

WGS 84 in China

China implemented WGS-84 in 2011. There have been reported issues concerning the accuracy of the published coordinates especially the airport reference data which is causing inaccurate data warnings during the landing phase.

There is evidence that there are map shifts both at airports and in the air on en route waypoints. An example of this is when Jeppesen has used accurate airport reference data and the differences are then picked up by the aircraft shortly after being airborne.

The State has previously been made aware of the WGS84 discrepancies and is working constructively with all agencies to correct the inaccuracies. Nevertheless, IFALPA considers it appropriate to issue this Safety Bulletin for such time as the differences exist as we consider the potential safety impact of coordinate inaccuracies warrants special attention.

If the WGS 84 tolerances are exceeded it will bring out an aircraft runway disagree warning which is the most critical of warnings. For example for Boeing aircraft please see below excerpt

- the FMC RUNWAY DISAGREE alert is triggered when the cross track distance between the aircraft and the centreline of the take-off runway, as defined in the FMC, exceeds 300 feet (91.5 metres). For inflight warnings on RNP 1, RNAV 5, RNP 10 etc., the aircraft warnings will be triggered when the RNP or RNAV performance value is not maintained i.e. if it is RNP 1 operations, then any deviation beyond 1 nm will be enunciated on the aircraft as "UNABLE RNP"

We encourage all operators and pilots to report any WGS-84 related events / alerts to the Chinese authorities and also to IFALPA via Carole Couchman, Senior Technical Officer (carolecouchman@ifalpa.org).