

COMPLEMENTI DI NAVIGAZIONE AEREA

(COMPLEMENTS OF AERIAL NAVIGATION)

by

TEN. COL. NICOLÒ GALANTE.

(21×31 cm. : 193 pp., 119 figures : *Ministero dell'Aeronautica*, Roma, 1938).

This course, which corresponds to the normal course given by Ten. Col. Nicolò GALANTE at the *Scuola di Guerra Aerea* (School of Aerial Warfare), is a compilation of several chapters dealing with the various problems of astronomical aerial navigation.

The first chapter gives the definitions of all the geometrical elements necessary for the solution of the problems of the celestial sphere. Chapter II contains a general discussion of the measurement of time and the system of time zones. The third chapter is devoted to definitions of the spherical co-ordinates of the stars, both on the celestial sphere and the local sphere. In the fourth chapter the author deals with the geometric determination of position and the fixing of position by means of altitudes of heavenly bodies. There are general notes on the various astronomical ephemerides, and in particular those which are published especially for aeronautics; on the rating of chronometers; observations by sextant and other reflecting instruments; problems of the dip of the horizon and refraction are treated in detail. In this chapter, the longest in the book, are also given the methods of calculation of the spherical triangle for the determination of the line of position. There is a special application of nautical astronomical calculations to aerial navigation.

The fifth chapter is devoted to generalities concerning the various charts employed in navigation, first the MERCATOR chart, the charts on the stereographic projection, polar, meridian or general. Then the gnomonic charts, polar, meridian and general, and certain cartographic projections obtained from the development of the cylinder, transverse or inverse (Charts of KAHN and of TONNA).

The sixth chapter contains general notes on the fundamental problems of orthodromic navigation and the representation of the orthodrome on MERCATOR and other charts.

The work ends with a series of exercises in theoretical navigation.

H. B.

INTERNATIONAL STANDARD PROJECTIONS FOR METEOROLOGICAL CHARTS

In the *Monthly Weather Review*, December, 1937, W.R. GREGG and I.R. TANNEHILL, after a short historical account of action in the International Meteorological Organization on projections and scales used for meteorological charts, state the objectives of the resolutions adopted at Salzburg on 16th September 1937 by the Commission on Projections for Meteorological Charts and briefly discuss the same.

Three projections, all *conformal*, were recommended.

RESOLUTION II. — (a) *The stereographic projection for the polar regions on a plane cutting the sphere at 60°.*

(b) *The LAMBERT conformal conic projection for middle latitudes, the cone cutting the sphere at 30° and 60°.*

(c) *MERCATOR'S projection for the equatorial regions, with true scale at 22 1/2°.*

RESOLUTION VII. — *The Commission recommends that every chart for meteorological purposes have printed on its face the name of the projection and the scale at the standard parallels; and that the scales be also printed on the chart at different latitudes.*