



16:09

90% 

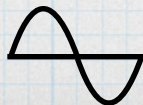


PhotoPills

PhotoPills

an overview

Paul Carpenter
October 2016



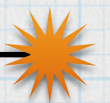
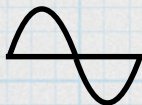
Scope

What it is

A quick tour

Some examples

*Not a "how to" lesson...



PhotoPills

Smartphone App

One of many

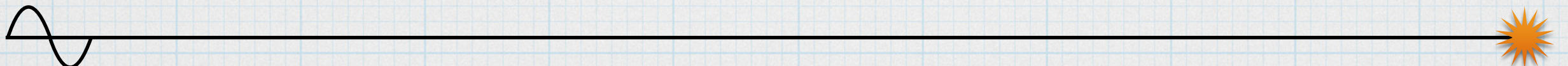
PhotoPills uses:

- GPS, Maps, Compass, Camera, inclinometer, database

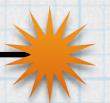
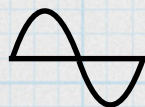
Gives:

- Positions and timings of Milky Way, Sunrise & Sunset, Moon phases

Tables: DoF, Hyperfocal distance, Exposure calculations etc...



A quick tour:





18:06

75%



My Stuff

Pills

Academy



Planner



Sun



Moon



Exposure



DoF



DoF Table



Hyperfocal Table



FoV



Subject distance



Focal length
match



Night AR



Star Trails



Spot Stars



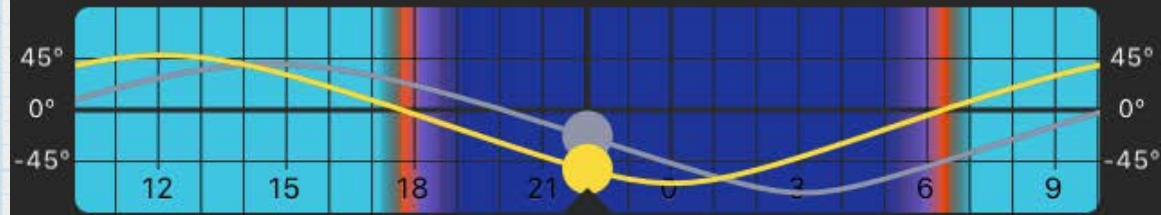
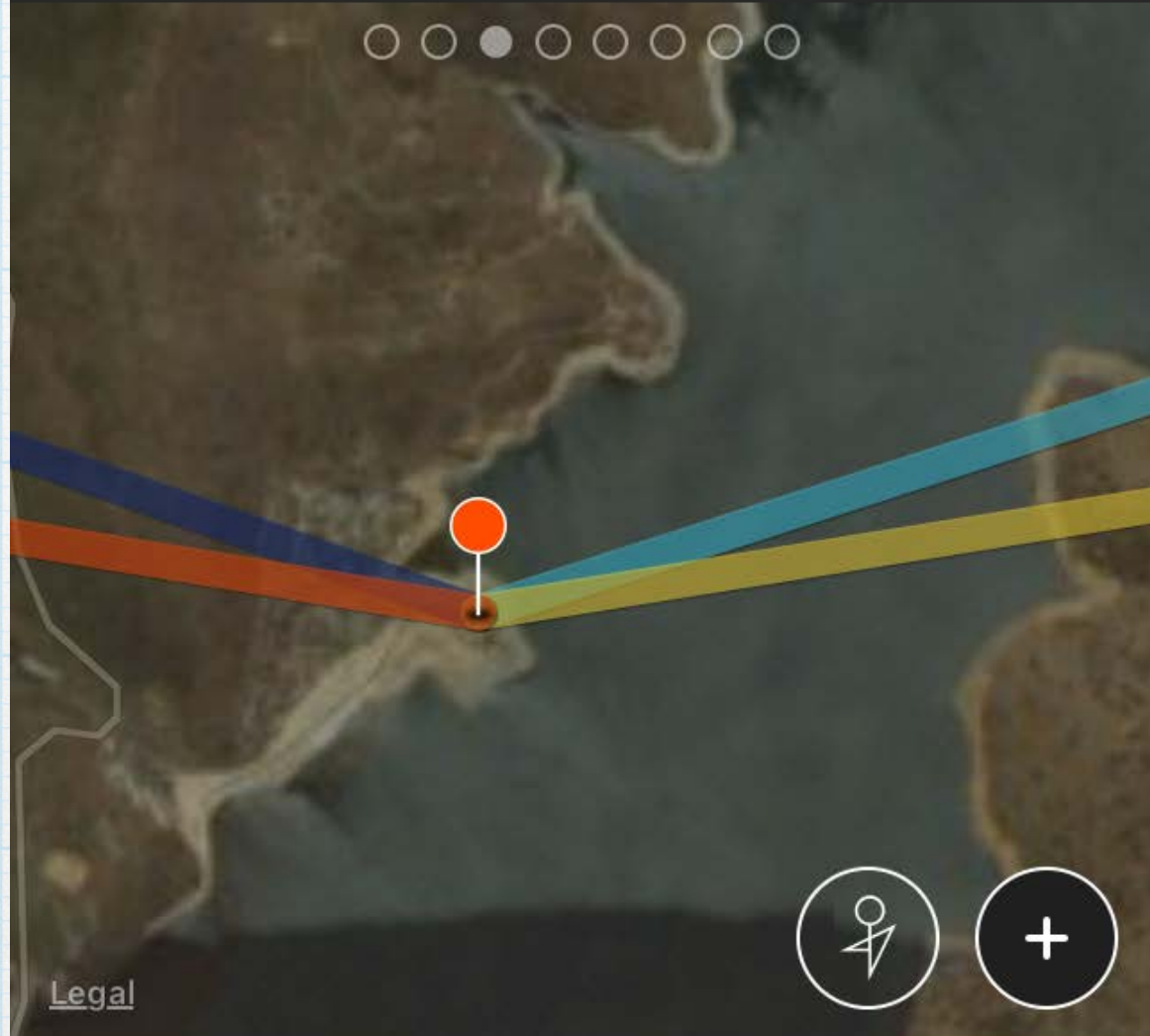
Time lapse

Back

Planner



	Azimuth	Elevation	Phase
Sun	234.7°	-51.84°	Waxing Crescent
Moon	274.9°	-22.99°	13.4%



Sunday GMT+10 22:02 10/04/2016

Now

Night AR

Done

24/02/2016, 20:12



Visual calibration

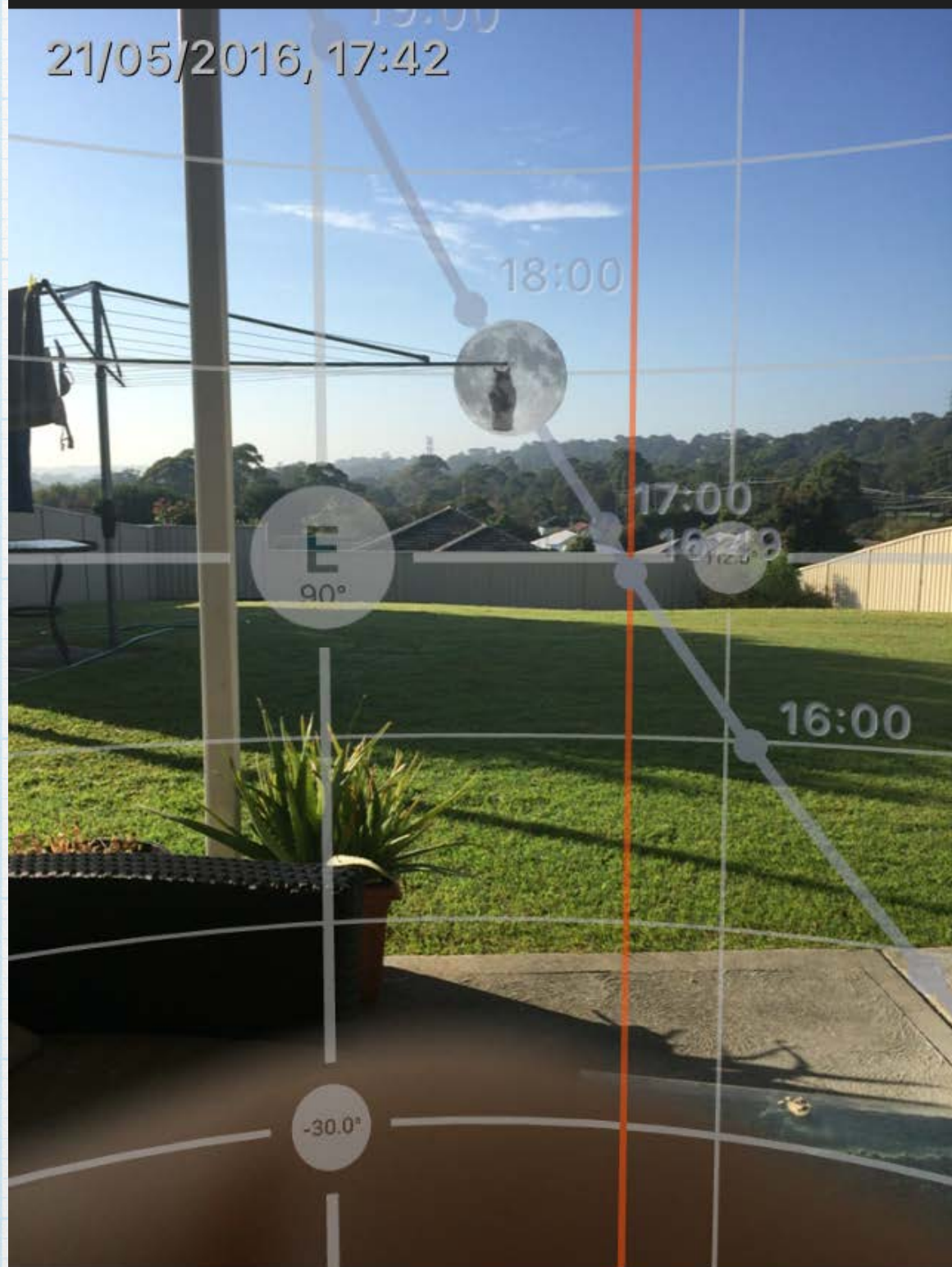


Action

Now

Augmented Reality

Done



Visual calibration



Action



18:06

75%

Back

Sun

Settings



Saturday, 11 June 2016 | 18:07
Bullecourt Circuit 36 - Adamstown, Australia



Night time
 23:53 09:53



11:21 **Night time**
Astronomical twilight ends

11:21 Galactic Center visibility starts
Elevation: 15.9°

16:07 Moonset
Waxing Crescent (42.4%)

22:24 **Astronomical twilight**
Nighttime ends

Time to rise 5h 46m

Daylight -12h 0m

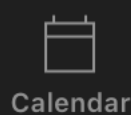
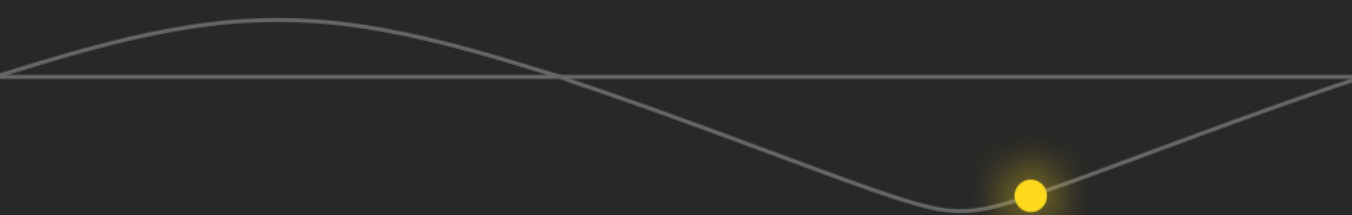
Azimuth 116.3°

Elevation -70.98°

Angular diameter 0.525°

Distance 151,911,729 km

Shadow ratio --





18:06

75%

Back

Moon

Settings

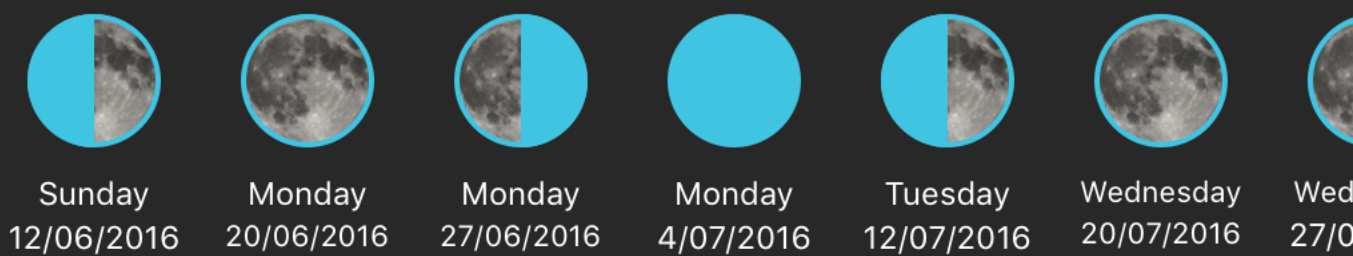
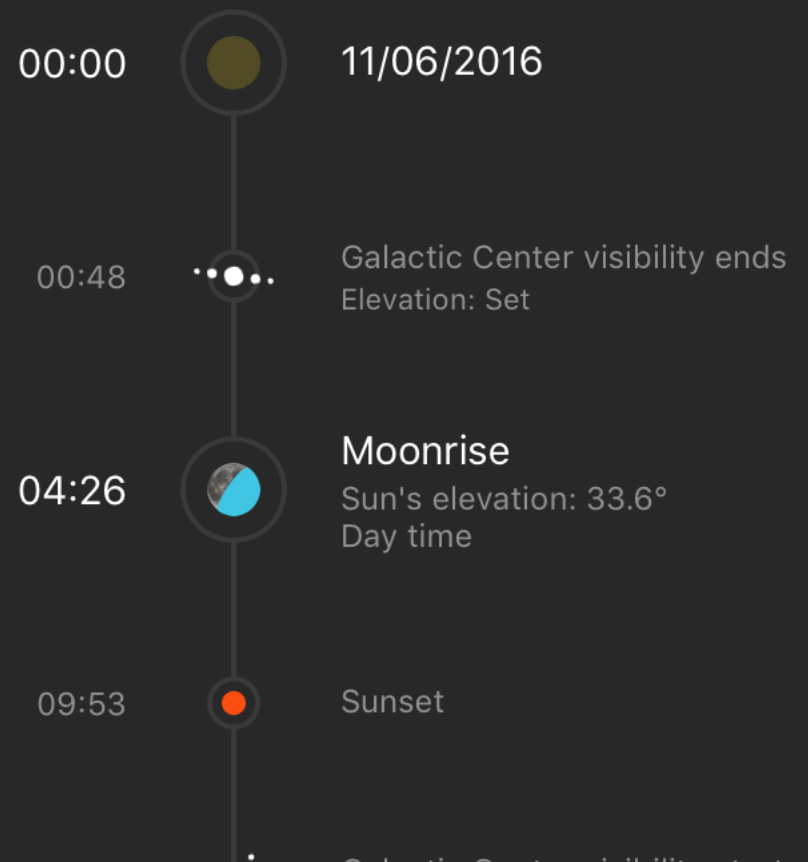


Saturday, 11 June 2016 | 18:06
Bullecourt Circuit 36 - Adamstown, Australia



Waxing Crescent (43.2%)

04:26 16:07

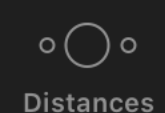
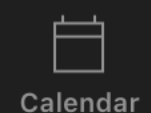
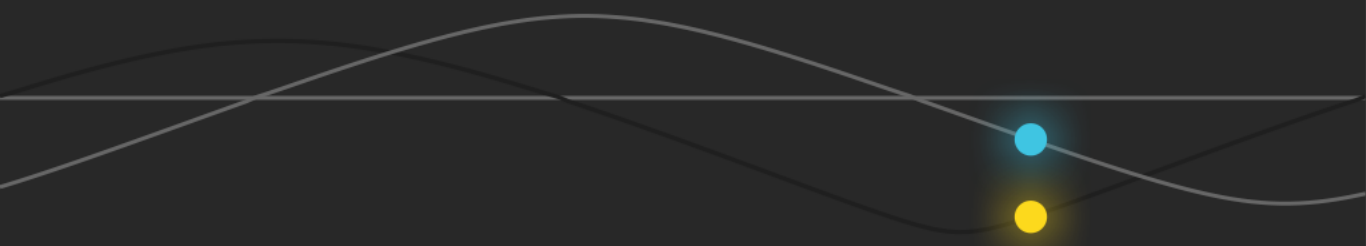


	Azimuth	Elevation	Light
Sun	116.4°	-71.02°	Night time
Moon	261.7°	-24.76°	

Time to rise **10h 54m**

Angular diameter **0.499°**

Age **6d 12h 6m**





[Back](#)

Exposure

Calculate **Shutter speed** >

Test settings



Aperture **f/16**



Shutter speed **1/80s**

ISO

ISO **100**

Equivalent settings



Aperture **f/16**

ISO

ISO **100**



Filter **10 Stops**

Shutter speed	13s
Exposure Value (EV)	+14.32
Rounded Exposure Value (EV)	+14 1/3



Exposure values



Share

Classic DoF

Camera **Canon EOS 5D Mark III**



Focal length **24 mm**



Aperture **f/16**

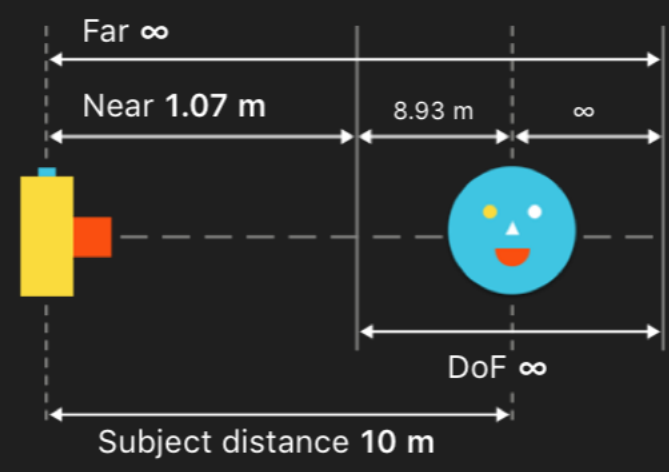


Subject distance **10 m**



Teleconverter **--**

Hyperfocal distance	1.22 m
Hyperfocal near limit	0.61 m
DoF near limit	1.07 m
DoF far limit	∞
Depth of field	∞
Depth of field in front	8.93 m
Depth of field behind	∞





Field of View

Camera **Canon EOS 5D Mark III**



Focal length **24 mm**

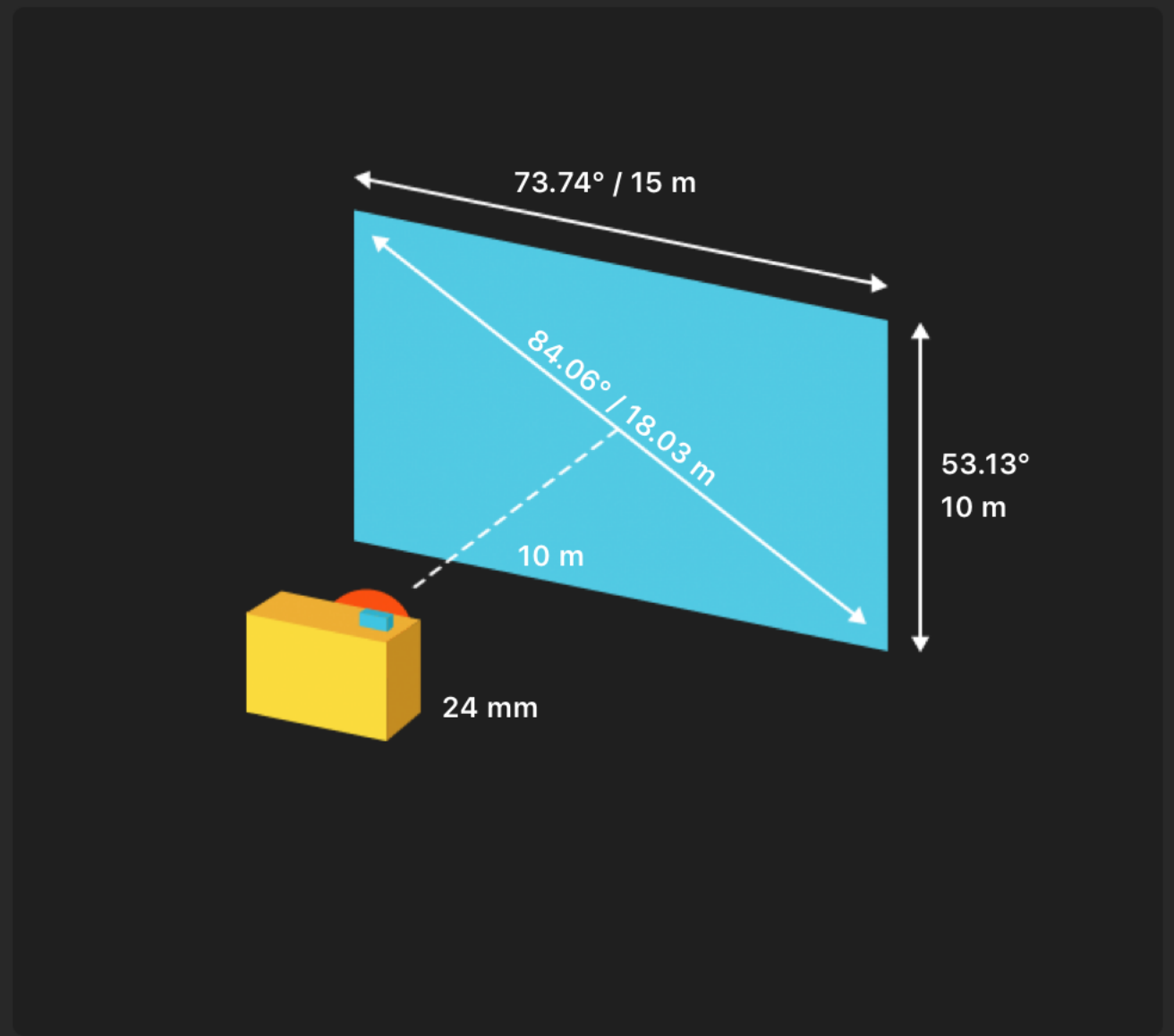


Subject distance **10 m**

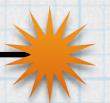
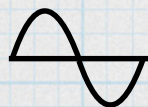


Orientation **Landscape**

Horizontal angle of view	73.74°
Vertical angle of view	53.13°
Diagonal angle of view	84.06°
Horizontal field of view	15 m
Vertical field of view	10 m
Diagonal field of view	18.03 m



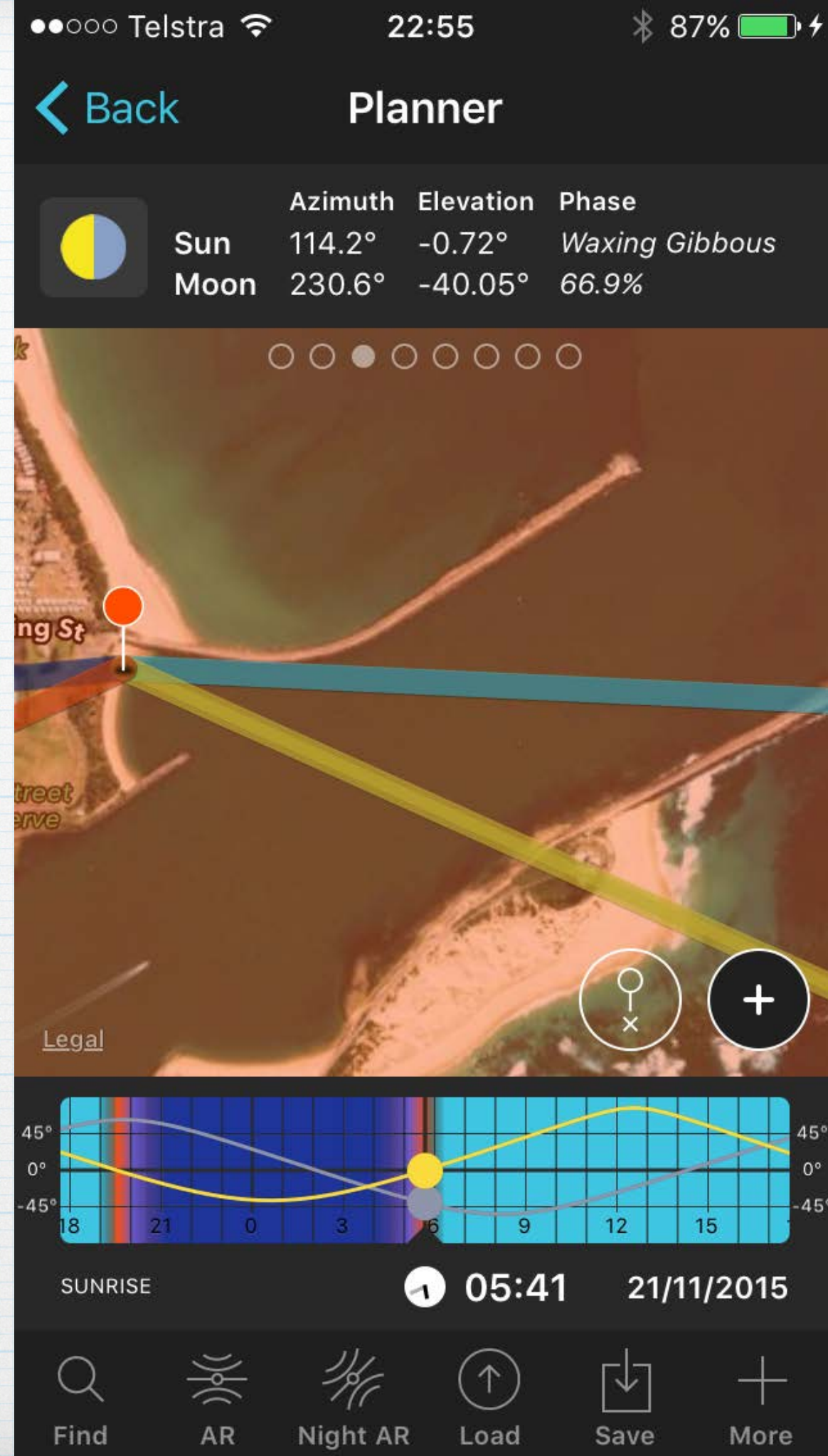
Three examples:



Nobby's Lighthouse Sunrise

Problem: Be in the right place
and right time to capture the
sunrise behind Nobbys

Solution: Select chosen day,
then move red 'pin' until yellow
sunrise line falls on lighthouse

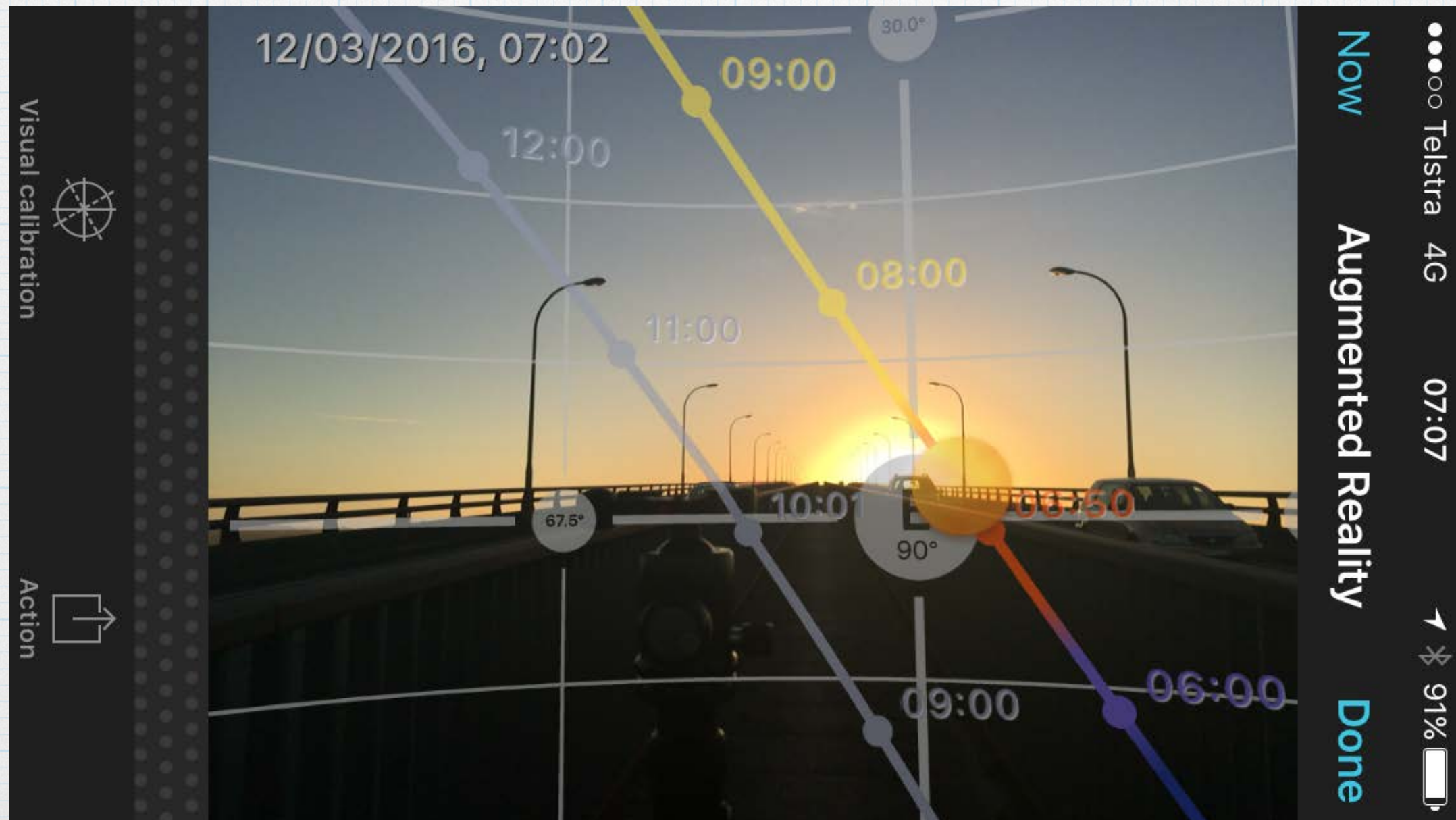




Stockton Bridge Sunrise

Problem: Capture the sun when it is aligned with the axis AND elevation of the bridge

Solution: Using Augmented Reality, determine how many minutes after sunrise the sun is aligned with the slope of the bridge



...then find the day when
"sunrise + 20min" aligns with
the bridge

Telstra 23:26 98%

Back Planner

	Azimuth	Elevation	Phase
Sun	87.4°	3.00°	Waxing Gibbous
Moon	263.4°	-21.40°	97.5%

Stockton Bridge

Legal

Tuesday GMT+11 07:14 22/03/2016

Find AR Night AR Load Save More

Now

Augmented Reality

Done



Visual calibration



Action

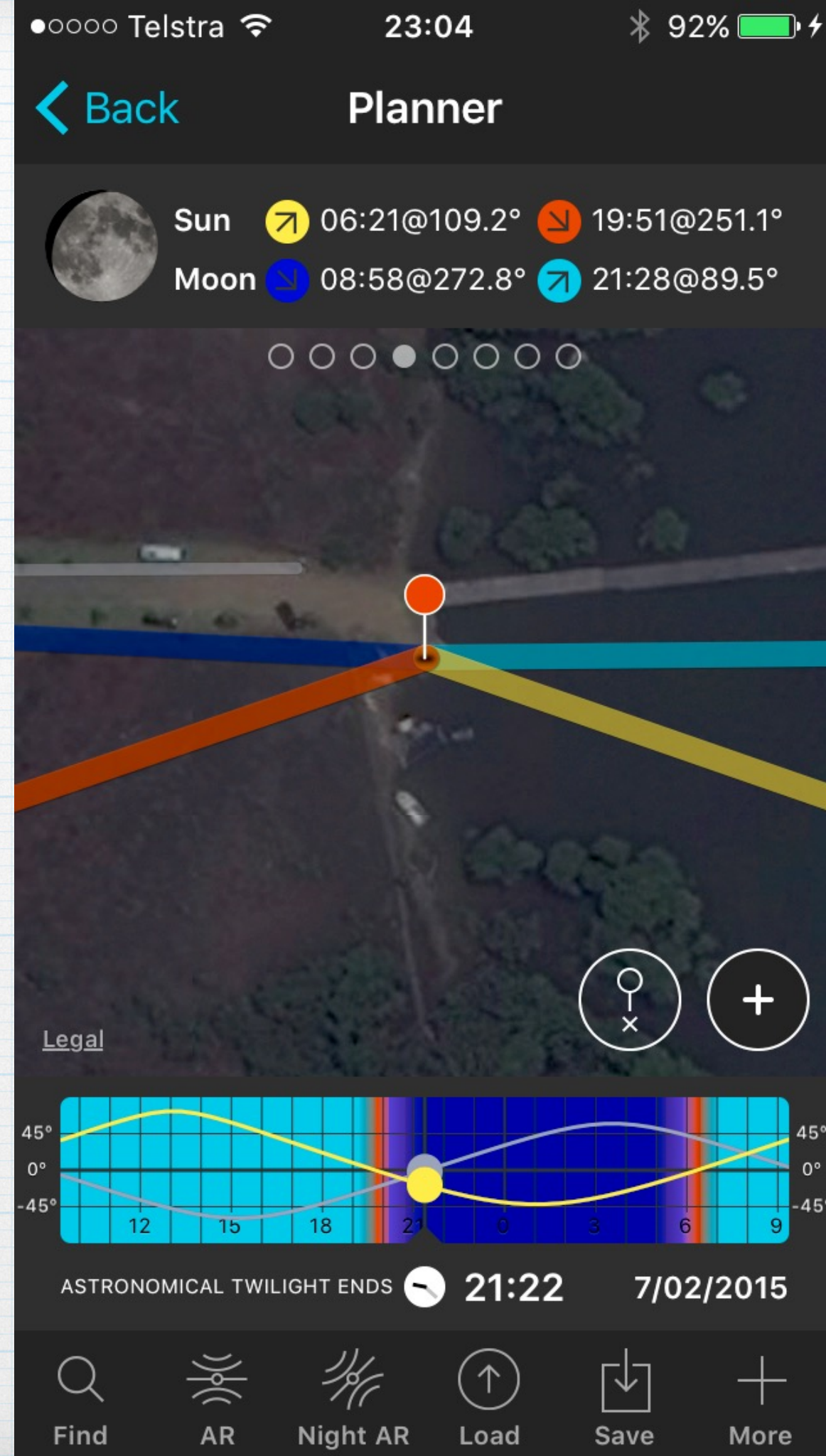


© 2POINT28 PHOTOGRAPHY

Milky Way over Karuah

Problem: Plan a Milky Way
composition between
astronomical twilight and
moonrise

Solution: Determine time period
available, use AR to work
composition options





Now

Night AR

Done

11/04/2016, 21:33

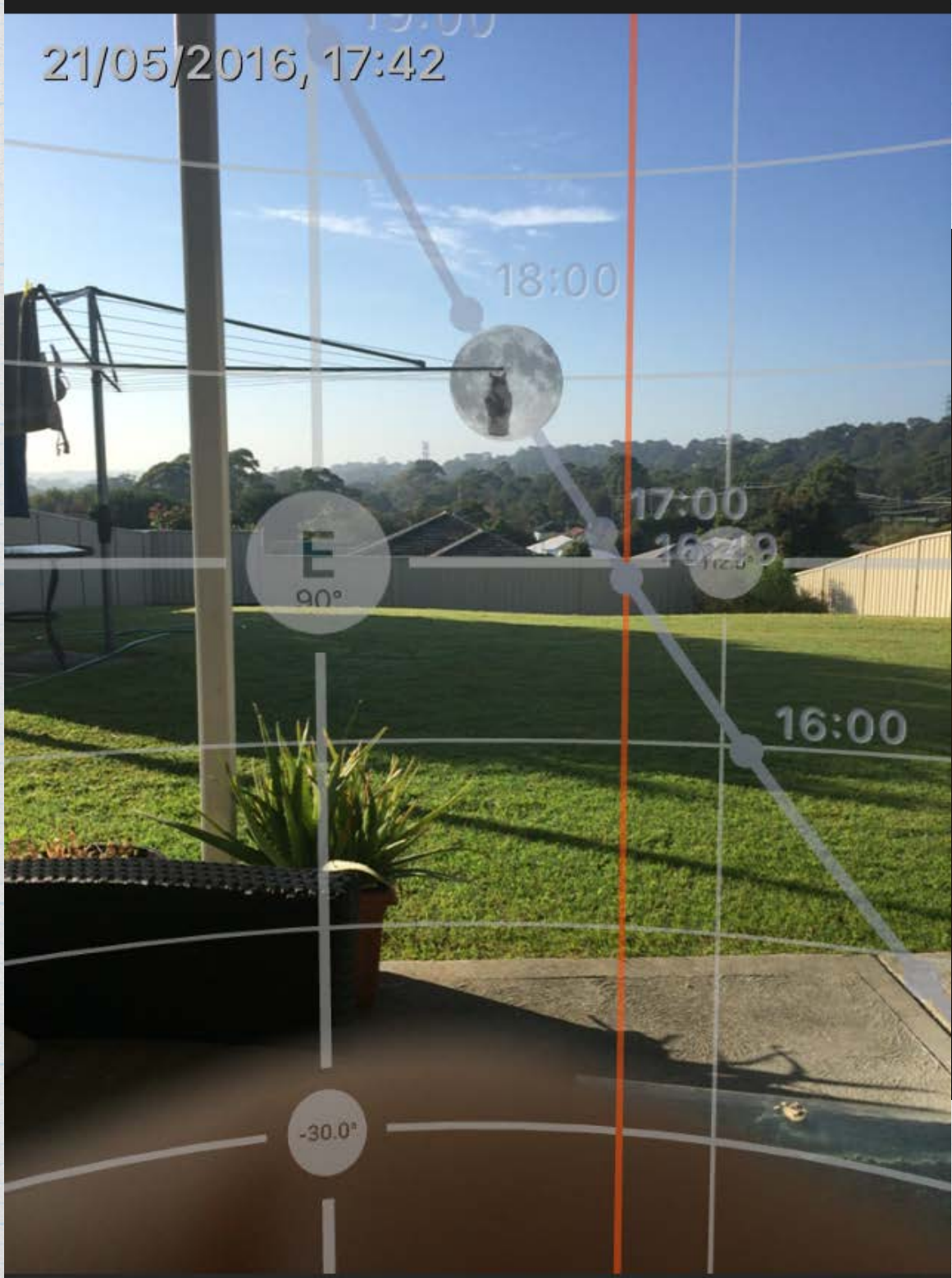


Visual calibration



Action

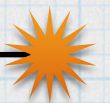
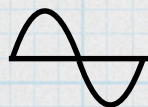




PhotoPills

a planning tool....

... Not a magic fix





PhotoPills

