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Optics and photonics — Test methods for telescopic systems —

Part 9: Test methods for field curvature

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Foreword

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This document was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 4, *Telescopic systems*.

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Introduction

As mentioned in ISO 14490-7, there are several characteristics which determine image quality, besides the limit of resolution. One unmentioned characteristic there is field curvature which can be noted by the user as a field dependent defocus, which however could be refocused using the test specimen's focusing facility.

The intermediate image surface of a telescopic system (except Galilean systems) usually exhibits a curvature instead of being a plane surface, depending on the optical characteristics of the objective lens system. In addition, the surface can be split into two separate surfaces, the sagittal and tangential image surfaces.

This surface, in turn, is being imaged by the eyepiece onto a virtual image surface (looked at by the user) which also can be split into two separate surfaces. Due to the optical characteristics of the eyepiece, the slope of the curvature of these surfaces might be different from those of the intermediate image surfaces.