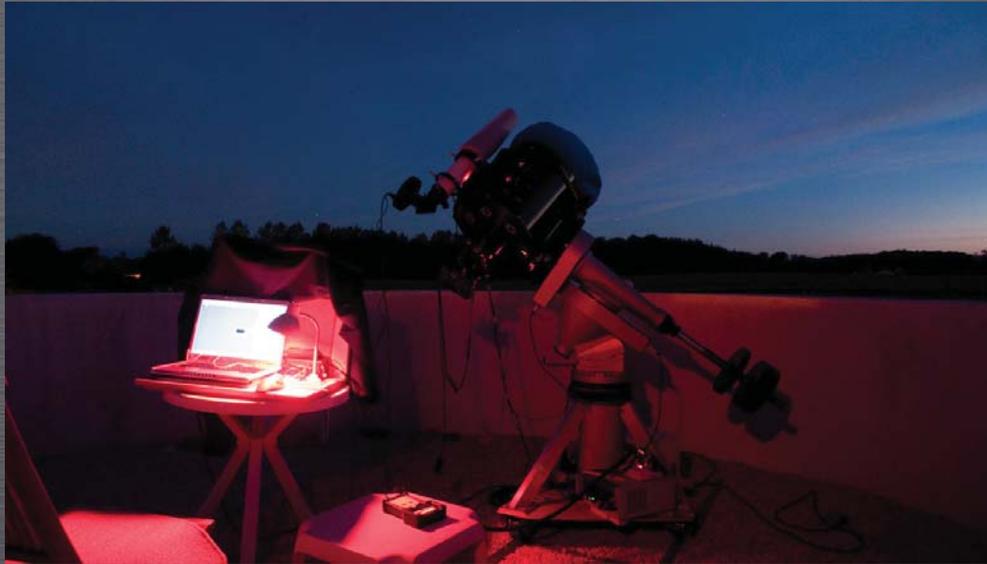




MY CERAVOLO ASTROGRAPH EXPERIENCE

HENRIK BONDO MAY 2011 DENMARK

*I got this question:
How is your astrograph experience working out ?*



I AM VERY HAPPY WITH ITS PERFORMANCE.
IT REALLY HELPS ME ENJOY AND DEVELOP IN MY ASTRONOMY HOBBY !
(IN THE SITUATION; JUST SEEING MY SMILE WOULD BE ENOUGH ANSWER)

IT'S **SO** EASY TO USE - ALMOST TRANSPARENT:
KEEPS ITS FOCUS, NEWER DEW, EASY TO COLLIMATE (ALTHOUGH IT "NEVER"
NEEDS THAT). IT GIVES SHARP STARS TO THE CORNERS, AND HAS A FAST
F4.9 OPTICAL SYSTEM WITH A LARGE PHOTOGRAPHIC FIELD.

IMPORTANT TO ME IS ALSO ITS SHORT TUBE BEING ONLY A LITTLE
WIND SENSITIVE IN MY OPEN OBSERVATORY.

FINALLY IT'S BEAUTIFUL.

BUT WHO IS SAYING THOSE NICE WORDS, AND WHAT SUBSTANCE IS BEHIND ?



**I AM A PATHOLOGIST HAVING WORKED WITH MAINLY ZEISS AND LEICA
MICROSCOPES FOR MORE THAN 30 YEARS.
(THE PHOTO SHOWS MY OLD ZEISS RESEARCH MICROSCOPE 1980)**



MY CURRENT MICROSCOPE - A NIKON. I MENTION THE MICROSCOPE CONNECTION BECAUSE THE EXPERIENCE IN A MICROSCOPE IS VERY SIMILAR TO THE ONE IN A “MACROSCOPE”: IT HAS TO GIVE SHARP AND CONTRASTY IMAGES, BE ROCK-SOLID AND OVERALL “TRANSPARENT” BETWEEN ME AND THE HISTOLOGICAL SPECIMEN. OF COURSE THE INTEGRATION BETWEEN MICROSCOPE-CAMERA-COMPUTER-ALLSORTSOFSOFTWARE MUST HAVE THE SAME “TRANSPARENCY” IN ORDER TO GIVE A FAST AND RELIABLE WORKFLOW.

1. THE NEED FOR AN ASTROGRAPH



I STARTED MY ASTRONOMY HOBBY IN 1995 WITH AN 5" ASTROPHYSICS REFRACTOR,
TRIED ASTROPHOTOGRAPHY WITH FILM AND MANUAL GUIDING, BUT GAVE UP.
I THEN PURSUED VISUAL OBSERVATIONS FROM A SMALL ROLL-OFF OBSERVATORY



**IN 2003 I GOT A 20" DOBSON FOR DEEP SKY OBSERVING
AND BUILD AN OPEN OBSERVATORY ...**



**... WITH TELESCOPE WAGONS ON RAILS
AND A SMALL “TELESCOPE-STORAGE-HOUSE” BEHIND ...**



... AND STARTED LUNAR IMAGING WITH THE 5" AND THE 20"



**IN 2008 I TOOK UP DEEP-SKY IMAGING AGAIN.
THIS TIME IN ORDER TO IMPROVE MY VISUAL ABILITIES AT THE DOBSON**

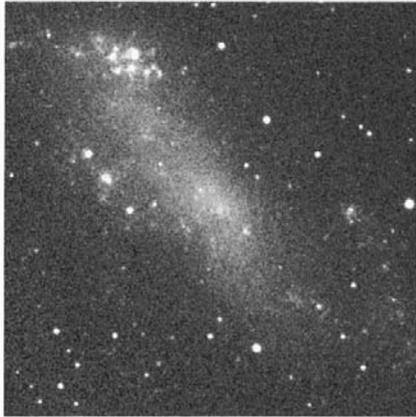


Fig. 5.3. A difficult object: IC 2574 ("Coddington Nebula"), a member of the M 81 group in Ursa Major



**ONE OF MY FIRST OBJECTS WAS IC2574 (SEEN IN STEINECKE'S BOOK "GALAXIES")
I MADE A SKETCH OF THIS VERY DIM OBJECTS AT THE DOB EYEPIECE
AND WAS HAPPY TO FIND IT ON THE NIKON DSLR SCREEN AT THE CORRECT PLACE**



ic2574 COSf4.9 270min modified Canon 5DMkII

**BUT WHAT I REALLY NEEDED WAS TO TAKE MY OWN IMAGES FOR CONTEMPLATION
- BESIDES MY BELOVED VISUAL IMPRESSION.**

2. THE ASTROGRAPH DECISION (2009)



I CHOSD A CERAVOLO ASTROGRAPH BECAUSE IT HAD FINE SPECIFICATIONS, SHOWING SOME FULL RESOLUTION IMAGES WITH SHARP STARS IN THE CORNERS, AND A MODEST SIZE, THAT WAS MANAGEBLE FOR MY MOUNT AND OBSERVATORY CONSTRUCTION. I DIDN'T KNEW THE "TRANSPARENCY" BEFOREHAND, BUT MY MAILS WITH PETER INDICATED A MAN WHO FELT FOR AND WAS PROUD OF, WHAT HE WAS DOING. HIS SUPPORT HAS SINCE BEEN SIMPLY OUTSTANDING REGARDSDLESS OF MY PROBLEMS (HERE I AM CHANGING SOME CIRCUITS, I THINK IN CONNECTION WITH INSTALLING AN OPTEC HANDCONTROLLER)

3. THE ASTROGRAPH EXPERIENCE



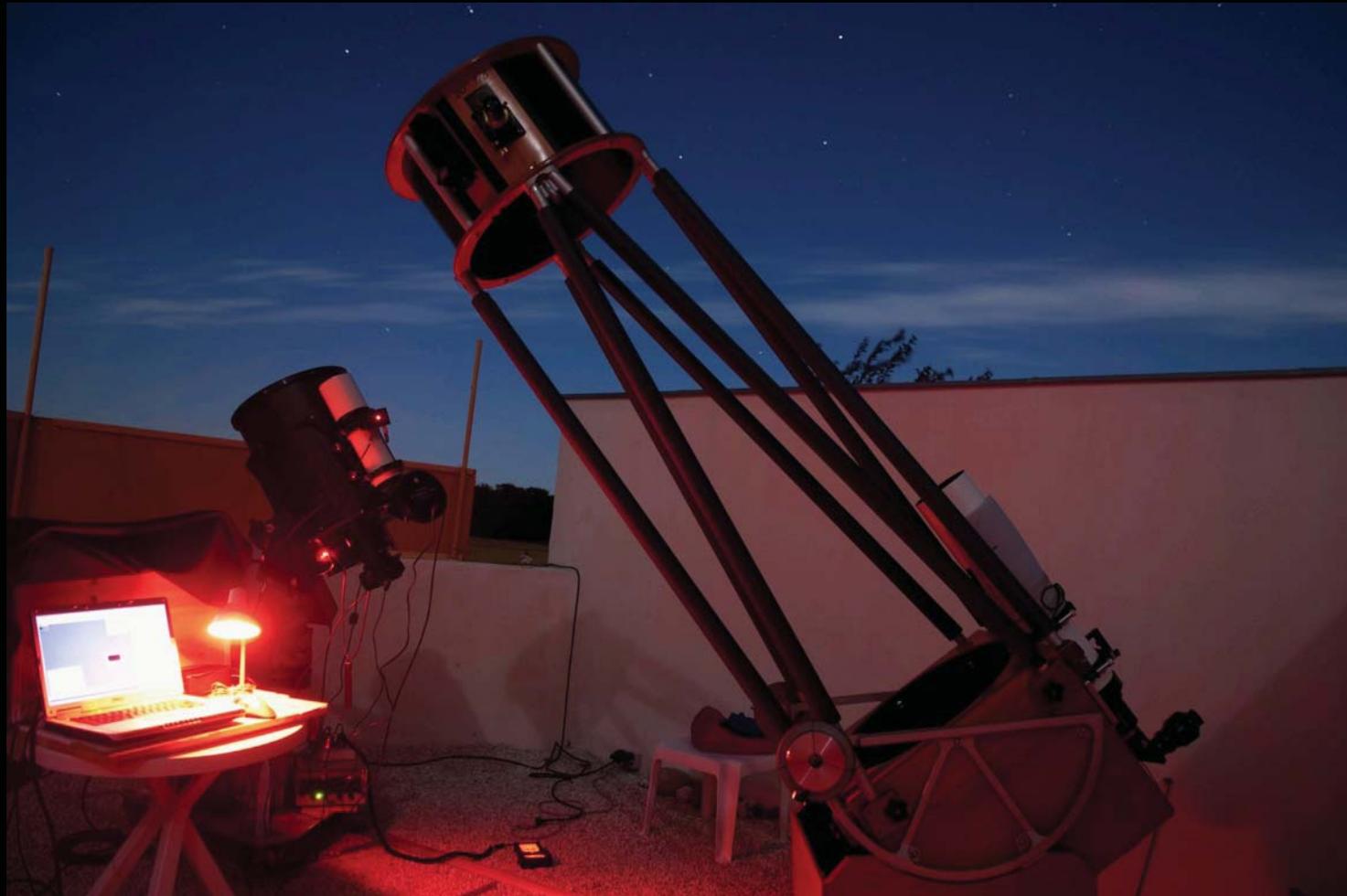
I USE THE FOLLOWING SOFTWARE:

MAXIM FOR GUIDING (TMB 80MM REFRACTOR AND ORION SSII)

IMAGES PLUS FOR CAPTURING ASTROPHOTOS (WITH A MODIFIED CANON 5DMRKII)

PIXINSIGHT AND PHOTOSHOP FOR PROCESSING

**STARTING UP A SESSION ON THE PC WITH FRAMING THE OBJECT, FOCUSING,
CALIBRATING THE GUIDING, AND CHECKING EXPOSURES IS ANNOYING
COMPARED TO THE ROUTINES OF VISUAL OBSERVING ...**



**ON VERY WINDY NIGHTS (SEE THE BRANCHES BEHIND THE WALL)
I USE A SMALL SHIELD ON THE LOW OBSERVATORY WALL
IN ORDER TO GET SMALL, ROUND STARS AND A COMFORTABLE WORKING PLACE.**



... BUT ONCE FINISHED SETTING UP, I EITHER LAY DOWN ON THE SUNBED
LOOKING AT THE SLOWLY ROTATING SKY OR OBSERVE WITH THE DOBSON.
GOING INSIDE, I DON'T CONSIDER BEING PART OF A FULFILLING ASTRONOMY HOBBY.
IF I AM TIRED, BUT STILL WANT TO USE A PRECIOUS CLEAR NIGHT, I DO IT ANYWAY.

(THE PHOTO IS A LONG TIME EXPOSURE - I CAN'T SEE THE LAMP AND PC UNDER THE CARPET)

**SOUNDS OF GEESE
ABOVE MY HEAD
CALLING FROM THEIR HEARTS**



**A CENTRAL PART OF MY OBSERVING EXPERIENCE IS SENSING THE ATMOSPHERE,
THE SMELLS, AND HEARING THE SOUNDS OF NATURE ...**

**STANDING IN THE SNOW
STARS BEING BORN IN HEAVEN
I AM BORN EACH STEP I TAKE**



M42 COSf4.9 81 min modified Canon 5DMkII

**... AND TRYING TO EXPRESS MY THOUGHTS IN A HAIKU POEM,
INTEGRATING, WHAT I SEE, WITH MY OWN PROCESS AS A HUMAN BEING**

**HERE LOOKING AT A LOW HANGING M42 IN THE DOB, SUDDENLY TAKING A STEP IN THE SNOW,
I REALIZED THE IMMENSE OPPORTUNITIES IN EACH STEP I TAKE - A MOST UPLIFTING EXPERIENCE.
I COULDN'T DOCUMENT IT WITHOUT MY ASTROGRAPH - THEREFORE AN ASTROGRAPH EXPERIENCE !**

**A FLYING HEART IN SPACE
A WANDERING SPIRIT
FOLLOWED BY IT'S SHADOW**



ic5146 COSf4.9 270min modified Canon 5DMkII

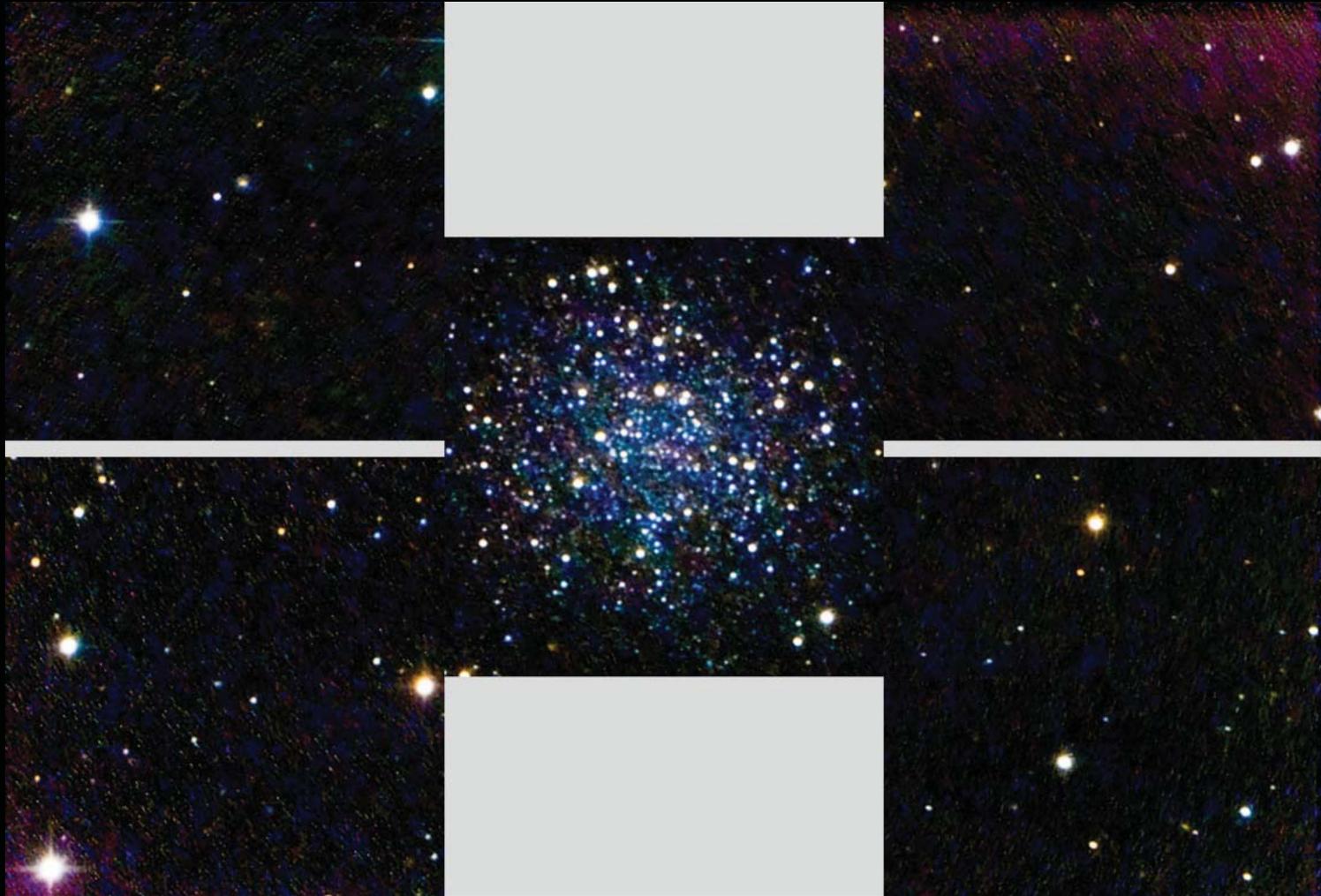
**HERE ARE SOME THOUGHTS CONCERNING THE TRAIL I LEAVE THROUGHOUT LIFE
WITH - AT LEAST TO ME - MOSTLY UNKNOWN CONSEQUENCES**

THE SHINY STARS
AND THE HUMBLE ONES
EQUALLY FASCINATING



M53 ngc5053 COSf4.9 200min modified Canon 5DMkII

4. THE ASTROGRAPH RESULTS



THE HUMBLE STARS AND THE FOUR CORNERS AFTER APPLYING EXCESSIVE CURVES

YOU SEE A LOT OF NOISE (19C TEMPERATURE INSIDE THE CANON) BUT NICE ROUND STARS. IF YOU FIND SOME STARS NOT THAT ROUND, IT'S BECAUSE THE FOCAL PLANE OF THE CANON WERE NOT SQUARELY PLACED IN THE OPTICAL PATH.
I REALLY MISS A PRECISION 2" CANON ADAPTOR BARREL

ONLY 5616 X 3552 PIXELS OF THE 5616 X 3744 PIXELS WERE USED DUE TO THE INNER SHAPE OF THE CANON HOUSE



M71 COSf4.9 168min modified 5DMkII

ALTHOUGH THE CENTRAL MOTIVE IS SMALL, I LIKE THE OVERVIEW EXPERIENCE



1.23m Calar Alto Observatory



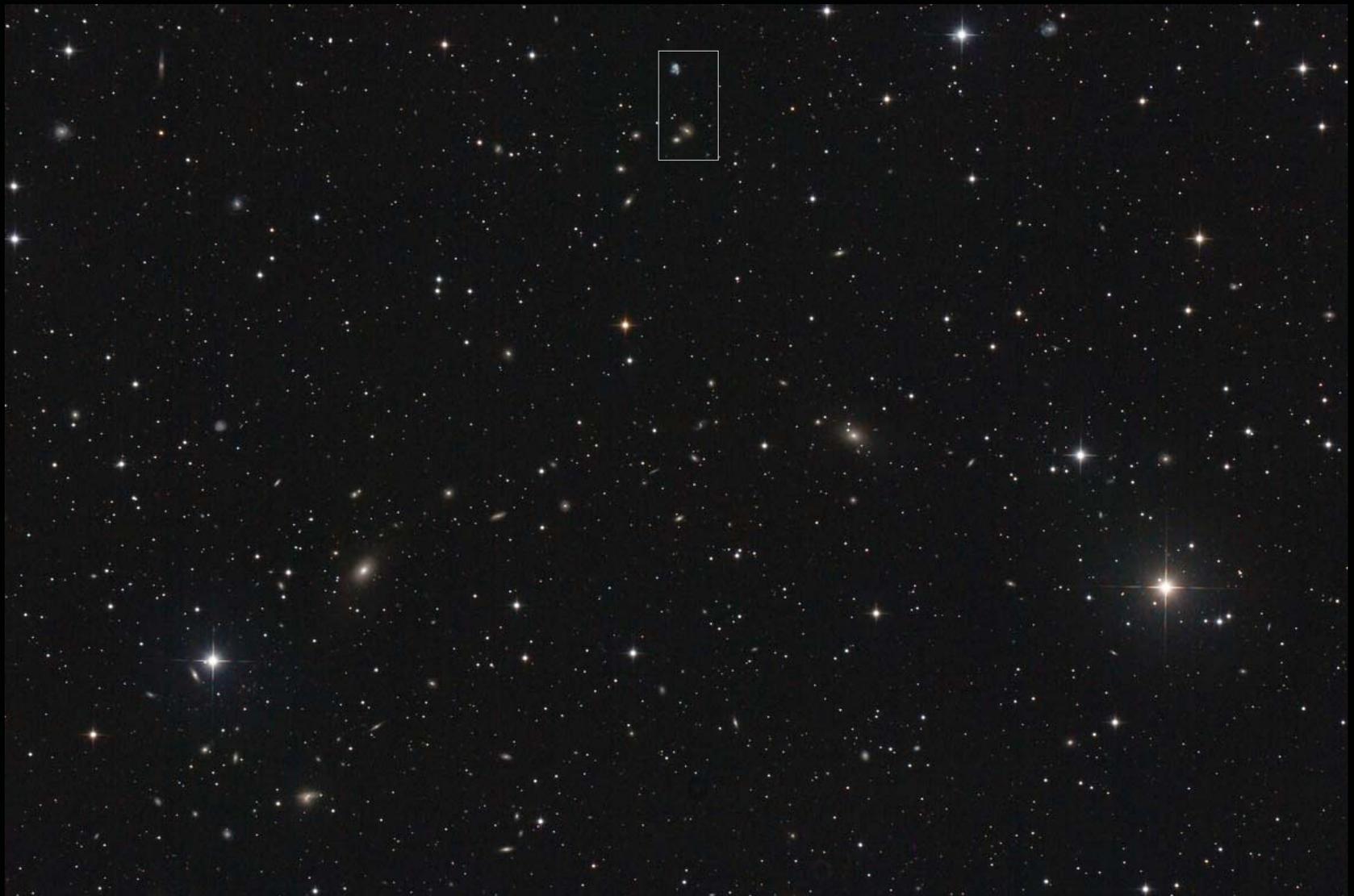
M71 COSf4.9 168min modified Canon 5DMkII



0.9m KPNO

**I COULDN'T RESIST COMPARING MY RESULTS WITH OTHERS.
I WAS VERY SURPRISED TO SEE THE CAPABILITIES OF MY SMALL INSTRUMENT
COMPARED TO PROFESSIONAL OBSERVATORIES**

(I REGRET I HAVEN'T KEPT THE LINK TO THE IMAGES)

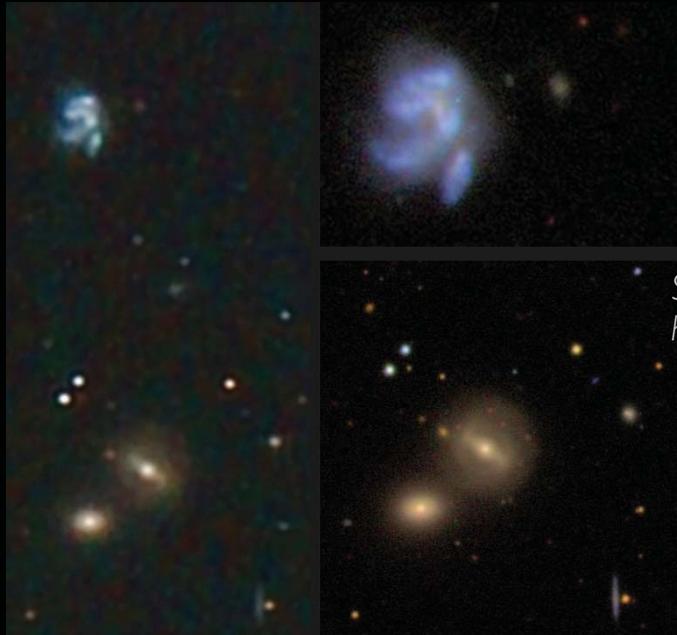


Abell 2197 COSf4.9 100min modified Canon 5DMkII

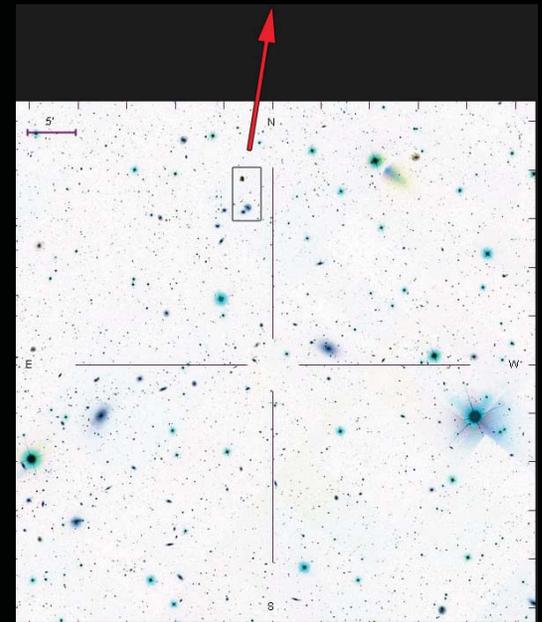
I ALSO TRIED MORE CHALLENGING OBJECTS LIKE ABELL 2197 ...

PLEASE NOTICE THE FRAMED AREA

12" COSf4.9 100min
modified Canon5DMkII



SDSS 98" Apache Point Observatory New Mexico
<http://cas.sdss.org/dr5/en/tools/places/abell.asp>



... EVEN IN THIS SHORT EXPOSURE (CLOUDS WERE RUNNING IN)
I CAN RECOGNIZE GALAXY STRUCTURES VISIBLE IN THE SDSS IMAGE
- MAYBE NEXT TIME I WILL TRY A DEEPER EXPOSURE
TO GET MORE STARS AND THE GALAXIES BETTER RENDERED.

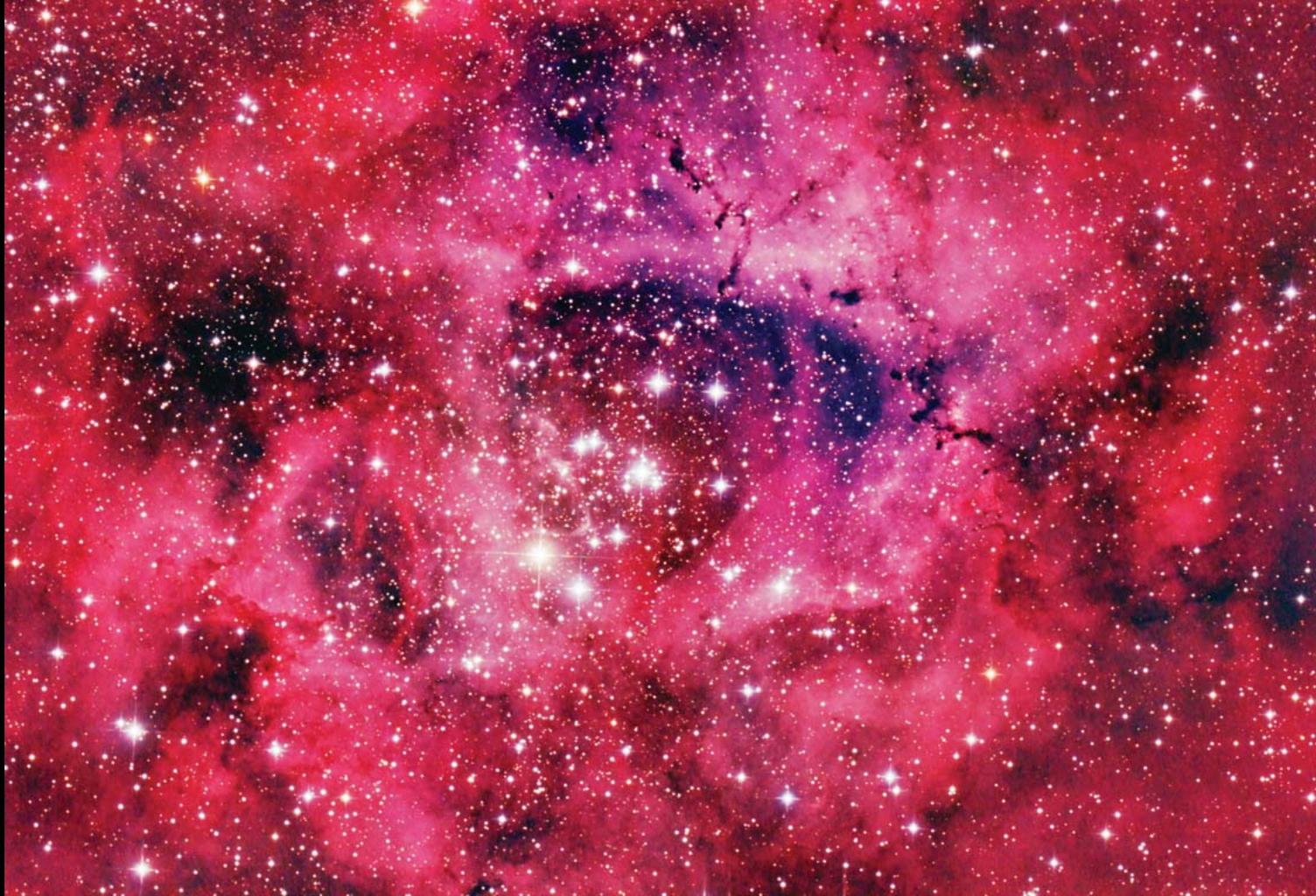


*Moon 28Jan10 2205UT
12" COSf9 mosaic DMK camera & Nikon
(original magnification above)*

**ALTHOUGH THE ASTROGRPH IS NOT INTENDED
FOR HIGH RESOLUTION LUNAR IMAGING
I AM VERY HAPPY WITH THE RESULTS.**

THE HUMORUM BASIN REGION OF THIS IMAGE WAS AN LPOD 4JUN10

5. UNRESOLVED CHALLENGES



ngc2239 COSf4.9 170min modified Canon 5DMkII

WITH MY HUMBLE CANON I HAVE IMITATED THE ICONIC IMAGE ON [WWW.CERAVOLO.COM](http://www.ceravolo.com)

MY NEXT STEP WILL CERTAINLY BE:

- LOOKING FOR A MONOCHROME ASTROCAMERA TO MATCH THE ASTROGRAPH
- FINDING PEACE INSIDE MYSELF AS A SOURCE OF HAIKU POEMS