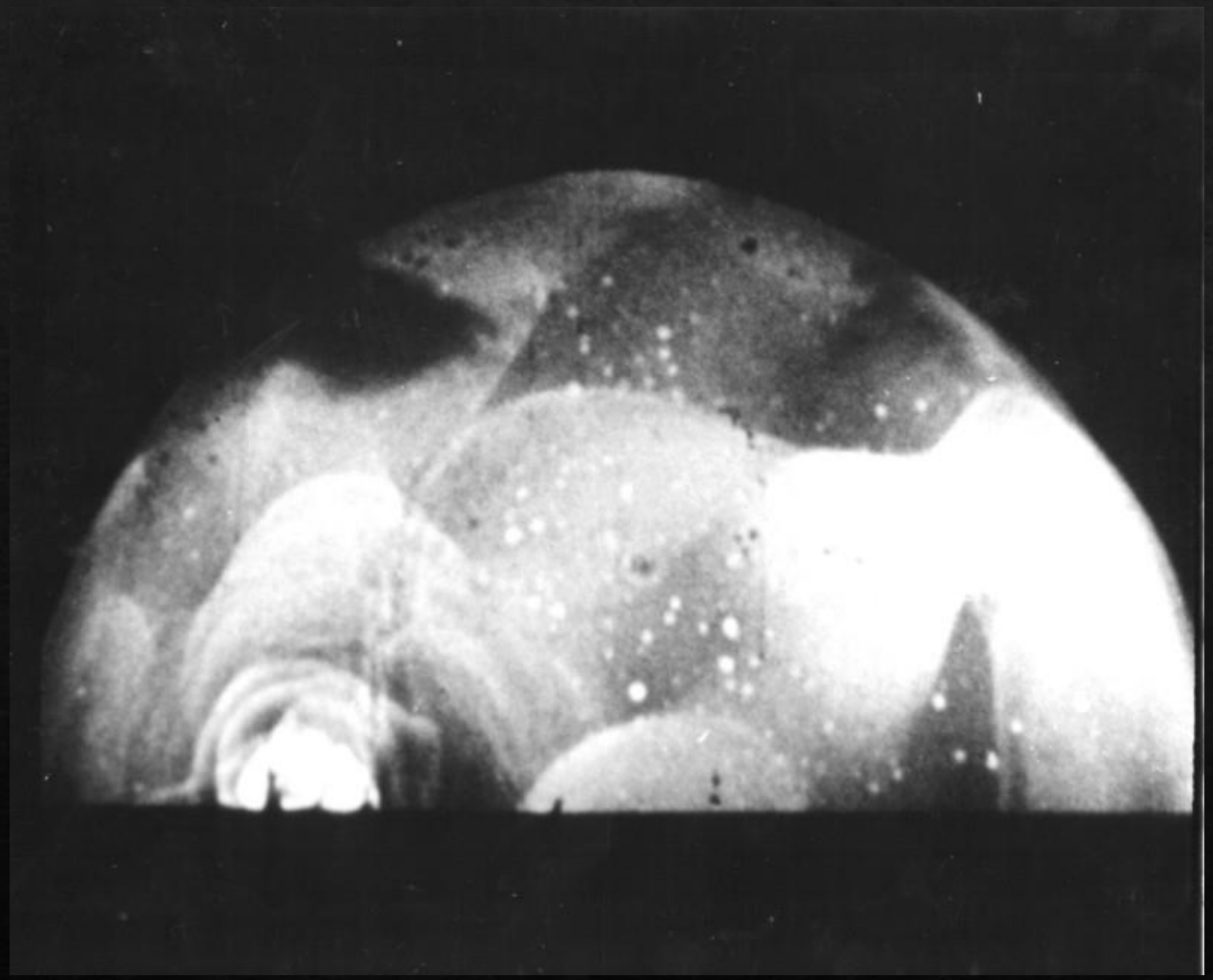
HDR through Time

- Charles Wyckoff, film and Atomic Bombs
- Ansel Adams, Dodge and Burn
- David Malin, Photographic Amplification
- Kunihiko Okano, DDP (Maxim DL)
- DDP (CCDStack)
- HDRMT (PixInsight)



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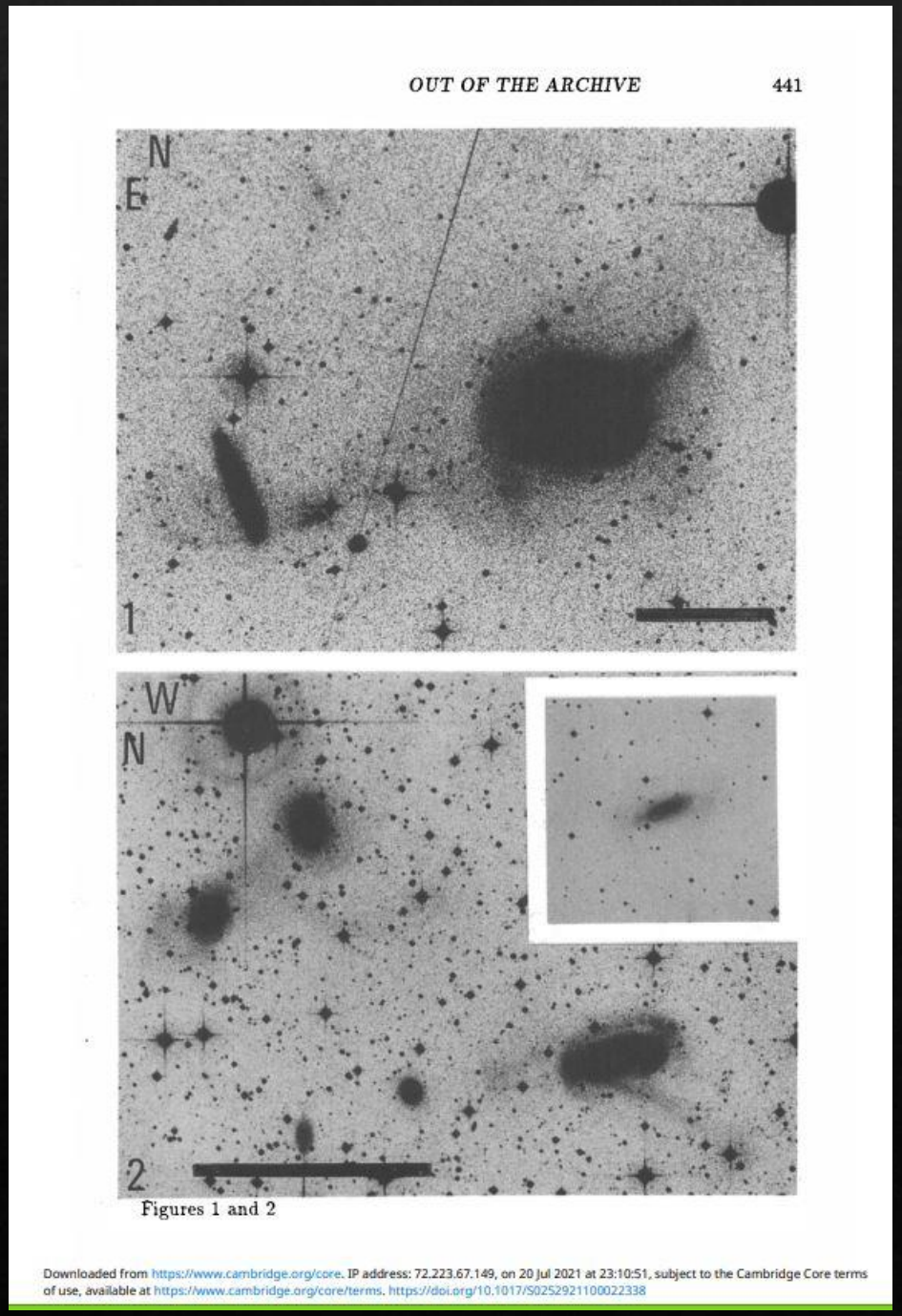

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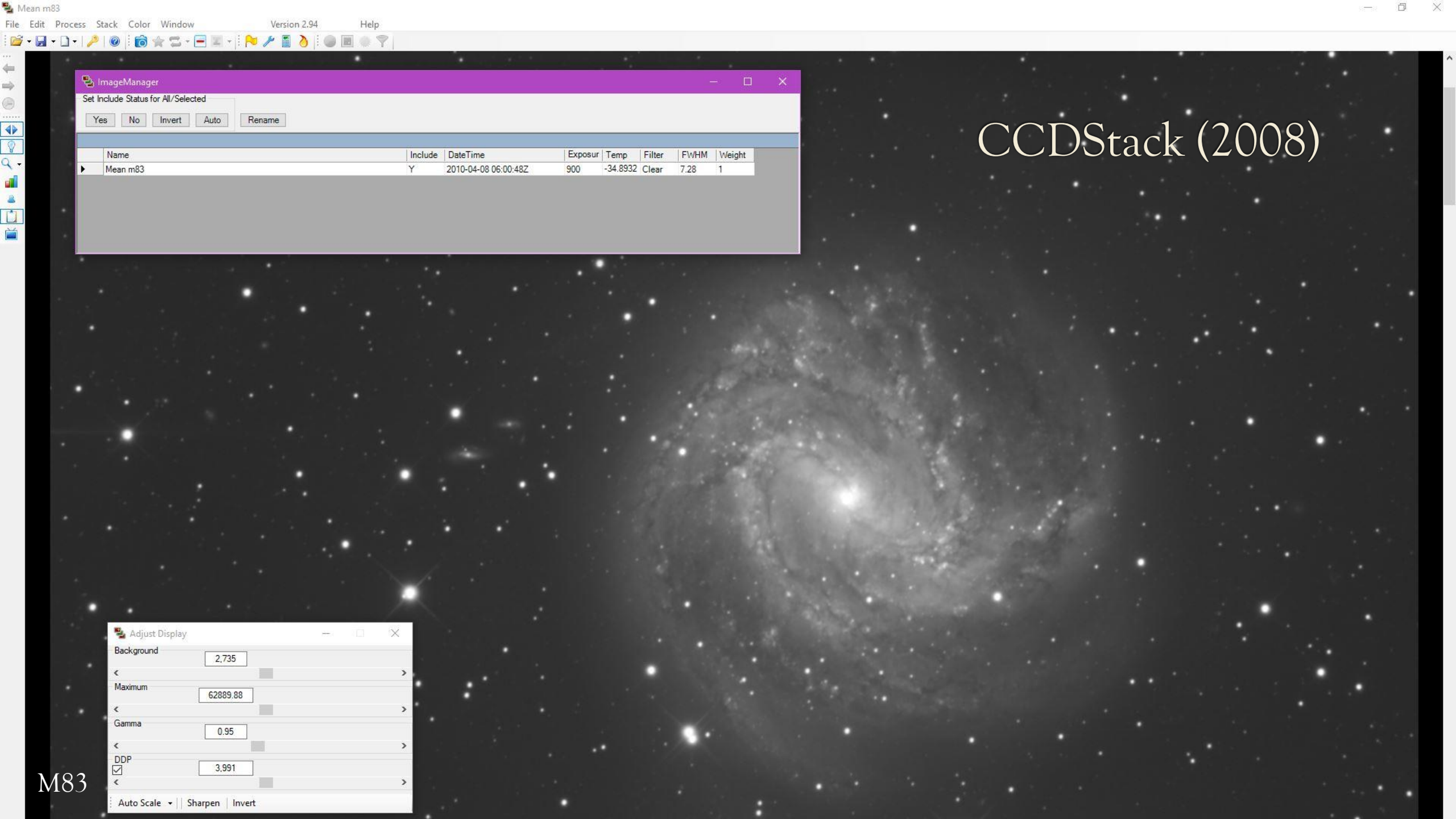
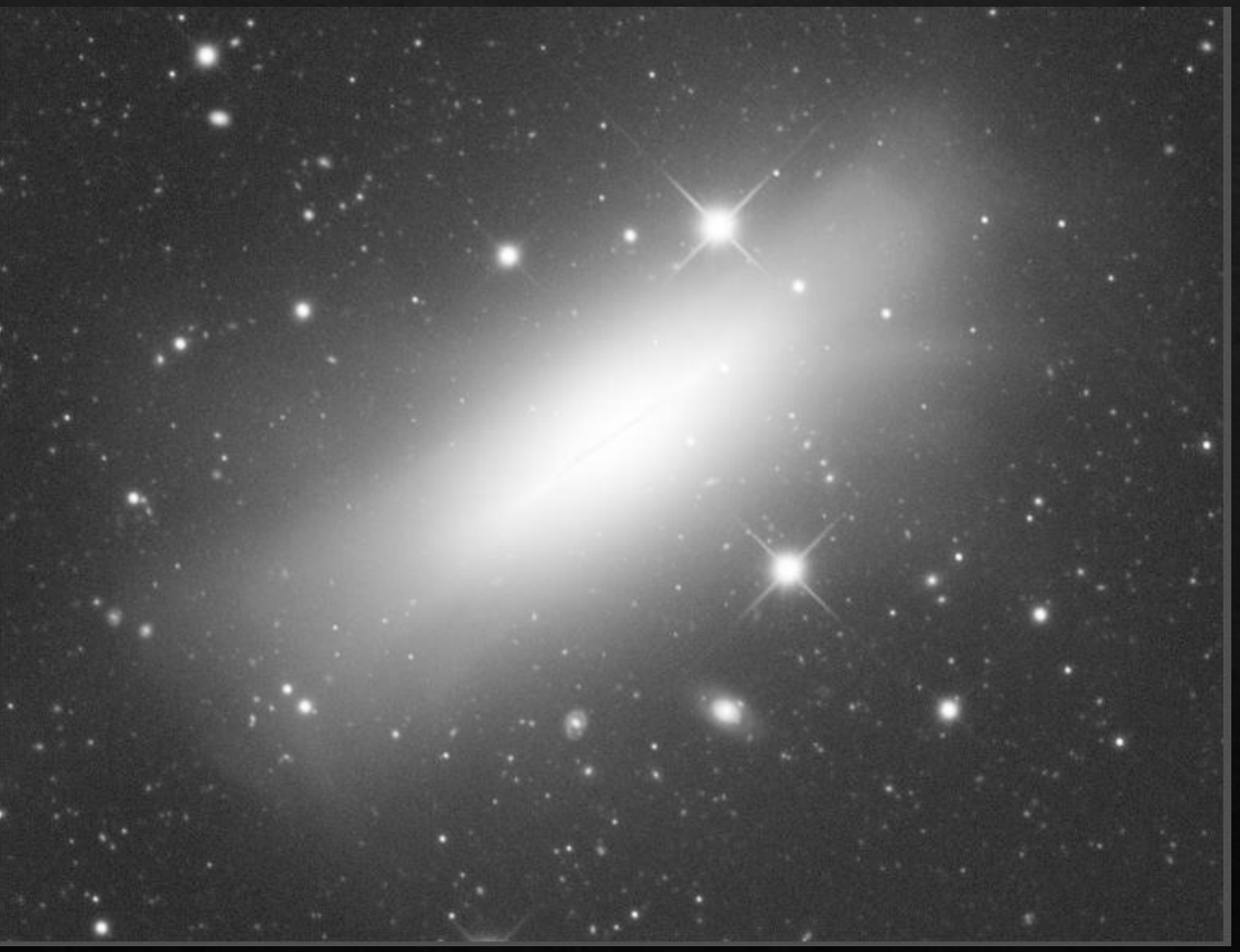

Mean m83
File Edit Process Stack Color Window Version 2.94 Help
ImageManager
Set Include Status for All/Selected
Yes No Invert Auto Rename
Name Include DateTime Exposur Temp Filter FWHM Weight
Mean m83 Y 2010-04-08 06:00:48Z 900 -34.8932 Clear 7.28 1
CCDStack (2008)
Adjust Display
Background 2,735
Maximum 62889.88
Gamma 0.95
DDP 3,991
Auto Scale Sharpen Invert
M83

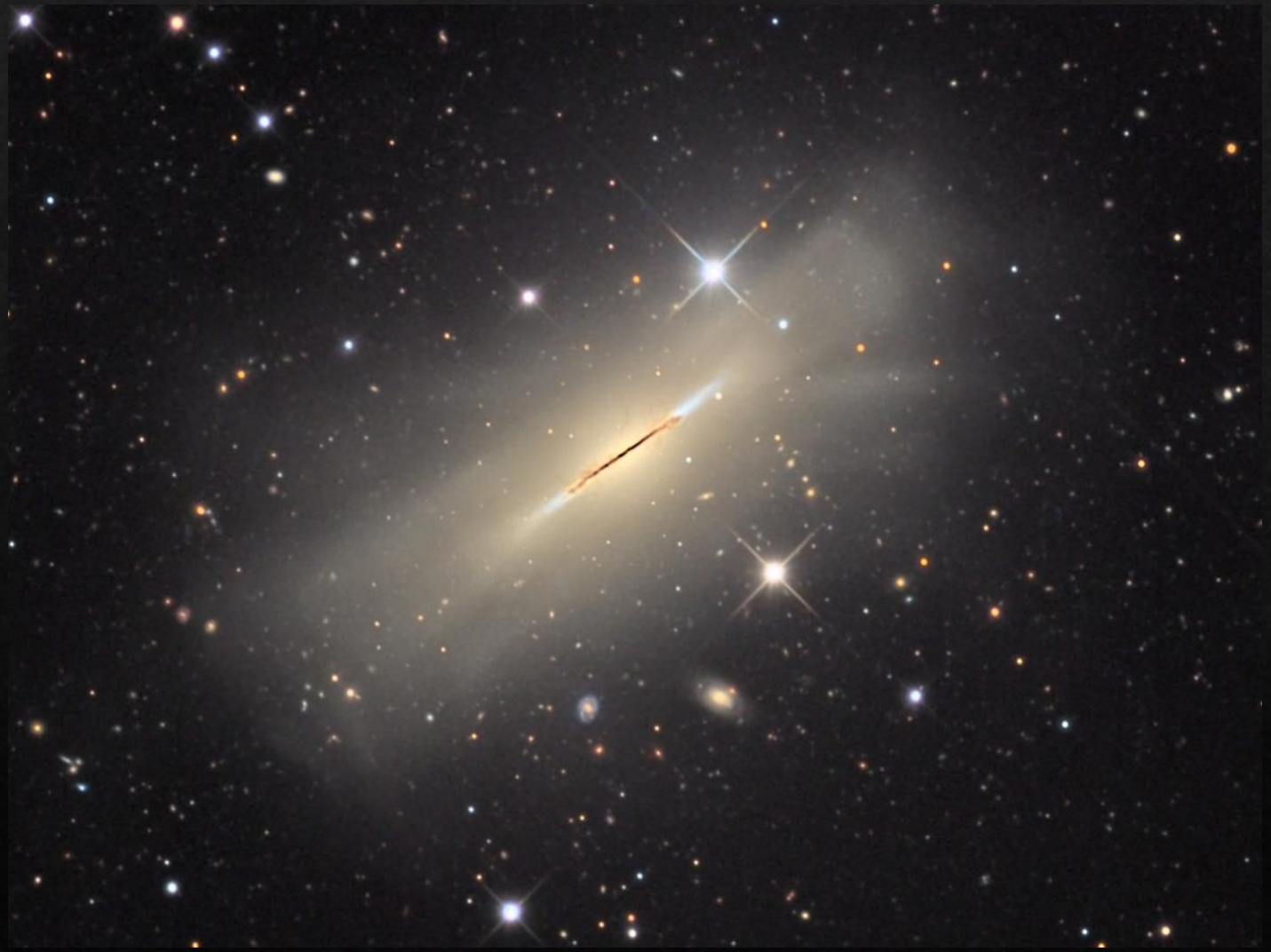


NGC5866

PixInsight

HighDynamicRangeMultiScaleTransformation

- Maintains Sky Level
- Adjustable scale size with wavelet layers
- (Show Google Images)
- Show in PixInsight



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NGC5866

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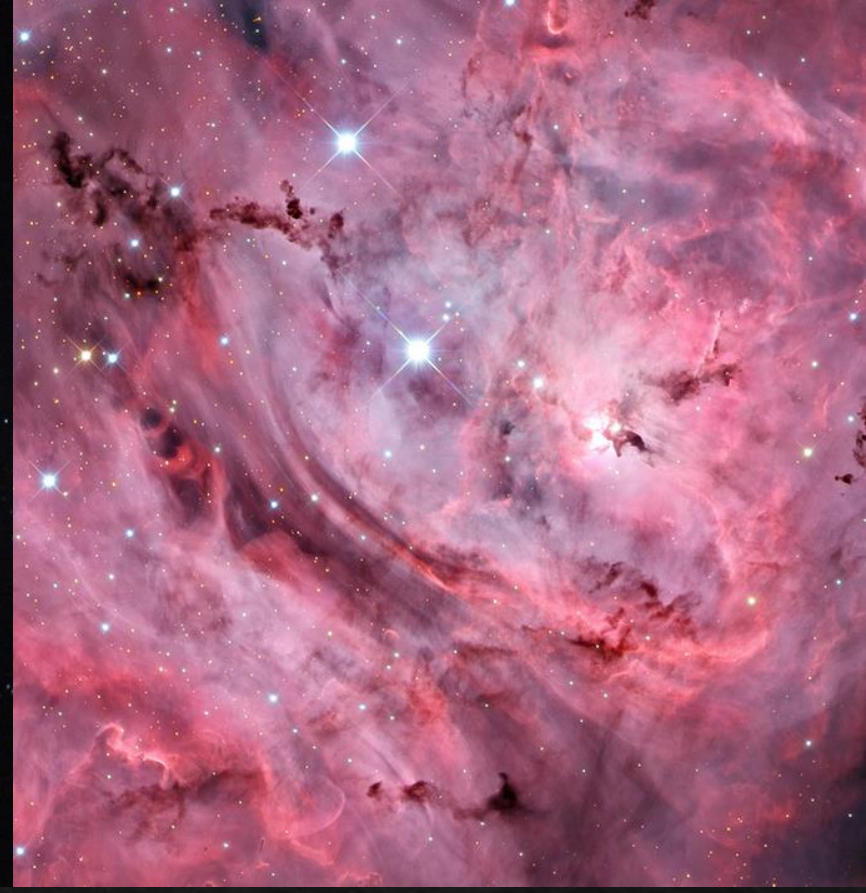


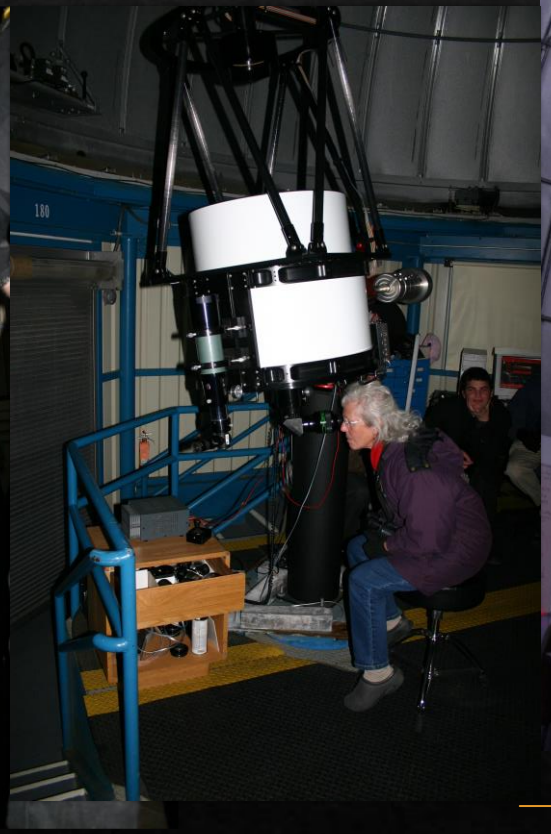
HDRMT Examples

M88, 1398 , M8

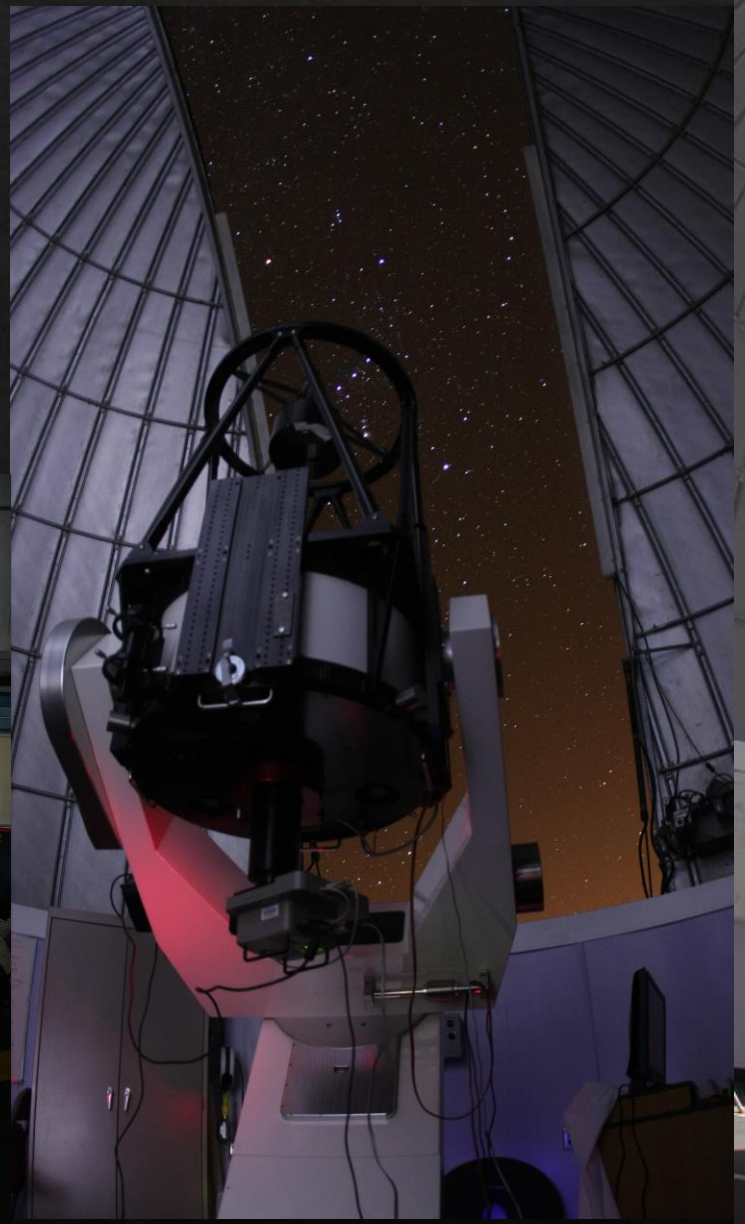
Telescopes

0.4m Meade LX200

RCOS 0.5m



RCOS 0.6m Phillips Telescope

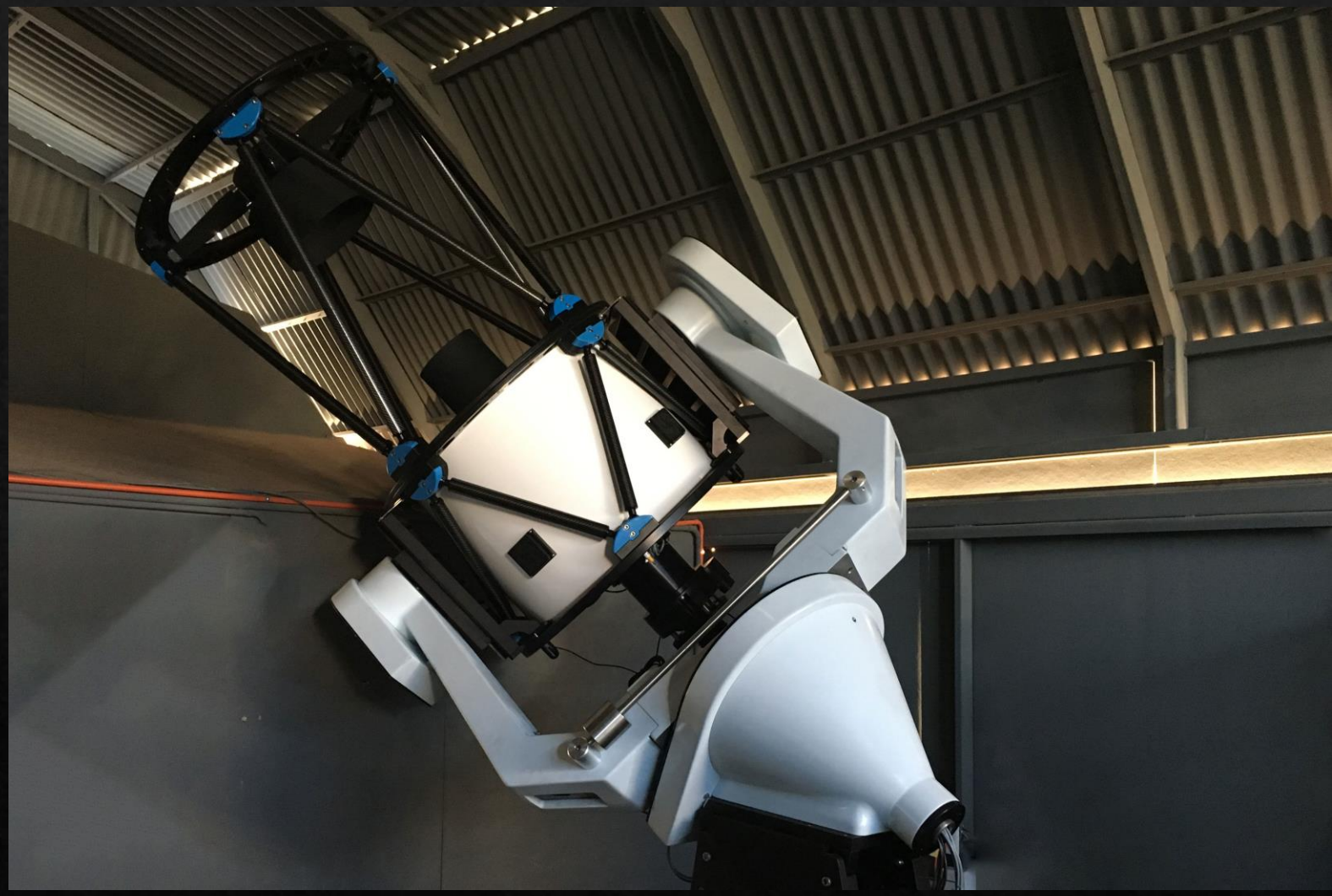


RCOS 0.8m Schulman Telescope

Telescopes

0.18m Epsilon Takahashi (“Pomenis”)

Telescope Live CH-1 0.6m (Chile)



Rigel, IC 2118

Pleiades

show

Power real

Kalamazoo Astronomical Society

Looking Up Since 1936

Home | Activities | Membership | Gallery | Prime Focus | Remote Telescope | Owl Observatory | Resources | Support Us | Contact Us

Schedule of Events

The KAS is one of the most active organizations in West Michigan. We hold a wide variety of entertaining and educational events throughout the community. Below is a schedule of all of our upcoming activities. This page is updated regularly, so please visit often. **Unless noted otherwise below, all KAS activities are free and open to the general public.**

17 SEP

Astrophotography SIG Meeting

- Friday, September 17, 2021
- 8:00pm-9:30pm
- Online via Zoom
- Click Here to Register for the Meeting
- *To the Ends of the World with Astrophotography*

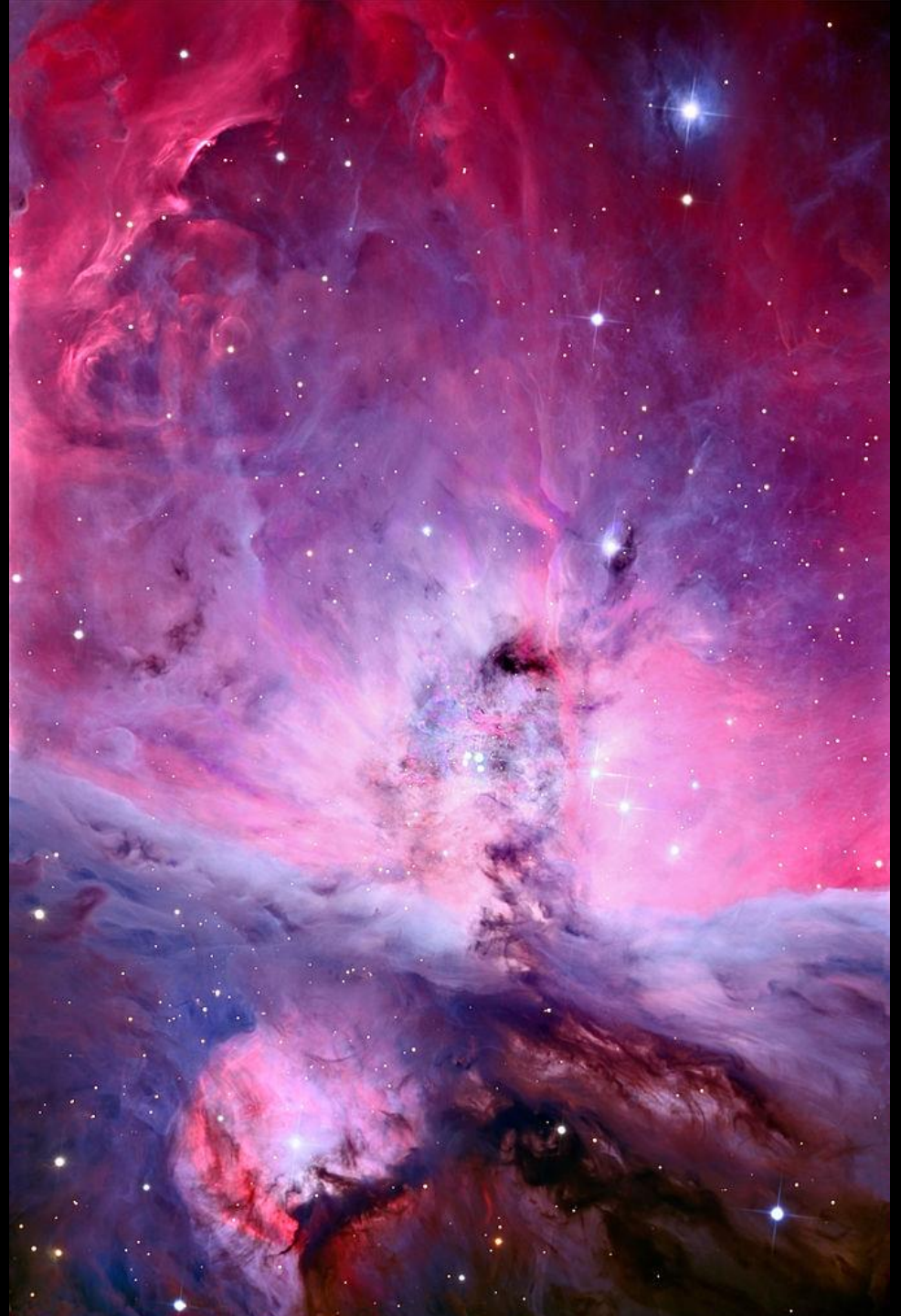
Kalamazoo Clear Sky Chart:

KAS Tidbits

General Meetings
Most meetings are held on the first Friday of every month at the Kalamazoo Area Math & Science

M16 (Eagle)

show



M42

M42

CFH

©CFHT

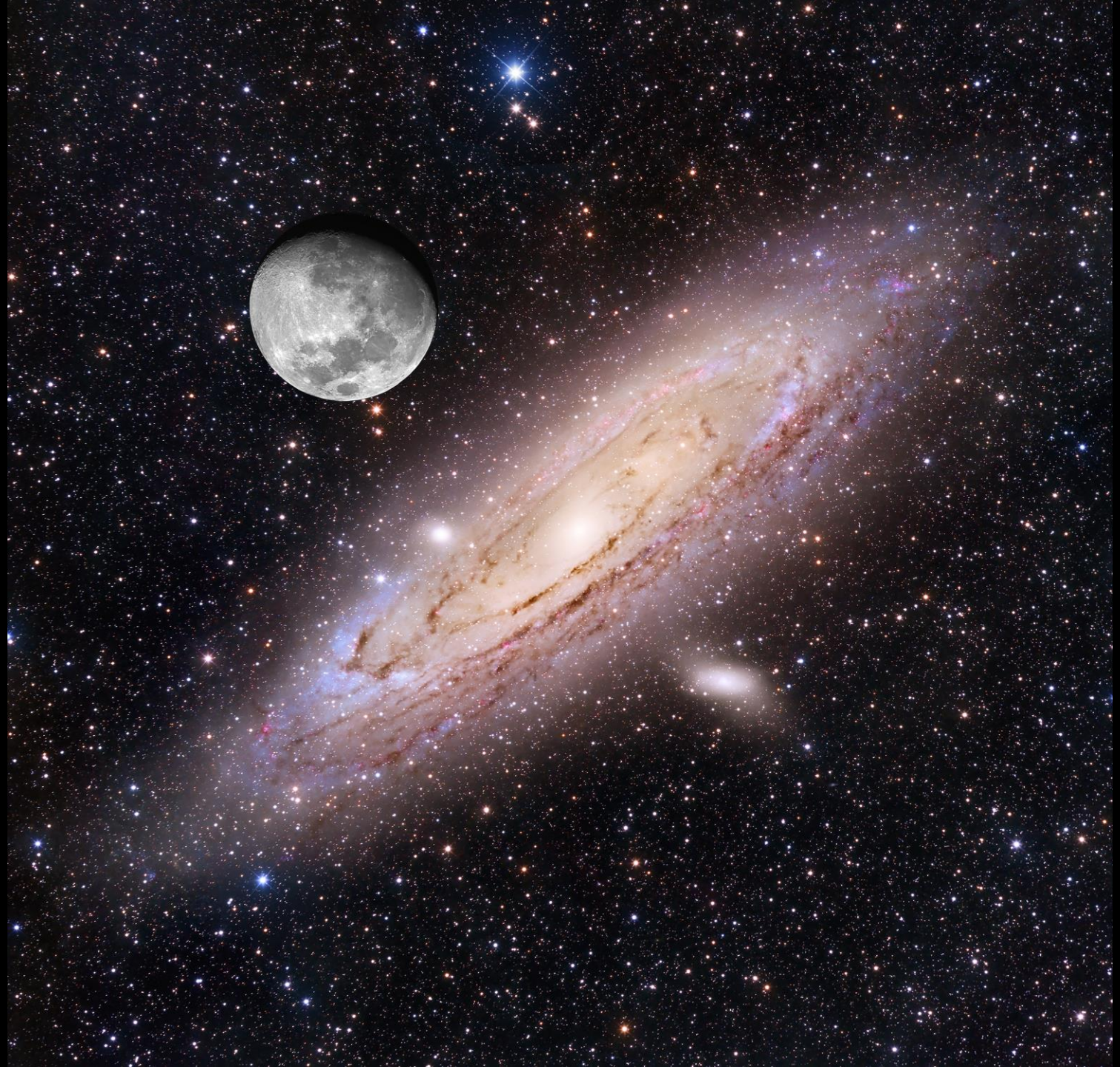
show

Rho Ophiuchi

600px
show


Moon

Betelgeuse



Moon over M31

Orion

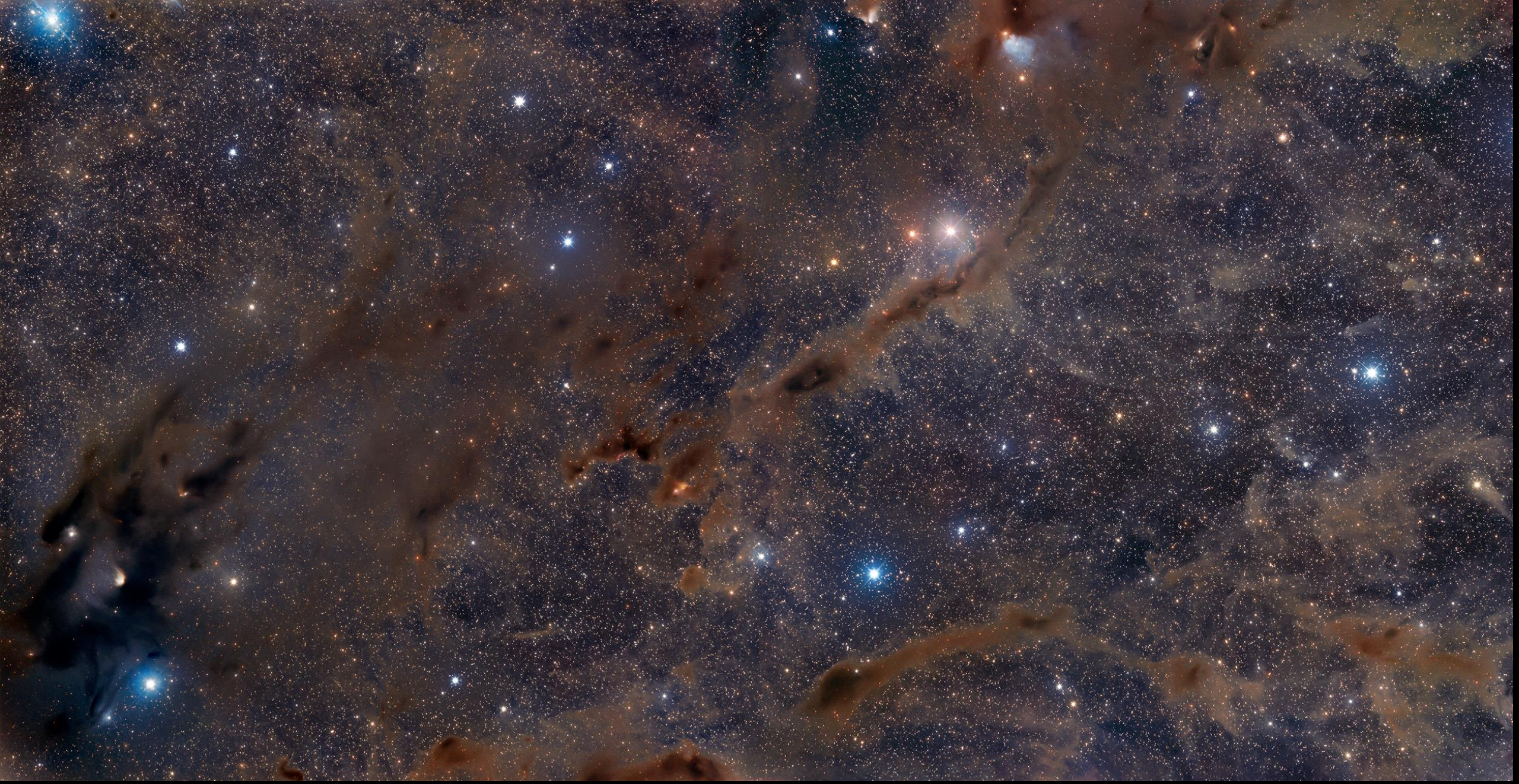
Barnard’s Loop

Barnard’s Loop, M78

M78

NGC 7000

IC 4592, IC 4601



Taurus Molecular Cloud

google

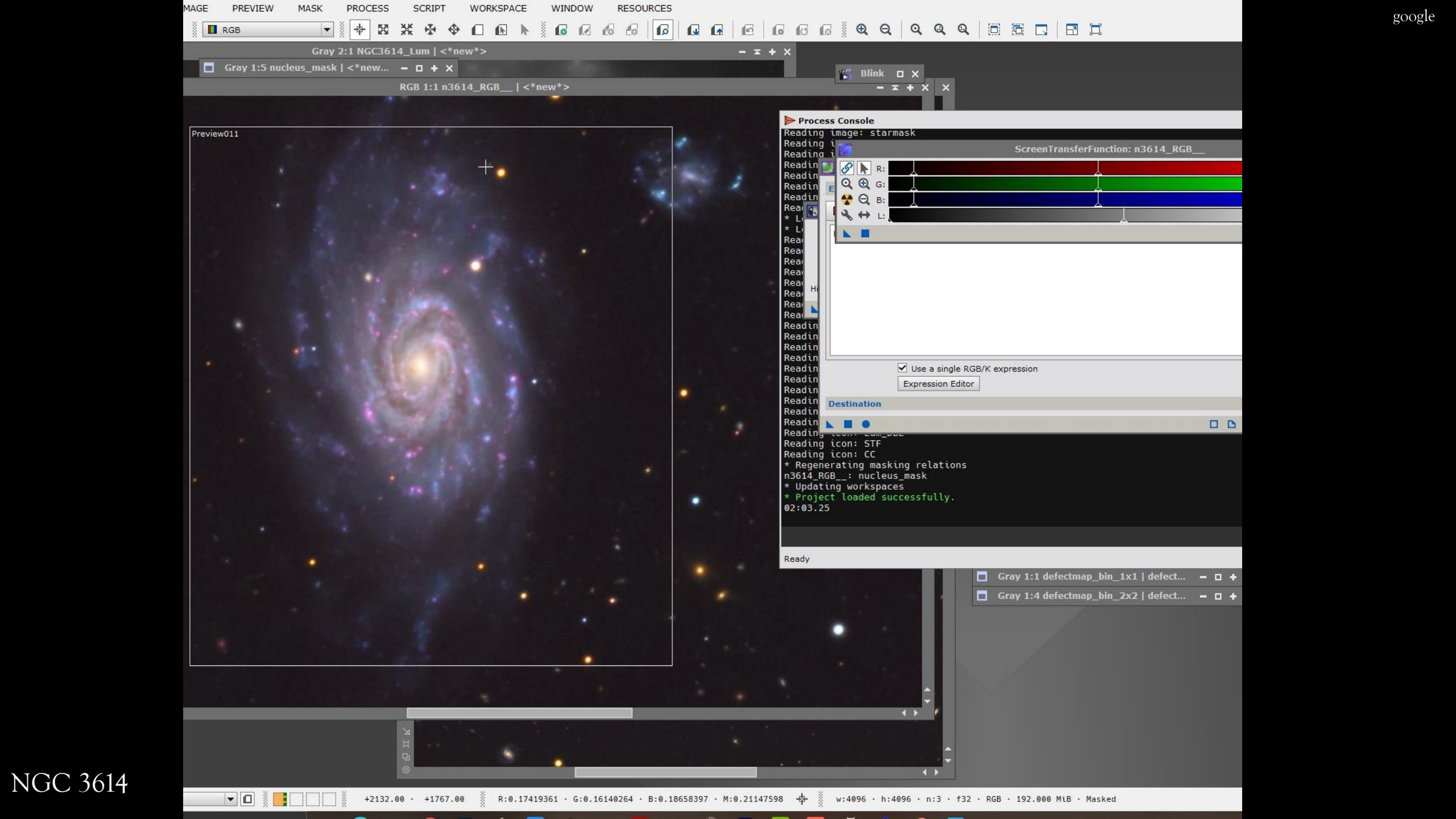
NGC 3261

NGC 3310

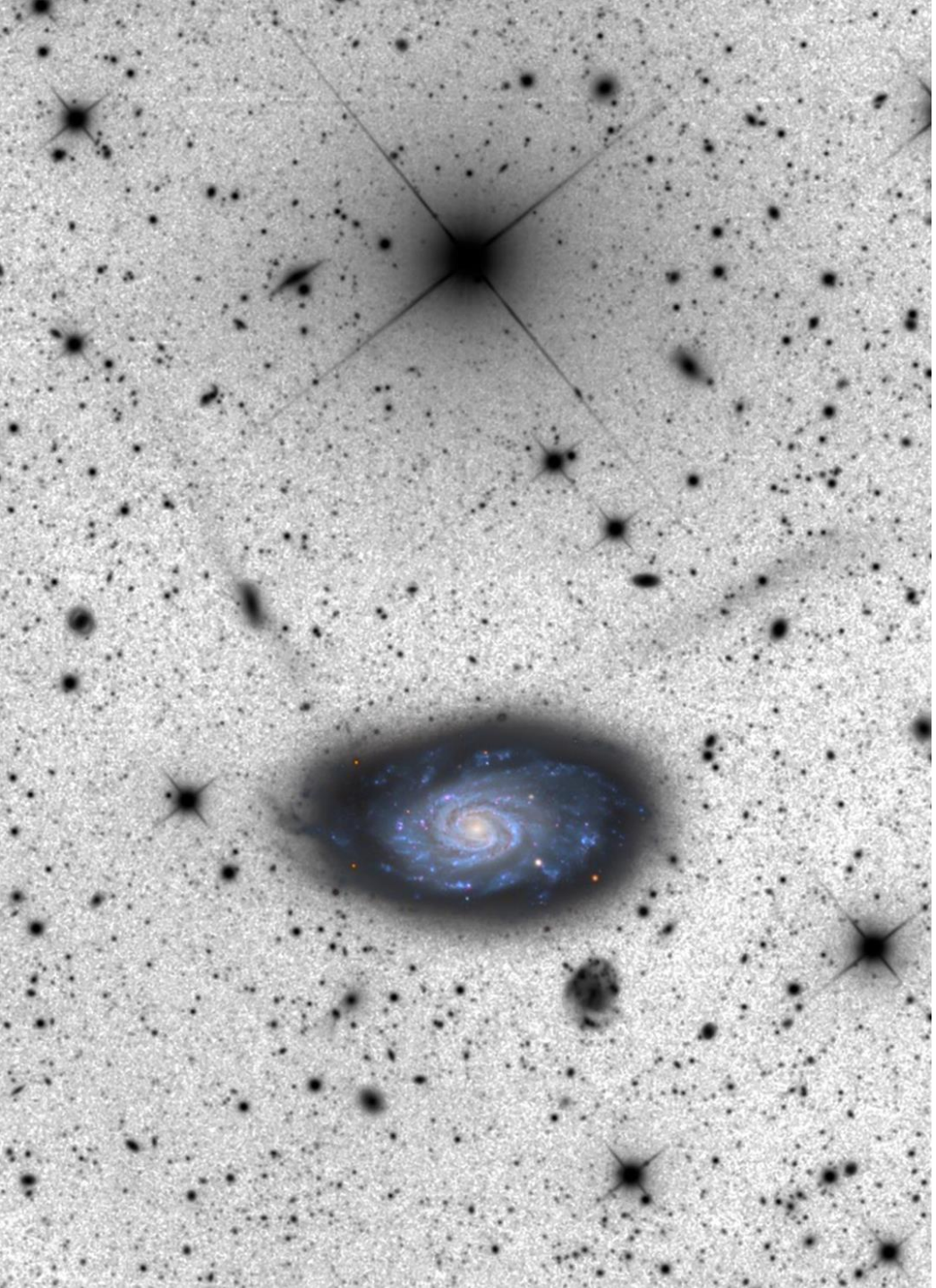
NGC 3310

google

NGC 3614



NGC 3614



RNAAS RESEARCH NOTES OF THE AAS

Discovery of Stellar Streams around NGC 3614

Adam Block[1]

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Research Notes of the AAS, Volume 5, Number 6
Citation Adam Block 2021 *Res. Notes AAS* **5** 142

Figures ▾ References ▾

+ Article information

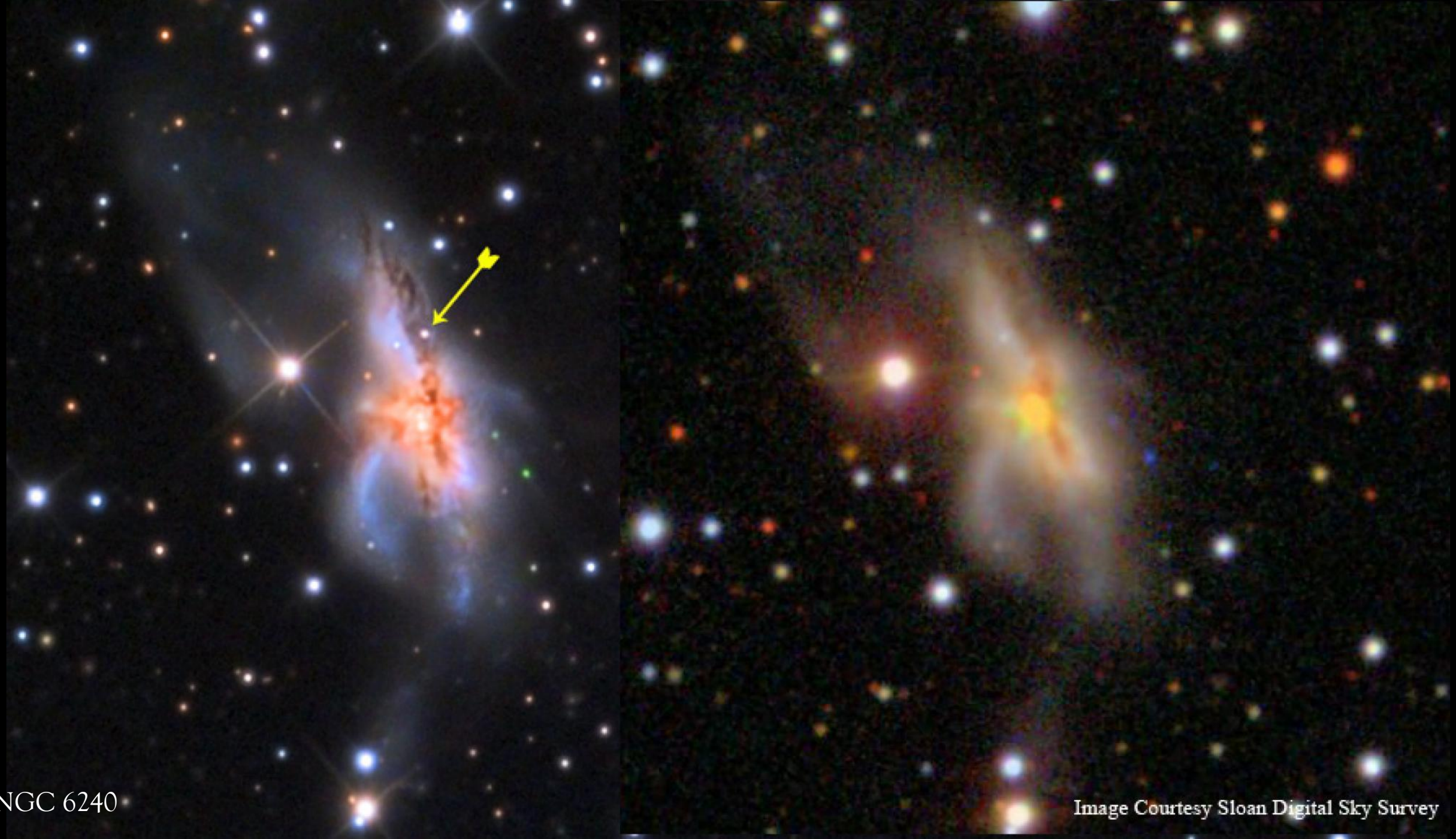
Abstract

In the course of surveying spiral galaxies in the Local Volume, long exposures of NGC 3416 show two probable stellar streams with the possible remnant of a satellite galaxy. I captured the discovery image using the Schulman Telescope at Steward Observatory's Mount Lemmon Sky Center (University of Arizona). I acquired the wide bandpass data over three nights under photometric conditions in 2015 February. Prominent theories of galaxy formation hold that the creation of present-day galaxies are the aggregation of many past minor mergers. Stellar streams lend credence to the idea by presenting evidence of extended low surface brightness tidally created signatures. NGC 3614 appears to be a good example the for kind of extended features expected by these theories.

Export citation and abstract BibTeX RIS

◂ **Previous** article in issue **Next** article in issue ▸

Abstract
1. Star Stream Survey
2. Observations
3. Data Reduction
4. Results
5. Conclusion
References


NGC 6240
Image Courtesy Sloan Digital Sky Survey

Sh2-239

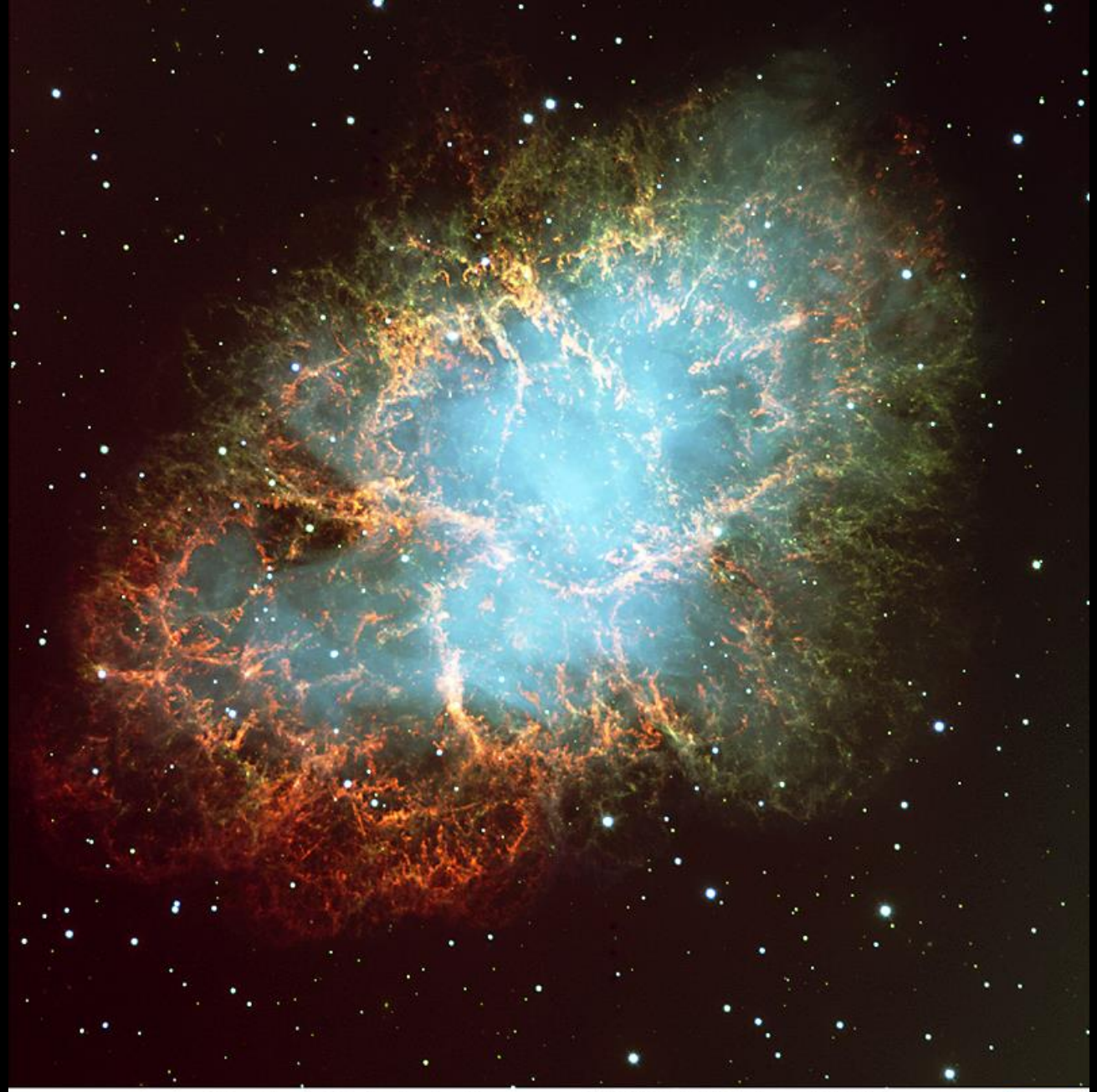
V1025 Tauri

CW Tauri


M51

M51

M51

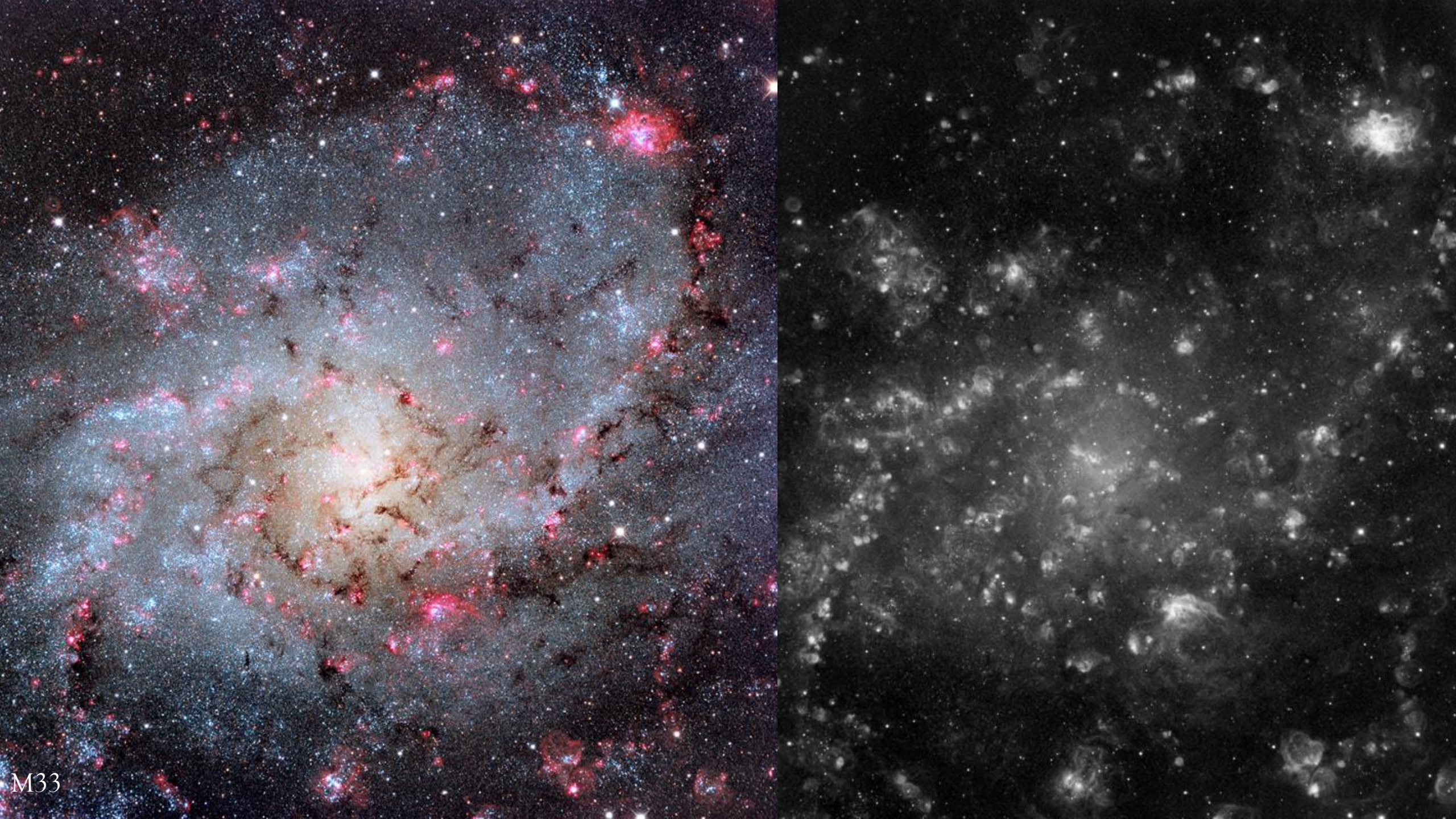


The Crab Nebula in Taurus (VLT KUEYEN + FORS2)

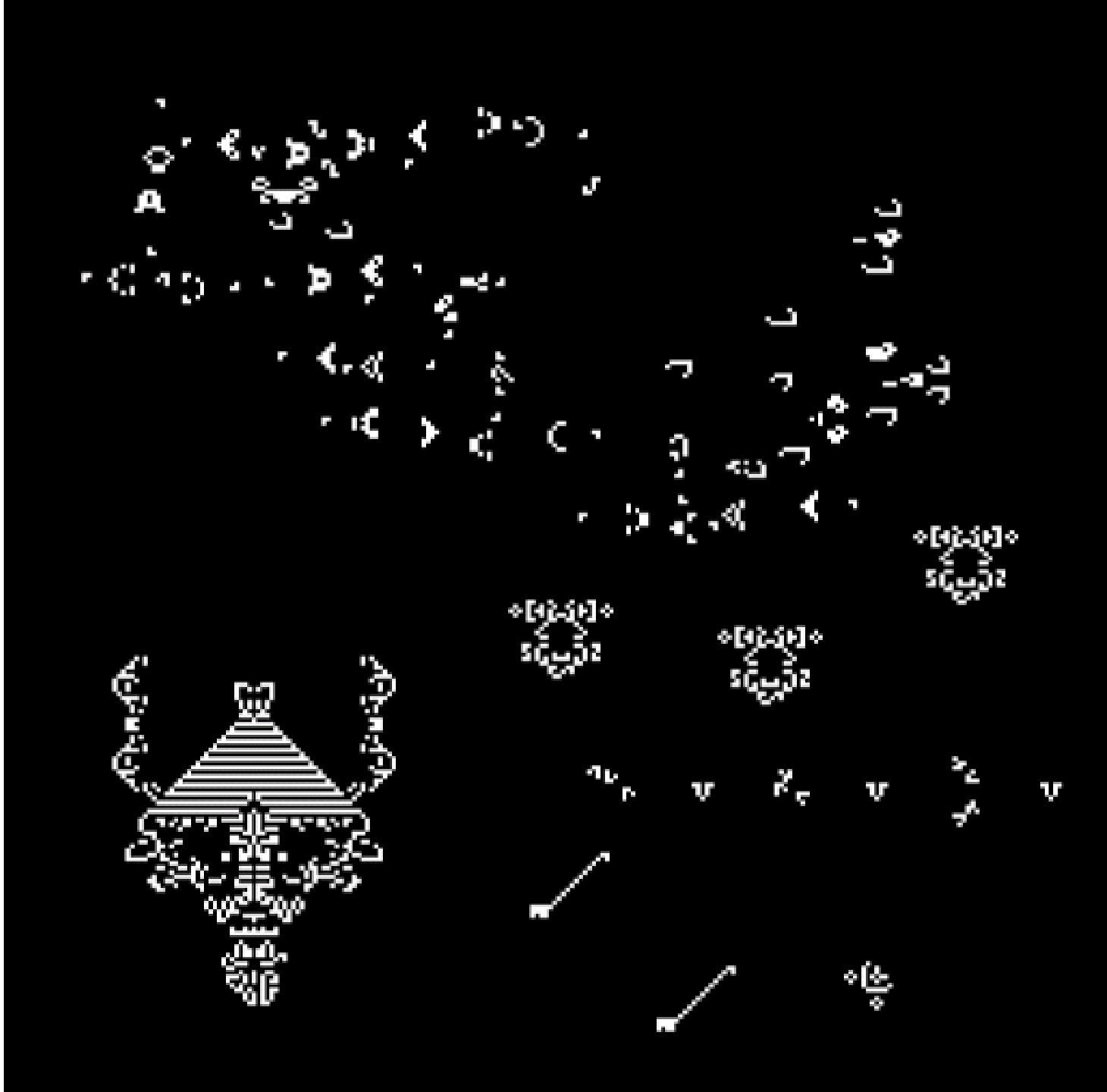
ESO PR Photo 40f/99 (17 November 1999)

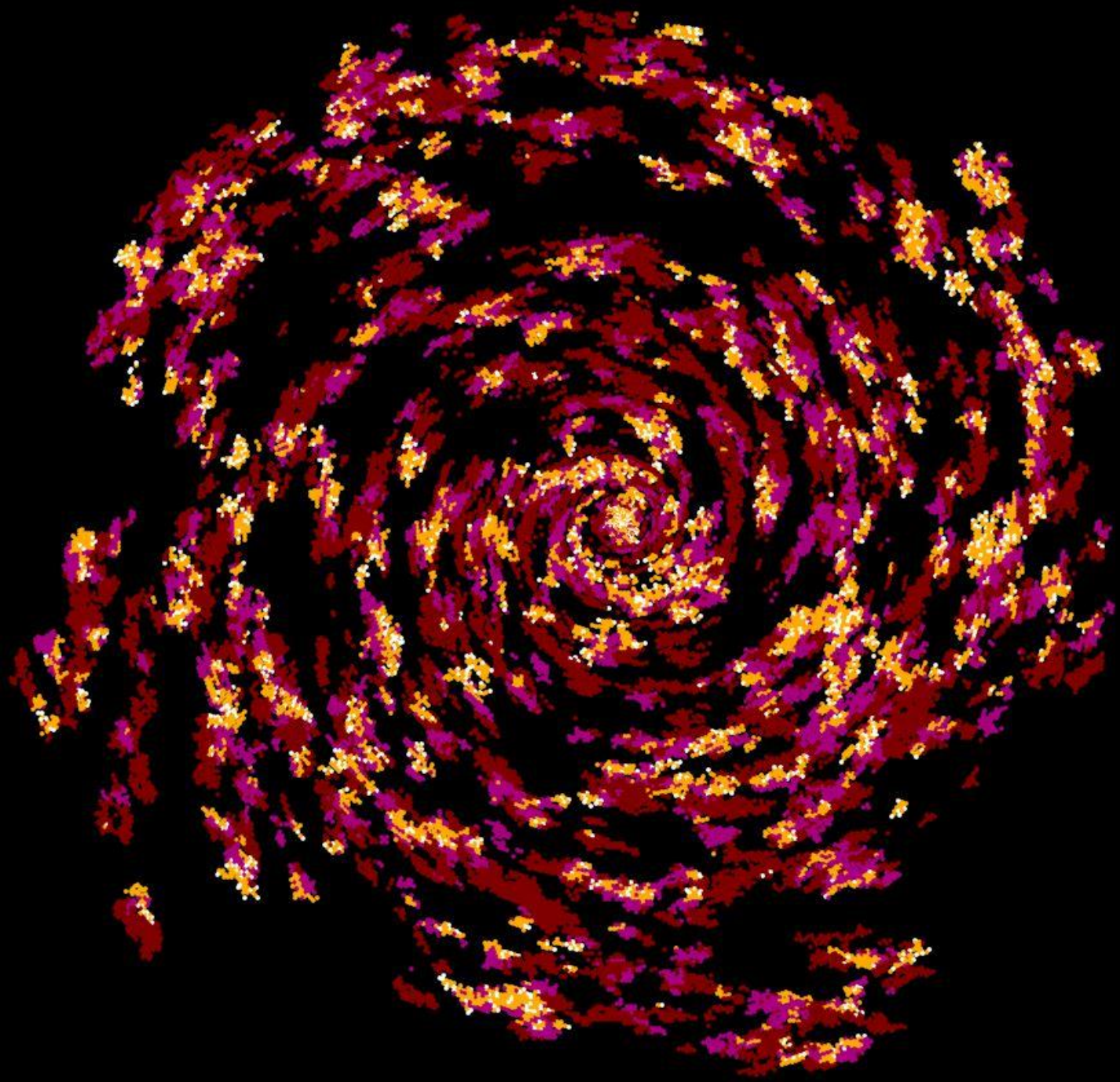
M1


NGC 891


M33

John Conway's "Game of Life"





Galaxy Simulation