NCWG **NCWG8-06.13A**

Meeting 8 X NOV 2022

Agenda Item X.X

Proposal on Adding the Symbol of Differential Beidou Satellite Navigation System (DBDS) Reference Stations

Submitted by China

SUMMARY

Executive Summary: China MSA proposes to add a new symbol of Differential Beidou Satellite Navigation System (DBDS) Reference Stations.

Action to be taken: See section 4

Related documents: S-4 B-481.4

1. Introduction

Satellite navigation services are of great importance to the safety of navigation. In 2014, the IMO Maritime Safety Committee recognized the BeiDou satellite navigation system as a component of the World-Wide Radionavigation System at its 94th session by SN.1/Circ.329 on Recognition of the BeiDou Satellite Navigation System (BDS) as a component of the World-Wide Radionavigation System. Since then, The Beidou Navigation Satellite System (BDS) has become the third global navigation satellite system after GPS and GLONASS to provide all-weather, all-day, high-precision positioning, navigation and timing services for global navigation users.

2. Discussion

Differential Beidou Navigation Satellite System (DBDS) is an enhancement to the Beidou Navigation Satellite System that uses a network of fixed ground-based reference stations to broadcast the difference between the positions indicated by the satellite systems and the known fixed positions. China has built several DBDS reference stations in coastal areas in order to provide high-precision navigation and positioning services based on BDS for international and domestic ships sailing in China's coastal waters and various activities involving the sea. To facilitate various users, it is necessary to chart the site of the DBDS station.

Option1:

The section B-481.4 of S-4 gives the symbol of DGPS stations as follows:

Since DBDS stations are similar to DGPS stations, it is suggested that DBDS stations are portrayed as follows:

The black circle with positioning point indicates the location of the station, and the purple note "DBDS" indicates that the radio positioning service provided by the station is the differential BeiDou Navigation Satellite System service.

Option2:

Since both the Differential Beidou Satellite Navigation System (DBDS) and the Differential Global Positioning System (DGPS) are Differential Global Satellite Navigation System (DGNSS), it is recommended to replace the note "DGPS" of S51 with the note "DBDS".

3. Recommendations

a) Insert a new entry "B-481.5 DBDS" in S-4 as follows:

Differential Beidou Navigation Satellite System (DBDS) is an enhancement to the Beidou Navigation Satellite System that uses a network of fixed ground- based reference stations to broadcast the difference between the positions indicated by the satellite systems and the known fixed positions.

Stations that provide DBDS corrections to the mariner may be charted. However, as the corrections are normally automatically fed into onboard systems, charting the site of the DBDS station does not usually assist the mariner. If required, they must be charted as:

Or

b) Replace the Section B-481.4 with the following new entry:

Differential Global Satellite Navigation System (DGNSS) is an enhancement to the Navigation Satellite System that uses a network of fixed ground- based reference stations to broadcast the difference between the positions indicated by the satellite systems and the known fixed positions. Stations that provide DGNSS corrections to the mariner may be charted. However, as the corrections are normally automatically fed into onboard systems, charting the site of the DGNSS station does not usually assist the mariner. If required, they must be charted as:

4. **Actions requested of NCWG**

The NCWG is requested to note the information provided in this document and take action as appropriate.