ENVIRONMENTAL LIGHT FIELD – CALCULATING INTENSITIES

STEP 1: CONVERT RAW FILES (E.G. .NEF) TO DIGITAL NEGATIVES (.DNG)

Download and install Adobe DNG Converter (http://www.adobe.com/products/photoshop/extend.displayTab2.html#downloads). After opening Adobe DNG Converter, click on Change Preferences and in the window that opens, use the drop-down menu to create a Custom Compatibility. IMPORTANT: Make sure the **'Uncompressed' box is checked** in this custom compatibility mode and the **'Linear (demosaiced)' box is unchecked**. `Backward Version' can be whatever you like.

STEP 2: ORGANISE YOUR DATA

All of your images for one environment should be in the same folder. Different exposures for one scene should be consecutive files, but don't have to have consecutive numbers (e.g. they can be `file001.dng` and `file005.dng`, as long as there are no files 2-4). They should also be in order of ascending EV. All of these are usually automatically fulfilled if you shoot with a Nikon camera. The name of your environment folder will be used by ELF as the name of the corresponding dataset. All environment folders should be in a single data folder, which should contain nothing else than environment folders.

STEP 3: MAKE SURE ELF CAN SAVE ITS OUTPUT

The first time you run ELF, the program will ask you to select two default output folders:

- a main folder (which will include the output ELF plots as pdfs, Excel files with the results, and the mean images as high-resolution tifs)
- a public folder (which will just include low-resolution jpgs of the results, and can therefore more easily be shared, e.g. via dropbox).

STEP 4: CALCULATE

You can now run the file calc_wholefolder.m, which will first ask you for your **data folder** (i.e. the folder that contains all of your environment folders, which in turn contain the images). After you select the data folder and output folders, the program will calculate the mean images and intensity-related statistics for all environments in the data folder. Computation time depends largely on your processor; on a fast desktop machine, it should be approximately 1 min per scene.