

3.7: Eyepieces

An **eyepiece** or **ocular** is a magnifier used before the eye at the end of an other optical instrument such as a microscope and a telescope. The eye looks into the ocular and the ocular "looks" into the optical instrument. The ocular provides a magnified virtual image of the image produced by the optical instrument. Similar to the magnifying glass, the virtual image should preferably be at or near infinity to be viewed by a relaxed eye. Several types of eye pieces exist and most of them are made out of two lenses: 1 . the field lens, which is the first lens in the ocular; 2 . the eye-lens, which is closest to the eye at a fixed distance called the **eye relief**. The aperture of the eyepiece is controlled by a field stop. An example is given in Figure 3.7.1.

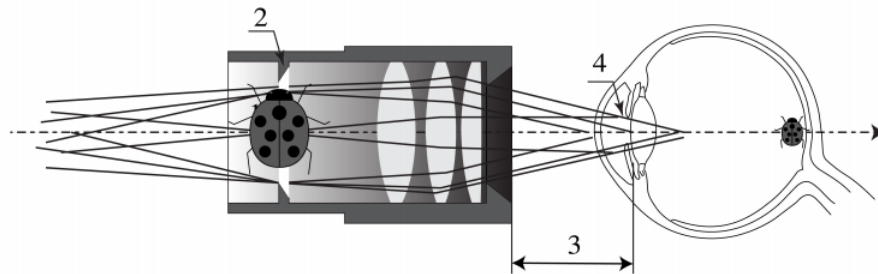


Figure 3.7.1: Example of an eyepiece; 1) real image 2) field diaphragm 3) eye relief 4) eye pupil (adapted from Wikimedia Commons by Tamas-flex/CC BY-SA 3.0).

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