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

GB/T 14914.4-2021

**The specification for marine observation - Part 4: Shore based
radar observation**

海洋观测规范 第4部分：岸基雷达观测

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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 of Standardization Documents" drafted: This document is part 4 of GB/T 14914 "Ocean Observation Specifications": GB/T 14914 has released the following parts:

- Part 1: General;
- Part 2: Coastal observations;
- Part 3: Observation of buoys and submersibles;
- Part 4: Shore-based radar observations;
- Part 5: Satellite remote sensing observations;
- Part 6: Data processing and quality control: Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents: This document is proposed by the Ministry of Natural Resources of the People's Republic of China: This document is under the jurisdiction of the National Marine Standardization Technical Committee (SAC/TC283): This document was drafted by: National Marine Technology Center, Wuhan University, National Marine Standard and Metrology Center: The main drafters of this document: Zhang Suoping, Wen Biyang, Xu Jinxing, Wu Yuhua, Qi Zhanhui, Zhang Dongliang, Xu Wenling, Yuan Lingling, Wang Ying, Fang Fang, Liu Xiaobao:

With the development of ocean observation technology, my country's observation methods have gradually developed from traditional coastal observation to buoy submersible observation and radar observation: A variety of observation methods such as survey, aerial observation and satellite remote sensing observation have been adopted, and an ocean three-dimensional observation network integrating star-air-earth has been preliminarily formed: for the sea To meet the needs of the development of ocean observation, standardize ocean observation activities, implement the "Regulations on the Administration of Ocean Observation and Forecasting" (Decree No: 615 of the State Council), Specification" (GB/T 14914-2006) was revised to "Ocean Observation Specification":

"Ocean Observation Specification" includes general provisions, coastal observation, buoy submersible observation survey, shore-based radar observation, satellite remote sensing observation, data processing and quality control, among which the seashore code is the revised part, and the remaining 5 parts are new add part: GB/T 14914 "Ocean Observation Specification" is proposed to be composed of 6 parts:

--- Part 1: General: The purpose is to stipulate the observation principle, observation content and quality control of ocean observation:

--- Part 2: Coastal observations: The purpose is to stipulate the project time and technical requirements of coastal observation:

--- Part 3: Buoy Submarine Observation: The purpose is to stipulate the observation items such as buoys, marine submersible buoys and surface drifting buoys, etc: skills requirement:

--- Part 4: Shore-based radar observations: The purpose is to specify the observation items and timing, general regulations, and observation methods of shore-based radar observations: Laws and requirements, data processing and electromagnetic radiation protection:

--- Part 5: Satellite remote sensing observations: The purpose is to specify sea surface temperature, marine meteorological elements, marine dynamic disasters, marine natural disasters Observation content and methods of hazards and sea surface height:

--- Part 6: Data processing and quality control: The purpose is to specify observational data such as seashore, buoys, shore-based radar and satellite remote sensing: General requirements, processes, content and methods of processing and quality control: GB/T 14914:4 establishes scientific and forward-looking standards for shore-based radar observation, making it scientific, standardized and institutionalized, In order to meet the strategic needs of marine development and promote the standardization, institutionalization and standardization of marine work: This document implements shore-based radar observations With a unified implementation standard, radar observations can be regulated to obtain representation, timeliness, accuracy, comparability and continuity The radar ocean observation information data can be used for social development, marine economic construction, disaster prevention and mitigation, emergency management, national defense and security: Ocean Observation Specification Part 4: Shore-based radar observations

1 Scope

GB/T 14914.4-2021 is the Chinese national standard on the specification for marine observation - part 4:shore based radar observation, in the field of natural and applied sciences. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 December

2021 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2022. Classification: ICS 07.060, CCS A45. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the observation items and time, general regulations, observation methods and requirements and data of shore-based radar observations in the ocean observation specification: processing, etc: This document applies to oceanographic surveys conducted by shore-based radars for marine observation purposes by medium and high frequency ground wave radar observatories and by X-band radar observatories: Surface currents, waves, wind and sea ice observations: For radar observations other than high-frequency ground wave radar and X-band radar in ocean observations, it is recommended to For the installation and deployment and application requirements of specific instruments, please refer to the provisions of this document: Radar Observation for Ocean Observation on Mobile Observation Vehicle For testing, please refer to the provisions of this document:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document: GB/T 12763:

2 Oceanographic Survey Specifications Part 2: Marine Hydrological Observations GB/T 14914:

3 Terms and Definitions

The terms and definitions defined in GB/T 15920, GB/T 12763:2 and the following apply to this document:

3:1 shorebasedradar Installed on coasts, islands, platforms, and mobile observation vehicles, using the basic principles of electromagnetic waves interacting with the ocean surface, it is specially designed for A radar that acquires information such as ocean surface currents (field), waves (field), offshore surface wind (field), and sea ice (field):

3:2 high-frequency ground-wave radar observation system Using the basic principle of the interaction between high-frequency electromagnetic waves and the ocean surface, the surface current (field) is mainly obtained, and the waves (field), A radar observation system for marine environmental information such as wind (field):

3:3 remote station remoteradarstation A site used to obtain single-station detection data of high-frequency ground wave radar, including transmitting and receiving antennas, transmitters, receivers, acquisition terminals and data Data processors, data communication devices, power supply

facilities, etc., and transmit the observation data to the synthesis station:

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