Technical Specification

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Geographic information — Calibration and validation of remote sensing data and derived products —

Part 2: Synthetic aperture radar (SAR)

Information géographique — Calibration et validation des données de télédétection et produits dérivés —

Partie 2: Radar à synthèse d'ouverture (SAR)

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Foreword

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Introduction

Remote sensing is one of the major data sources for geographic information. As a kind of active imaging radar sensor, SAR has the ability to observe the earth in both day and night, and for almost all weather conditions. As a result, SAR data and their derived products have been widely used in various fields such as disaster monitoring, geological mapping, environmental protection, etc.

Such applications can integrate SAR data from different suppliers and different sensors. The quality of those data and products is essential for the success of such applications. Calibration and validation are the fundamental processes to assess and improve the data quality and ensure the Earth observing (EO) data and derived products from different sources are comparable and interoperable.

The calibration and validation include the SAR sensors themselves, SAR data collected by sensors, and products derived from SAR data. ISO/TC 211 has developed the ISO 19159 series of Technical Specifications to cover the calibration of sensor hardware and validation of the calibration results. ISO/TS 19159-3 is about calibration and validation of SAR/InSAR sensors. The ISO 19124 series standardizes calibration and validation of remote sensing data and products:

— ISO/TS 19124-1 addresses the overall framework and common calibration and validation processes related to EO data and derived products from different types of remote sensors.

— This document (ISO/TS 19124-2) standardizes the calibration and validation of SAR data and their derived products.