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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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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

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

A list of all parts in the ISO 14490 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## 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.

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