



FIG. 1 FORECASTING DIAGRAM FOR DETERMINING SOARING QUALITY

stability index favors good soaring, but high winds hinder it, and both may be present on a given day. In order to determine the relative importance of the elements, and their interrelationship, a graphical correlation of the data was made and this is presented in Figure 1. This diagram then serves to forecast soaring conditions after estimating the values that will prevail for the three elements considered. The diagram is entered with the expected wind speed, moving left to the expected cloud cover, then down to the forecast stability, then following the horizontal lines to the right. As shown, the expected soaring conditions will be expressed on a range from "excellent" to "none." The dotted line with arrows shows an example for a wind speed of 14 knots at 850 mbs., 8 tenths or less of opaque cloudiness, and a stability index of 0.3. As shown, the diagram indicates "fair" soaring for such conditions.

This study is meant only as a first approximation to an objective forecasting procedure for soaring flight where the lift is from thermals, and it should serve as a basis for further refinement as more examples are considered and as more features are included, such as type of ship, skill of pilot, etc. Only simple, readily forecast weather elements have been used and in some instances these do not thoroughly describe the situation. Thus, an occasional case arises that does not fit the diagram well, but with judgment on the part of the user an adequate forecast can be obtained.

The writer gratefully acknowledges the help of the members of the Rochester Soaring Club and in particular that of their president, Mr. Edgar D. Seymour.

BOOKS ON SOARING

THEORY AND TECHNIQUE OF SOARING

By John Kukuski \$5.00

SOARING FLIGHT

By Terence Horsley \$2.49

SCHWEIZER AIRCRAFT CORP.

ELMIRA, NEW YORK

Date	Gliding Conditions	Wind Speed (knots)	Stability Index ¹	Tenths of Opaque Cloudiness
7/11/54	excellent	11	-1	1
7/23/54	excellent	14	-2	1
7/10/54	excellent	4	1	1
8/21/54	excellent	10	-1	0
7/25/54	excellent	6	0	6
9/12/54	excellent	19	2	0
8/1/54	good	13	-1	2
8/7/54	good	15	-2	1
7/19/54	good	23	-2	2
6/19/54	good	5	1	3
7/24/54	fair	15	2	5
6/13/54	fair	13	2	1
8/8/54	poor	4	0	10
9/4/54	poor	13	6	7
9/6/54	poor	12	7	2
8/22/54	poor	10	3	10
6/26/54	poor	22	2	6
9/5/54	poor	29	5	8
6/20/54	none	22	1	4
6/12/54	none	26	3	2
6/6/54	none	19	2	10
6/5/54	none	24	2	10
8/14/54	none	21	0	9
7/31/54	none	41	3	10
6/27/54	none	41	3	10
6/27/54	none	34	2	10

¹Computed by subtracting surface potential temperature from potential temperature at 850-mb. level.

Table 1. Summary of gliding and weather conditions at Rochester Soaring Club base at Batavia, N. Y.



- 2-Way VHF Transmitter & Receiver
- Dry Battery Model for Glider
- 6-12 V. D.C., 115 V. A.C. for Car, Airplane, or Gnd. Station
- 50-100 mile range
- Light Weight
- Ruggedized Construction
- One Year Guarantee

Write for FREE Brochure

VHF MULTIPHONE

BY

Skycrafters

2453 E. SPRING - LONG BEACH, CALIF.