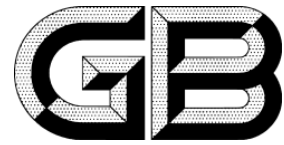


ICS 37.020
CCS N 31



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 44403-2024

**Optics and photonics - Telescopic system - General terms and
terms for binoculars, monoculars, spotting scopes and
telescopic sights**

光学和光子学 望远镜系统 通用术语和双筒望远镜、单筒望远镜、观测镜及瞄准
望远镜术语

(English Translation)

Issued on: August 23, 2024

Implemented on: August 23, 2024

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

Preface

Introduction

1 Scope

2 Normative references

3 Terms and Definitions

3.1 Terms and definitions in the general field of telescope systems

3.1.1 General Definition

3.1.2 Basic characteristics of observation telescopes

3.1.3 Optical components of telescope system

3.2 Terms and definitions for binoculars, telescopes and spotting scopes

3.3 Terms and definitions for telescope sighting

Reference

Index

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document modifies ISO 14132-1:2015 "Optical and photonic telescope systems - Terminology - Part 1: ISO 14132 General ISO 14132-2:2015 "Optical and photonic telescope systems - Terminology - Part 2: Binoculars" Telescopes, spotting scopes and telescopes - Terminology" and ISO 14132-3:2021 "Optical and photonic telescope systems - Terminology - Part 3.

"Terms of aiming telescopes".

Compared with ISO 14132-1:2015, ISO 14132-2:2015 and ISO 14132-3:2021, this document has the following structural adjustments.

---3.1 corresponds to Chapter 4 of ISO 14132-1:2015;

---3.2 corresponds to Chapter 3 of ISO 14132-2:2015;

---3.3 corresponds to Chapter 3 of ISO 14132-3:2021.

The technical differences between this document and ISO 14132-1:2015, ISO 14132-2:2015 and ISO 14132-3:2021 and their reasons are as follows.

- The scope of Chapter 1 has been changed to adapt to the usage habits of Chinese standards;
- Changed the title name (see 3.1, 3.2, 3.3) to facilitate the use of the standard;
- The definition content (see 3.1.2.2, 3.1.2.3, 3.1.2.6) has been changed to conform to the standard expression habits of my country;
- Added permissible terms (see 3.1.2.8) to conform to the standard expression habits of my country;
- Added the A-direction diagram and index number description of Figure 1 (see 3.2.1.19) to facilitate the understanding of the definition of the term;
- Added permissible terms (see 3.3.21) to conform to the standard expression habits of my country;
- Changed the term names and added permitted terms (see 3.3.22) to conform to the standard expression habits of my country;
- Added permissible terms (see 3.3.23) to conform to the standard expression habits of my country;
- Deleted ISO 14132-1:2015 symbols and abbreviations (see Chapter 3).

The following editorial changes were made to this document.

- Changed the standard name;
- Added formula numbers;
- Added "Note" (see 3.2.1.19, 3.2.1.21);
- Deleted "Note" (see 3.3.11);
- Adjusted references.

Introduction

The telescope system is the core part of various telescopes and is widely used in astronomical observation, space remote sensing, geodesy, weapons and equipment, culture and education, etc.

Sports, culture, entertainment, tourism and other fields. With the advancement of science and technology and the development of social economy, the application scope of telescopes is expanding.

The industry has taken shape as the output of products has gradually increased.

The formulation of this document will promote the consolidation of the achievements of telescope technology progress, promotion and application, and development, and will have

a great impact on the technology of the telescope manufacturing industry.

At the same time, as it is based on international standards, it provides support for international technical communication and it brings convenience to commercial trade and creates conditions for "Made in China" to go global.

In view of the above reasons, the terminology of various types of telescopes is standardized and regularized according to the technical characteristics and uses of the telescope system.

It is very necessary.

Optics and Photonics Telescope Systems General terms and binoculars, telescopes, Observation and sighting telescope terminology

1 Scope

This document defines the terms and definitions for the general field of telescopes, binoculars, spotting scopes and spotting telescopes.

This document is applicable to the formulation of telescope standards, the compilation of technical documents, teaching materials and books, as well as document translation, technical exchanges and trade.

2 Normative references

This document has no normative references.

3 Terms and definitions

The following terms and definitions apply to this document.

ISO and IEC maintain terminology databases at the following addresses.

3.1.1 General Definitions

3.1.1.1

Telescope systemtelescopic system Infinity system afocal system an optical system in which parallel light rays from an infinitely distant object form a conjugate beam.

3.1.1.2

Keplerian telescope

A telescopic instrument with a positive focal length objective and a positive focal length eyepiece.

3.1.1.3

Galilean telescope

A telescopic instrument with a positive focal length objective and a negative focal length eyepiece.

3.1.1.4

telescope

An optical instrument used to view distant objects.

Examples. Binoculars, spotting scopes, riflescopes, amateur telescopes, spotting scopes, and night vision goggles.