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(54) Title: IMPROVED SEQUENTIAL SCANNING WAVEFRONT MEASUREMENT AND RETINAL TOPOGRAPHY

(57) Abstract: An improved sequential scanning method and apparatus for measuring wavefront aberration involves angularly displacing a measurement beam from a parallel beam striking the corneal surface at a desired location and using the displacement of an image on a detector between the angularly displaced beam and a reference beam to obtain a more accurate wavefront measurement than provided by the displacement between the parallel beam and a reference beam conventionally used for such wavefront aberration measurement. A method and related apparatus for determining a retinal topography relies on using the improved measurement method and apparatus in conjunction with other ocular data to determine changes in the bulbous length of the eye based upon retinal image displacement.