Correction of DIMM seeing data

The correction be applied to the DIMM seeing (arcsec) to get the expected value for FORS image quality is as follows:

$$FWHM_{FORS} \simeq FWHM_{DIMM} \left(\frac{0.5}{\lambda(\mu m)}\right)^{1/5} z^{3/5}\, k \qquad (1)$$

where λ is the wavelength expressed in μm, $z = 1/cos(\theta)$ is the airmass (if θ is the zenith distance) and k is the so called *outer scale correction* for a pupil of 8m diameter, given by the following expression:

$$k = \left(1 - 78.08\, \frac{\lambda(m)^{2/5}\, z^{-1/5}}{FWHM_{DIMM}^{1/3}}\right)^{1/2} \qquad (2)$$

where λ is expressed in meters.

References

Sarazin, M. 2000, *Astronomical Site Monitor*, VLT.SPE.ESO.17410.1174