

论文

天气雷达水平仪检测数据误差订正与数学处理方法初探

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摘要 天气雷达天线座水平度的检测主要使用2种气泡式水平仪来获取数据。由于水平仪在天线座上的实际检测工作环境与水平仪原来的标准检定环境差别较大,所以直接获取的检测数据含有明显的误差成分,这在很大程度上影响到了对天线座水平度的准确检测。针对在水平仪检测数据订正与数学处理方法方面出现的问题,分别提出了对这2种气泡水平仪系统读数误差的确定方法和检测数据的数学处理方法。结果表明:对读数误差的确切分离与对检测数据进行恰当的数学处理,能够明显提高天气雷达天线座水平度检测数据的准确度和可信度。

关键词 [天气雷达](#) [水平仪](#) [检测数据](#) [读数误差](#) [误差订正](#) [数学处理](#)

分类号

Preliminary study on error correction and mathematical treatment methods of detection data for weather radar level

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Abstract The detection data to the horizontality of weather radar antenna pedestal were mainly obtained by two kinds of alveoli levels. The direct detection data existed obvious errors because the practical and standard detection conditions of levels on antenna pedestal were different, which could influence the accurate detection of antenna pedestal horizontality to some extent. Thus, the methods of error correction and mathematical treatment for two alveoli levels detection data were presented. The results indicated that the exact separation to reading error and the right mathematical treatment to detection data could improve the accuracy and reliability of weather radar antenna pedestal horizontality.

Key words [Weather radar](#) [Level](#) [Detection data](#) [Reading error](#) [Error correction](#) [Mathematical treatment](#)

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