

危害飛行氣象因素客觀預報之研究

—— 熱力及地形雷雨 ——

A STUDY ON PRACTICAL OBJECTIVE FORECAST METHOD ON FLYING HAZARDOUS WEATHER: THERMAL AND TERRAIN THUNDERSTORM

林則銘

空軍氣象聯隊

响有唯機之完大探料，南之於空最上統珠空東面
 影最精飛成月年之資園東年因探生面系深探台地
 形行之用完七三處面桃屏二，之發壓圖中之，之
 地飛氣民年年十三地，第成公之等氣完年蓮場
 及對天及兩四大港之山南。完馬兩數天研四花機
 力為等用分十至東地松台表月現備指替之十，港
 熱，此軍共六年及等北，圖七發地流代次大場小
 因雨對我完民十公山台義報年已各環差)本至機確
 言間陣有保研於大馬松作嘉預五，北部度於年北高
 月及唯唯本完國，北製，兩十中南局高故十東反
 序九兩，能。研民園台以崗備大完有以之，六屏門
 一至當氣始全之用桃及，集之國研本且間敗國，全
 大之天，要年使份，日清地民之與，度失民山，
 年成之報行一係月料348，等於年，連緯試公岡公
 每生害預飛第，九資共竹場完一料闕同嗜馬及馬
 而危之之。成至空，折機研第資有不之用，

內向雨生。圖走陣發報。氣及備不預。天置及與之。日位，生觀。當之兩發容。合旋備兩且。配氣之備唯。帶區對正。日熱地，較。514及心表作。共上圖可。料ITCZ以報，資，作預率。測面製觀機。觀錄，容之。

對即量生風接亦素因折其因率。因，合發於直故因述分求各機。素汽之由可，之上圖推於之。中因水兩。統度係與氣以出兩。論之三之備係是關用天，求備。理嘗列氣故關氣穩接珠以法而生。及流下空，之天及直係，折進發。法對足度(S)切之動有完種公，能。方厚滿(V_z)度處圍運生研33解係可。究深常動是有範直發本計圖闕下。研於必運穩素中垂之，于步之值。二生長直之因大之兩此因逐兩數。係發垂氣三及氣備於之及備是。兩之之空此形空與鑑關計生特。備嘗氣及與地响為有有統發之。流空(8)必，影必。素，與子。

三 研 究 步 驟

ABSTRACT

Thunderstorms and rainshowers occurred due to thermal and terrain effects in the period from June through September, are two of the most dangerous hazards for aircraft flight. Based on the rawinsonde observation data taken from 1971 to 1975 at Makung, Taoyuan, and Tungkong, and the surface observation data taken at the same period and days at air bases in this country, and the position and orientation of fronts, ITCZ, and tropical storms presented at same period and days, and by use of the statistical and weather analysis methods, the objective forecast diagrams and tables for each air base are obtained. By use of those tables, the probabilities of occurrence and nonoccurrence of thunderstorm and rainshower can be predicted more accurately. Thus the flying safety of both military and civil aircrafts can be also insured.

REFERENCES

- Gringorten. I. 1955: "Method of Objective Weather Forecasting" Advances in geophysics, Vol. 2 academic press, New York, pp. 57-92.
- Sortor, J. D. 1958: "A systematic approach to local objective forecast studies" Bull. Amer. Met. Soc. Vol. 39, No. 1 pp. 21-27.
- Telfer, R.T. 1958: "A practical way to make air mass thunderstorm forecasting easier and more reliable". Bull. Amer. Met. Soc. Vol. 39, pp. 1-7.
- Wagner, A.J. 1957: "Some relationships between air mass stability, large-scale vertical motion and thunderstorm frequency" appendix 2 to synoptic applications of dynamical concepts, final report under contract AF19(604)-1305, Mass. Inst. of Tech. Cambridge, Mass. pp. 53-71.
- Captain Charles S. Cushman 1960: "Catalogue of predictors used in local objective forecast studies". U.S. air weather service Tech. Rep.
- Miller, R.G. 1972: "Note on analysis and severe storm forecasting procedures of the air force global weather center" tech. Rep. 200 (Rev.) pp. 5-2, 5-18 and appendix F.
- 林永哲. 1976. 1976年夏季台灣雷雨討論。台灣大學大氣科學系天氣預報俱樂部第三次討論會。