

MINI-REFRACTOR +
MINI-MOUNT =
MEGA FUN!

By: Jim Thompson

Date: Dec. 2023

Mini-Refractors Again? ...

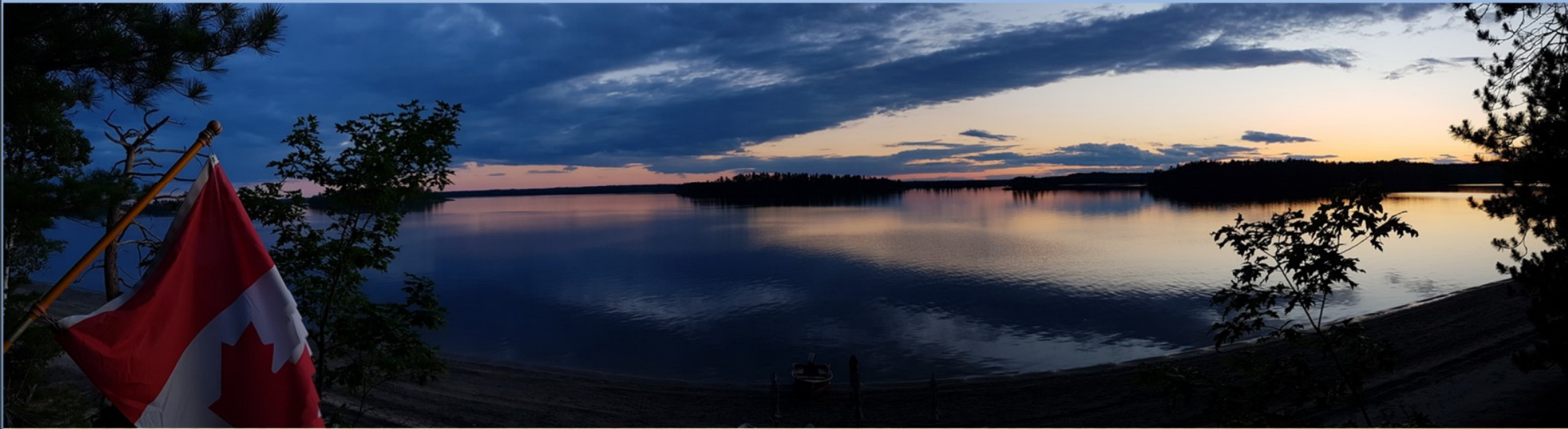
MINI REFRACTORS

**“ITS NOT HOW BIG IT IS,
ITS HOW YOU USE IT”**

By: Jim Thompson

Date: January 2022

... And Again? ...



Report From A

BEACH BUM ASTRONOMER

By: Jim Thompson

Nov. Dec. 2022

Yes, Cause They're Awesome!

- Inexpensive, high quality optics
- Short focal length = wide FOV
- Small, light weight
- Good for portable setups
 - e.g. on the beach at my cottage



TPO Ultrawide
(40mm)



Importance of Being Portable

May 6th, 2023



**I usually set up
20' that way!**

Only Half of the Story

- ◎ Mini-refractors rock, but ...
- ◎ Is there a mount equally awesome?
 - Compact
 - Light weight
 - Good tracking
 - Easy to use
 - Inexpensive



Portability

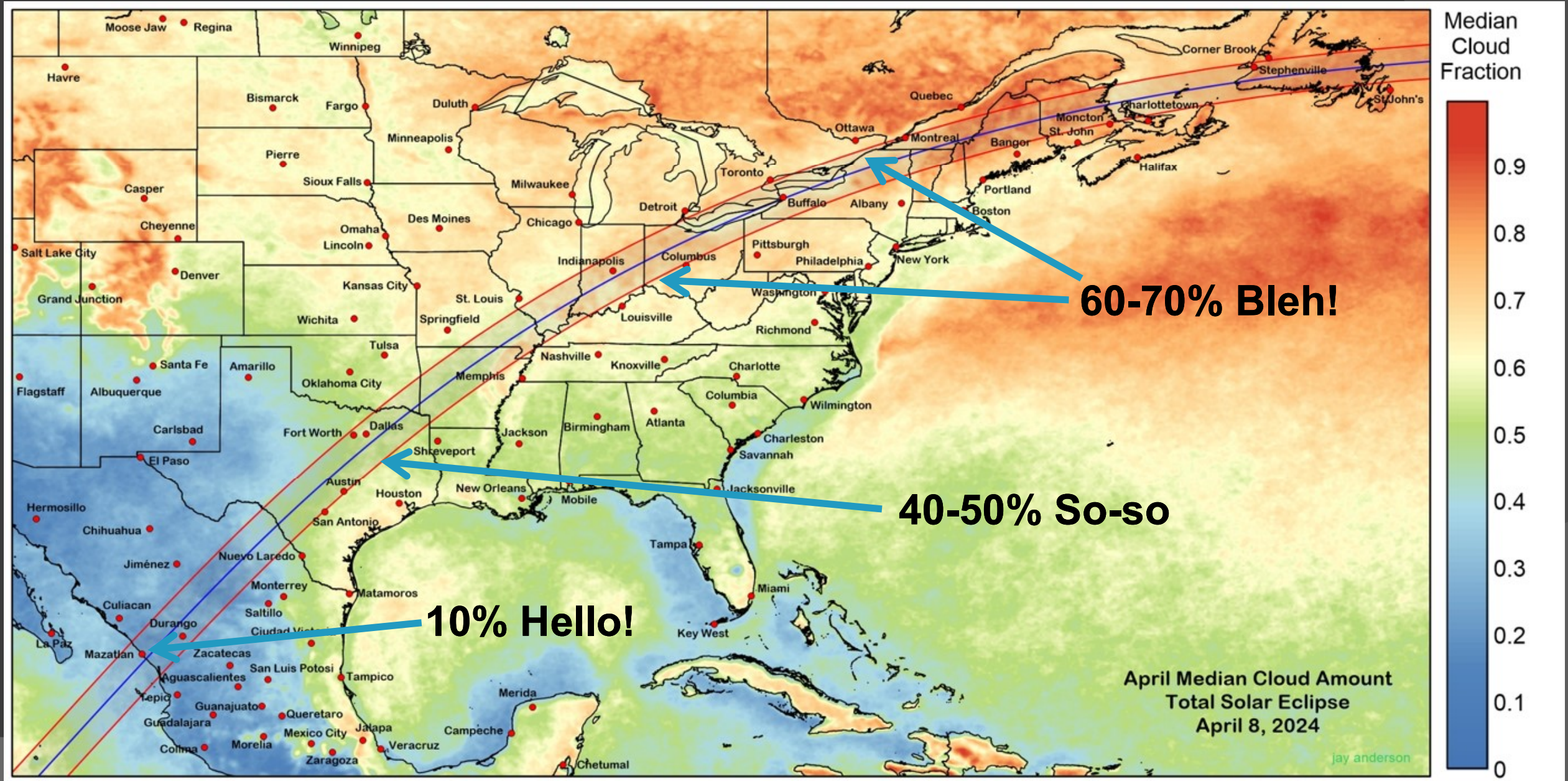
The Great American Eclipse!



Where Will We Go?



Best Chance of No Clouds



Trip Booked, Time to Pack

- ◎ Flights a bit complicated
 - Lightweight & portable important
- ◎ Will try to view southern sky also
 - Easy nighttime setup & use (GOTO?)
- ◎ Couple mount models to choose from...
 - Smallest/simplest = “star tracker”

Star Tracker Choices



Vixen Optics
“Polarie”

1.6lb, 2hr battery
\$476USD*



Skywatcher
“Star Adventurer”

2.2lb, 72hr? battery
\$350USD*



iOptron
“SkyGuider Pro EQ”
2.2lb, 20hr battery
\$398USD*

- RA drive only (No DEC = No GOTO)
- Limited selection of speeds
- Limited remote control capability

*price for mount only

iOptron SkyHunter

- 2.9 lbs, 10hr battery
- Both axis motorised
- Use in ALT-AZ or EQ mode
- Manual or Wireless control via mobile device
- Optional hand controller
- Mount, counterweight & tripod \$488USD



My New Portable Setup

- Optional fine-adjust EQ base (\$78USD)
- Optional hand controller (\$275USD!)
- USB-C charger, ball head
- Re-use packaging foam in existing case



SkyHunter's Dual Config's

ALT-AZ Mode

- Quickest setup
- Lightest setup
- Less accurate tracking

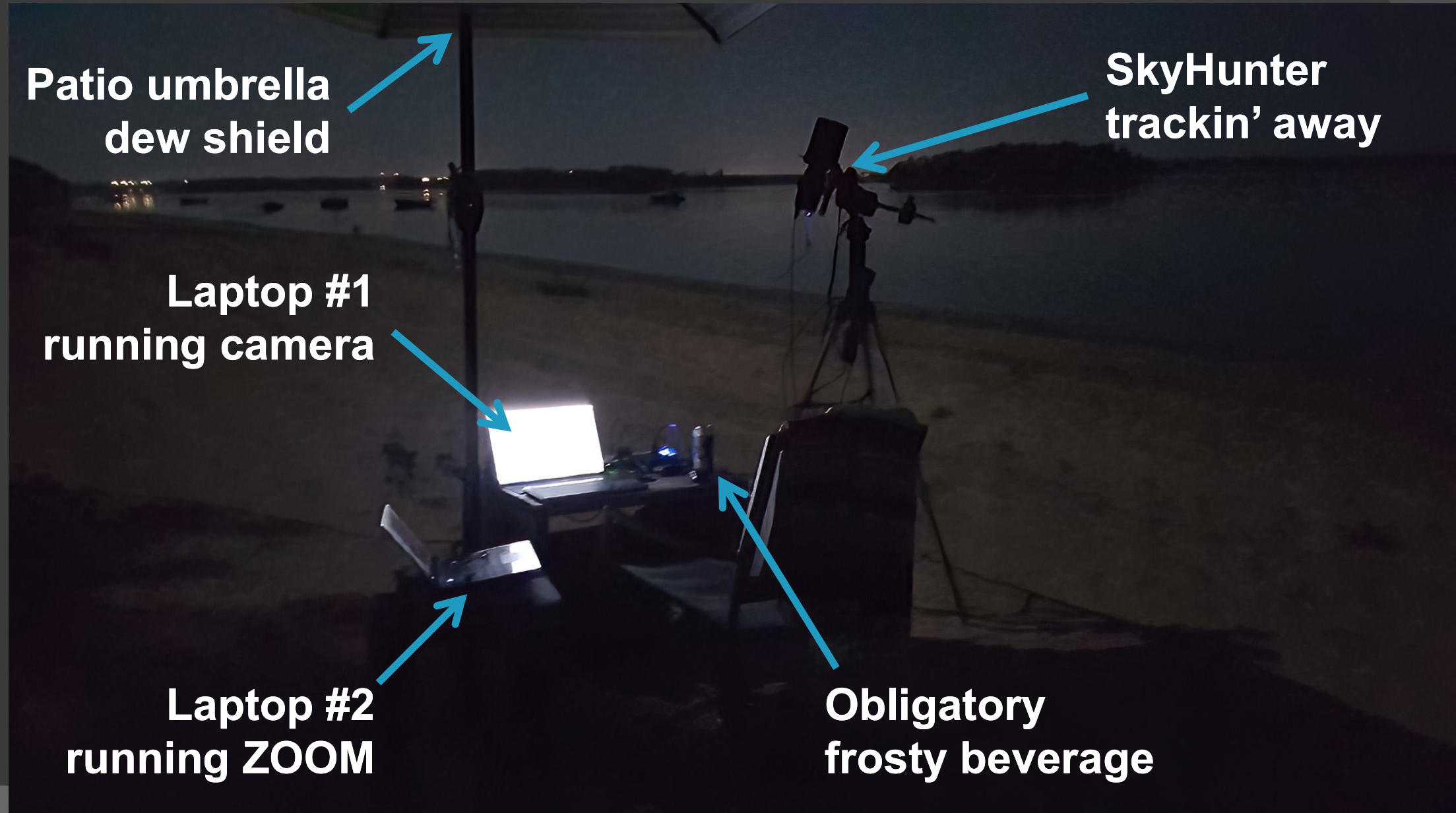


EQ Mode

- Longer setup (balancing, polar align)
- Heaviest setup (weight + bar + EQ base)
- More accurate tracking



First Light – Aug. 31st, 2023



Sample Live Stacks - #1

M8 Lagoon Nebula



NGC6992/6960 Veil Nebula



Sample Live Stacks - #2



NGC6888 Crescent Nebula



IC1318 Asian Dragon Nebula

Sample Live Stacks - #3

NGC7000 North American Nebula



DWB111 Propeller Nebula



Sample Live Stacks - #4



IC1396 Northern Rosette Nebula



Sh2-132 Lion Nebula

Survey Says? ...

- ◎ Overall SkyHunter gets a **thumbs up**
 - Tracking & GOTOs were both good for my FOV – once properly aligned!
- ◎ Struggled a bit with mount alignment
 - Importance of “Park Position” vs. “Zero Position”
- ◎ RA clutch is a bit wonky – don’t over tighten!
- ◎ 3rd party polar align software worked great
 - iOptron also sells polar align camera accessory

Next Steps

- Practice daytime setup & tracking Sun
- Decide if eclipse day will be:
 - ALT-AZ – simplest & lightest
 - EQ – best tracking
- Have fun!

QUESTIONS?

