Light in the dark

Astro-Landscape Photography

Dr Stuart Marlin APP

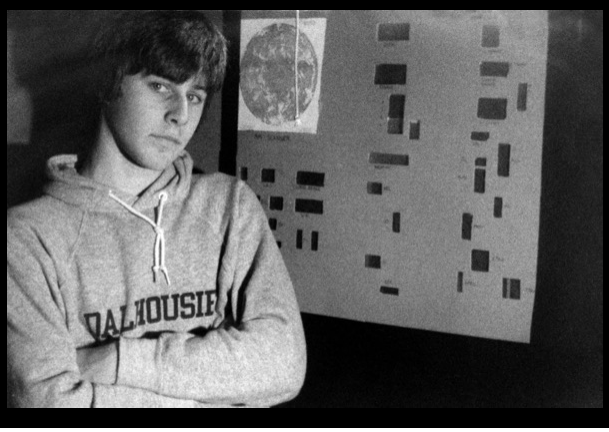
aipp
ACCREDITED
PROFESSIONAL
PHOTOGRAPHER

Overview

1. My Journey
2. Astro Limitations
3. Inspirations
4. Basic Astro:
   1. Goals
   2. Gear
   3. Process
5. Chasing Big Sky
6. Low Level Landscape Lighting

Part 1: My Journey

- This is the part where I tell you about me, my approach to photography and my vision/art



Part 2: Astro Overview
Why Astro is hard

1) LOW light: stars themselves are dim

Need

LOW aperture

And HIGH ISO

And LONG exposure

Part 2: Astro Overview
Why Astro is hard

2) POINT source light: stars themselves are FAR AWAY

Need

LENS that is SHARP at

Need

to focus at

SO…. Your foreground will NOT be in focus

Part 2: Astro Overview
Why Astro is hard

3) HIGH light: the world is well lit

Part 2: Astro Overview
Why Astro is hard

4) Space Junk

Part 2: Astro Overview
Why Astro is hard

5) EARTH MOVES

Part 2: Astro Overview
Why Astro is hard

6) When the moon hits the sky…..

Expose for the moon

1/125sec
F5.6
ISO 200

Stars
Too dark

Part 2: Astro Overview
Why Astro is hard

7) Clouds

ISO 3200
13 sec
F2

Stars not as visible

2 stops from ideal for stars
At ISO 6400, F2, 20 sec clouds are BLOWN OUT

Part 3: Inspiration

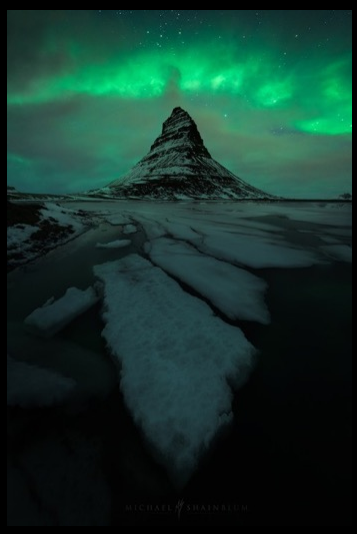
Mikko Lagerstedt: Artistic, Composites

Part 3: Inspiration

Michael Goh = Astrophoto Bear : Purist/ Astronomer

Part 3: Inspiration

Michael Shainblum = Landscape Photographer



Part 3: Inspiration

Oscar Keserci= Landscape Photographer

Part 3: Inspiration

Elia Locardi= Landscape Photographer

Fstoppers Tutorial
Photographing the World

Part 4a: Goals

- Steps
  - Basic Astro
    1. Basic proficiency
    2. Technical Competence
    3. Artistic compositions/ Foreground elements
    4. Exotic locations
  - BIG sky
    1. Basic proficiency – Wide angle, multiple exposures
    2. Technical Competence – Facilitate stitching
    3. Artistic compositions – Milky Way Arch
    4. Exotic locations (dragging gear around the world)

Part 4b: Basic Gear

- 1) WIDE and FAST and SHARP lens

F2.8 or lower
24MM or wider
LOW CA

Part 4b: Basic Gear

- 2) Good Tripod
  - Doesn't have to be expensive, just good stability

Part 4b: Basic Gear

- 2) Good Head
  - Ball head with independent TILT and Rotation

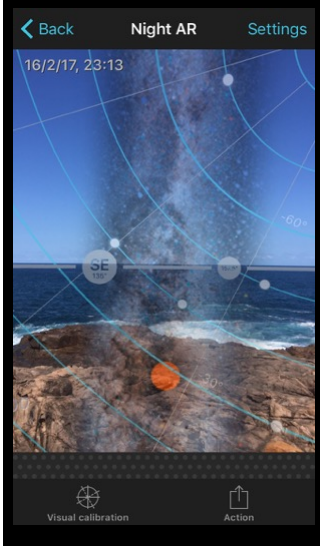
Ball Head

Gimbal

Leveling Base

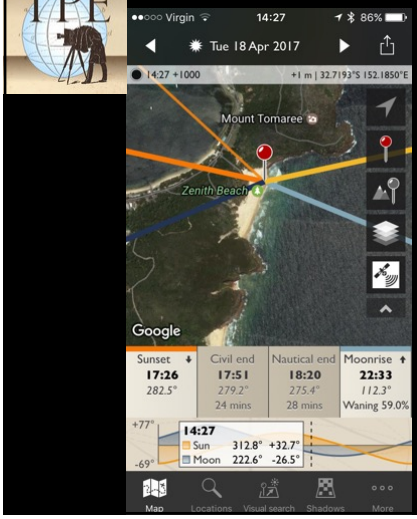
Part 4b: Basic Gear

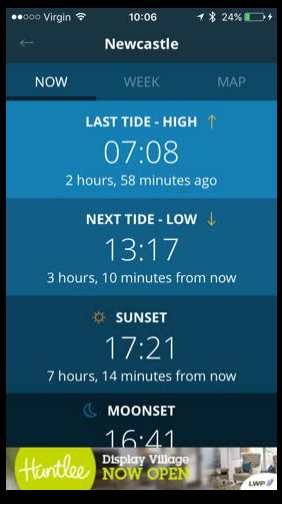
- 3) Info
  - Know what to expect before you get there



Part 4b: Basic Gear

- 3) Info
  - Know what to expect before you get there





Part 4b: Basic Gear

- 4) other necessary stuff

Part 4b: Advanced Gear

- 4) Camera Control

Part 4b: Advanced Gear

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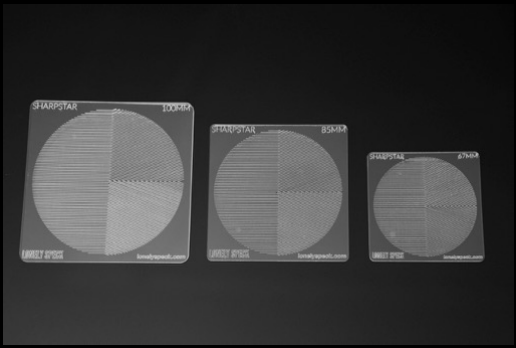
Part 4b: Advanced Gear

- 4) Focus Control
  - Focus at Infinity (not always where it says it is on your lens)



Part 4c: Process

- A) SHOOTING

A) F-Stop = as low as you can and still be sharp.

B) Shutter = as Long as you can without Star movement (RULE of 500)

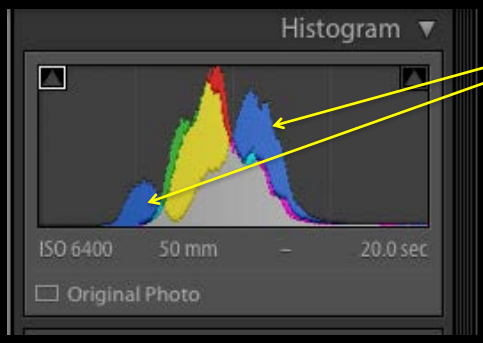
24mm lens = 21 sec
14mm lens = 36 sec
50mm lens = 10 sec

C) ISO = as low as you can to get A and B

Maximize exposure while minimizing noise

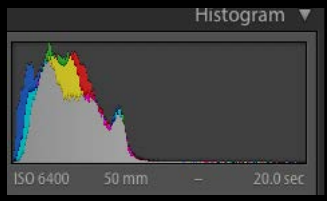
Part 4c: Process

- A) SHOOTING



Blues will be brighter (STARS) and darker (SKY)

USE YOUR HISTOGRAM for exposure

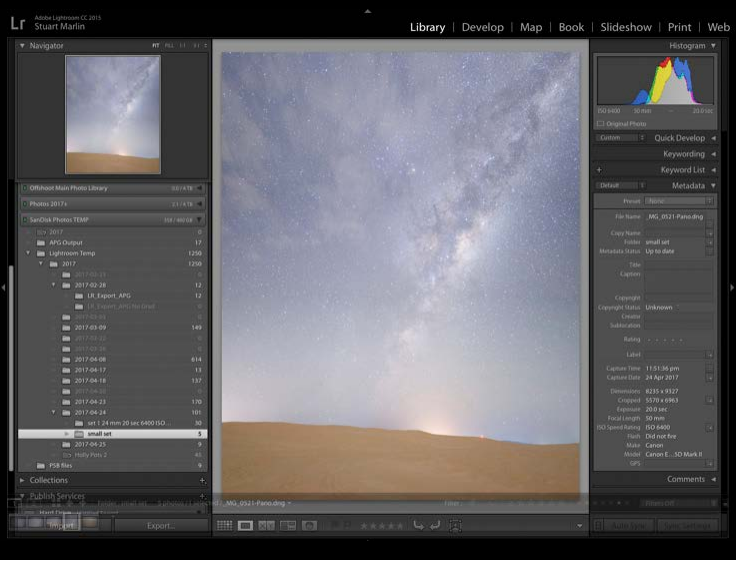


IF down here
LOTS of noise in shadows
BUT will look good on LCD on camera

Use your Camera LCD ONLY for Composition only

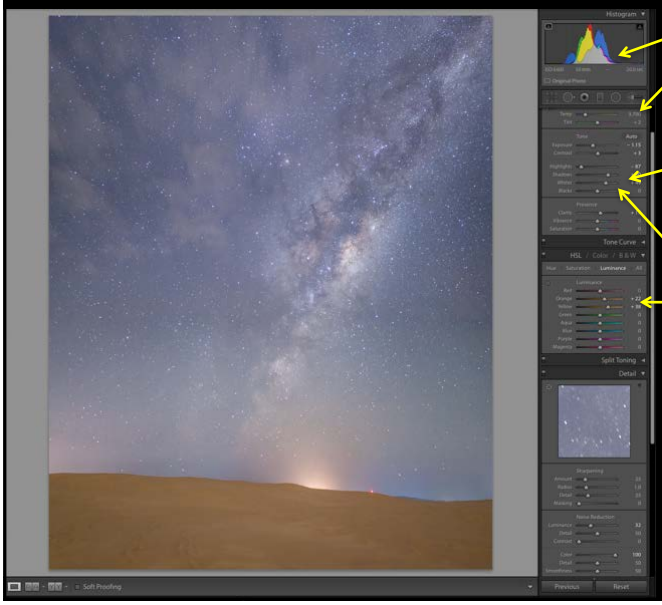
Part 4c: Process

- B) Lightroom



Part 4c: Process

- B) Lightroom



Colour?

Some separation of stars from sky

Some Brightening of ground

Minimal sharpen (usually none unless stitching pano)

Minimal LUM Noise
Maximum Colour Noise

+ Lens Profile Corrections

Part 4c: Process

- B) Lightroom: Presets

30 sec to edit this in Lightroom

Presets by Mikko Lagerstedt:

Part 4c: Process

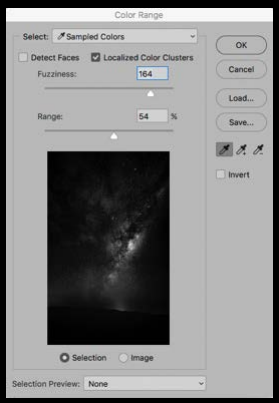
- C) Photoshop

Luminosity Mask
NOT STARS

Levels reduce brightness of sky
Leave stars and ground

Part 4c: Process

- C) Photoshop: Enhance Stars more



Part 4c: Process

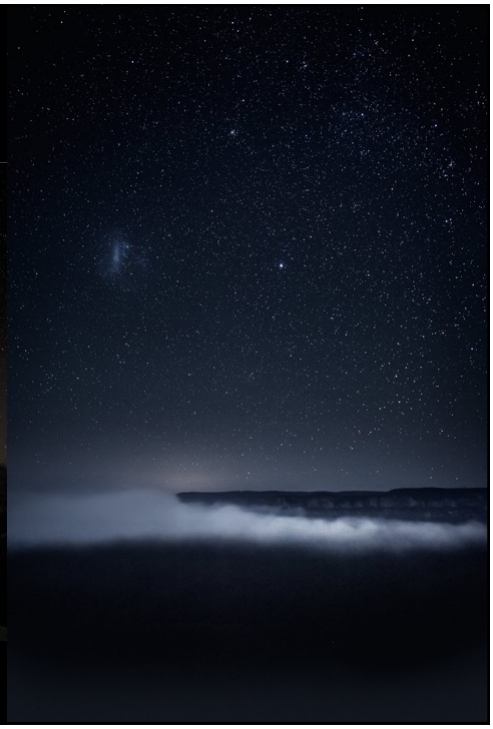
- C) Photoshop: Noise

Noiseware: Night
+ NOT stars Luminosity mask

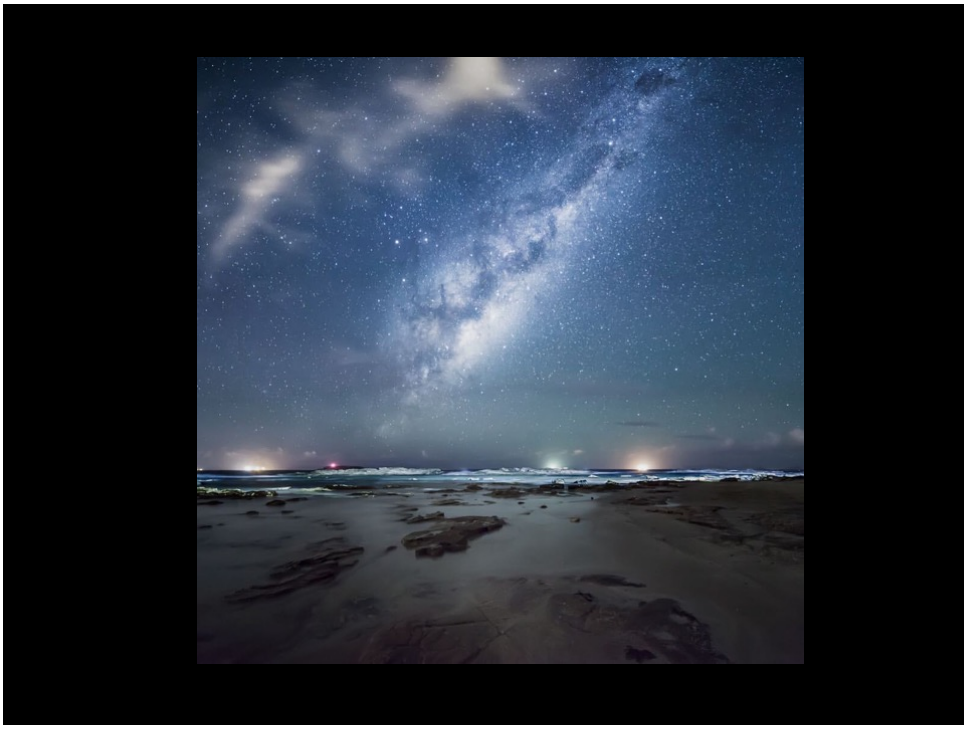
Part 4c: Process

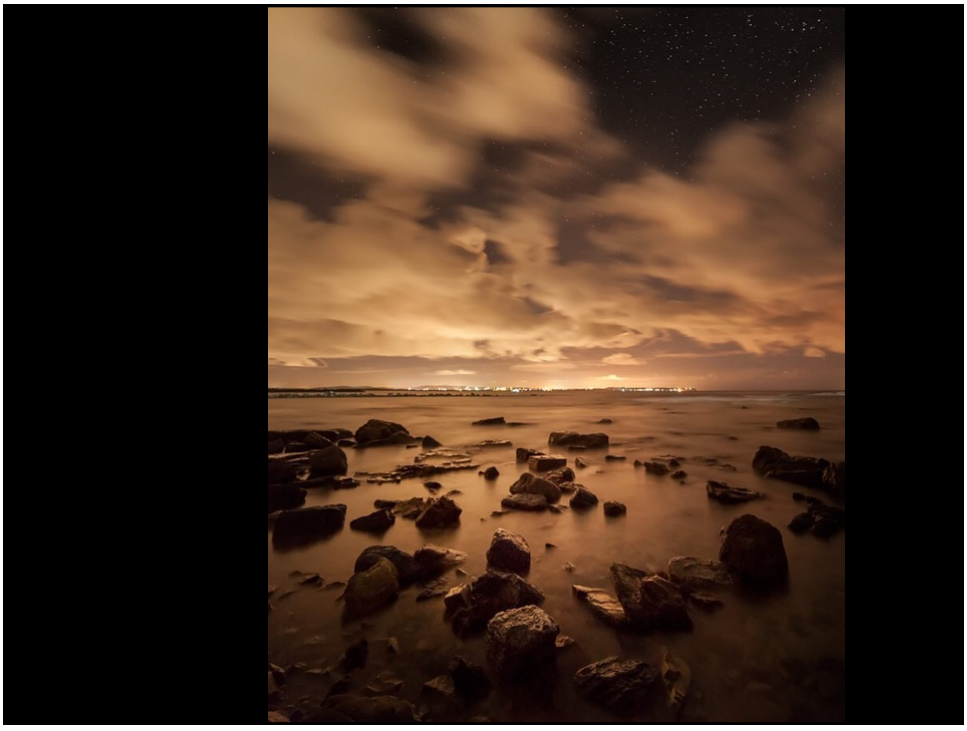
- C) Photoshop: some more final sharpening (limited)

Outcomes

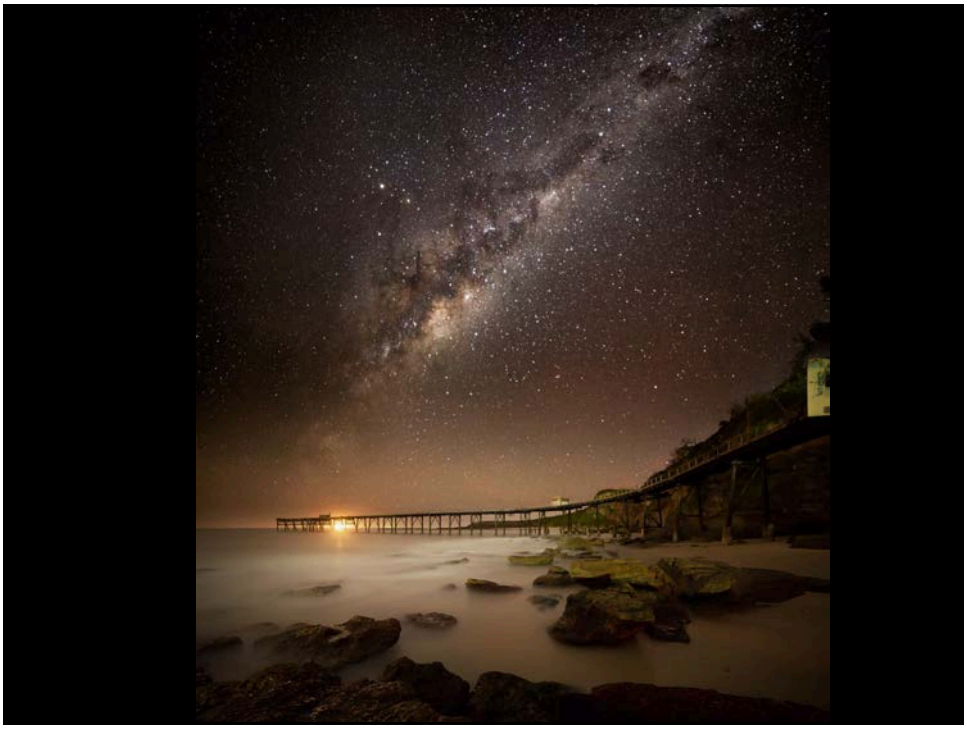


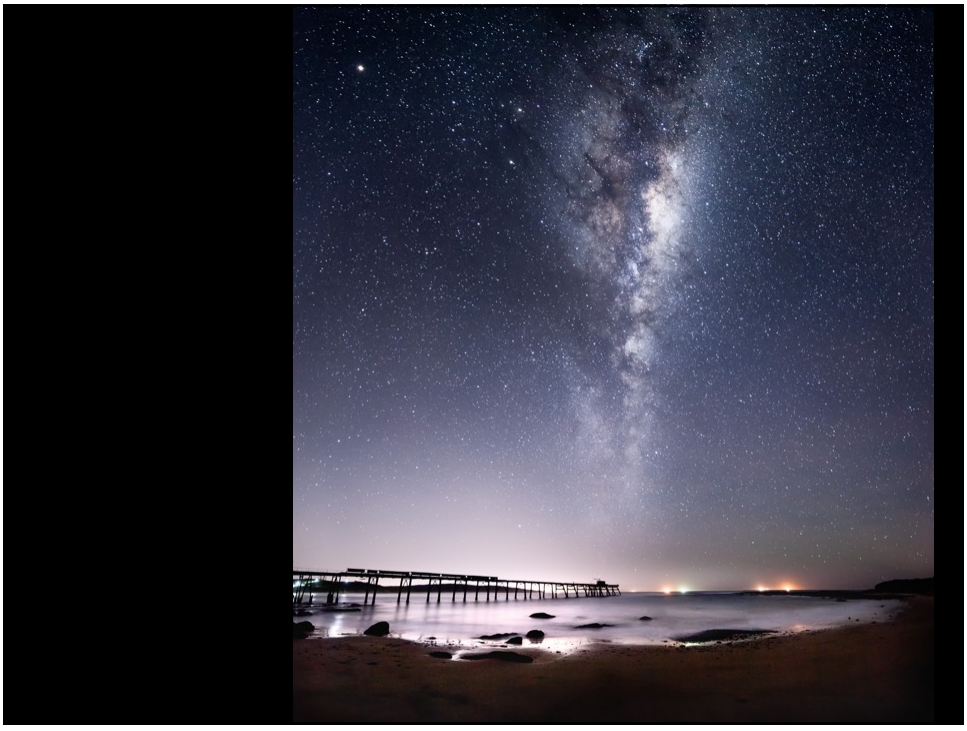
Swansea Heads

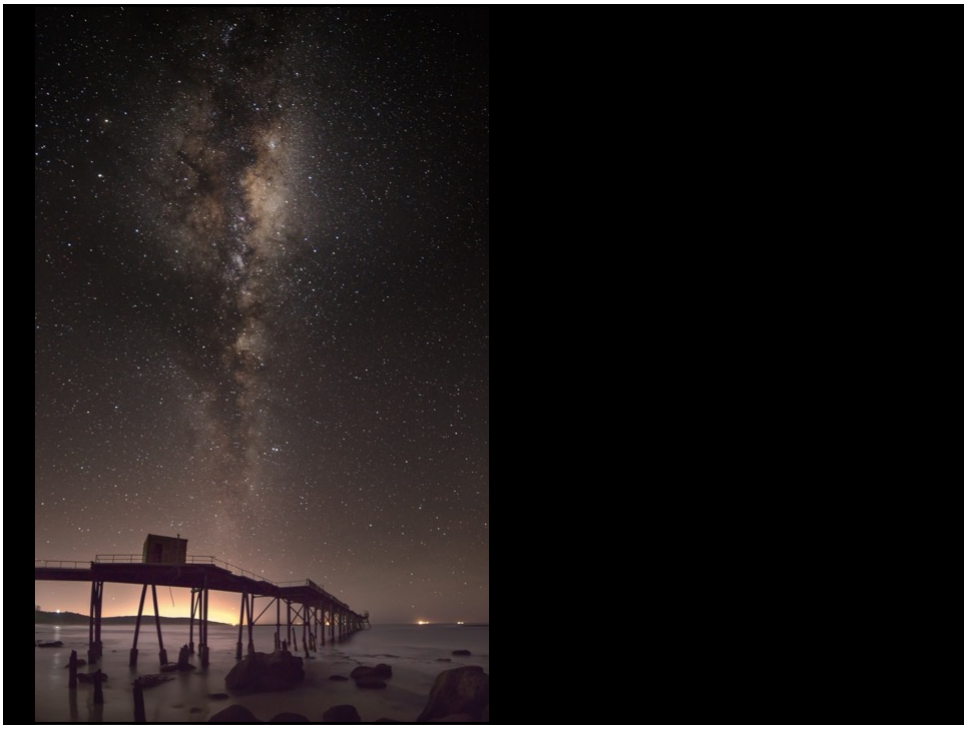


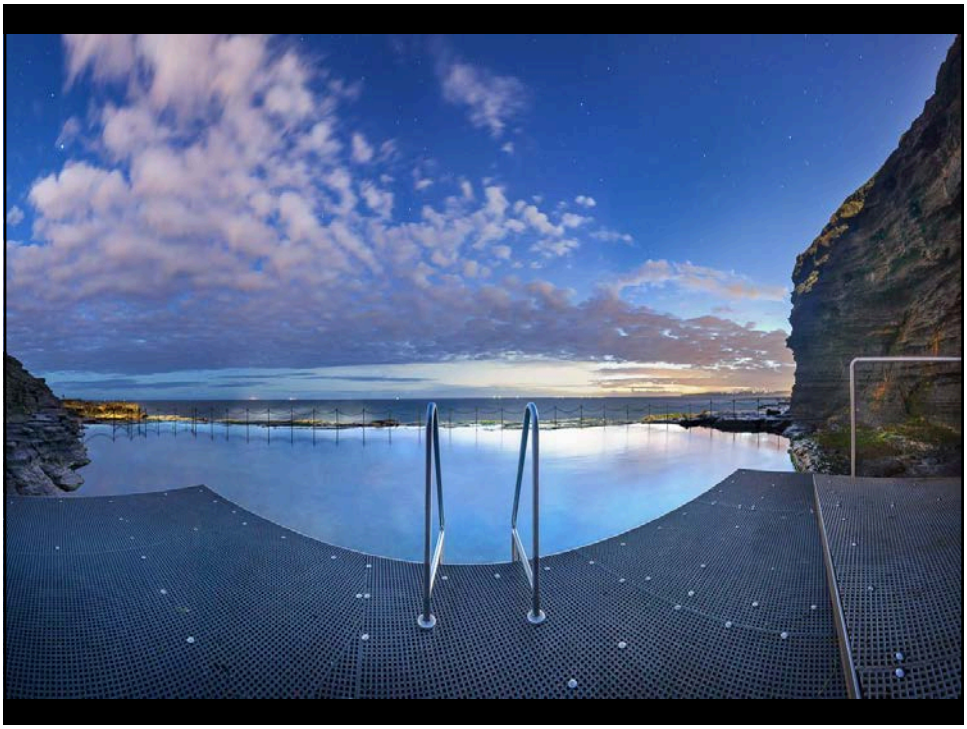


Catherine Hill Bay









Chasing BIG sky

- Approx 160° Horizontal
- Approx 120+° Vertical

Michael Goh = Astrophoto Bear

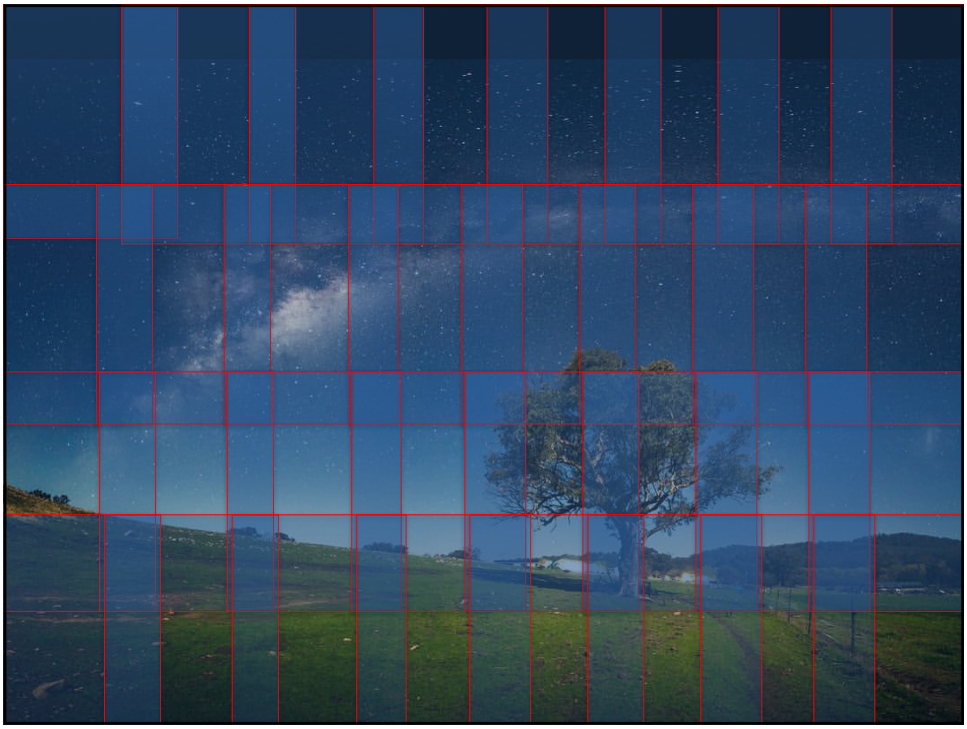
Chasing Big Sky 1) the hard way

Nodal slider

Gimbal

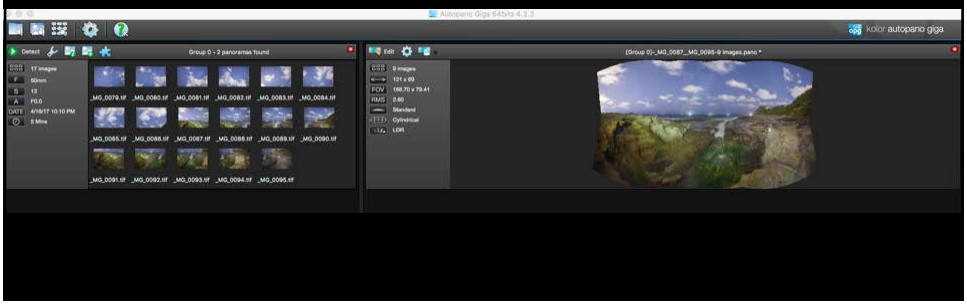
Leveling base

Tripod



Stitching

PTgui
Panorama Tools
graphical
user interface
Create high quality panoramic images


kolor autopano giga

Chasing Big Sky 2) the easy way

Programmable
Precision
Repeatable
Designed for Mars Rover
Can take 100's of photos

50 individual pictures

5 ROWS of 10 Columns

180° wide

With camera Mounted Vertically on a Gigapan
Allows better stitching if detail free skies

LOW Level Landscape Lighting

- Small LED lights (Tungsten filters) at Dimmest settings throw light across foreground when there is NO moon and no light from urban areas

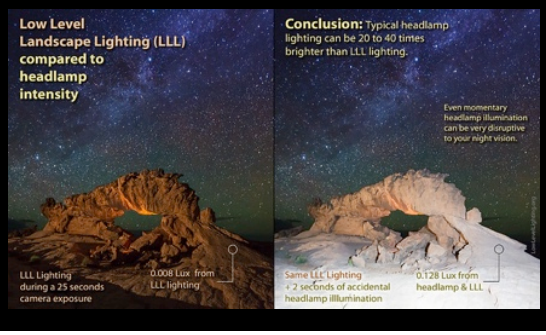
Avoid light Painting
Avoid flash

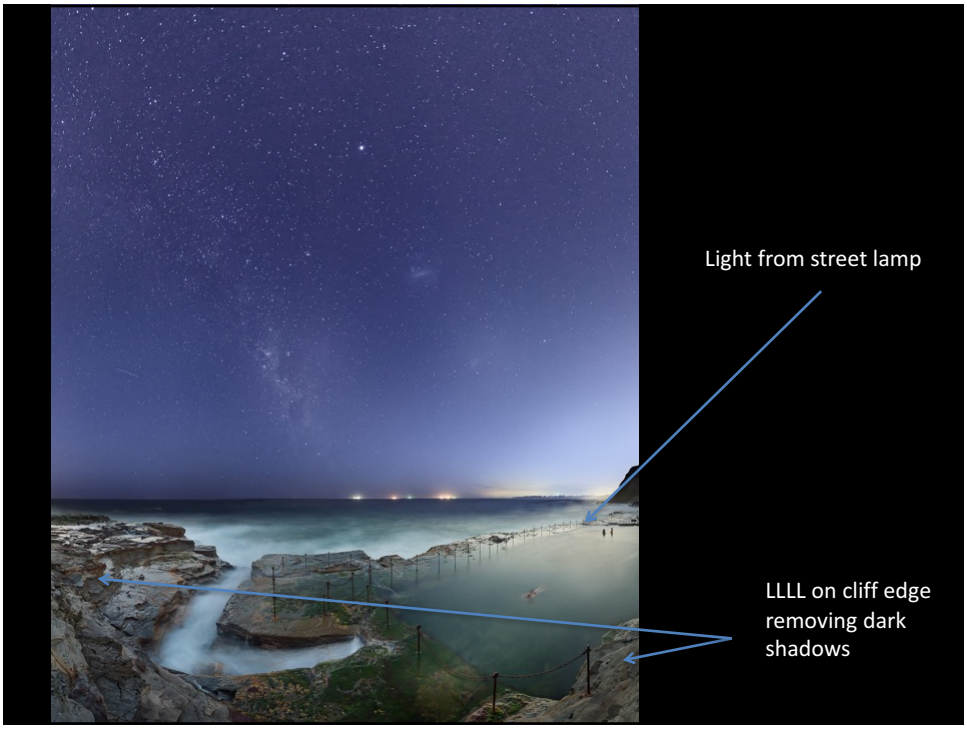
LLLL

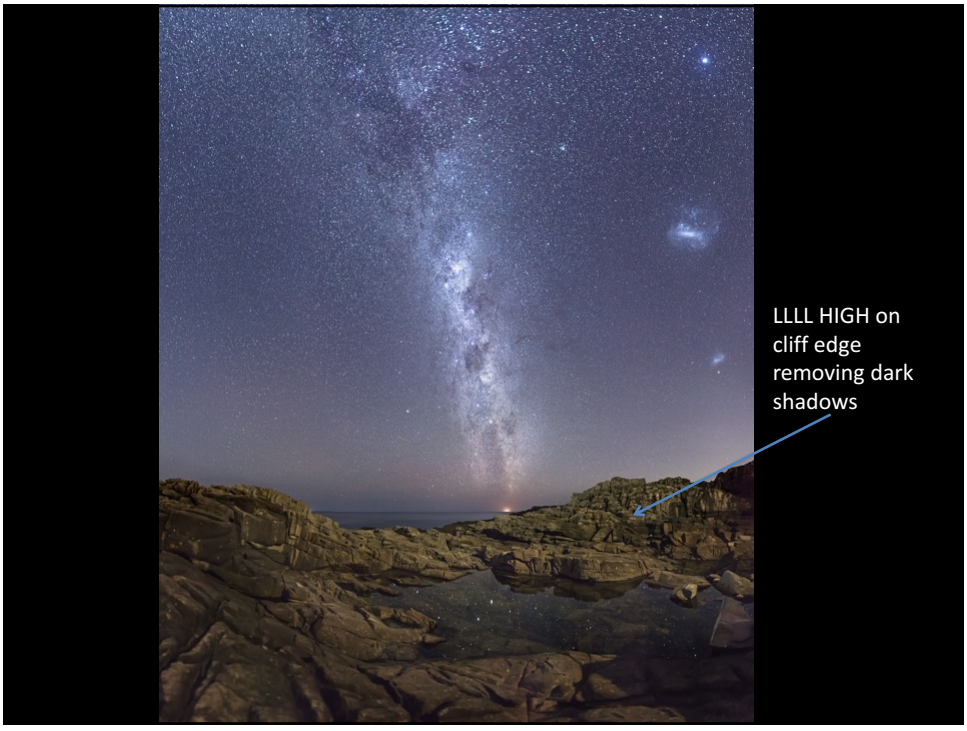
With no MOON and no light from a city, the ground has NO LIGHT

ADD LLLL to get an effect similar to ¼ MOON

LLLL vs Light painting






LLLL HIGH on
cliff edge
removing dark
shadows

Fin