

introduction

In order to locate the airborne radar detection position affected by the aircraft motion, a method to locate actual position of observation data for data pre-processing of HIWRAP is put forward. And it combines with the homogeneous coordinate method to accomplish the transformation of data coordinate and fix the problem that the coordinate system for observation and data processing is not consistent. This poster presents the performance of an early version of the algorithm in the method when it is run on data collected by the HIWRAP during GRIP.



parameters	position	parameters		
Acknowledgments. T	he HIWRAP data collect	ction was funded by the N		
without their help an	d release freely.Thanks	s for NASA GRIP.Thanks fo		
experiment PIs and his	s/her team.Any opinions	s. findings. and conclusions		

relative

Radar scan

A Method to Locate Airborne Radar Observation Data

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High-Altitude Imaging Wind and Rain Profiler (HIWRAP) Global Hawk with scanning Conical Scan, 10-30 rpm



The real data collected during GRIP were chosen to test the algorithm. Figure of observation data position drawed by using method consistents with the ideal figure according to the radar scanning strategy. The measures(including tracks) and their comparisons show that the algorithm performs well.

kainnerchirp_20100917_000000-002430 Data for the previous 200 time points

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the aircraft attitude

GPS information and geometric parameters

IASA GRIP mission. The HIWRAP data can't be used or NASA Goddard Space Flight Center. Thanks for the or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the NASA GRIP or others.

Verification

Data for the previous 1000 time points





improving accuracy. display.

Summary and Future Work

This method can locate the actual location of the radar observation data and put all data information into the same coordinate system.

• There are plans to improve the algorithm for timeconsuming. A method of reducing the dimension matrix is presented to decrease the computing time. And it needs further analysis and verification o

 There are plans to analyse the influence of location factor on location accuracy and discuss the possibility of correcting error and method of

 There are plans to develop integrated software for airborne weather radar data to achieve diversification of observation data information