

Exposing myself to ridicule....

- Where did I go wrong on the night?
- Where did I go right?
- What could I have done better?
- What will I do better at the next outing?



Where did I go wrong?

I wore my bright Orange T-shirt – a real bargain in Kota Kinabalu at only 8 Malaysian Ringgits - and Mary Linder spotted me in her car and tried to run me over!!!

Lesson 1: don't be so spottable!!!



Where did I go wrong?

I didn't listen enough to my colleagues, and started shooting without planning. Maureen told me she was shooting the moon. I should have asked her what typical exposure / aperture – she is an expert!!!

Lesson 2: Think and plan!



Where did I go wrong?



- I thought I got the exposure right for the moon!! What went wrong?

Answer: Nothing!



What could I have done better?



I **did** have the exposure right!

Answer: ???????



Where did I go wrong?



I **did** have the exposure right!

Answer: The RAW converter!! It was trying to make it look correctly exposed! So learn how your RAW converter works.



Where did I go wrong?



Why was my initial image so over-exposed?

- Answer: how did my camera know I was trying to photograph a dark image?

If a face is in shadow, the camera should get the exposure right! It should make it lighter!




If a face is in **deep** shadow, the camera should get the exposure right! It should make it **much** lighter!

But what if **you** want the face dark? The **camera** does not know this! You have to tell it with exposure adjustment..... Do this with the camera controls.

The same applies to your RAW converter! How does **it** know that **you** wanted the image to be dark?

You have to tell it! Once I did that, the moon looked OK.



In some situations, you may get better results if you manually compensate (adjust) the exposure value set automatically by the camera. In many cases, bright subjects (such as snow) will turn out darker than their natural colors. Adjusting toward + makes these subjects closer to their real shades. For the same reason, adjust toward – when shooting dark subjects. The exposure can be adjusted in range of ± 5.0 EV. Center weighted averaging metering () or spot metering () is recommended for exposure compensation. The EV step interval can be selected from 1/3EV, 1/2EV or 1EV.  “EV STEP” (P. 124)



-2.0 EV



± 0




+2.0 EV



Where is this on your camera?

The metered exposure value can be locked with the **AEL** button (AE lock). Use AE lock when you want a different exposure setting from the one that would normally apply under the current shooting conditions.

Normally, pressing the shutter button halfway locks both AF (auto focus) and AE (automatic exposure), but you can lock the exposure alone by pressing **AEL**. When you lock the exposure, the metering mode (digital ESP metering, center weighted averaging metering or spot metering) selected in the menu is automatically applied.  "AEL METERING" (P. 124)



Where is this on your camera?

■ Digital ESP metering **ESP**

The camera meters and calculates the light levels or light level differences in the center and other areas of the image separately. Recommended for shooting under conditions where there is high contrast between the center of the screen and the area around it, such as when shooting backlit subjects or under excessively bright light.

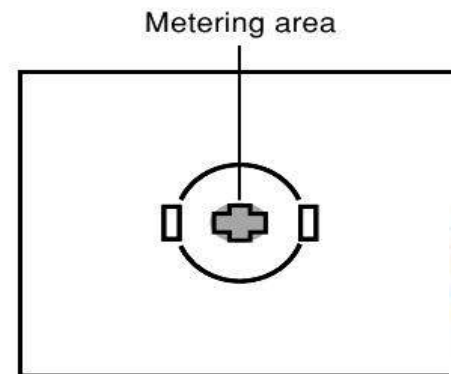
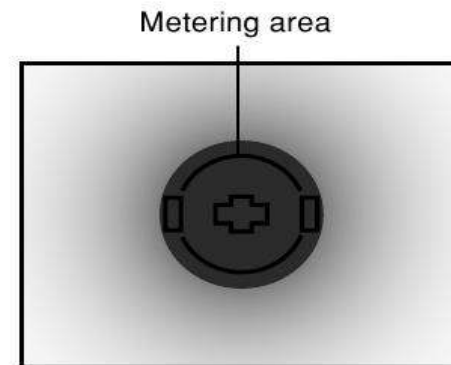
■ Center weighted averaging metering

This metering mode provides the average metering between the subject and the background lighting, placing more weight on the subject at the center. Use this mode when you do not want the light level of background to affect the exposure value.

■ Spot metering

The camera meters a very small area around the center of the subject, defined by the spot metering area mark in the viewfinder. Use this mode for intensively backlit subjects, etc.

Where is this on your camera?



What could I have done better?



BUT I still had a
problem!!

What should I have
checked **before** I
started shooting?

Answer: ????????



Where did I go RIGHT?

I brought my head light – my hands were left free for my camera / tripod and I could easily see my camera controls for adjusting things

Lesson 2: Buy a cheap *adjustable* head light



Where did I go RIGHT?

I brought my tripod and knew how to set it up and use it. It was an asset rather than a liability!

Lesson 2: Plan ahead- bring a tripod to night time events or events with long exposure (i.e more than hand-held). Borrow one if need be!



Where did I go RIGHT?



Where did I go wrong?



Under exposed image (test)



Correctly(?) exposed image.

Where did I go wrong?



Where did I go RIGHT?

Self-timer shooting ☺ :

This function lets you take pictures using the self-timer. You can set the camera to trigger the shutter after either 12 or 2 seconds. Fix the camera securely on a tripod for self-timer shooting.

Remote control shooting 📡 (with optional remote control) :

By using the optional remote control (RM-1), you can take a picture with yourself in it or a night scene without touching the camera. The camera can be set to trigger the shutter either right away or 2 seconds after the shutter button on the remote control is pressed.



Where is this on your camera?

Where did I go RIGHT?

ANTI-SHOCK

This diminishes camera shake caused by vibrations when the mirror moves. You can select the interval from the time the mirror is raised until the shutter is released.

How to setting

In the menu, camera2 -> ANTI-SHOCK -> OFF. Press up-arrow or down-arrow button to select the time from 1 - 30 seconds. Press the OK button.



Where is this on your camera?

Where did I go wrong?



Where did I go wrong?



For long exposures, your sensor may heat up and you will get Hot Pixels!

How can you stop this?



Where did I go wrong?

This function reduces the noise that is generated during long exposures. When shooting night scenes, shutter speeds are slower and noise tends to appear in images. When NOISE REDUCTION is set to ON, the camera automatically reduces noise to produce clearer images. However, shooting time is approximately twice as long as usual.

For more information about noise generated in images during long exposures, refer to "Noise in images" (P. 51).



NOISE REDUCTION: OFF



NOISE REDUCTION: ON



Where did I go right?



A new image, a new test shot + exposure compensation to get it exposed correctly!

How did I check this?



Where did I go right?

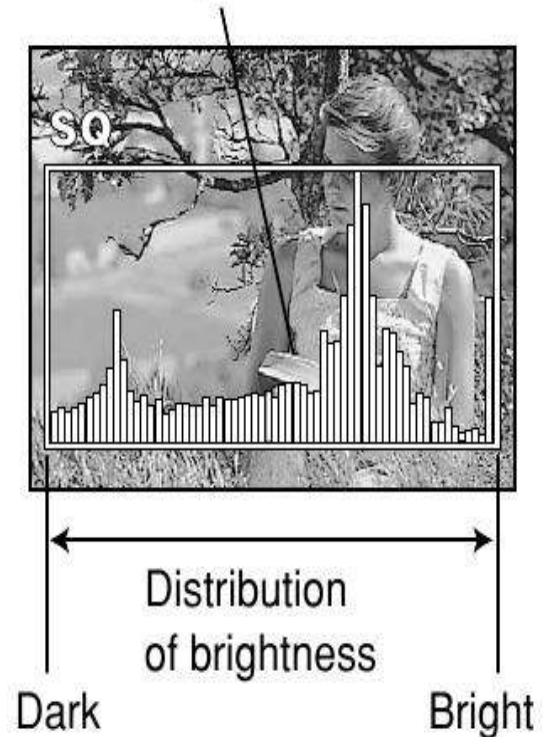
Histogram

Shows you the distribution of brightness in recorded images. Checking the histogram will enable more precise exposure control for subsequent shots.

How to use the histogram display

The histogram display enables you to check the brightest highlights and darkest shadows which may result in a poor image. If the bars in the histogram are higher towards the right, the image may be too bright. If the bars are higher on the left, the image may be too dark. Compensate the exposure or shoot again.

Histogram



Where is this on your camera?



Where did I go right?

Highlight

The overexposed parts of the recorded image blink.

Overexposed parts



Where is this on your camera?

Where did I go right?



Where did I go right?



BUT Hot Pixels!!!!



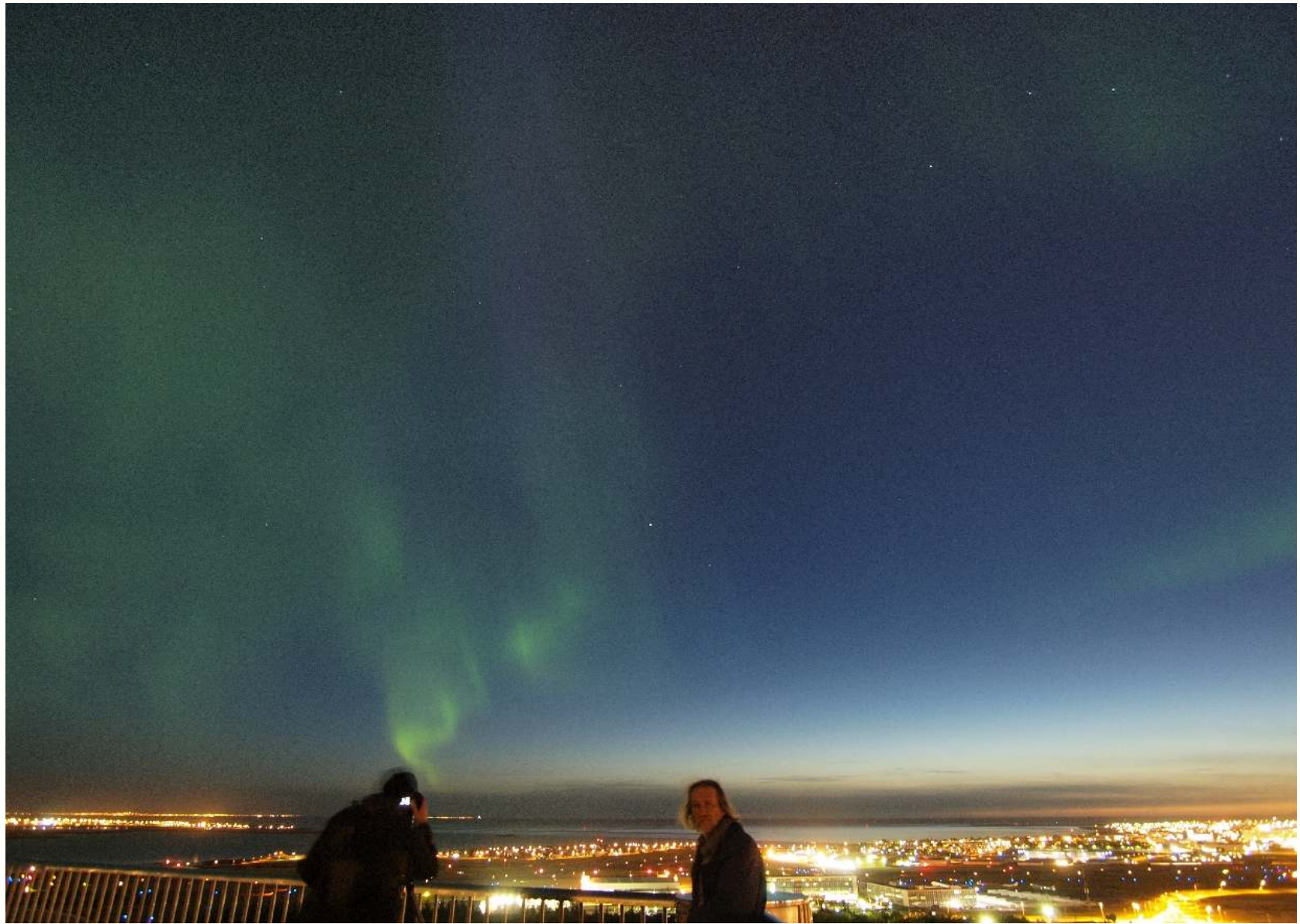


I took a number of images of the city whilst I waited so as to get my exposure correct.
Long exposure, manual focus, tripod, anti-shock on, black frame noise reduction on.



50 shots later, I was starting to feel confident. Lots of checking the images to start with so I did not waste the opportunity. And I was basically continuously shooting as I swung my camera across the skies.

Lots of "Wow!!!"s.



At this stage I was shooting for longer periods of time - it did not affect the exposure too much, but did let the camera see the unwinding ribbons for longer.



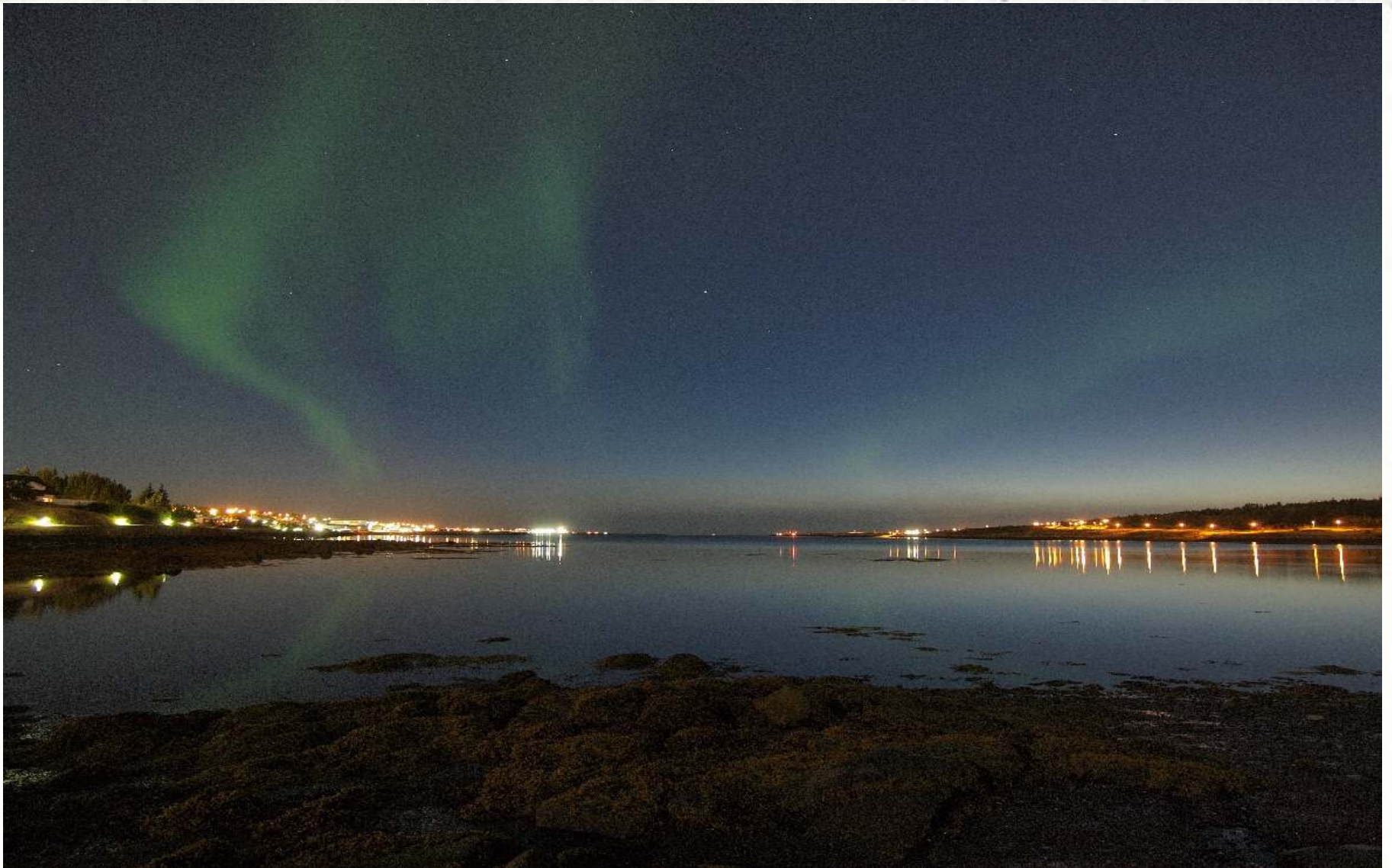
An intensity histogram can be very useful to know if you are under exposing or blowing highlights, but it does not really help you in knowing whether the stars are visible in the background, whether they are blowing out, whether the foreground exposure is nicely balanced vs. the night sky, etc.



The new position was good, the foreground anchored the Aurora to the earth, and water, whilst not a great reflector, seemed OK. So a useful preparation for this exercise is to go out at night and just shoot night-time shots. Build up your manual focusing skills. Work out what your camera does when you want a scene to look dark - you don't want the camera to turn a night scene into a day scene. Know how to do EV compensation?



In this image, the reflection is starting to become apparent, but the Aurora at this stage was dying fast. The colours were rather drab to my eyes, and the shape was smoke-like rather than ribbon. Overall, the exposures of the composition were OK, but the foreground was a little subdued.



I wanted to get a reflection plus the foreground, but it was fast becoming obvious that the difference between a newbie Aurora photographer and a seasoned one was the learning that takes place when you photograph and think, photograph and think. I was too late in my learning.....



I increased the amount of foreground in this image. Again, I had little control over the Aurora and whether my 20 seconds of exposure would be rewarded or not. If you like tightly cropped images, then you may criticise me here for a composition which, like Erik Satie's music, seems to have more space than content. That is fine.

The extra time that I had, helped me to re-compose and re-expose several shots. I was still at the mercy of the Aurora - sometimes a spectacular coloured ribbon would awe me, but coyly disappear when the shutter was open. The correct exposure of the reflection was obviously going to be a problem. In hindsight, I think that a Graded Neutral Density Filter may have been useful. I had some of these but I had not experimented with them before leaving for Iceland.

Lesson to learn: always fiddle with things **before** it is essential.

Where did I go right?

Where did I go wrong?





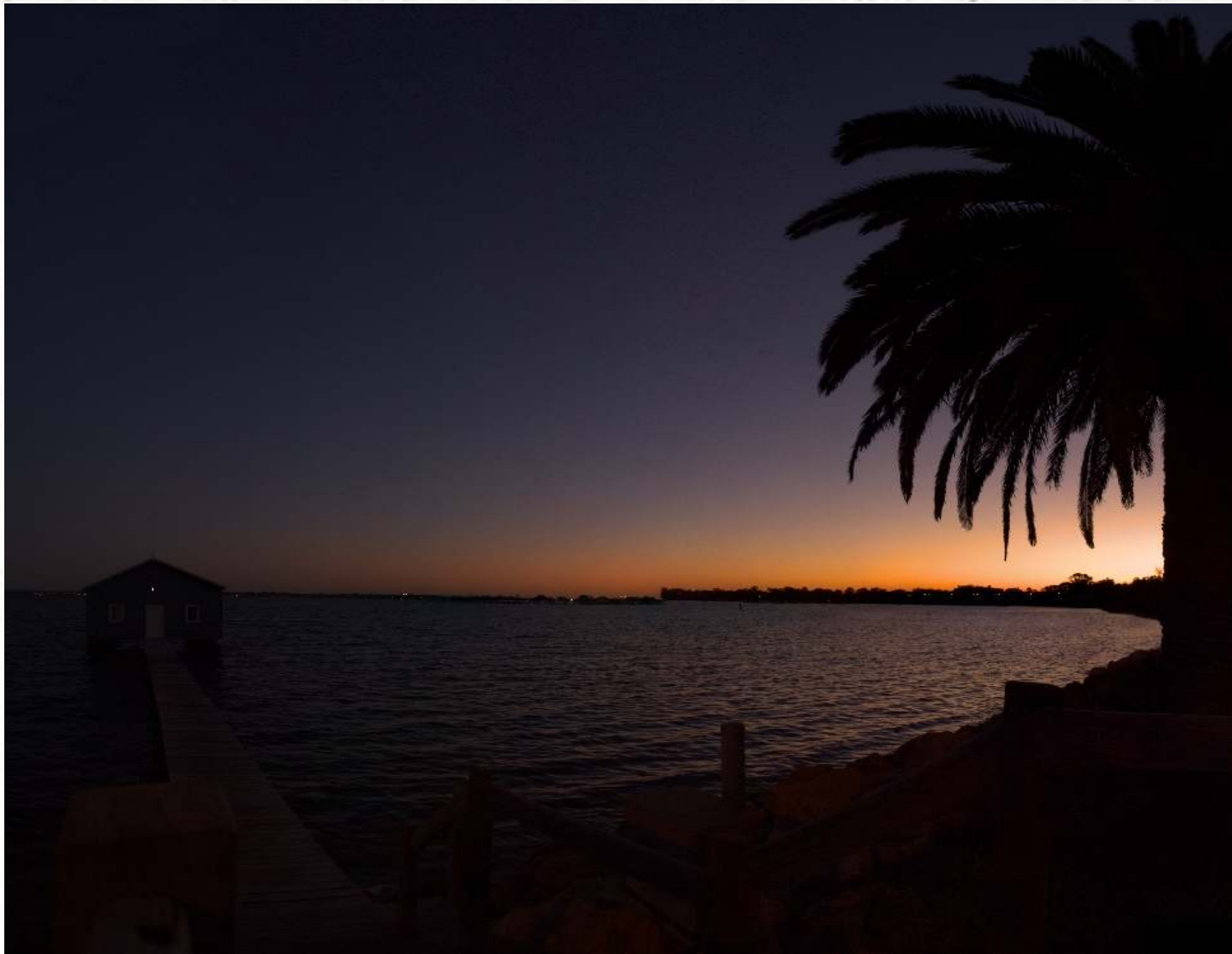
Why take so many images of the full moon rising?
And why go back month after month?





Sometimes you get it wrong





And sometimes you get it right.....



What will I do better at the next outing?

Be prepared! Check equipment!

Bring along the Manual

Bring along a head light!

Check settings before start shooting!

Talk to colleagues and ask advice.

