

NOTES AND CORRESPONDENCE

Comments on "Rapid Frontal Zone Cyclogenesis 31 October 1975"

FREDERICK SANDERS

Department of Meteorology, Massachusetts Institute of Technology, Cambridge 02139

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A recent paper by Cochran and Johnson (1976) shows a development in the satellite imagery remarkably similar to one presented by Johnston (1974) and commented on by me (Sanders, 1976).

Accordingly, I submit in Figs. 1 and 2 surface analyses for 0000 GMT 31 October and 1 November, based on material available in the Northern Hemisphere Data Tabulations. Data for 1200 GMT 31

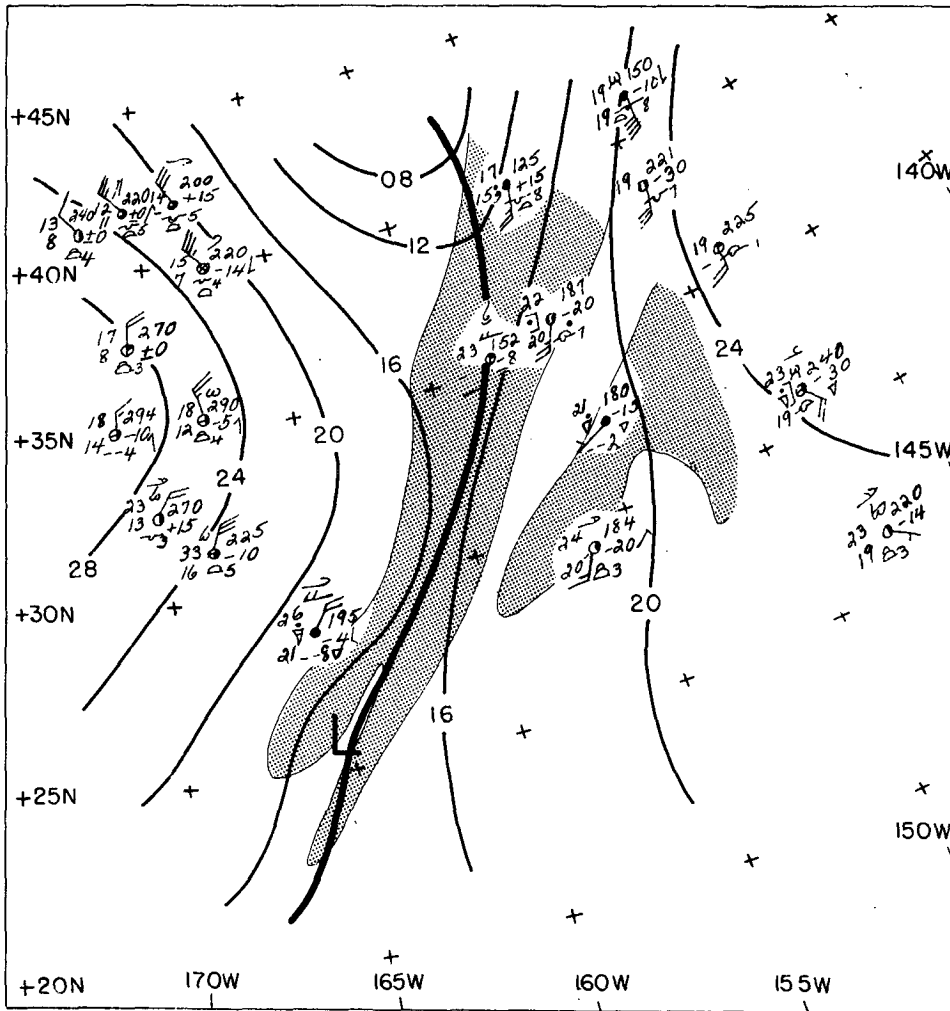


FIG. 1. Surface analysis, 0000 GMT 31 October 1975. The heavy line represents the frontal system, and the thin lines isobars, labeled in mb excess over 1000. Observations are plotted in a reduced version of the abbreviated U.S. model. Stippling indicates the major features of the SMS-2 IR picture at 0345 GMT.

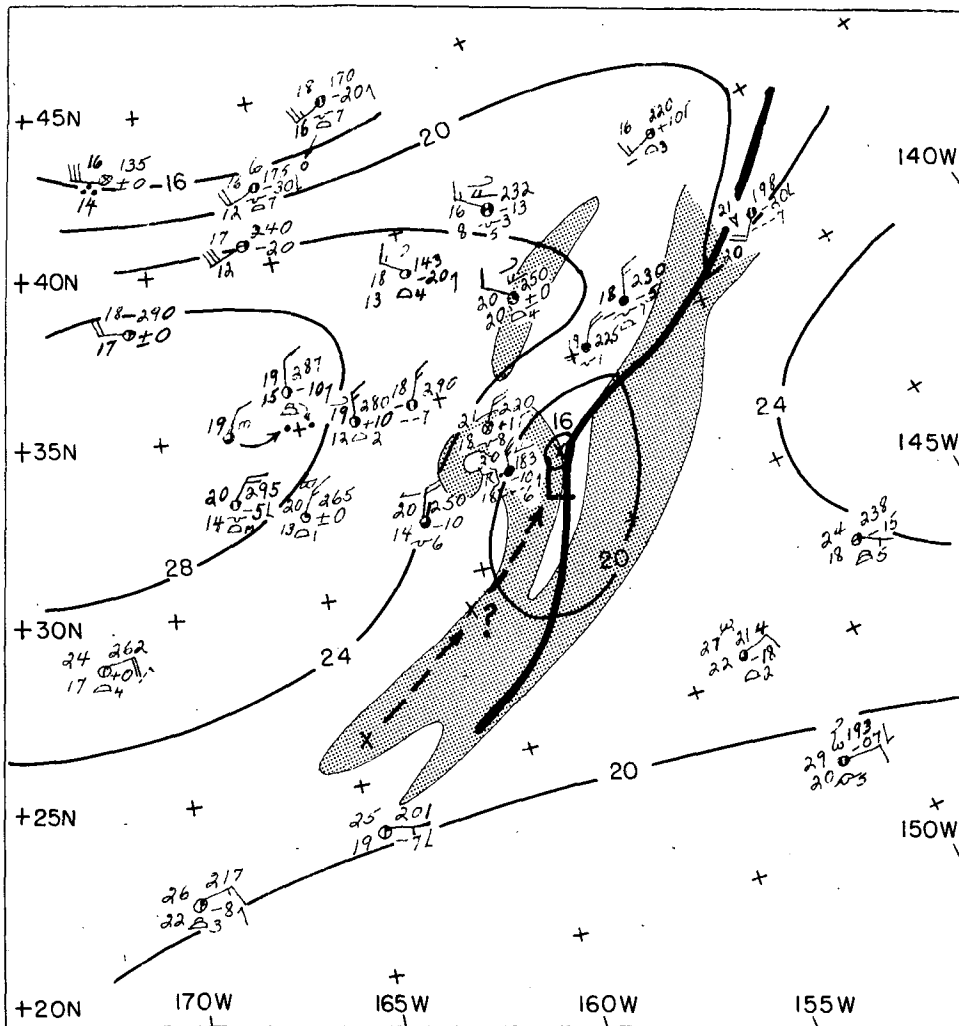


FIG. 2. As in Fig. 1 except for 0000 GMT 1 November 1975. The dashed line indicates the presumed track of the surface wave over the 24 h period. The stippling refers to the satellite picture at 1245 GMT 31 October.

October were too sparse to permit meaningful detailed analysis and I was not able to obtain observations from 0600 and 1800 GMT.

It seems that a frontal wave moved northeastward along the major initial cloud band and that the vortex indicated near 33°N, 160°W in Cochran's and Johnson's Fig. 4 represented a closed circulation above the lower troposphere, well to the north of the surface center. The isobars in my Fig. 2 suggest a growth of circulation about the surface center during the 24 h period but no deepening. However, surface winds appear to be at least as strong at the beginning as at the end of the period. The authors' account appears to imply otherwise.

It seems to me that accounts based on satellite imagery should always be accompanied by a careful analysis of available conventional observations, in this case those from ships. Only then can we appreciate as well as possible what is actually going on.

REFERENCES

- Cochran, D. R. and H. M. Johnson, 1976: Rapid frontal zone cyclogenesis. *Mon. Wea. Rev.*, **104**, 1078-1080.
- Johnston, E. C., 1974: Rapid frontal wave development. *Mon. Wea. Rev.*, **102**, 804-806.
- Sanders, F., 1976: Comments on "Rapid frontal wave development." *Mon. Wea. Rev.*, **104**, 1071-1074.