I think that it is possible to erase the interference effect in a telescope, reducing the Airy disc.

A telescope transform an aperture plane wave in an eyepiece plane wave, so that the telescope is a function T on a output bidimensional signal (that is $\mathbf{I}$ or $I(x,y)\ \forall\ x,y$) that give the original input image (sample images).

If there are many input sample images, that have a know outputs (magnification), then the T function can be evaluated: for example this function can be a polynomial function (or each approximation of the telescope function):

$$\mathbf{I}_{in} = T(\mathbf{I}_{out})$$

$$I_{in}(x_l, x_m) = I_{in}^{lm} = \sum_{ijXY} T_{ijXY}^{lm} I_X^i I_Y^j$$

so that each pixel in the **C**harged-**C**oupled **D**evice is a function of each intensity of the input map; the number of parameter is great for a polynomial approximation (in this case, for a disc with 10^3 points, there are $O(10^6)$ parameters), but there are many possible approximation functions (neural nets, Fourier, etc), and there are some with a minimum number of parameters, and there are simmetry of the system (for example each finite rotation of the telescope give the same rotate sample image, reducing the input time).

In conclusion, a telescope is a bidimensional function between maps, the output map can be corrected to the real map obtained using the magnification of a learning map (a real image placed in front of the telescope).

The same result could be applied to a microscope, using a more precise microscope to correct a reference one, and reducing the energy of the rays that do not destroy the samples.