plus the super days may yield more representative results since there are about 20 times as many good as super days in a year. With this thought in mind, Table III was constructed. The prevailing wind direction on good and super days was predominantly southwest during every month except February, September, and October. In June there were nearly as many days with west as southwest winds. In general, the next most frequent wind direction was westerly during the soaring months. The month of April was the exception with more good days with southerly winds than westerly winds. Noticeable by their absence were good days with east winds; only four such days recorded in three years.

How Can We Predict the Soaring Weather?

Since 85% of the good and super days were directly associated with maritime polar frontal passages, it follows that if we can predict the passage of the fronts, we can also predict when the soaring will be good.

We have the following sources of information available to us:

1. Direct sky and barometer observations.
2. Local radio, newspapers and television.
3. Low frequency (200 - 400 kc.) U. S. Weather Bureau weather sequences and forecasts.
4. High frequency direct communication with Flight Service Stations at major airports.

1. Direct sky and barometer observations.

Nearly all fronts are preceded by cirrus and cirrostratus formations of varying intensities and duration which overhang the surface front, probably because of the higher average wind speeds aloft. As the front approaches, the clouds thicken and lower, the barometer begins to fall, and the surface winds pick up. As the front passes, the barometer begins to rise, the winds continue to increase in velocity, and the sky begins to clear. If the passage occurs early enough in the day, cumulus will form because of the ground heating in the presence of the cold, moist, unstable, MP air. The first clue of approaching good soaring weather is, then, the initial wisp of cirrus on the western horizon. This wisp may appear anywhere from 16 hours to five days prior to the time that good soaring begins. As mentioned above, the barometer will begin to fall as the front nears. By this time, however, the cirrus is generally well thickened and the barometer merely confirms what the sky already has shown. Considering observations made during the months of April through August, (the best soaring months), the appearance of cirrus in the western sky yielded good days one to five days later in 64% of the observations. In the other 36%, the good day(s) failed to develop either because two fronts followed each other too closely or because the cirrus was not indicative of an approaching front.

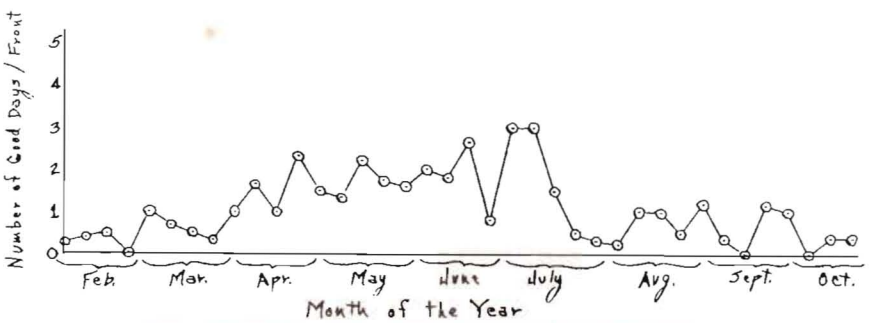

Figure 2. Average number of super plus good days following each frontal passage vs. month of the year, 1959, 1960 and 1961.

TABLE III

Wind Direction on Good and Super Days

	SW	W	NW	N	NE	E	SE	S	Calm
February	1	1	5	1	1				
March	7	0	2	3	1				3
April	13	5	3	2	1		1	7	4
May	24	12	1	1	3	2	3	2	4
June	14	12	2	2	1	2	2	3	3
July	8	4	1		2		1	1	1
August	12	4	1				1	1	1
September	4	4	2	3			2	2	
October	1	1	1						1

2. Local radio, newspapers and television.

Although these sources use general terms and sometimes do not have a very current forecast, radio, newspapers and TV sometimes yield useful information. A radio forecast of "scattered showers and westerly winds of 10-20 mph" may well be an indication of a good soaring day. In contrast, if the announcement states "increasing cloudiness tomorrow," this probably means we can expect some thickening cirrus or lower clouds as the result of an approaching storm. The surface weather maps and forecast maps printed daily in the *Tri-City Herald,* when used in conjunction with sky and barometer observations are very useful in interpretation of current conditions.

3. Low Frequency Weather Sequences.

The 200-400 kc. radio band carries 15-minute and 45-minute after