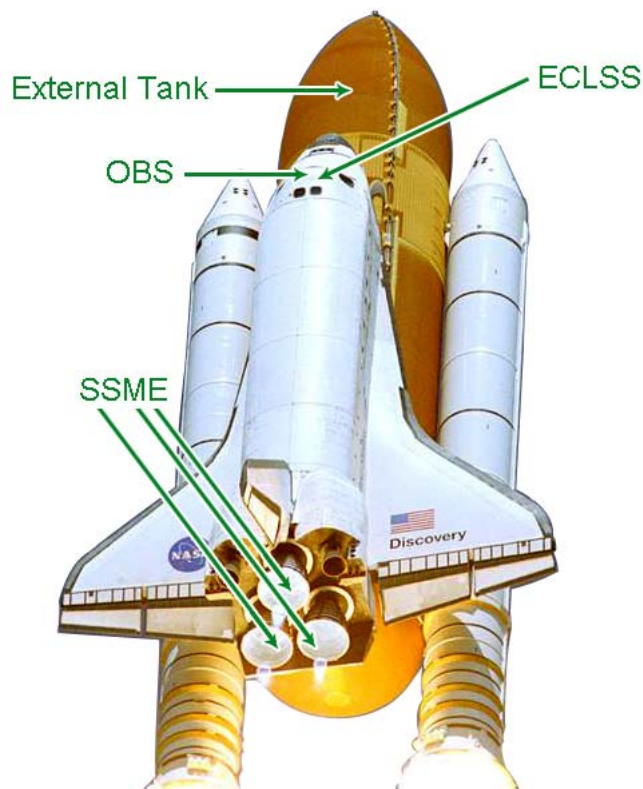
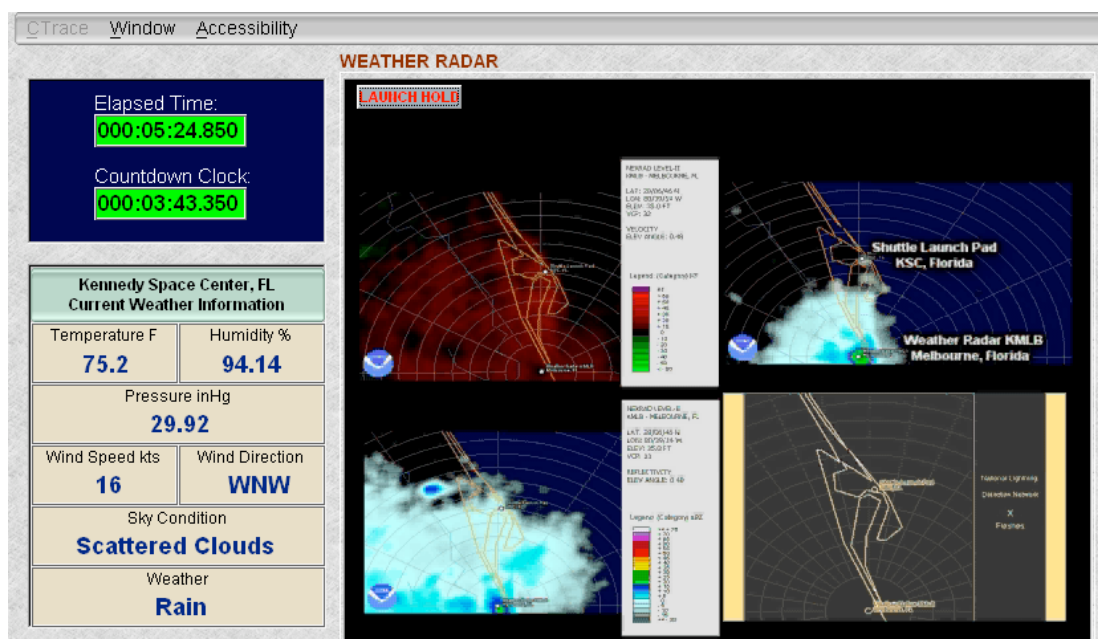


READING: The Five Consoles



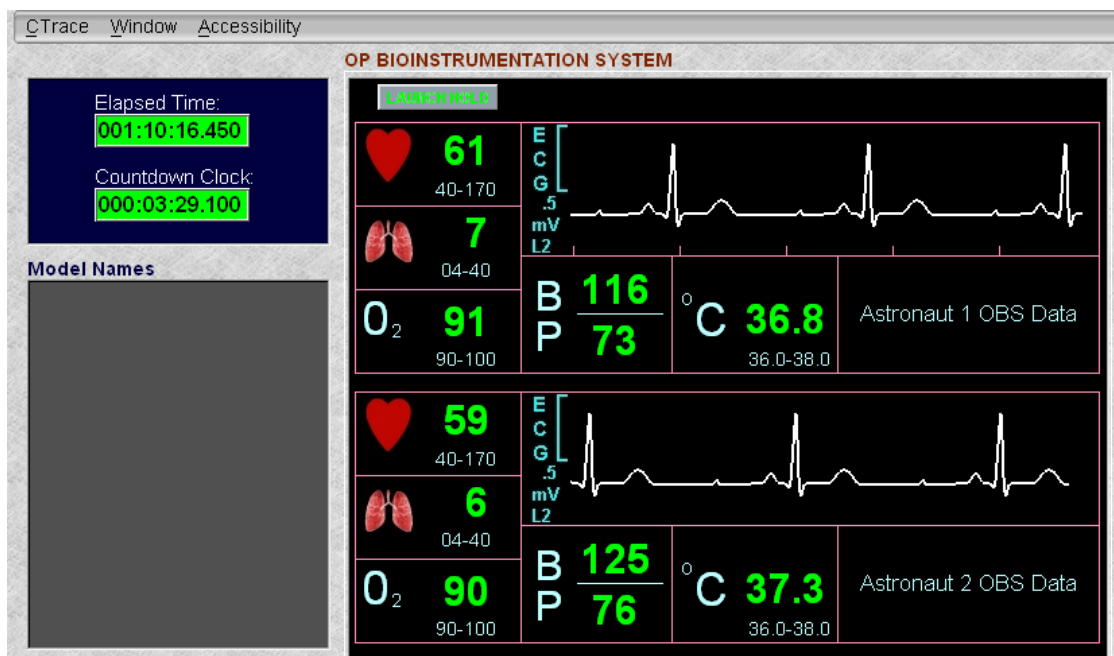
Weather Display

The KLASS Weather Display console is a simplified version of the Kennedy Space Center's Meteorological Interactive Data Display System known as MIDDS. MIDDS integrates diverse weather data on a single display, including weather radar and lightning strikes. This data helps forecasters determine if weather and lightning avoidance criteria are met.



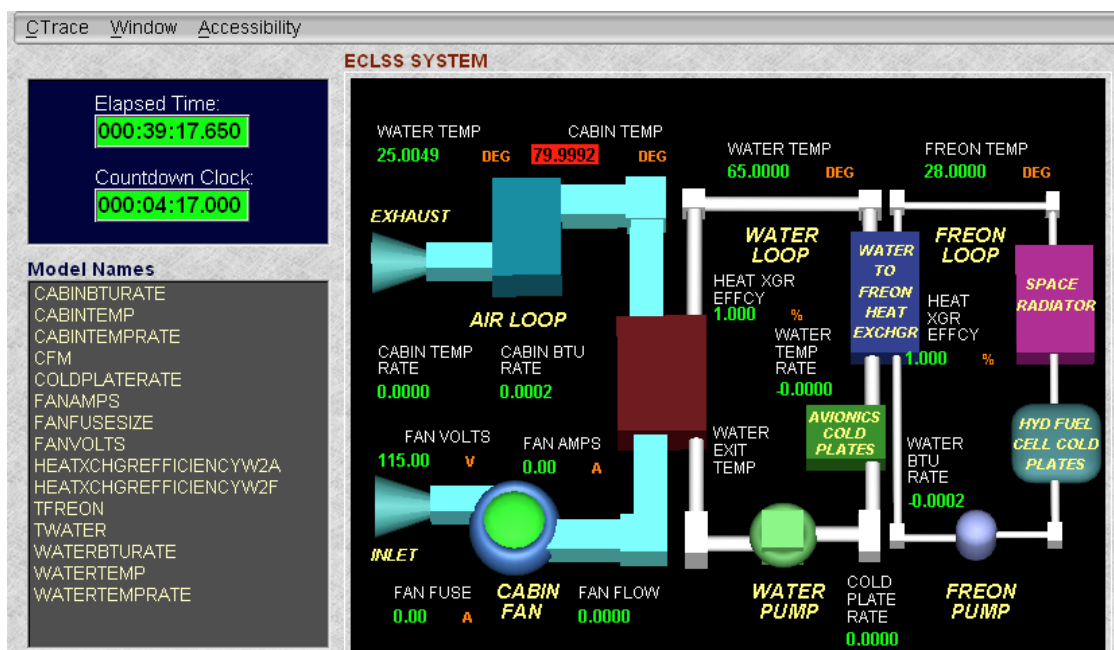
OBS (Operational Bio med Bioinstrumentation System)

The OBS console displays an electrocardiograph of two designated flight crewmembers. For these astronauts, it also displays pulse, respiration, oxygen level, blood pressure, and temperature.



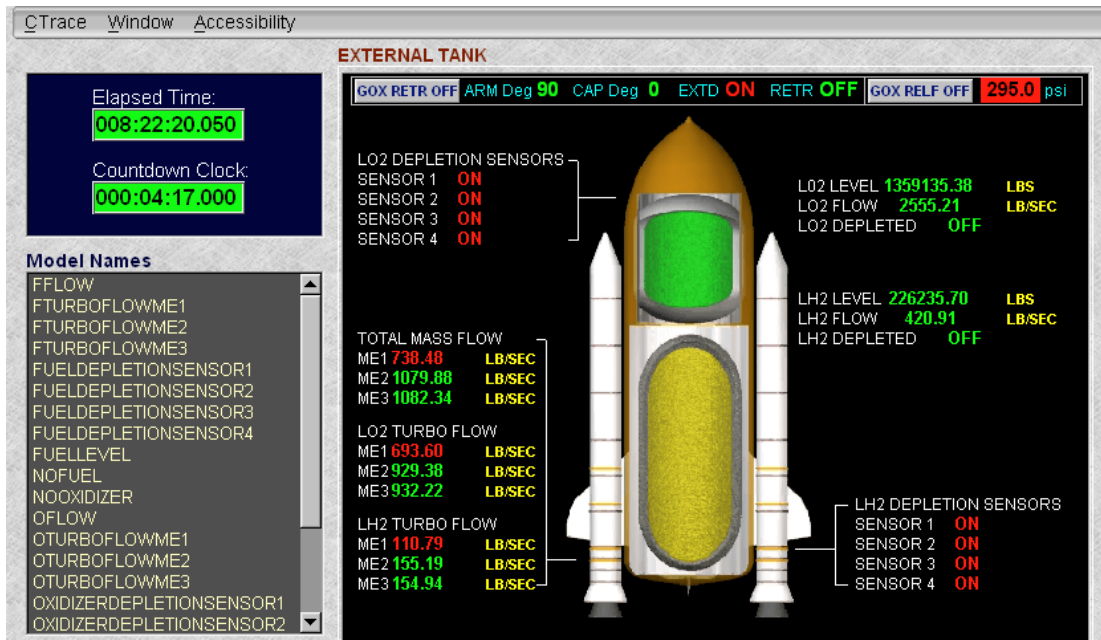
ECLSS (Environmental Control and Life Support System)

The ECLSS is responsible for maintaining a comfortable environment for the astronauts while they are out of their space suits and in the Orbiter's cabin. The graphic below display shows the part of the ECLSS responsible for maintaining a comfortable air temperature.



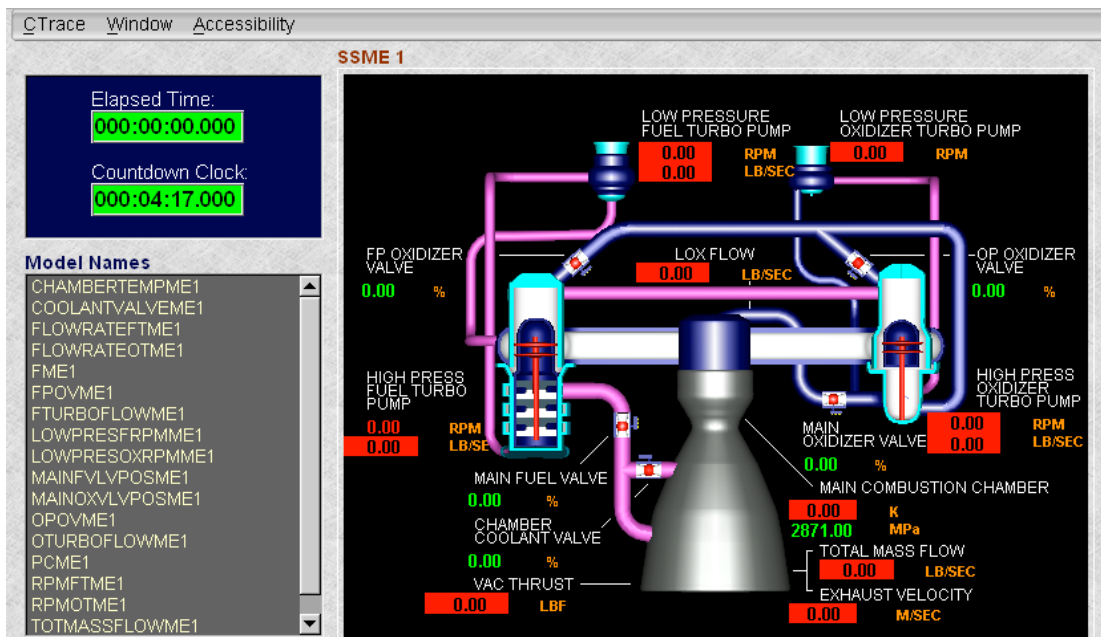
External Tank

The External Tank console monitors the flow of liquid oxygen and liquid hydrogen to the main engines.



SSME (Space Shuttle Main Engine)

The SSME console monitors power output and propellant flow within the main engine. There are three SSME consoles, one for each of the Shuttle's main engines. From each of these consoles, a Shuttle engineer can adjust fuel and oxidizer valves in order to produce the required amount of thrust for the Shuttle.



Console Components

The screenshot displays the SSME 1 console interface, which is divided into several functional areas:

- Timers:** Located at the top left, it includes an "Elapsed Time" display showing 000:00:00.000 and a "Countdown Clock" showing 000:04:17.000.
- Model Names:** A scrollable list of component names such as CHAMBERTEMPME1, COOLANTVALVEME1, FLOWRATEFTME1, FLOWRATEOTME1, FME1, FPOVME1, FTURBOFLOWME1, LOWPRESFRPMME1, LOWPRESORRPMME1, MAINFVLVPOSME1, MAINOXVLVPOSME1, OPOVME1, OTURBOFLOWME1, PCME1, RPMFTME1, RPMOTME1, and TOTMASSFLOWME1.
- Model Output:** A log window at the bottom left showing a "MODEL CLOCK" and several lines of 000:00:00.000, indicating that no specific events have been logged yet.
- Subsystem Schematic:** The central part of the console features a detailed 3D schematic of the engine's internal components. Various data points are overlaid on the schematic, including:
 - LOW PRESSURE FUEL TURBO PUMP: 0.00 RPM, 0.00 LB/SEC
 - LOW PRESSURE OXIDIZER TURBO PUMP: 0.00 RPM
 - FP OXIDIZER VALVE: 0.00 %
 - LOX FLOW: 0.00 LB/SEC
 - OP OXIDIZER VALVE: 0.00 %
 - HIGH PRESS FUEL TURBO PUMP: 0.00 RPM, 0.00 LB/SEC
 - HIGH PRESS OXIDIZER TURBO PUMP: 0.00 RPM, 0.00 LB/SEC
 - MAIN FUEL VALVE: 0.00 %
 - MAIN OXIDIZER VALVE: 0.00 %
 - MAIN COMBUSTION CHAMBER: 0.00 K, 2871.00 MPa
 - CHAMBER COOLANT VALVE: 0.00 %
 - VAC THRUST: 0.00 LBF
 - TOTAL MASS FLOW: 0.00 LB/SEC
 - EXHAUST VELOCITY: 0.00 M/SEC

Annotations on the right side of the schematic indicate that values highlighted in red (e.g., 0.00 RPM, 0.00 LB/SEC) are out-of-range, while values highlighted in yellow (e.g., 2871.00 MPa) are within target ranges. Values highlighted in green (e.g., 0.00 %) are within target ranges.