ECR	Item	Date Raise	Closed	Proposed Change (With Reason)
1	BCH Buffer Car	27-Mar-97	Yes	Swap positions of pairs of wire points, so that they align with connectors SK3 and SK4 on BCH Main Card.
2	BCH Buffer Car	27-Mar-97	Yes	Pad geometry of item 2, cscc009 capacitors, should be as CDR33 (1206), not CDR03 (1808); C6, C7, C8, C
3	Schott Fibre Ta	10-Apr-97	Yes	To correctly specify the surface finish on surface iv as "fine grain". At present this surface finish is undefined
4	ICU Mem Card	22-Apr-97	Yes	Add frame, screws and PCB to the Assembly List.
5	ICU Mem Card	24-Apr-97	Yes	FM assembly list defines a part "M54HC151DVBD". Because of an RGS MOQ on part "9408 054 11BF", thi
6	BCH Main Card	24-Apr-97	Yes	Change value of IM2 inductor L1 to tune tank circuit to 60MHz
7	BCH Main Card	24-Apr-97	Yes	Provision of single vertical clock in "high" state during image integration; reduces dark current by factor of 2.
8	BCH Main Card	24-Apr-97	Yes	Modification to ADC reference voltage source - design error.
9	BCH Main Card	24-Apr-97	Yes	Increase CCD voltage from +22V to +25V. Change of specification from EEV.
10	BCH Main Card	24-Apr-97	Yes	Additional test points for CMOS-ECL level shifter tuning. Aids set-up of board.
11	BCH Main Card	24-Apr-97	Yes	Move positions of Ground test pins for electrical safety. Risk of shorting other components with probe leads.
12	DEM Backplan	06-Jun-97	Yes	To add connections on ICU so that watchdog function can be used from RBI.
13	BPE Filter B	21-May-97	Yes	Connect all secondary output return lines together and to structure on Filter Card of the BPE.
14	ICU-Proc	29-May-97	Yes	Remove potential high power mode and power glitch from PROMs.
15	INT-HARN	06-Jun-97	Yes	Link screens on COMPWR and MNPWR cables via connector pins. Impractical to link all screens of Gore c
16	DEM Backplan	10-Jun-97	Yes	To add connection to DEM Backplane FS Model, AFTER the EM is returned from ESA/Dornier. (NB as per
17	ICU EXP	10-Jun-97	Yes	Front page up-date: add T Sasseen delete C Ho. Add hierarchial list of all sheets for ICU EXP(SSI) design.
18	ICU OMIF	10-Jun-97	Yes	Correct typing errors : 1. Under "Layout Instructions" the document references RBI chip, this should be MA
19	ICU OMIF	06-Aug-97	Yes	The MACS IC (U2) needs a floating IP HLREQ (pin 49), tied high.
20	ICU OMIF	06-Aug-97	Yes	The MACS IC (U2) needs a floating IP HLREQ (pin 49), tied high.
21	BCH Main Card	06-Aug-97	Yes	Remove vertical drive clamp diodes D13, D14, D15, D16, D17, D18.
22	BCH Main Card	06-Aug-97	Yes	Modifications to video amplifiers (see summary table attached).
23	BCH Buffer Car	12-Aug-97	Yes	Improvement of CCD buffer emitter followers.
24	HVPSU Board	27-Nov-97	Yes	Change resistor R182 from 10k ohms to a link. The reason for this is that the cathode of the intensifier is no
25	HVPSU Board	27-Nov-97	Yes	Add 3 resistors to this board. Two resistors (SOT) are to be added to the 25V line to allow for the possibility
26	BCH Main PCB	05-Nov-97	Yes	Schematic changes for general improvements for the FM PCB
27	BPE Mother Ca	16-Dec-97	Yes	The QM Mother Card routes power and critical signals via a route longer than necessary. This results in sub
28			Cance	
29	BCH Buffer Car	29-Jan-98	Yes	Buffer Card changes for flight.
30	BPE Camera C	09-Feb-98	Yes	R44 should be connected to VDD not GND.
31	BPE Camera C	09-Feb-98	Yes	The Design Definition Document specifies jumpers J4, J7, J5, J6. These will only be known for certain durin
32	HVPSU Board	10-Feb-98	Yes	Change resistor R100 from 10K to a link
33	HVPSU Board	10-Feb-96	Yes	Add R203 which should be 100K, rcr07.

ECR	Item	Date Raise	Closed	Proposed Change (With Reason)
34	BCH Buffer Car	12-Feb-89	Yes	Re-site the thermistor holes which pass through the metal radiation shield.
35	HVPSU Boards	17-Feb-98	Yes	Error in Mentor System 7 library part. The MDM 15 pin connector has an incorrect pin assignment. Drawin
36	BCH Buffer Car	17-Feb-98	Yes	Add two de-coupling capacitors to the emitter followers (47n type 1210 from collector to ground).
37	HVPSU Board	18-Feb-98	Yes	Change R81 from 2K2 to 5K62
38	HVPSU Boards	09-Mar-98	Yes	Add an insulator for the MDM connector onto the assembly drawings for HVPU Boards 2, 3 & 4.
39	BCH Main PCB	05-Mar-98	Yes	Oscillator Update. The 60MHz oscillator and associated circuitry was found to be less than ideal in most of
40	BCH Main PCB	05-Mar-98	Yes	25V supply modifications. The +25V is to be fed directly from the main 25V supply, as the charge pump cct
41	BCH Main PCB	05-Mar-98	Yes	11VDH protection. The circuitry added to isolate the 11 volt supply to the horizontal drivers until the -5.3V h
42	BCH Main PCB	05-Mar-98	Yes	50V capacitor replacement. There are a number of 470nF CKR06 capacitors on this PCB. These are not a
43	BCH Buffer Car	11-Mar-98	Yes	CCD protection modification. The output of the CCDs is too heavily loaded when the +25VOD is powered u
44	BCH Buffer Car	13-Mar-98	Yes	Grounding. The radiation shield on the CCD Buffer Card is not connected to the ground plane on the PCB.
45	BCH Main PCB	05-Mar-98	Yes	54HC374 replacement. The 54hc374 on the data bus from the ADC has not got TTI logic level inputs. The
46	BCH Main PCB	25-Mar-98	Yes	ADC supply modification. The ADC +5.3V supply is fed from an RC filter. This means the VCC supply to th
47	BCH Main PCB	25-Mar-98	Yes	Oscillator assembly modification. The assembly method for the 60MHz oscillator PCB, which was added in
48	BCH Main PCB	27-Mar-98	Yes	Insulating washer modification. The clearances around metalwork have been violated on the solder side of
49	BCH Buffer Car	05-Mar-98	Yes	Change of SOTs to fixed values. The two resistors R3 and R5 are specified as SOT. These should be fitte
50	BCH Buffer Car	01-Apr-98	Yes	Emitter follower loading modification. The emitter followers on the buffer PCB have been shown to work sat
51	BCH Main PCB	09-Apr-98	Yes	Gain Modification. Hajime has found that the camera gain needs to be reduced.
52	BCH Buffer Car	15-Apr-98	Yes	Vertical clock sequence modification. The vertical clocks remain in an unsatisfactory state after a line shift.
53	HVPSU Board	16-Apr-98	Yes	Earthing of Reynolds connector. The r105r Reynolds connector needs to be earthed. At present the Chem
54	Junction Box	20-Apr-98	Yes	On J20 and J23 link pins 35 and 36 to structure.
55	BCH Main PCB	24-Apr-98	Yes	11VDH protection, mod II. The circuitry added to isolate the 11V supply to the horizontal drivers until the -5.
56	Monitor Card	27-Apr-98	Yes	Vref-5Vpwr rail stability. The sense voltage of this rail is monitored on the drive side of the Schottky diode (
57	Mother Card	27-Apr-98	Yes	Termination resistors. Replace the 100R series termination resistors R1, 2, 3, 4, 5 and 6 with 27R.
58	Selector Card	27-Apr-98	Yes	Make the following changes on FM 1:-
59	HV Board 3	29-Apr-98	Yes	Changes for new DEP tube. The following changes need to be made to accomodate the different character
60	HV Board 4	29-Apr-98	Yes	Changes for new DEP tube. The following changes need to be made to accomodate the different character
61	FM Software	23-Sep-98	Yes	The OM instrument requires that the ambient light level is very low before the image intensifier can be used i
62	DPU Code	28-Sep-98	Yes	DPU performance - tuning the wait states.
63	DPU Code	29-Sep-98	Yes	DPU performance - tuning of the SAA configuration.
64	DPU Code	29-Sep-98	Yes	Elimination of obsolete and unneeded codes.
65	DPU Code	29-Sep-98	Yes	Rearrangement of the White codes.
66	DPU Code	29-Sep-98	Yes	Code testing.

ECR	Item	Date Raise	Closed	Proposed Change (With Reason)
67	DPU Code	29-Sep-98	Yes	Preliminary codes for the real-time raw-data mode.
68	DPU Code	29-Sep-98	Yes	Add capability of blue DSP reporting instantaneous count rate to white DSP for future debugging purposes.
69	ICU Code	29-Sep-98	Yes	Remove the autonomous safing task as the high voltages have sufficient protection in hardware. NB the sof
70	DPU Code	01-Oct-98	Yes	Reset science and memory window to zero before configuring for each exposure.
71	ICU Code	01-Oct-98	Yes	Two separate versions of the flight code exist due to the high voltage code in DETANALOG.ADB being sligh
72	DPU Code	09-Oct-98	Yes	Implement algorithms/codes to allow normal exposure with user selectable bpe_binning and tracking_on, as
73	DPU Code	26-Oct-98	Yes	The compiled codes are scattered in four locations. Co-locate them into a single location, dpu/development/
74	DPU Code	03-Nov-98	Yes	Implement a robust DPU window allocation and subsequent processing algorithm to make the data processi
75	ICU Code	13-Nov-98	Yes	It has become apparant that the OM instrument could potentially be damaged if a failure of the spacecraft C
76	ICU Code	23-Nov-98	Yes	Package mutex needs an exception handler. If the task produces an exception, it will not be handled possib
77	DPU Code	03-Dec-98		Implement and test remaining Real Time Raw Data mode in DPUOS and C codes.
78	DPU Code	14-Jan-99	Yes	Implement a method to enable and disable Scrubbing of the Global Program Storage RAM using a memory l
79	DPU Code	14-Jan-99	Yes	Modify the format of the A592 record to include the count of Multi-Bit errors found in the error word.
80	DPU Code	17-Feb-99	Yes	Extra alert in the global access package. In the global memory access package for the white codes, a set of
81	ICU Code	18-Feb-99	Yes	As a result of previously undocumented DPU alerts now being made known, the ICU code needs to be modi
82	ICU Code	22-Feb-99	Yes	If a command is sent to prematurely stop the filter wheel moving before it reaches either datum or a filter pos
83	DPU Code	03-Jun-99		The DPU Code should include compiler-flagged distortion maps for Prime/Redundant detectors.
84	DPU Code	03-Jun-99	Yes	The compressed Data Buffer may be overwritten under unusual circumstances, causing data loss.
85	ICU Code	09-Jul-99		The telemetry and DPU data management need to be modified to accomodate the new SID F7, associated
86	ICU Code	09-Feb-00	Yes	Two mode change commands to the same mode should not produce an error.
87	ICU Code	06-Mar-00	Yes	Change all HV, filter and ADA exceptions to major anomalies.
88	ICU Code	06-Mar-00	Yes	Auto-safe on filter wheel position loss.
89	ICU Code	06-Mar-00	Yes	Auto-safe on telemetry queue full for 1 minute, rather than 5 minutes.
90	DPU Code	08-Jun-00	Yes	Please implement the begin and end of exposure alerts DA_BEGOF_EXP and DA_ENDOF_EXP for engine
91	DPU Code	20-Jul-00	Yes	Please implement a new observing mode for the entire field of view.