

WEATHER SATELLITE VIEWS ICEBERG

by Henry W. Brandli (1)

During the first week in November 1987, an iceberg, twice the size of the state of Rhode Island, broke away from Antarctica and was drifting in the Ross Sea. The iceberg broke from the Ross Ice Shelf, a region of freshwater ice formed from snow, at a point called the Bay of Whales.

Icebergs often break away from the Antarctic ice shelves where they are affected by weather and tidal forces. This new iceberg (B 9) equaled two to three times the amount of ice that normally breaks free in a year. On 19 February 1988, the Defense Meteorological Satellite (DMSP) obtained a visual view of the iceberg (Fig. 1). The iceberg was about 25 miles wide and 98 miles long, for an area of 2,450 square miles and estimated at 750 feet thick.

An interesting concept appeared in a recent issue of *Insight Magazine*: "Equatorial lands in need of fresh water may soon have access to a new source, Antarctic icebergs. Soviet scientists are behind a project to move icebergs from Antarctica

to the shore of the Arabian Peninsula. Officials say that satellites will be used to spot the masses of ice that tugboats will move toward the equator. Researchers estimate the project will take several months. The icebergs' massiveness should keep them from melting away in transit."

Earth resources satellites of the US, France and Russia, also can view the iceberg, but not as frequently as polar-orbiting weather spacecraft. Also, weather satellite imagery (visual/infrared, microwave, etc.) provide other important factors affecting the giant "ice cube," i.e. wind, water temperatures, ocean currents, rain, etc. And the DMSP has the best resolution of any meteorological satellite.

NOTES AND REFERENCES

1. Henry W. Brandli is Chairman, NWA Satellite Meteorology Committee.

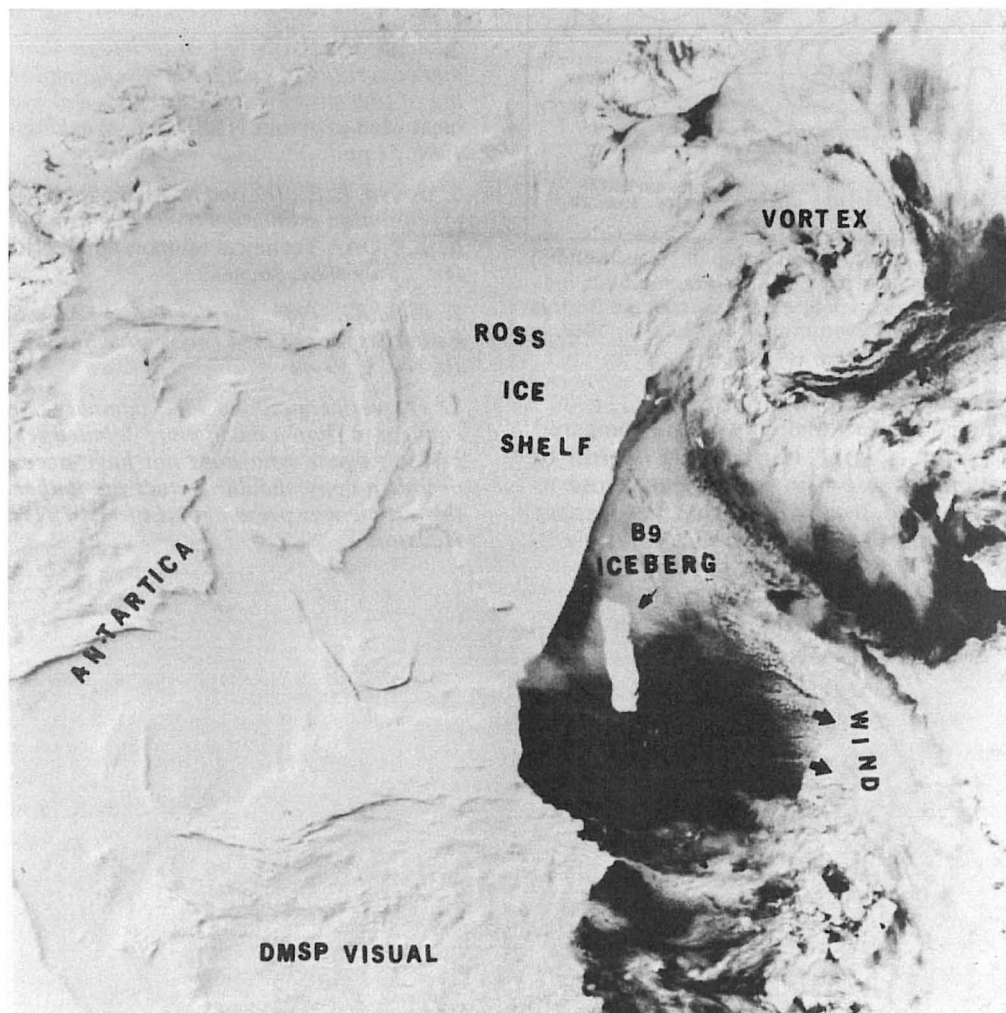


Fig. 1. DMSP visual 450 mile-high view of B9 iceberg on 19 February 1988 at 2158 GMT. The low level wind flow is indicated by the cumulus cloud lines.