

2019 Taiwan Geosciences Assembly (TGA)

Report topic :

Availability analysis of sounding falling data at Banqiao Station of Central Weather Bureau

Purpose :

In the vertical environmental observation of meteorology, launching sounding balloons for observation is an important part. The wreckage caused by the observation will likely land in the Taipei metropolitan area and cause an accident. To reduce possible hazards and understand the availability of falling sounding data, this study will track the trajectory of the sounding instrument and the characteristics of the fall point for analysis.

Method :

In order to calculate the sounding drop point in the future, first use the data of the sounding ascent and descent to calculate the trajectory, and compare it with the trajectory of the GPS positioning. Then count the sounding trajectory and vertical environment field of each month, as well as the location of the beginning and last data of the sounding fall. Compare the difference between ascent and descent, and discuss the impact of environmental fields on observing instrument positions. Finally, a case is used to illustrate the possible reasons for the change of placement.

Conclusion :

During the warm season (May-October), when the convection is strong, it is less affected by the synoptic wind field, and the sounding landing point is likely to stay in the inland of Taiwan. At this time, more final data of sounding falls can reach the middle and lower atmosphere, and there is an opportunity to obtain the potential information of the rapidly changing weather system and increase the available analysis data.