

## CHAPTER 3

### OTHER OBSERVATIONS

**3.1 General.** In addition to aerial reconnaissance data, the observational systems used in support of the National Winter Storms Operations Plan include land surface, ship, radar, buoy, upper air, and satellite data. The routine operations of these various data sources are detailed in Federal Meteorological Handbooks and agency directives, which include:

- Federal Meteorological Handbook No. 1, Surface Weather Observations and Reports  
<http://www.ofcm.noaa.gov/fmh-1/fmh1.htm>
- Federal Meteorological Handbook No. 2, Surface Synoptic Codes  
<http://www.ofcm.noaa.gov/fmh2/fmh2.htm>
- Federal Meteorological Handbook No. 3, Rawinsonde and Pibal Observations  
<http://www.ofcm.noaa.gov/fmh3/fmh3.htm>
- Federal Meteorological Handbook No. 11, Doppler Radar (Parts A, B, C, and D) to include section 3.15, Snow Accumulation Algorithm.  
<http://www.ofcm.noaa.gov/fmh11/fmh11.htm>  
<http://www.ofcm.noaa.gov/fmh11/fmh11B.htm>  
<http://www.ofcm.noaa.gov/fmh11/fmh11C.htm>
- Various National Weather Service (NWS) Operations & Services directives (e.g., NWS Instructions 10-13XX series; NWS Instructions 10-14XX series)  
<http://www.weather.gov/directives/010/010.htm>.

The only two observational programs that will be highlighted further, using references from the applicable chapters of the National Hurricane Operations Plan (NHOP) (which has similar information regarding observations for tropical cyclones), are two data sources that provide unique capabilities to support winter storm analysis and forecasting - satellite observations and buoys/coastal stations in the deep ocean and coastal areas.

**3.2 Satellite Observations.** For satellite observation information available to support winter storm analysis and forecasting, refer to the NHOP, Chapter 7 located at:  
<http://www.ofcm.noaa.gov/nhop/12/pdf/07-chap7.pdf>

**3.3 National Data Buoy Capabilities.** For information on the National data buoy capabilities to support winter storm analysis and forecasting, refer to the NHOP, Chapter 9, paragraphs 9.1 and 9.3 located at: <http://www.ofcm.noaa.gov/nhop/12/pdf/09-chap9.pdf>

