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Weather forecast verification-Severe convective weather

天气预报检验 强对流天气

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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 for standardization documents" Drafting is required.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the China Meteorological Administration.

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Weather forecast verification of severe convective weather

1 Scope

This document specifies the verification content and verification indicators for severe

convective weather forecasts, and describes the calculation of TS scores and the determination of actual information. method.

This document is applicable to quality assessment, business management, etc. of severe convective weather forecasts.

2 Normative references

This document has no normative references.

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 severe convective weather

A general term for severe weather that occurs when convection develops vigorously in the atmosphere.

Note. Usually includes any one or several weather phenomena such as short-term heavy rainfall, thunderstorms, gale, hail, tornado, etc.

3.2 TS score threat score

A measure of the accuracy of a "will or will not happen" (yes or no) forecast of a weather event.

Note. Usually expressed as TS. Its value is the ratio of the number of correct forecasts of an event to the sum of the number of forecasts and missed forecasts, also known as the key forecast success index.

(Critical Success Index, CSI).

4 Inspection contents and inspection indicators

The inspection content includes the forecast of severe convective weather events such as short-term heavy rainfall, thunderstorms, hail, tornadoes, etc. Inspection indicators include TS score, hit rate, false alarm rate, missed alarm rate and forecast deviation. Table 1 specifies the inspection contents and inspection indicators for severe convective weather.

Table 1 Inspection contents and inspection indicators for severe convective weather

Inspection content	Inspection indicators
TS score, hit rate, false alarm rate, missed alarm rate and forecast deviation of short-term heavy precipitation forecast	TS score, hit rate, false alarm rate, missed alarm rate and forecast deviation
TS score, hit rate, false alarm rate, missed alarm rate and forecast deviation of thunderstorm and gale forecast	TS score, hit rate, false alarm rate, missed alarm rate and forecast deviation
Hail forecast	TS score, hit rate, false alarm rate, missed alarm rate and forecast deviation
Tornado forecast	TS score, hit rate, false alarm rate, missed alarm rate and forecast deviation

forecast deviation

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