

## Field report ZWO EAF – Tobias Lamb

### Why did I buy the EAF:

I wanted to automate my system as much as possible and hoped to increase my yield of images on clear nights with the ZWO EAF. I own a TS94EDPH, which is an apochromatic refractor with excellent optics. However, I have the problem that every 45 - 60min I have to refocus due to focus drift, which means I have to keep going out to the balcony at night.

### Setup used:

As already mentioned, the ZWO EAF should be mounted to the TE94EDPH. Since I own a complete ZWO setup, this would be controlled by the ZWO ASIAIR Pro. The ZWO ASI2600MC Pro acts as the main camera and the ZWO ASI120MM Mini on a 240mm f/4 guiding scope acts as the guiding camera. As mount my well-tried Skywatcher HEQ-5 Pro is used. The whole setup is on the Geoptik column tripod with casters.

### Mounting:

The mounting was absolutely uncomplicated. All the necessary tools (two hex keys) and mounting materials (screws, washers) were included. This is how it has to be!

First, the side of the focuser without reduction is disassembled (loosen the grub screw with the small hexagon socket wrench) and removed from the focuser. On the now exposed shaft, the matching adapter sleeve is placed and also fixed again with a grub screw. Make sure that the grub screw is on the flattened side of the focuser shaft. The ZWO EFA is then attached to the adapter sleeve with another grub screw, which is located in the sleeve. Again, pay attention to the flattened side on the shaft of the ZWO EAF. Next, I aligned the ZWO EAF so that the bottom of it is as parallel as possible to the bottom of the eyepiece focuser so that the mounting plate can be mounted. This is then attached to the ZWO EAF with two screws and to the bottom of the focuser with two screws. The whole assembly took about 5 - 10min.

### First test:

Of course, this was followed by 4 weeks of gray skies first. But when the first opportunity presented itself, the whole system was tested.

I have the ZWO EAF without temperature sensor, because I run a focusing cycle every 30min anyway. This can be conveniently set in the menu of the ASIAIR app. There is also the option to run a focus cycle before the start of each session, each filter change and a certain temperature change. It is important to pay attention to the exposure times here. Because of the full moon I photographed with the Optolong L-eXtreme Dual narrow band filter, I decided for 5 seconds. Only the first session was finally started. First a focus curve is created. This means that a star is automatically searched for, this is focused and then defocused again and finally a fixed focus point is set. I checked this for fun with the Bahtinov mask and it fit perfectly.

Then the autorun started and after 30min a new focusing cycle was reliably started, which took about 4 - 5min.

### Conclusion:

After the first two nights I am completely convinced and am happy that in the future I can go to bed with a clear conscience without having to get up every 45 - 60min to refocus. For me it was a very useful addition to my setup.