

The -PLUS saga

survey

Chapter 1 - The T80S Awakens

By Fábio R. Herpich - IAG/USP
herpich@usp.br

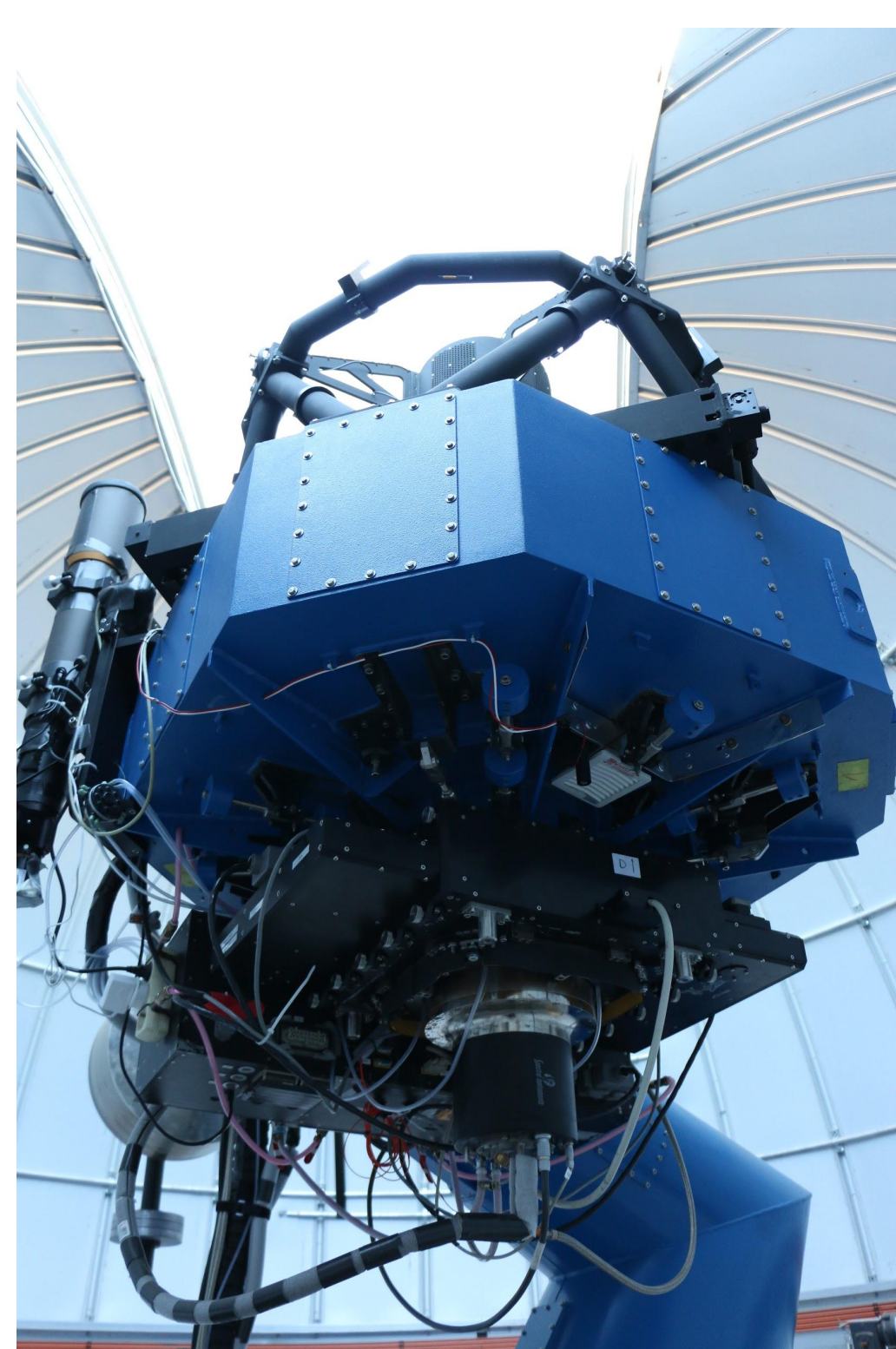


INSTITUTO DE ASTRONOMIA,
GEOFÍSICA E CIÊNCIAS
ATMOSFÉRICAS

<http://www.splus.iag.usp.br/survey/>



FUNDAÇÃO DE AMPARO À PESQUISA
DO ESTADO DE SÃO PAULO



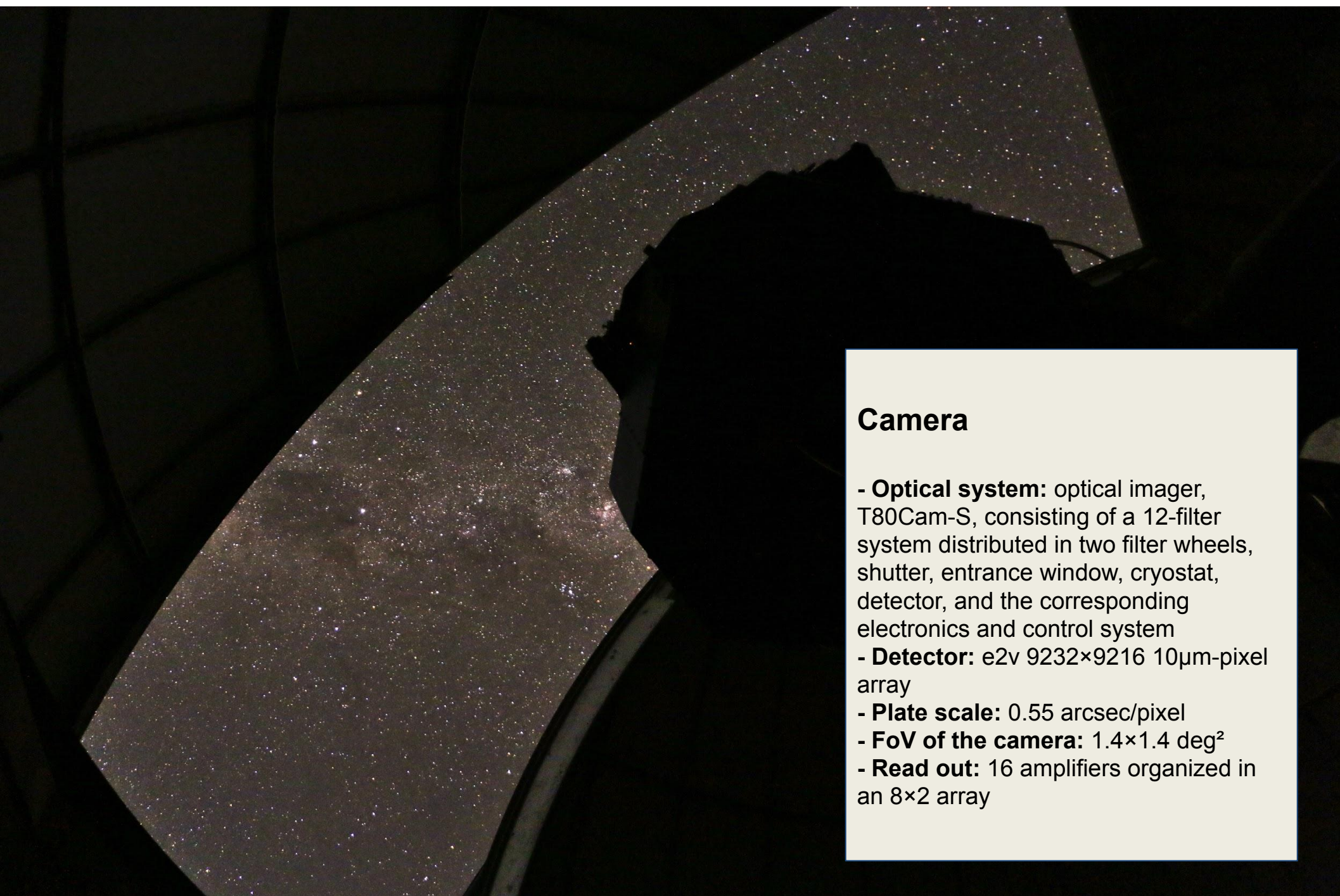
- **Location:** Cerro Tololo, Chile
- **Altitude:** 2178 m
- **Geodetic position:** -30:10:04.31, -70:48:20.48.
- **Mount:** equatorial
- **Optical system:** f/4.31 Ritchey-Chretien with one axial Cassegrain focal plane and a clear aperture of 860 mm
- **Plate-scale:** 55.56 arcsec/mm
- **Total FoV:** 130 mm or 2 deg diameter on the sky
- **Optimal FoV:** 110 mm or 1.7 deg diameter on the sky
- **Aberration degradation:** < 1%
- **Dome:** 8 m Ash dome
- **Slew time between two opposite sky positions:** < 1.5 min
- **Operation:** chimera observatory control system

Primary (“M1”):

- **Radius of Curvature:** -2471.295 mm
- **Curvature:** concave
- **Conic Constant:** -1.163946
- **Optical Diameter:** 826 mm
- **F Number:** 4.5
- **Effective Collecting Area:** 0.44 m²

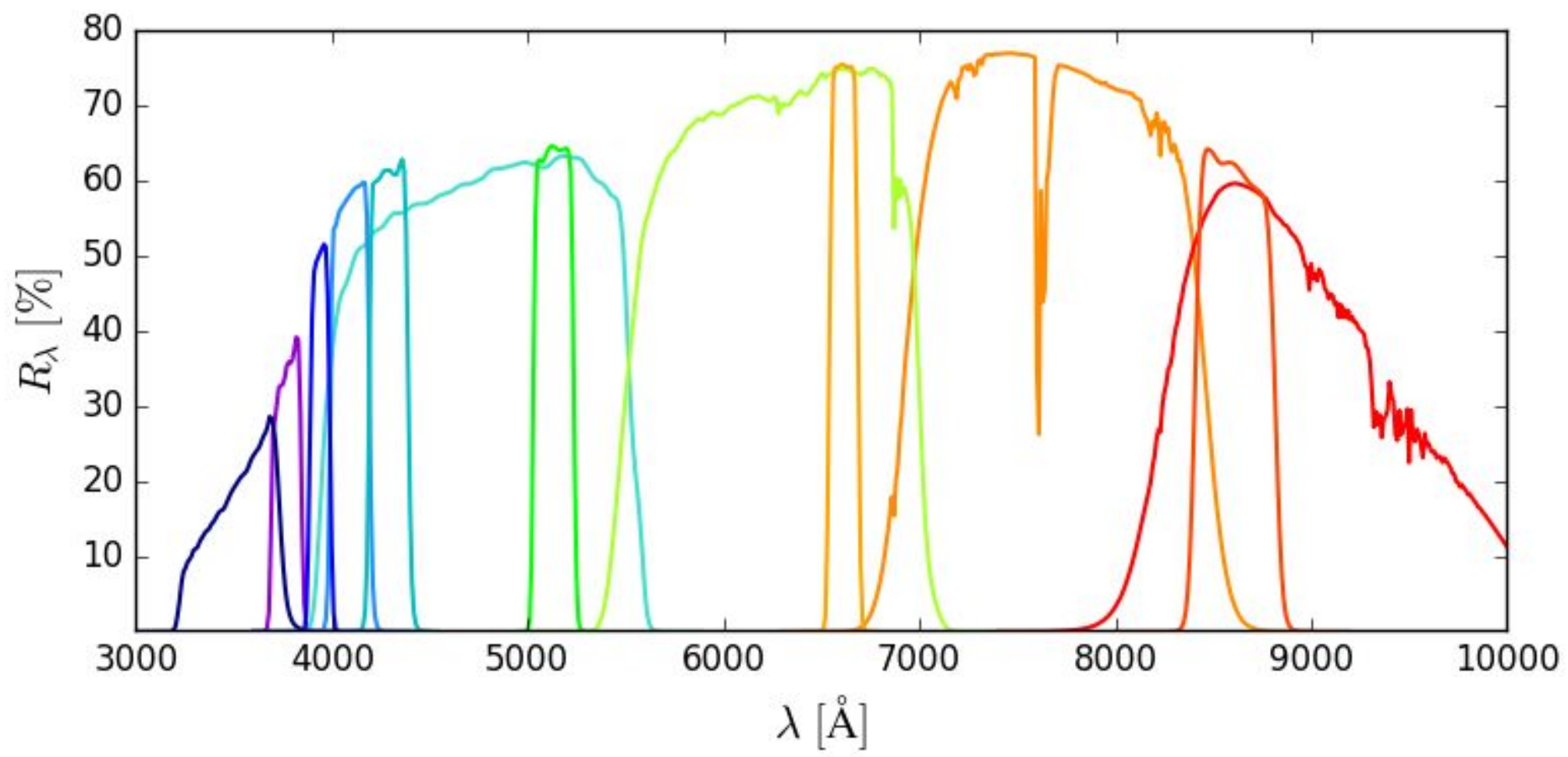
F/4.5 secondary (“M2”):

- **Distance from primary:** 825.7695 mm
- **Radius of curvature:** -1237.411 mm convex
- **Conic constant:** -5.776745
- **Optical Diameter:** 302.879 mm

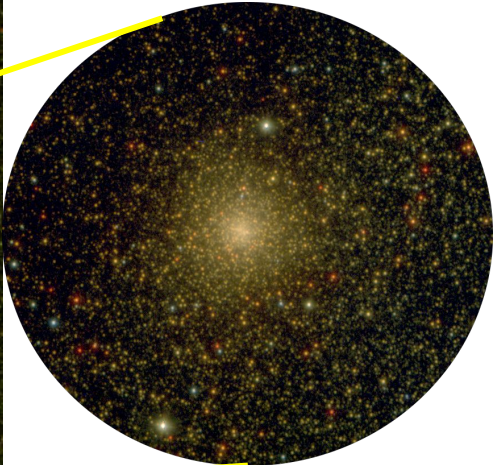
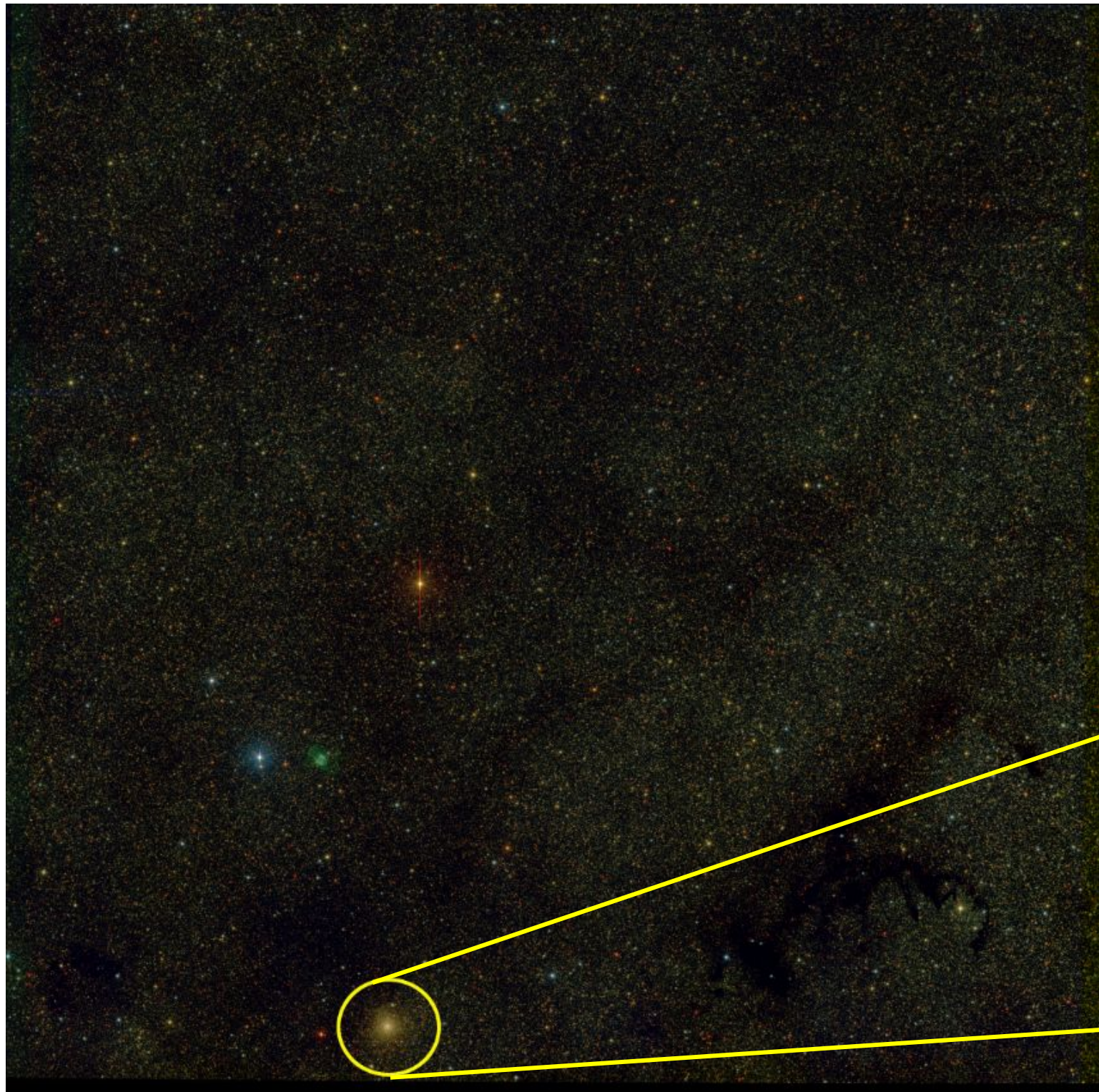


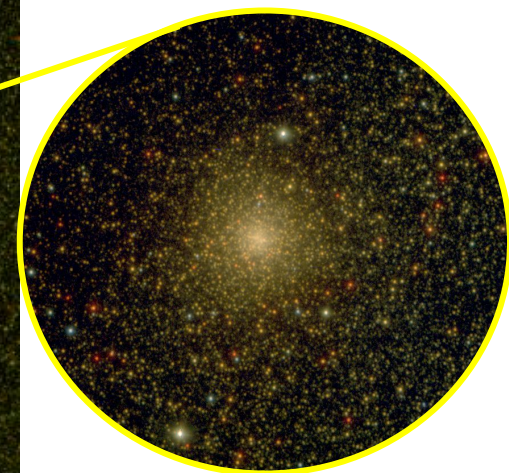
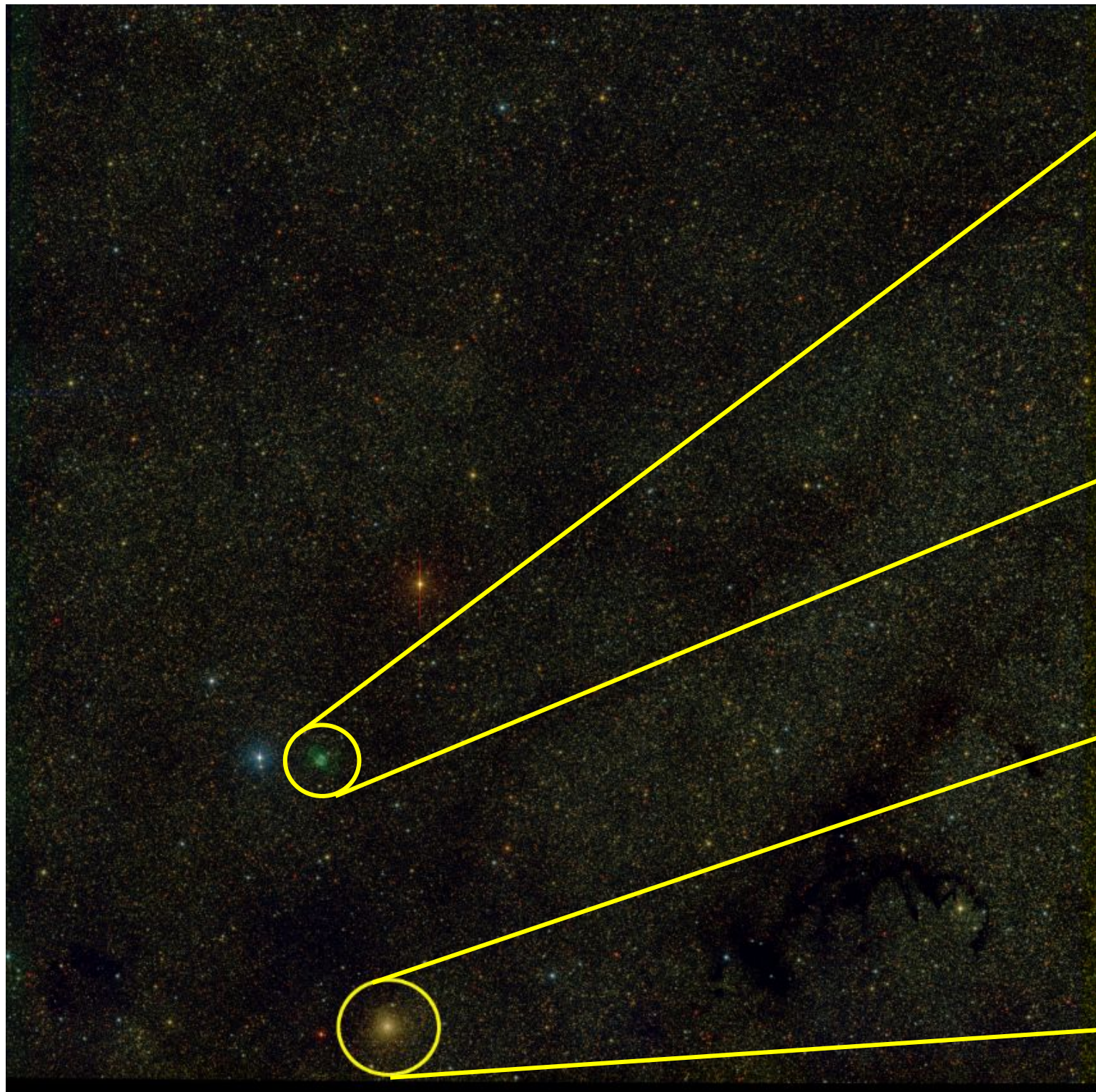
Camera

- **Optical system:** optical imager, T80Cam-S, consisting of a 12-filter system distributed in two filter wheels, shutter, entrance window, cryostat, detector, and the corresponding electronics and control system
- **Detector:** e2v 9232×9216 10 μ m-pixel array
- **Plate scale:** 0.55 arcsec/pixel
- **FoV of the camera:** 1.4×1.4 deg²
- **Read out:** 16 amplifiers organized in an 8×2 array









Search

T80S Manager 2:00 PM
@@ Monthly productivity ...

T80s Team 11:06 AM
You: Tem uma flag pra iss...

t80s 3:23 PM
General status: - site: REA...

lagoa 2:46 PM
t80s-jype2 - Started reducin...

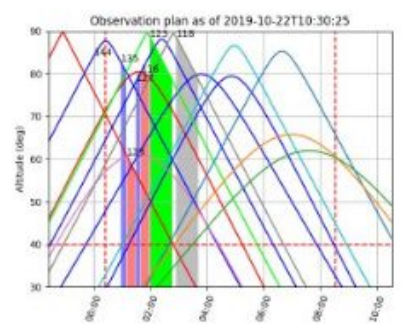


T80S Manager 7:10:05 AM
Lamp switched on

T80S Manager 7:30:08 AM
Running /mnt/public/t80s_scripts/scripts/plan_robobs.sh

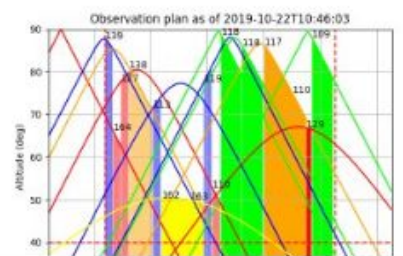
T80S Manager 8:00:51 AM
Last night observations

T80S Manager 8:00:54 AM

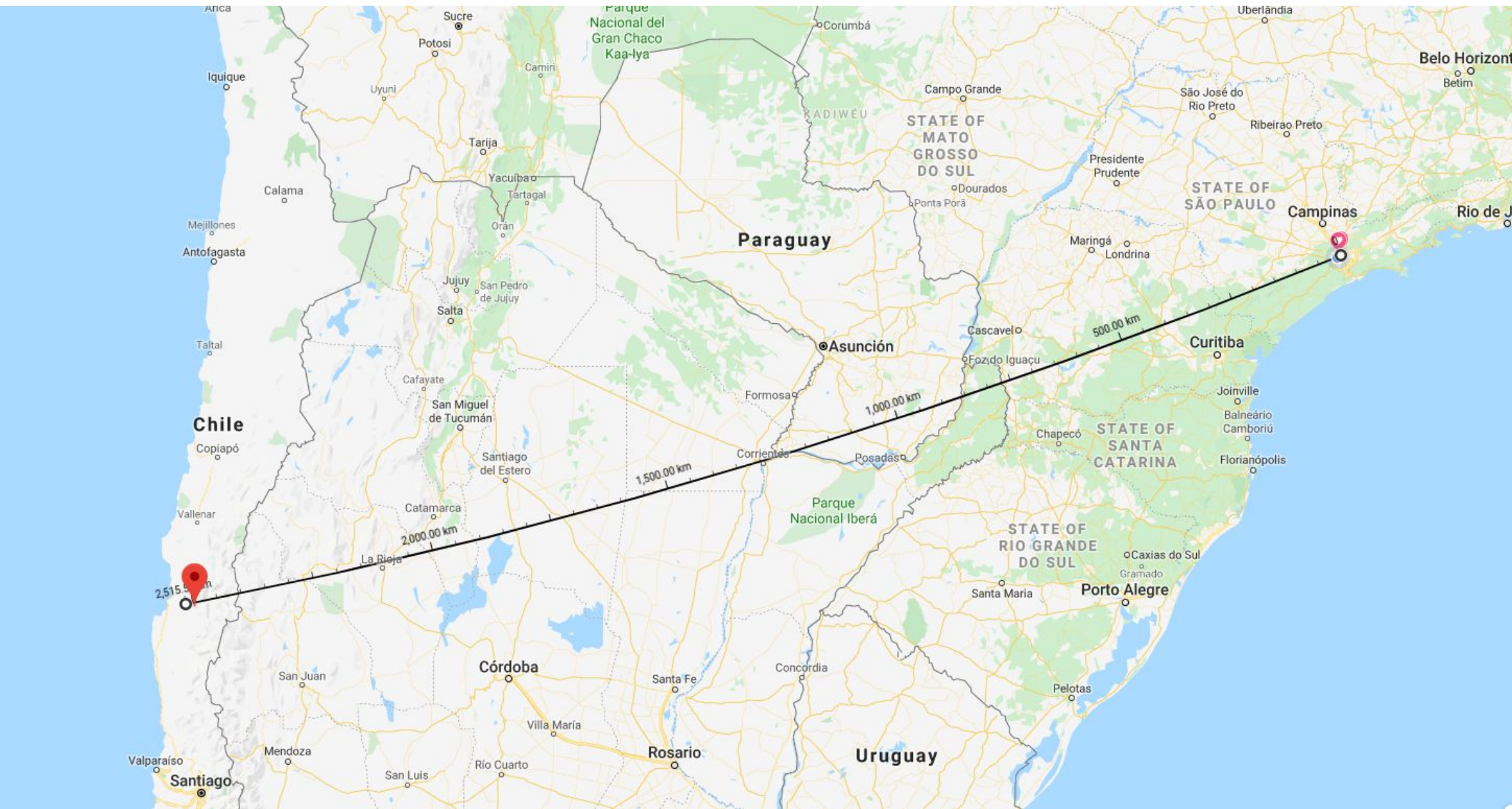


T80S Manager 8:00:54 AM
Tonight observations plan


T80S Manager 8:00:56 AM



Chapter 2 - The Last Report
- Telegram
- e-mail
- Remote connection



Chapter 3 - The Electrical Strikes Back

UPS: The battery power is too low to support the load; if power fails, the U...  Inbox x Work/T80S x



t80s-admin@astro.ufsc.br

to t80s-alerts ▾

Name: abcE037AD

Fri, Oct 11, 10:27 AM (11 days ago)

UPS: The battery power is too low to support the load; if power fails, the U... Inbox x Work/T80S x

Fri, Oct 11, 10:27 AM (11 days ago)

t80s-admin@astro.ufsc.br

to t80s-alerts

Name: ascE027AD

The screenshot displays the AsTeIOS GUI interface. A central dialog box titled "AsTeIOS GUI (NTM1000-M02)" is open, showing "New events occurred" and asking the user to "Investigate these in the 'Events view?'". The events listed are:

- Aug 30, 2019 12:57:05 AM UTC: DRIVES - Declination (INFO): ERR_DeviceInfo (Unspecified controller status signal)
- Aug 30, 2019 12:57:05 AM UTC: DRIVES - Declination (ERROR): ERR_DeviceError (4| I2T ERROR (ETEL error code))

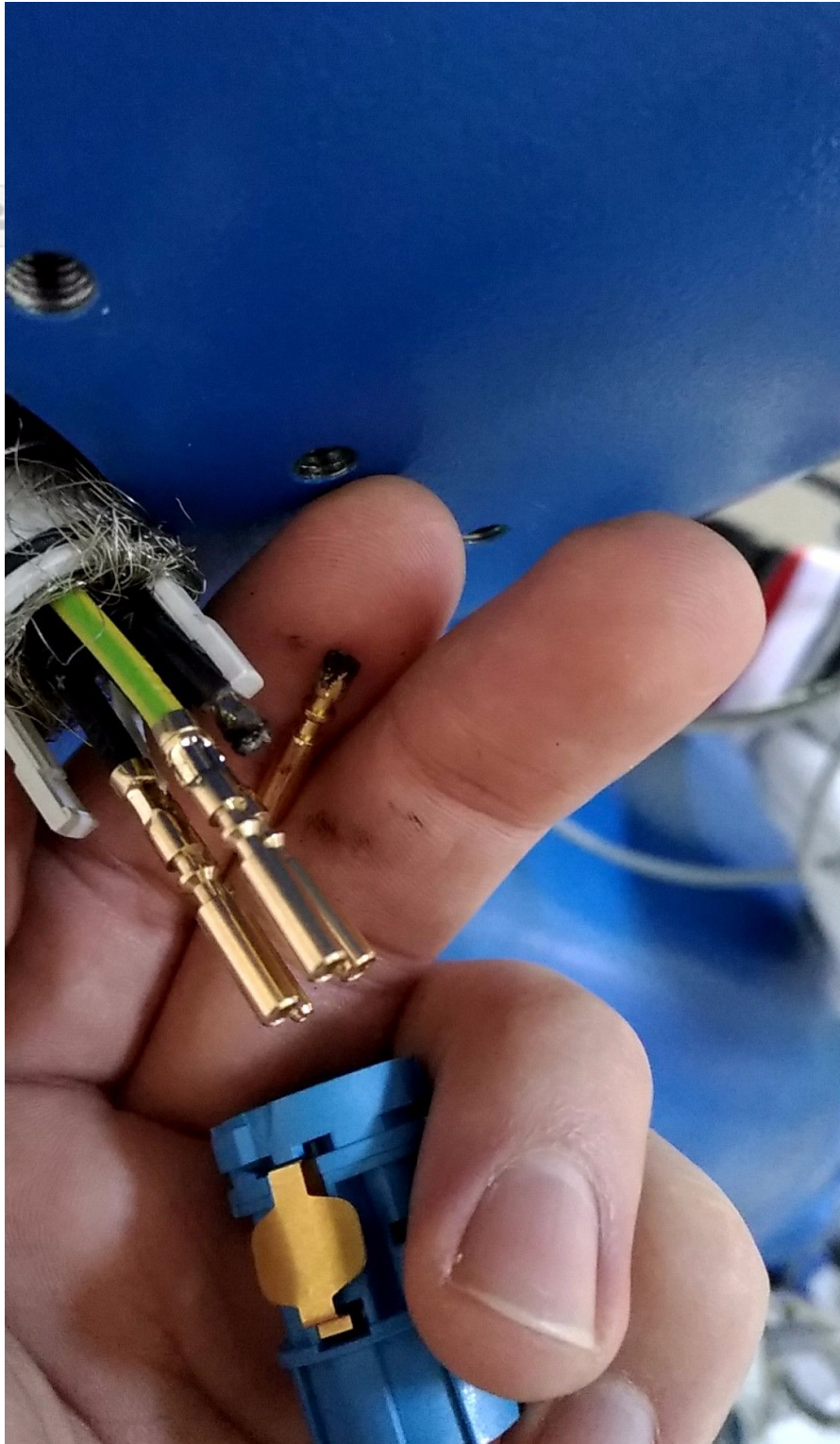
Below the dialog box, a table titled "telescope Axes" is visible:

Axis name	Power state	Reference state	Error state
Hour Axis	on	referenced	none
Declination	off	referenced	ERROR, INFO
M2-Axis (X)	on	referenced	none
M2-Axis (Y)	on	referenced	none
M2-Axis (Z)	...	referenced	...

To the right, a "Sensors" panel is open, displaying a table of sensor data:

Name	Value	Un
ManControlSpeed	6.500	no
TM1	16.860	Â°
TM2	12.270	Â°
FrontRing	11.390	Â°
TubeRod	12.340	Â°

Other visible elements include a star chart in the top right, a "Slit, Flap" control panel, and a "Sensors" tab in the bottom right.



d; if power fails, the U... Inbox x Work/T80S x

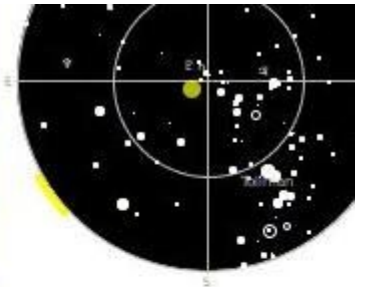
Fri, Oct 11, 10:27 AM (11 days ago)

Moving parts: Closed parts: Flap target state

Information (INFO): ERR_DeviceInfo (Unspecified controller status signal)
 Information (ERROR): ERR_DeviceError (4) | 12T ERROR (ETEL error code)

Cancel OK

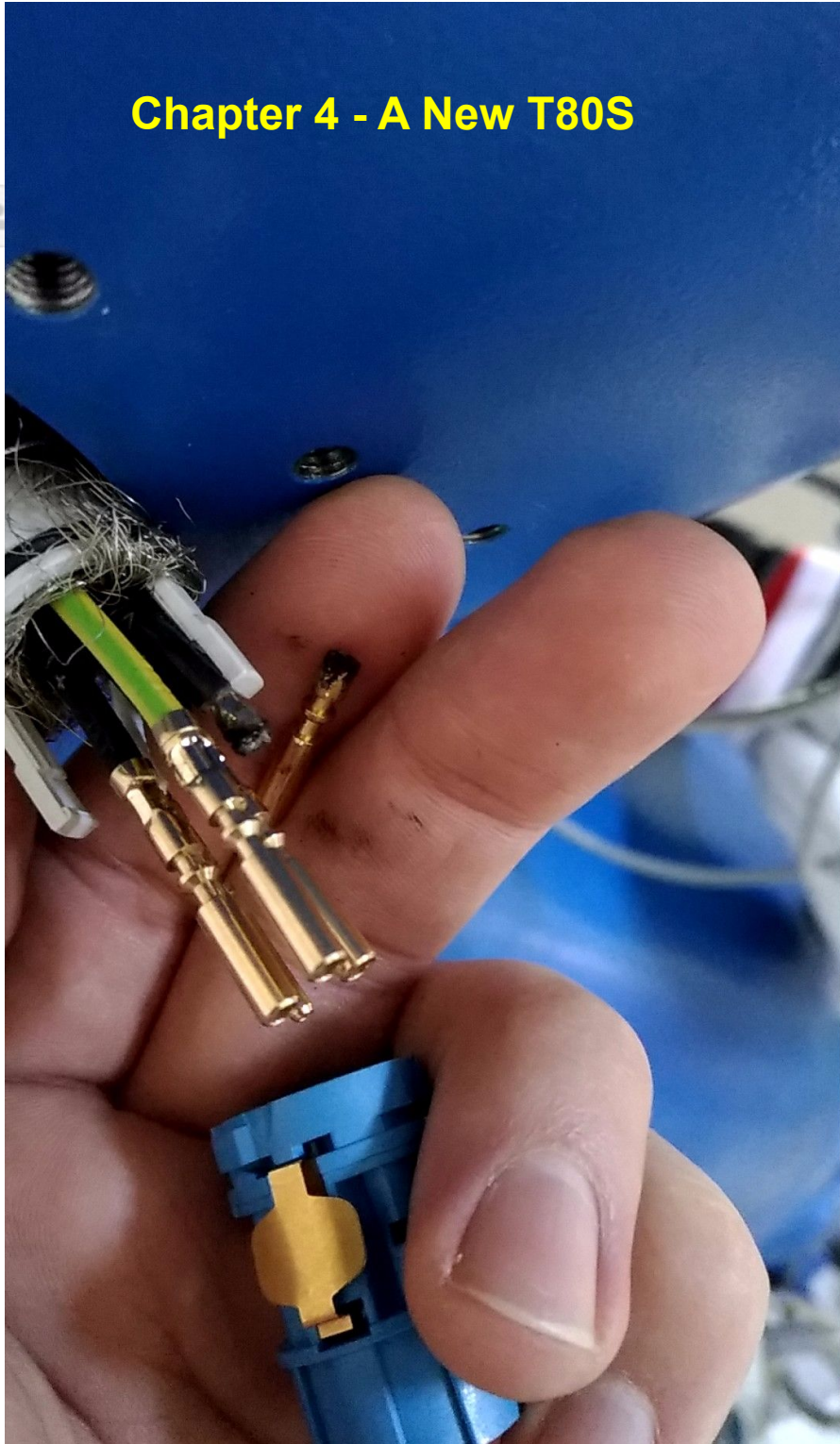
	Power state	Reference state	Error state
	on	referenced	none
	off	referenced	ERROR, INFO
	on	referenced	none
	on	referenced	none



Sensors

Name	Value	Un
ManControlSpeed	6.500	no
TM1	16.860	Â°
TM2	12.270	Â°
FrontRing	11.390	Â°
TubeRod	12.340	Â°

Chapter 4 - A New T80S



d; if power fail

Moving parts:

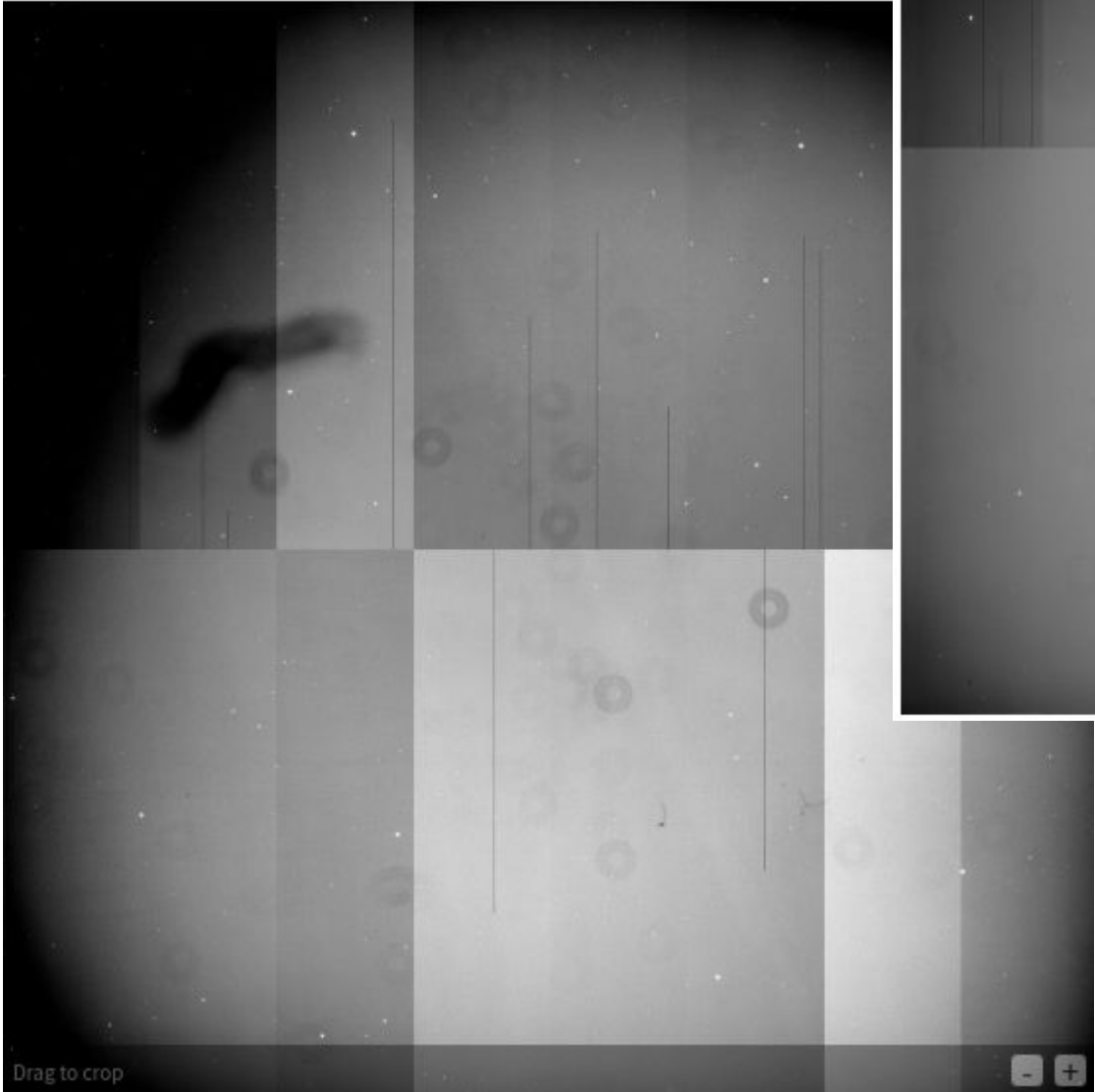
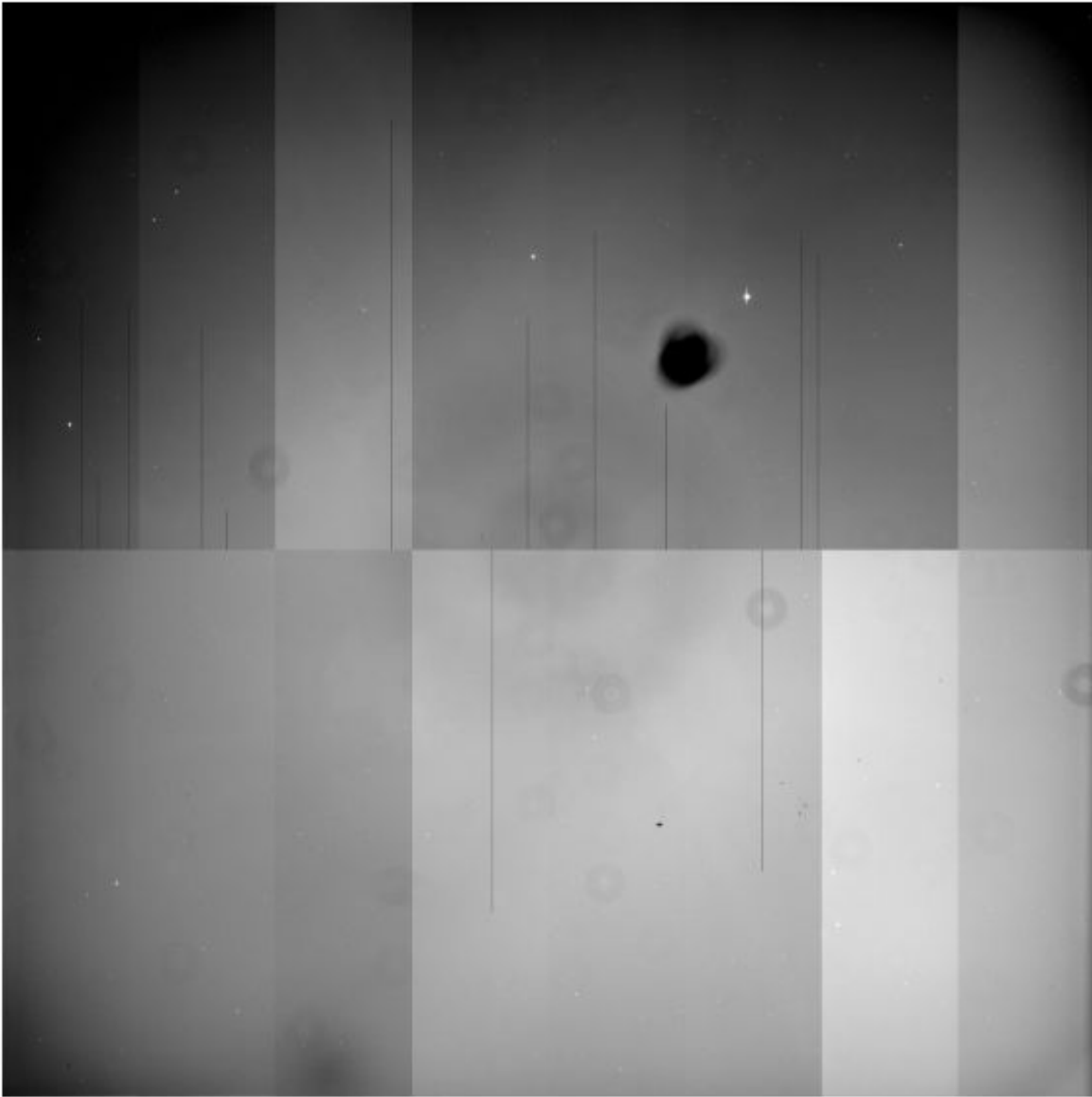
ion (INFO): ERR_Device
ion (ERROR): ERR_De

Power state
on
off
on
on
...



Chapter 5 - The Attack of the Bugs

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Chapter 6 - Revenge of the Environment

T80S - CTI0 - 2019-09-08 23:10:38



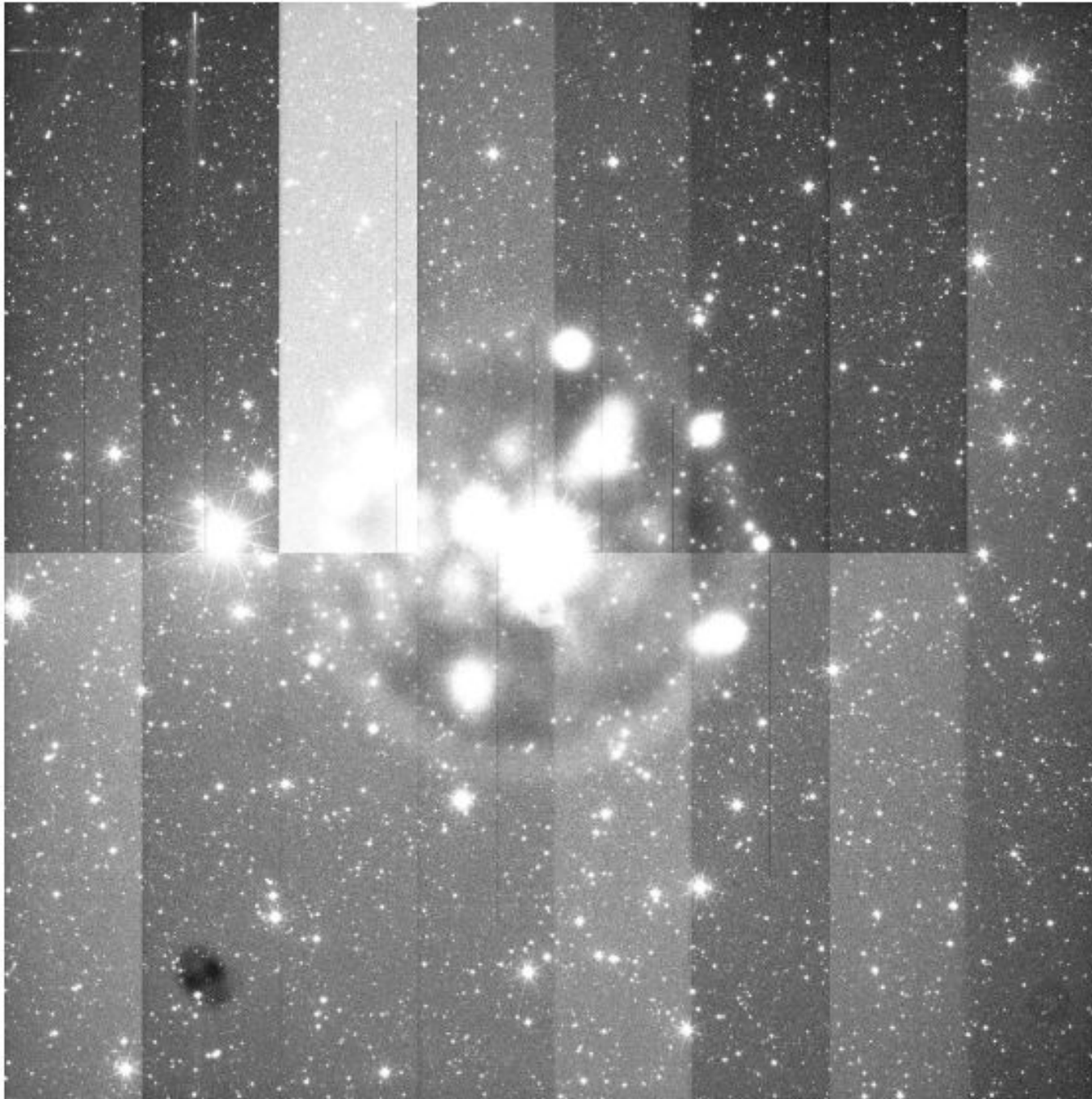
T80S - CTI0 - 2019-09-09 01:02:16



T80S - CTI0 - 2019-09-09 12:58:33

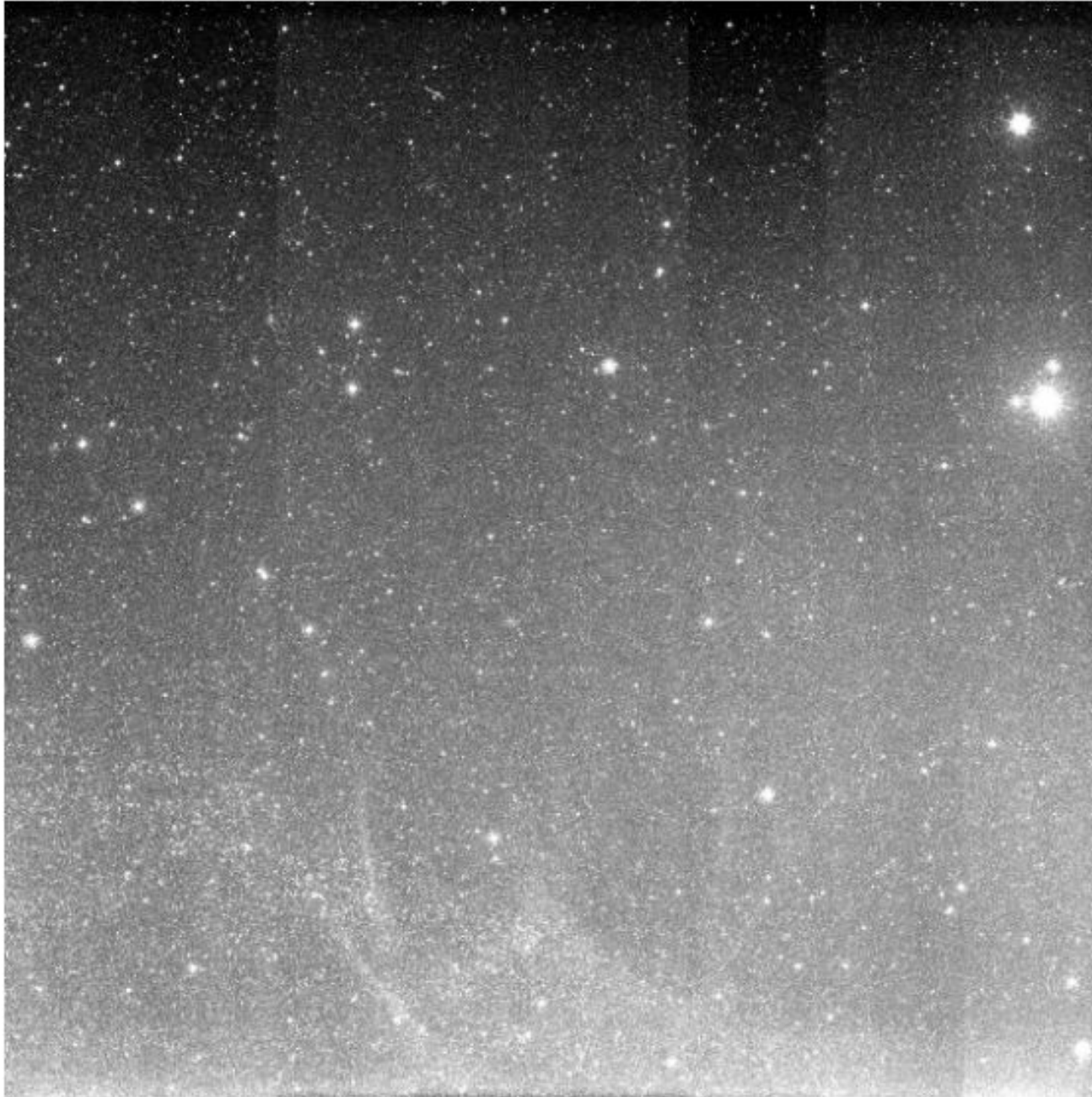


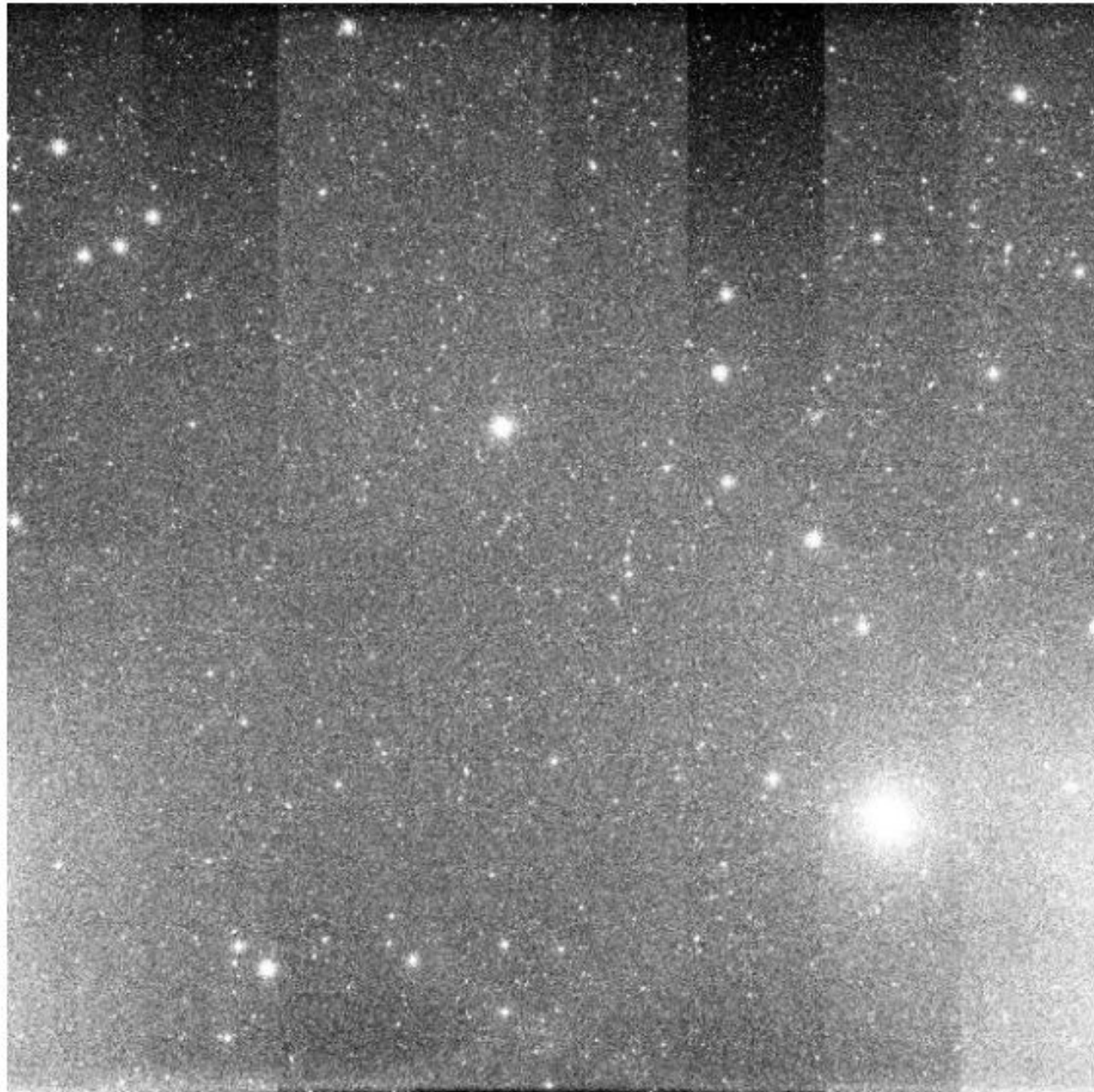
Chapter 7 - The Return of the Humidity



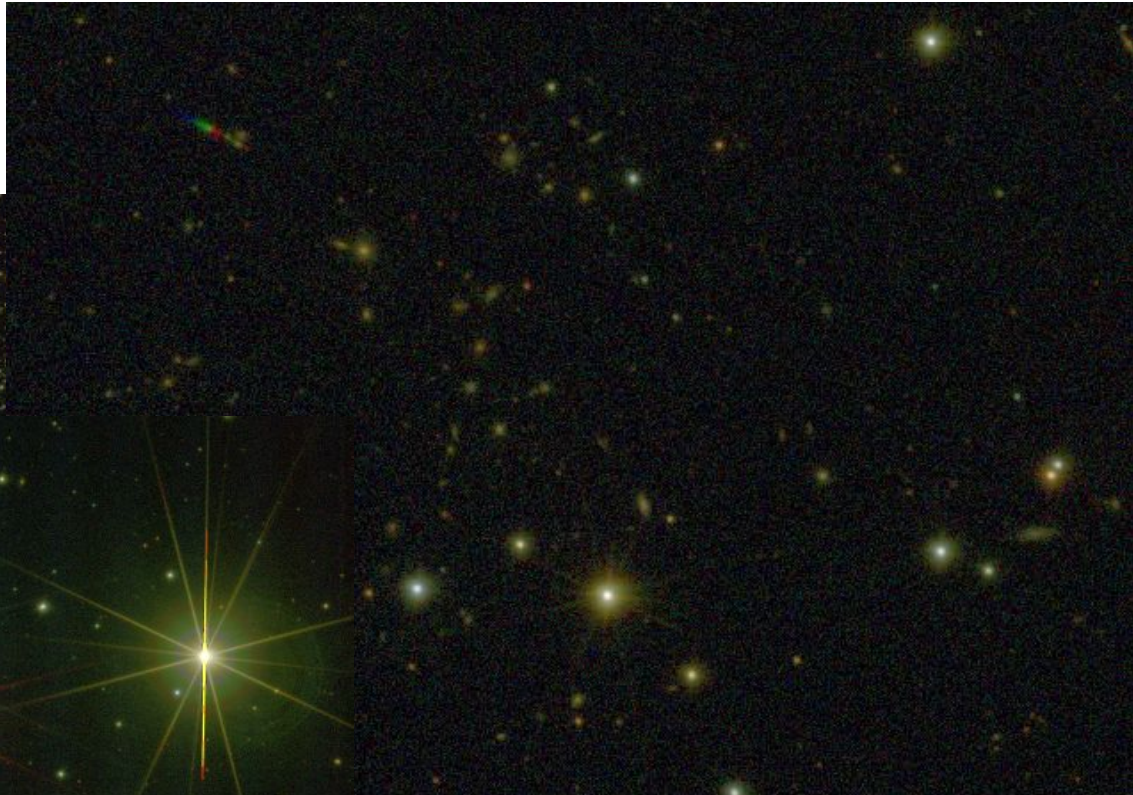
Chapter 8 - The Phantom Light

Chapter 8 - The Phantom Light





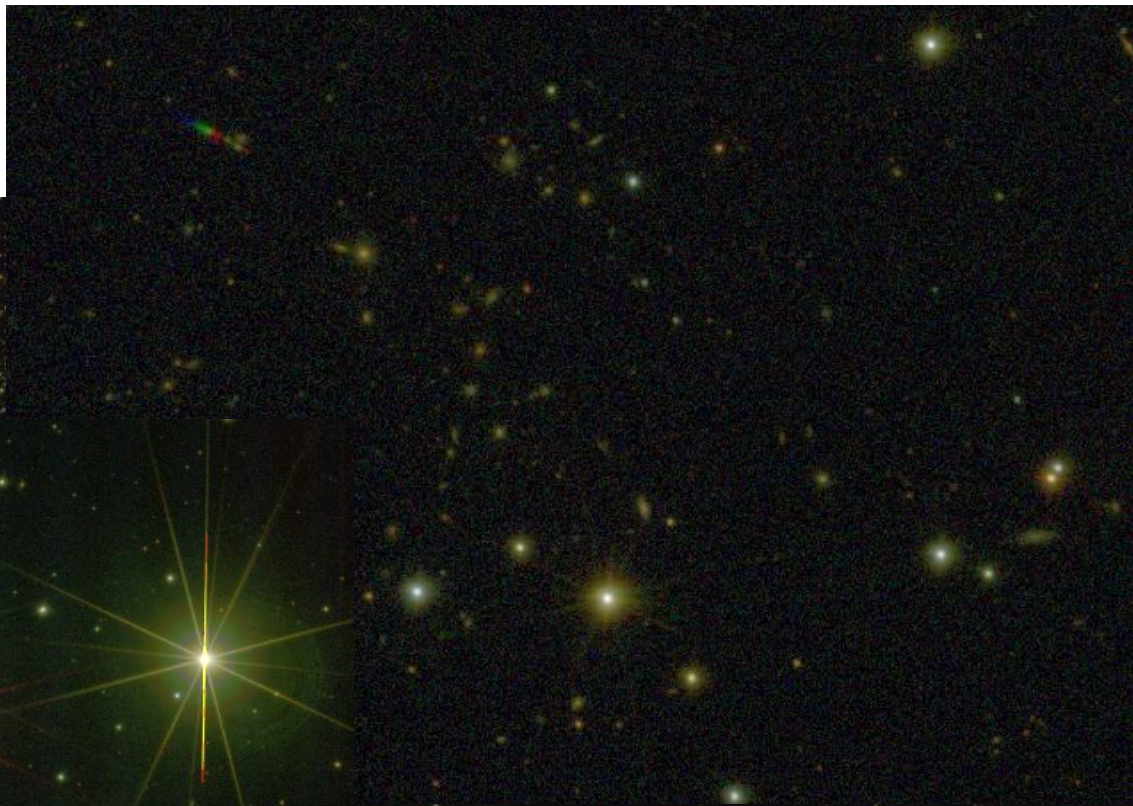
Chapter 9 - The Rise of T80S



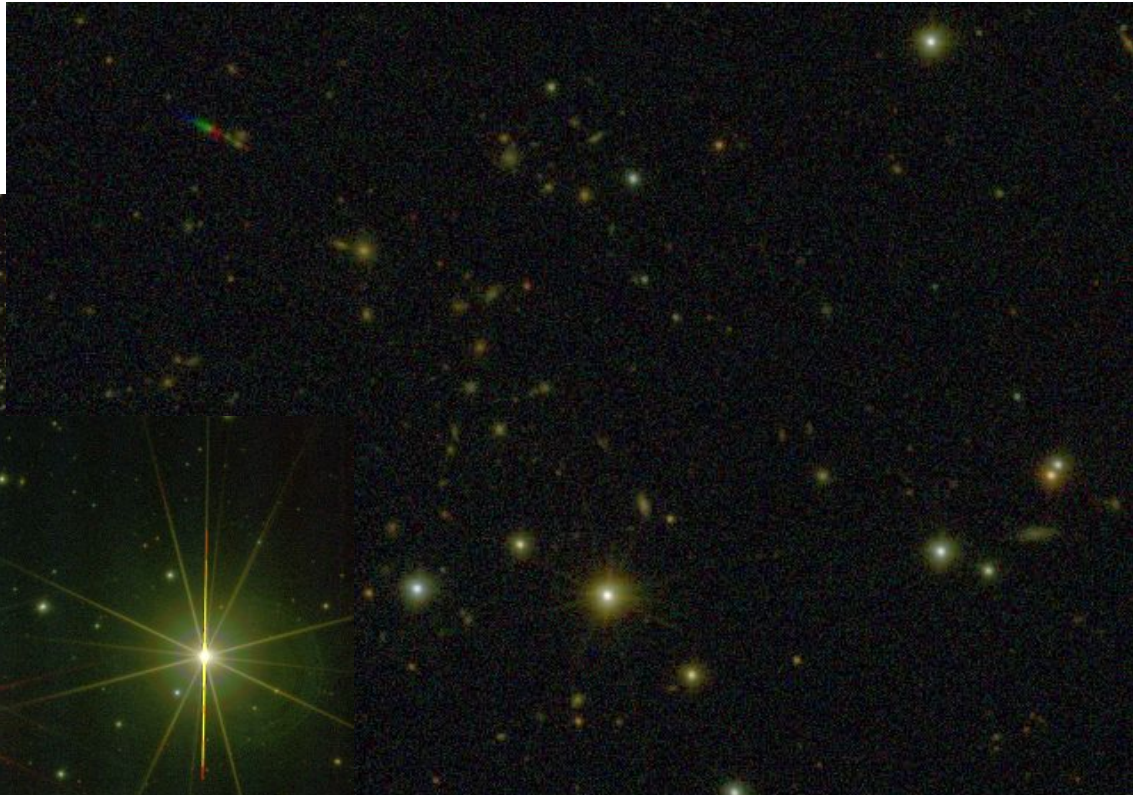
Updated: 2019-10-01

Tiles: 1183 (25%)

Images: 129047 (115668)



Chapter 9 - The Rise of T80S



Thank you!