



Observing Report for 2018

Presented by Norm Vargas
Lowell Observatory, Flagstaff, AZ
March 18, 2019



Observing Report Topics

- Observing and Weather Statistics
 - New PoP Changes
 - New Swiss Army Gui



Observing Statistics

- 325 nights scheduled in 2018. We started in February again to support the NOAO observing.
- 221 nights with at least one object observation
- 68.0% success rate
- 104 nights without an object observation



Monthly Success

February 12/28 42.9%

March 6/31 **19.4%**

April 19/30 63.3%

May 18/31 58.1%

June 28/30 93.3%

July 28/31 90.3%

August 29/31 93.5%

September 29/30 96.7%

October 17/31 **54.8%**

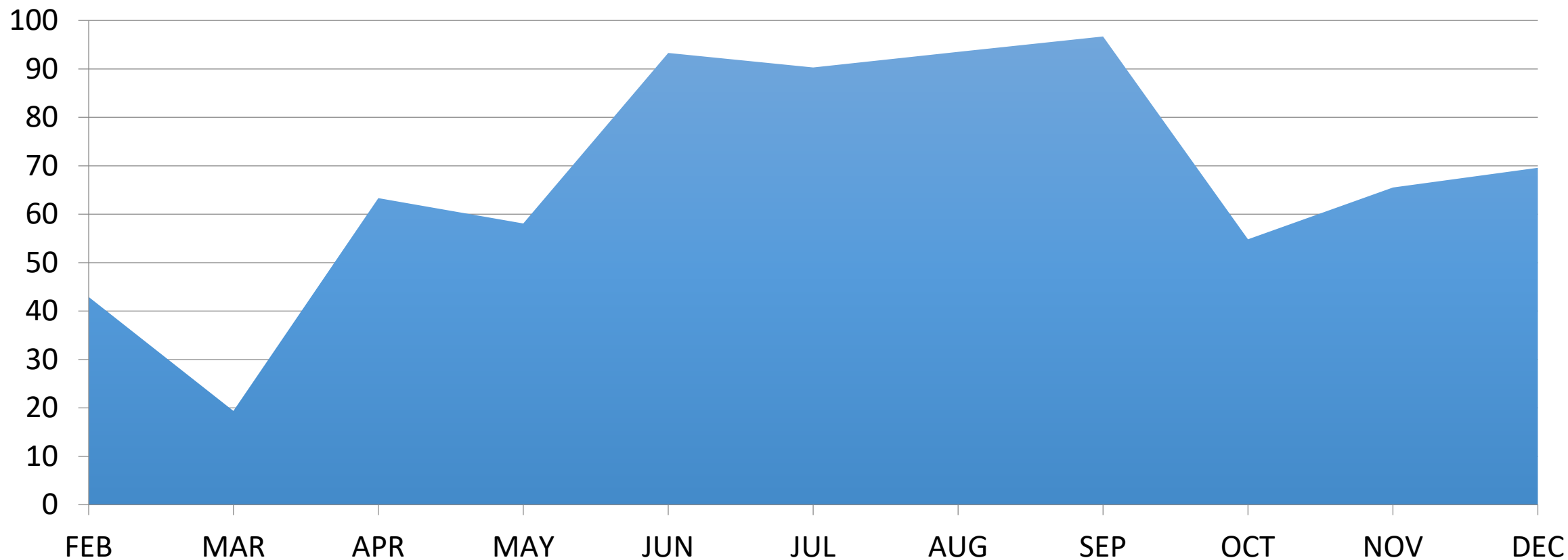
November 19/29 65.5%

December 16/23 69.6%



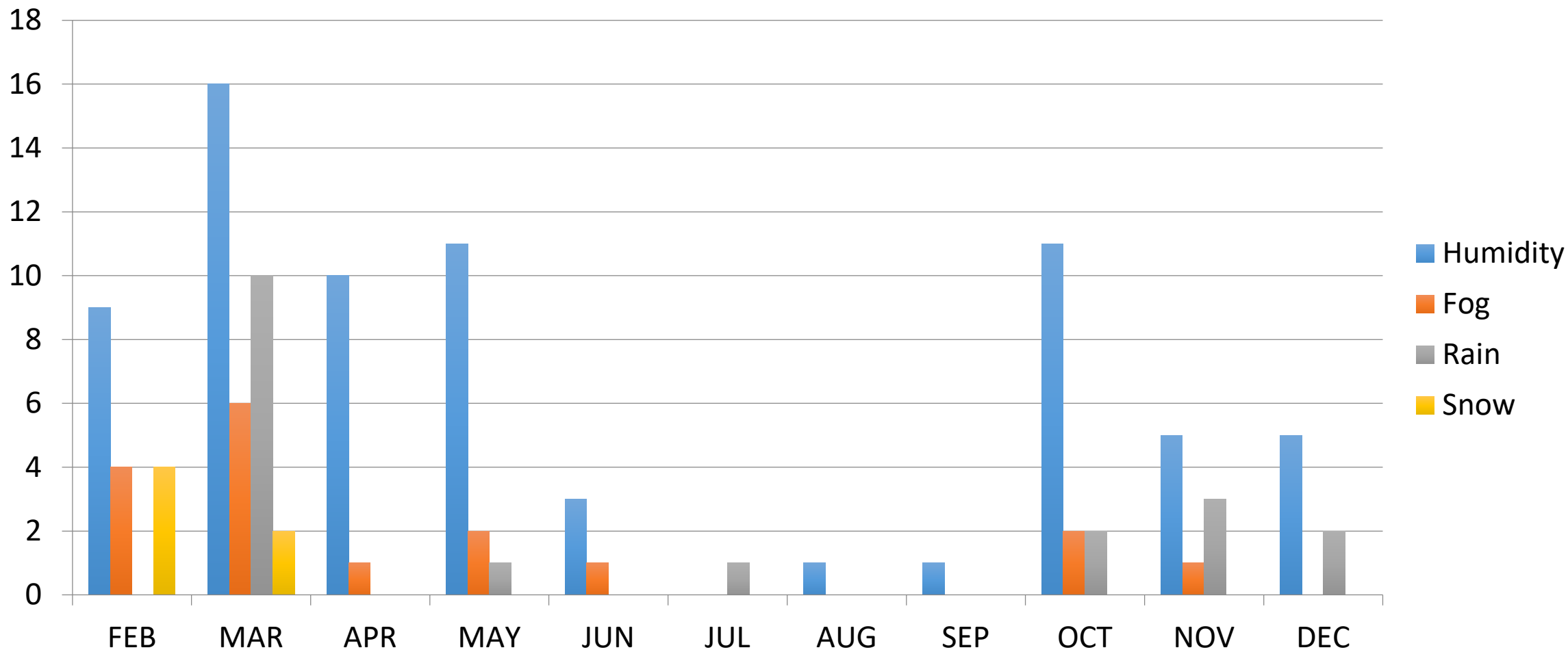
Monthly Success

Percent success

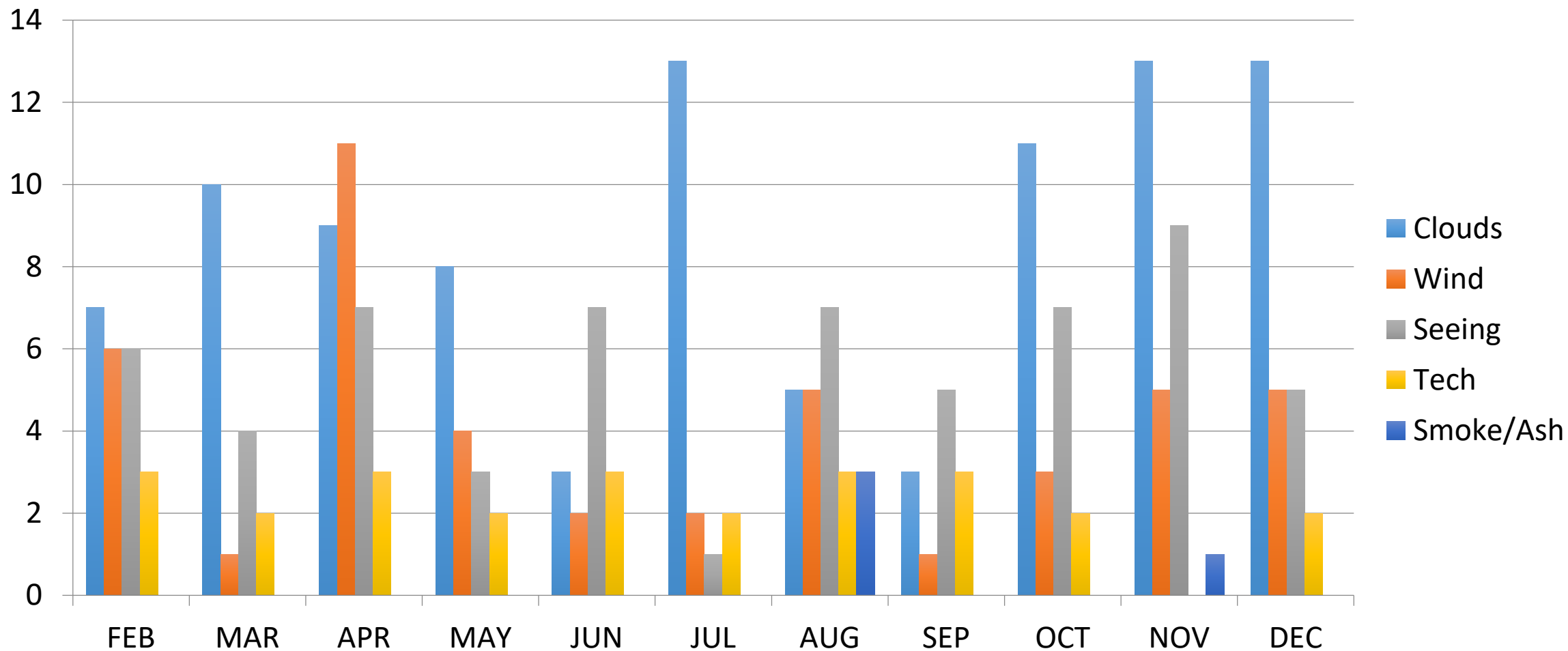




Hindrances to Data Collection

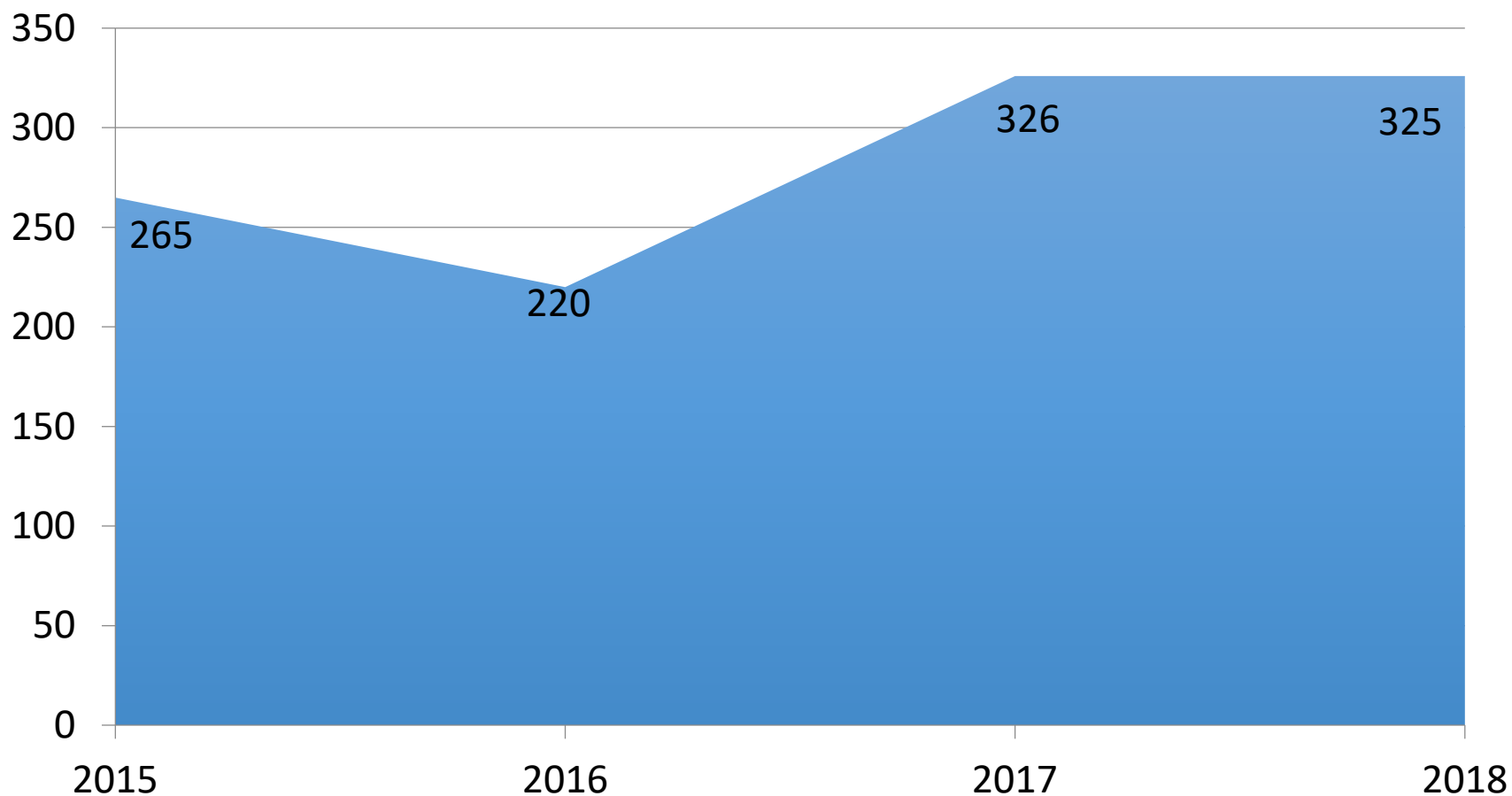


Hindrances to Data Collection



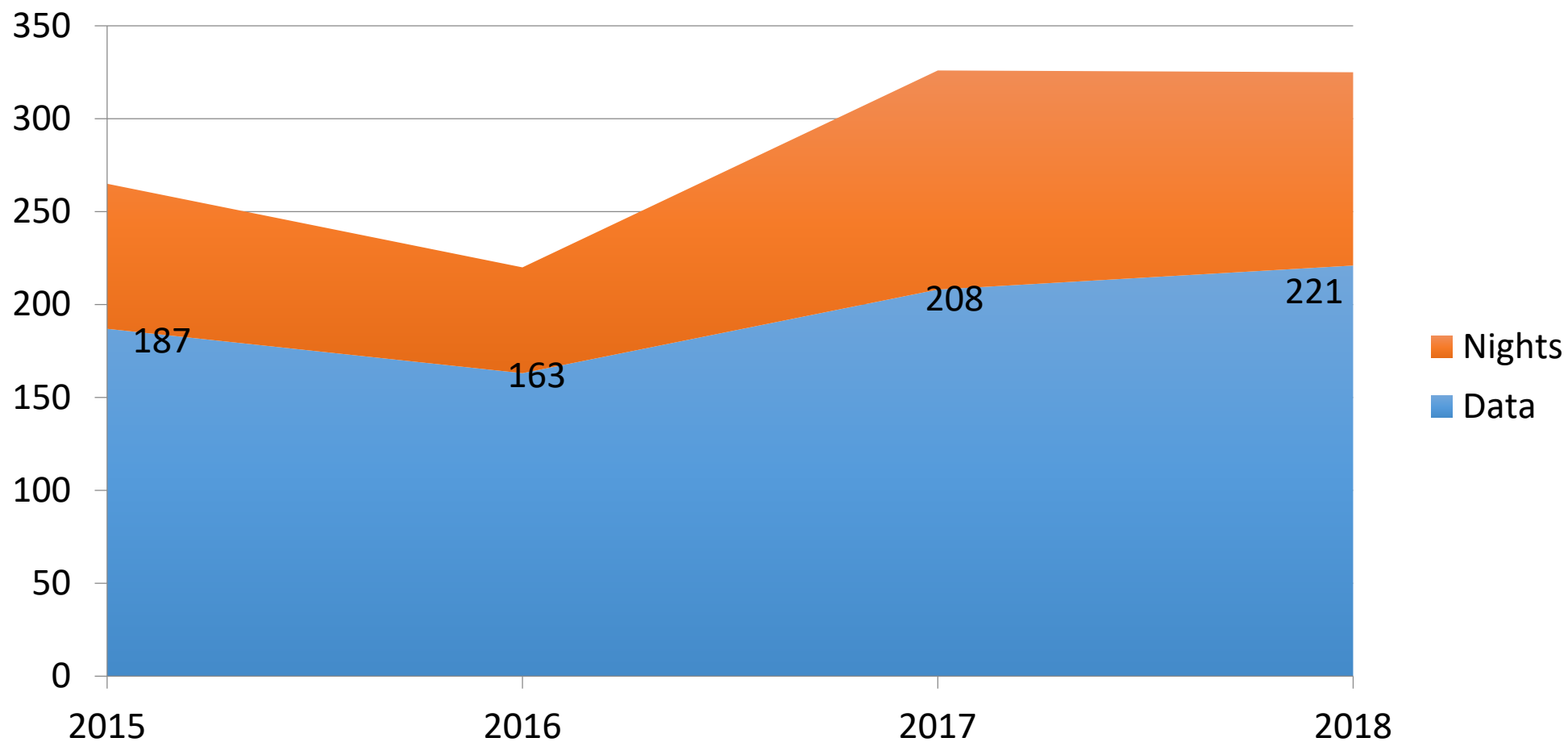


Nights Attempted 2015-2018





Nights with Data 2015-2018

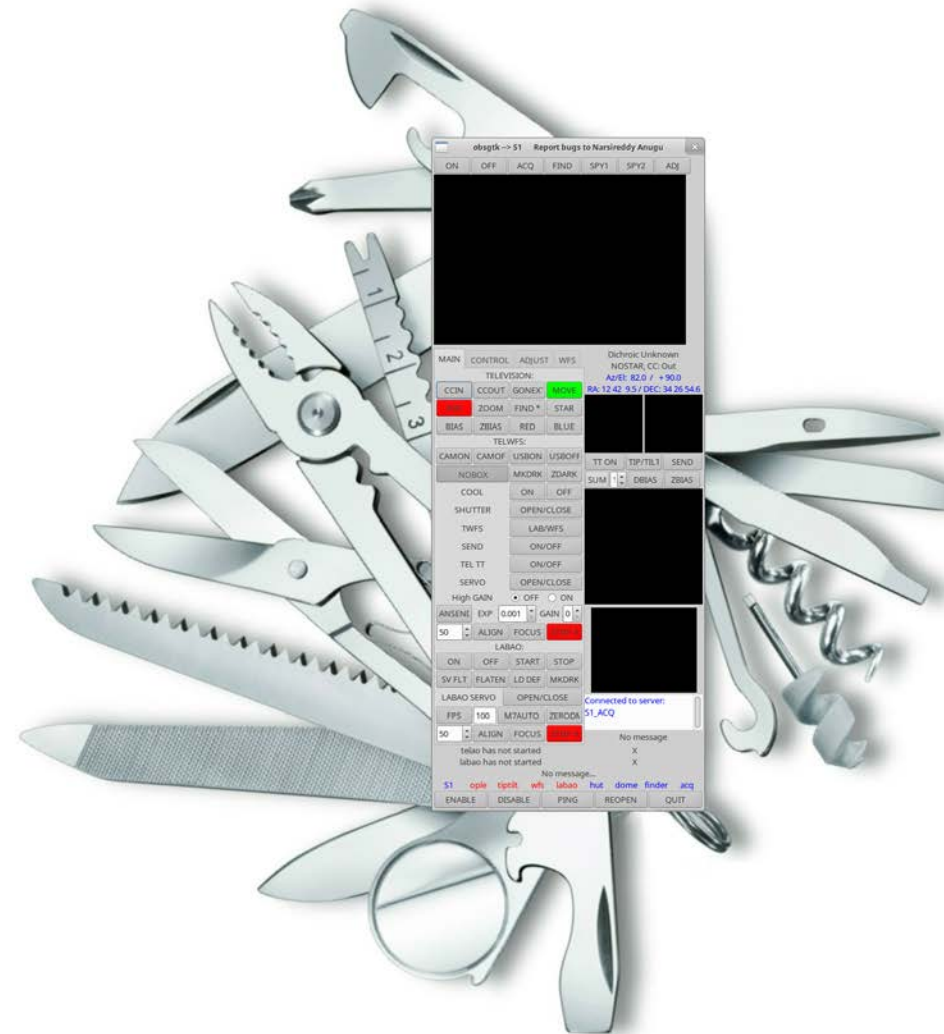


Something New for PoP changes

PoP changes will be quicker now with the new gui that will move the PoP mirrors in or out and also move the periscope to the correct position. It will then open a new Pico 2 M10 window so its position can be adjusted as well.



The New Obsgtk





The New Obsgtk

- New telescope gui was needed to save screen space
- It incorporates functions of 7 guis, but includes only what is needed to observe
- Combines telescope, tiptilt, labao, telescope wfs, acquisition and finder guis
- Must communicate with 9 servers and perform at least 85 functions
- Displays 9 cameras and plots: ACQ, Finder, 2 Spy cams, M10 cam, TT or WFS plots, Telescope WFS, and Labao WFS
- Developed by Narsi Anugu with input from Theo, Chris, Judit, Olli and Norm over the last 5 months. Used on sky since November.
- Some room for new buttons, but already quite filled

The Nightmare that Wasn't





Main Tab

obsgtk -> S1 Report bugs to Narsireddy Anugu

ON OFF ACQ FIND SPY1 SPY2 ADJ

MAIN CONTROL ADJUST WFS

Dichroic Unknown
NOSTAR, CC: Out
Az/El: 82.0 / +90.0
RA: 12 42 9.5 / DEC: 34 26 54.6

TELEVISION:
CCIN CCOUT GONEX MOVE
INIT ZOOM FIND * STAR
BIAS ZBIAS RED BLUE

TELWFS:
CAMON CAMOF USBON USBOFF
NOBOX MKDRK ZDARK
COOL ON OFF
SHUTTER OPEN/CLOSE
TWFS LAB/WFS
SEND ON/OFF
TEL TT ON/OFF
SERVO OPEN/CLOSE

High GAIN OFF ON

ANSEN EXP 0.001 GAIN 0
50 ALIGN FOCUS STOP A

LABAO:
ON OFF START STOP
SV FLT FLATEN LD DEF MKDRK
LABAO SERVO OPEN/CLOSE
FPS 100 M7AUTO ZERODN
50 ALIGN FOCUS STOP A

Connected to server: S1_ACQ

No message...

S1 ople tiptilt wfs labao hut dome finder acq

ENABLE DISABLE PING REOPEN QUIT

Control Tab

obsgtk -> S1 Report bugs to Narsireddy Anugu

ON OFF ACQ FIND SPY1 SPY2 ADJ

MAIN CONTROL ADJUST WFS

Dichroic Unknown
NOSTAR, CC: Out
Az/El: 82.0 / +90.0
RA: 14 0 0.9 / DEC: 34 26 11.9

EL/AZ GONEX STOW M10AL

HOME AUTO ON OFF
INITSCP STOP CCW CW

OPEN COVERS:
SLIT M1 M3 M5
M7 FINDER

CLOSE COVERS:
SLIT M1 M3 M5
M7 FINDER

TEL WFS:
GRAY YSO SPARE

OPEN/ON
BEACN FIBER RED BLUE

CLOSE/OFF
BEACN FIBER RED BLUE

Connected to server: S1_ACQ

No message...

S1 ople tiptilt wfs labao hut dome finder acq

ENABLE DISABLE PING REOPEN QUIT

Adjust Tab

obsgtk -> S1 Report bugs to Narsireddy Anugu

ON OFF ACQ FIND SPY1 SPY2 ADJ

MAIN CONTROL ADJUST WFS

Dichroic Unknown
NOSTAR, CC: Out
Az/El: 82.0 / +90.0
RA: 14 0 25.0 / DEC: 34 26 11.6

UP
LEFT 5 RIGHT
DOWN
GO BACK

UP
AZDEC 5 AZINC
DOWN

ACQ/FINDER
ACQ COOL ON ACQ COOL OFF
FIND COOL ON FIND COOL OFF
EXP UP EXP DOWN
GAIN UP GAIN DOWN

ACQ: OFF, 5.6C/0%, Exp ms: 150.0,
GAIN: 255 FPS: 0/0 Set temp: -20C
Orig: 198/142 Pos: 198/142,
zoom: -1/-1

FINDER gain: x

Connected to server: S1_ACQ

No message...

S1 ople tiptilt wfs labao hut dome finder acq

ENABLE DISABLE PING REOPEN QUIT

WFS Tab

obsgtk -> S1 Report bugs to Narsireddy Anugu

ON OFF ACQ FIND SPY1 SPY2 ADJ

MAIN CONTROL ADJUST WFS

Dichroic Unknown
NOSTAR, CC: Out
Az/El: 82.0 / +90.0
RA: 14 0 40.1 / DEC: 34 26 11.4

BEACON
FOC+ 100000 FOC-
UP
LEFT 500 RIGHT
DOWN +

DICHROIC
UP
LEFT 500 RIGHT
DOWN +

Connected to server: S1_ACQ

No message...

S1 ople tiptilt wfs labao hut dome finder acq

ENABLE DISABLE PING REOPEN QUIT

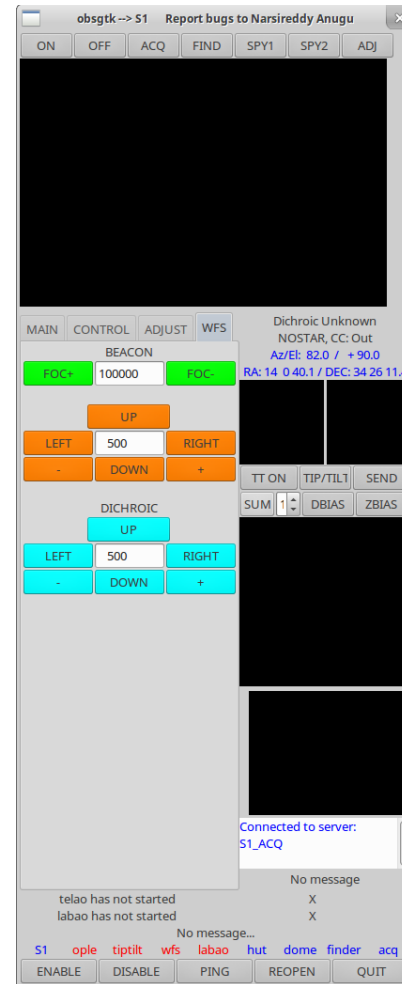


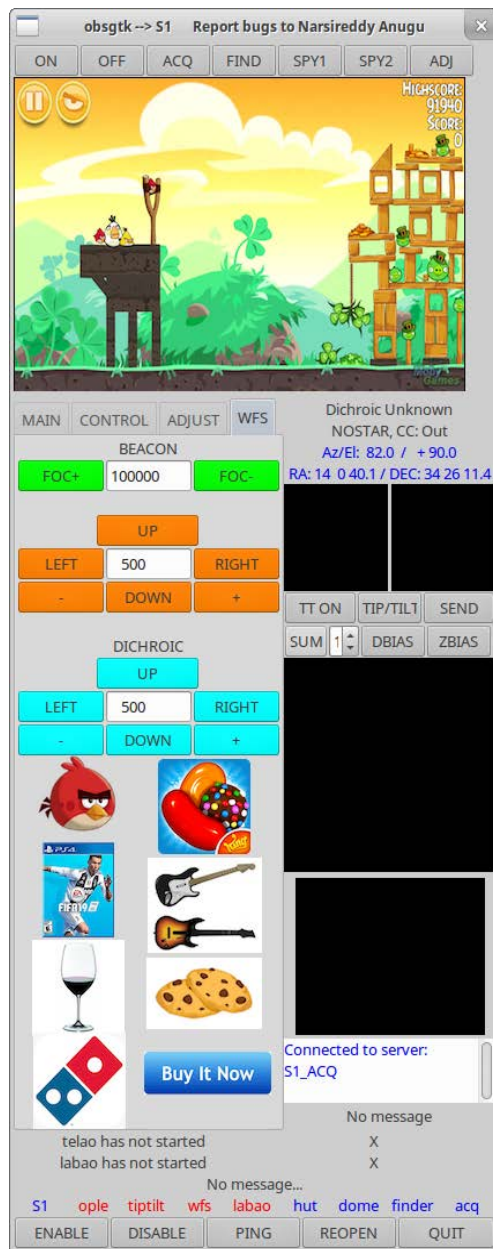
Difficulties in Creating Obsgtk

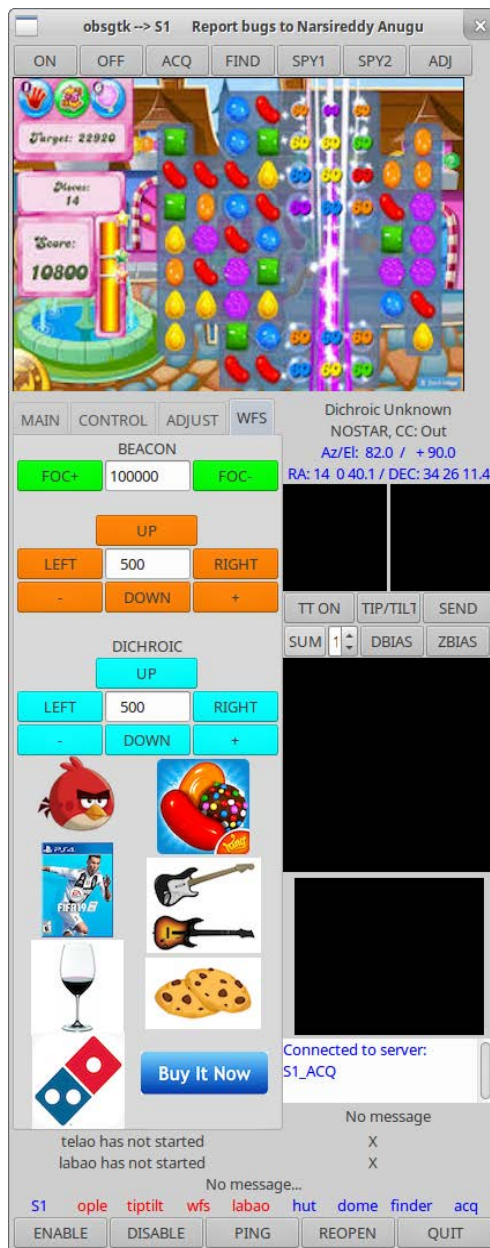
- Integrating communications with all 9 servers: telescope, ople, tiptilt, telescope wfs, labao, hut, dome, acquisition and finder
- Handling error messages from each server Runaway pop ups!!!
- Integrating cameras into one window when output from each varies so much. Images are binned in the servers before being sent to guis.
- Integrating the MOVE button to work with new cameras
- Deciding where to put the buttons and what to call them, ie. too many cooks in the kitchen or trop de cuisiniers dans la cuisine.
- Deciding what do we really need and use and what is too much

Future expansion

What do we put here in all this empty space?









obsgtk--> S1 Report bugs to Narsireddy Anugu

ON OFF ACQ FIND SPY1 SPY2 ADJ




MAIN CONTROL ADJUST WFS

Dichroic Unknown
NOSTAR, CC: Out
Az/El: 82.0 / +90.0
RA: 14 0 40.1 / DEC: 34 26 11.4

BEACON
FOC+ 100000 FOC-

UP
LEFT 500 RIGHT
DOWN +

DICHROIC
UP
LEFT 500 RIGHT
DOWN +



Buy It Now

Connected to server: S1_ACQ

No message
X
X

telao has not started
labao has not started

No message...

S1 ople tiptilt wfs labao hut dome finder acq

ENABLE DISABLE PING REOPEN QUIT





obsgrk -> S1 Report bugs to Narsireddy Anugu

ON OFF ACQ FIND SPY1 SPY2 ADJ



MAIN CONTROL ADJUST WFS

Dichroic Unknown
NOSTAR, CC: Out
Az/E: 82.0 / +90.0
RA: 14 0 40.1 / DEC: 34 26 11.4

BEACON
FOC+ 100000 FOC-
UP
LEFT 500 RIGHT
DOWN +

DICHROIC
UP
LEFT 500 RIGHT
DOWN +



Buy It Now

Connected to server:
S1_ACQ

No message
X
X

No message...

S1 ople tiptilt wfs labao hut dome finder acq

ENABLE DISABLE PING REOPEN QUIT





obsgrk--> S1 Report bugs to Narsireddy Anugu

ON OFF ACQ FIND SPY1 SPY2 ADJ

2 Michelin Premier A/S 205/60R16 92V Used Tire 7-632 96205

Condition: Used
Compatibility: See compatibility section

Price: USD \$116.90

[Buy It Now](#)
[Add to cart](#)

A seller you've bought from: Free shipping 60-day return

FREE Standard Shipping (Est. 2020)
See seller's shipping, returns, and terms
View on United States (United States)
Payment: PayPal VISA

PayPal CREDIT
No interest if paid in full in 6 months or less. Apply Now - Est. 2020
Finance: 30-day Return policy for return shipping - Est. 2020

MAIN CONTROL ADJUST WFS

BEACON

FOC+ 100000 FOC-

UP

LEFT 500 RIGHT

- DOWN +

DICHROIC

UP

LEFT 500 RIGHT

- DOWN +

Buy It Now

Dichroic Unknown
NOSTAR, CC: Out
Az/EI: 82.0 / +90.0
RA: 14 0.40.1 / DEC: 34 26 11.4

TT ON TIP/TILT SEND

SUM 1 DBIAS ZBIAS

Connected to server:
S1_ACQ

No message

telao has not started
labao has not started

No message...

S1 ople tiptilt wfs labao hut dome finder acq

ENABLE DISABLE PING REOPEN QUIT



Let's Eat!

