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|---|--|------------------------------|
| Subsystem <u>CCTV</u>                                 | CCTV Intensified Television Camera<br>Failure Mode and Effects Analysis<br>Space Shuttle Orbiter | Prepared by <u>G. Pitton</u> |
| Unit <u>ITVC</u>                                      |  | Date <u>10/28/94</u>         |
| Assy. Dwg. <u>20007442G1</u>                          |  | Revised <u>3/11/96</u>       |
| Quantity <u>/Location-1 Multiple</u><br>(Elbow Stack) |  |                              |

Function: To provide telemetry information of the camera status during the Vertical Blanking Interval.

| Item        | Failure Mode   | Failure Cause  | Failure Effect on End Item   | Failure Detect Flight/Ground   | Correct Action Time Avail/ Req    | Crit'y | Hazards/ Remarks   |
|-------------|--|--|--|--|-----------------------------------|--------|--|
| ITVC<br>3.4 | Loss of camera telemetry information on lines 11, 12, 13, 14, 16, 17, 18 and 19 of the Vertical Blanking Interval. | A4 Cmd Dec/Tele Enc<br>Lens A2 lens telemetry.<br>A6 Video Processor | (1) Loss of telemetry information but camera is still fully functional.<br>(2) Loss of temperature telemetry on L18 will be misinterpreted as an over temperature and cause an alarm to be issued. Loss of over temperature indication which could result in loss of the camera.<br><br><u>Worst Case</u><br>Unable to control PTU motion. Loss of elbow PTU control prevents stowing the RMS. | <u>FLT</u><br>(1) Status lights for ALC/Gamma on A7 panel are not illuminated when commanding camera.<br>(2) Over temperature condition and indication of 75°C will appear on CTVM when this camera is selected.<br>(3) Over temperature flag is issued by RCU.<br><u>GND</u><br>Same as flight but indication will be on GSE equipment. | <u>Worst Case</u><br>Jettison RMS | 3/1R   | Cannot close payload bay doors since camera interferes with payload. |