On February 12, 2005 the South Pole Meteorology Department moved from the Science Building under the dome to wing B2 of the new South Pole Station. Coincident with the move, the switch was made from the existing set of surface-based observing instruments to the AN/FMQ-19 Automatic Meteorological Station from Coastal Environmental Systems. This integrated observing system, also known as the OS-21 (Observing System for the 21st Century), is the standard for Air Force installations and is similar to the National Weather Service's ASOS. The FMQ-19 includes all the sensors, dataloggers, communications links, and the processing and display software. Following is a summary of the instrumentation changes from the "old" to the "new" system. Technical specifications for the FMQ-19 sensors are listed in the FMQ-19 manual. The display for all FMQ-19 sensors is the Mesotech Airport Weather Advisor software.

Temperature - Old: Omega Platinum RTD Probe – Model PR-14-3-100-1/4-6-E
Omega DP41 High Performance Digital Temperature Indicators (digital displays)
Qualimetrics Motor Aspirated Radiation Shield
Backup system was Rosemount Platinum RTD displayed on Esterline Angus Thermograph.

New: Temperature-humidity plug-in probe with aspirated radiation shield (precision resistance temperature detector (RTD) and capacitive humidity sensor).

Pressure - Old: "Navy digital" barometer located in dome Met office.
Backups: Kollsman aneroid barometer and Belfort microbarograph.

New: 3 resonant silicon transducer barometers located inside the FDCU enclosure on the Clean Air tower (readings from the 3 barometers are averaged). Belfort microbarograph with 7-day chart is still used as backup.

Information about changes to the station elevation and its effects on station pressure and altimeter setting can be found in the document **FMQ-19 Elevation Settings**.

Wind - Old: RM Young Wind Monitor – Model 05103 on Met Tower 1
RM Young Wind Tracker digital display
M-Tek Chart Recorder
Backup: Identical RM Young on Met Tower 3 and
Navy UMQ-5 windbird on Met Tower 1 (above RM Young)

New: Same RM Young monitors as old system – primary is on skiway tower and secondary is on Clean Air tower.

Additional sensors with the FMQ-19 system that are deployed for the summer season only are: a solar radiometer (Licor LI200SZ), ceilometer, visibility sensor, and ambient light sensor.
The Campbell-Stokes Sunshine Recorder continues to be used for recording daily sunshine hours. Official observations of clouds, visibility, precipitation and obscurations continue to be evaluated manually.