TECHNICAL REPORT

ISO TR 14618

First edition
1996-03-01

Middle atmosphere — Global model at altitudes between 30 km and 120 km, and wind model at altitudes above 30 km

Atmosphère moyenne — Modèle global aux altitudes comprises entre 30 km et 120 km, et modèle de vent aux altitudes supérieures à 30 km

Reference number
ISO/TR 14618:1996(E)

Contents

Page

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters or electrotechnical standardization.

The main task of technical committees is to prepare International Standards. In exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

— type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;

— type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;

— type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/TR 14618, which is a Technical Report of type 2, was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles,* sub-committee SC 6, *Standard atmosphere.*

Introduction

Since the publication of the last ISO standard atmosphere (ISO 2533:1975, *Standard atmosphere*), numerous new ground-based and satellite measurements have become available. This large influx of new data makes it possible to encompass the entire globe from the ground to the upper thermosphere and to provide information on the seasonal and latitude variability of the thermodynamic properties of the atmosphere for altitudes between 30 km and 120 km.

The detailed information on parameters distribution allows the calculation of mean wind at the middle atmosphere.

This Technical Report is based on COSPAR International Reference Atmosphere, 1986 (CIRA-86) which is the most extensive work analysing numerous satellite and ground-based measurements of the middle atmosphere.

Middle atmosphere — Global model at altitudes between 30 km and 120 km, and wind model at altitudes above 30 km

Section 1: General

1.1 Scope

This Technical Report establishes a zonal monthly mean of temperature, pressure, density and zonal wind. These data can be used as a function of geopotential/geometric height and has a latitudinal coverage from 80° S to 80° N, extending from altitudes between 30 km and 120 km.

This Technical Report was developed to serve as a mean basis for the design and operation of vehicles and provides additional information for general scientific purposes.