

NCR	Closed	Major	Item	Date Raised	Non Conformance (likely cause/description/where and when seen)
1	Yes	<input type="checkbox"/>	ICU B	25-Aug-00	There are tracks directly between pads on the FU03 MACS chip. When it is soldered, it is
2	Yes	<input type="checkbox"/>	ICU B	25-Aug-00	The geometry of the FU03 MACS chip is incorrect.
3	Yes	<input type="checkbox"/>	TMPSU O/P	25-Aug-00	The geometry of the FU03 MACS chip is incorrect.
4	Yes	<input type="checkbox"/>	TMPSU O/P	25-Aug-00	There are tracks directly between pads on the FU03 MACS chip. When it is soldered, it is
5	Yes	<input type="checkbox"/>	TMPSU O/P	25-Aug-00	The sketch on the assembly diagram for the power FETs is incorrect (3 to 2, 2 to 1 and 1 to
6	Yes	<input type="checkbox"/>	TMPSU I/P	25-Aug-00	The 1N5811 and 1N6492 diodes are incorrectly drawn on the assembly diagram (reverse t
7	Yes	<input type="checkbox"/>	TMPSU O/P	06-Sep-00	Diodes 1N5811 (D44, 45, 46, 47, 48, 49, 50 & 51) are fitted the wrong way round. The sy
8	Yes	<input type="checkbox"/>	TMPSU O/P	13-Sep-00	On the assembly drawing, the placement of components can be ambiguous, both in orient
9	Yes	<input type="checkbox"/>	ICU A	27-Nov-00	There is an oscillator that has an incorrect geometry layout.
10	Yes	<input type="checkbox"/>	TMPSU O/P	27-Nov-00	There is no identification to show how the flat pack Ic5 is placed on the TMPSU O/P Asse
11	Yes	<input type="checkbox"/>	TMPSU O/P	20-Dec-00	Some of the transistors TR1,TR3,TR13,TR14,TR15,TR16,TR26,TR37 mounted on the fra
12	Yes	<input type="checkbox"/>	TMPSU I/P	08-Jan-01	Some of the transistor TR1,TR2,TR13,TR17,TR21,TR25,TR33,TR34,TR35 mounted on th
13	Yes	<input type="checkbox"/>	ICU_B	17-Jan-01	Incorrect part layout used for ICB/MACS controller.
14	Yes	<input type="checkbox"/>	TMPSU I/P	18-Jan-01	The 4 Switching diodes 125044PS are incorrect on the assembly drawing
15	Yes	<input type="checkbox"/>	TMPSU I/P	18-Jan-01	D45 1N6492 is incorrect on the Assembly Drawing, it needs to move 180 degrees clockwis
16	Yes	<input type="checkbox"/>	TMPSU I/P	08-Jan-01	There is no wiring diagram on the assembly drawing for the four diodes D42,D46,D48,D49
17	Yes	<input type="checkbox"/>	BCH Main Card	07-Mar-01	IC32 on the FM BCH cards have temporary HC374's fitted, they need to be changed for Fi
18	Yes	<input type="checkbox"/>	BCH Buffer Card	29-Mar-01	AVX Tantalum Capacitors. The following commercial grade parts have been used on this
19	Yes	<input type="checkbox"/>	ICU A	09-May-01	Failure of 25Way D-Type connector during vibration due to incorrect part being used.
20	Yes	<input checked="" type="checkbox"/>	TMPSU I/P	28-Aug-01	During the first Short Functional Test of the FM-2 (Redundant) TMPSU, a non-conformanc
21	Yes	<input type="checkbox"/>	Monitor	28-Aug-01	During the soldering of this PCB two open circuits appeared. The PCB was one that was d
22		<input type="checkbox"/>	ICU PROM Code	23-Jul-01	In basic code, if after a reboot the limit checking is commanded off (with /iLimitOff) before it
23	Yes	<input type="checkbox"/>	TMPSU O/P	12-Nov-01	During post vibration testing it was discovered that a thermistor (ysi 44908) circuit designat
24	Yes	<input type="checkbox"/>	Detector Assembly	12-Nov-01	During testing it was found that the MCP out connector (reynolds 600 series) had a damag
25		<input checked="" type="checkbox"/>	Processor Card	08-Apr-02	During final commissioning and subsequent to vibration and thermal vacuum tests, a plate
26	Yes	<input type="checkbox"/>	ICU Software	15-Jan-03	UVOTMAN package time-since-burst time calculation incorrectly uses an MJD rather than
27		<input type="checkbox"/>	ICU Software	15-Jan-03	ACS NHK swamping occuring when the spacecraft dies and stopping telemetry polling can
28	Yes	<input type="checkbox"/>	ICU Software	15-Jan-03	Filter wheel fails to find the correct position when the hkrate=4, but only when stepping the
29	Yes	<input type="checkbox"/>	ICU Software	15-Jan-03	It is not possible to perform a settling exposure as the HV ramping time required (~16 seco
30	Yes	<input type="checkbox"/>	ICU Software	15-Jan-03	High voltage creeping problem
31	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	When the ICU cannot make an autonomous transition, it doesn't issue an error message.
32	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	The damage calculation doesn't take into account dead time between exposures.
33	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Some exception handlers in uvotman.adb are missing.

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34	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	RTS uses a direct unchecked read of EEPROM.
35	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	The incorrect detector threshold is set in the standard table.
36	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Next State is incorrectly displayed when going into SAFE or into BASIC.
37	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Some DEBUG.PROGRESS lines in icu_mem_manager.adb and heater.adb are wrong.
38	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	"dcsgen/extract" uses a simple glob to select ITOS .dbx files. It should use a ls and grep to
39	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	The the limit table needs writing with real actions (currently do "nothing")
40	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Fix the actions performed on ICU errors.
41		<input type="checkbox"/>	ICU Software	25-Feb-03	Exposure sequences table in ICU's EEPROM. These need writing by Pete Roming et al.
42	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	The AT UVOT_MODE of 0xFFFF is reserved as an end-of-table marker. Similarly the PT
43	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Avoidance check should be "<= angle" not "< angle"
44	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Inconsistent units for various angles leading to confusion in code and table generation. Inc
45	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Timeouts waiting for settled flag are insufficient and need to be increased to about 200.
46	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Safety circuit is not correctly enabled after BASIC->SAFE.
47	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Enhance dcsgen to produce a *.proc file that also gives the crc checks for "crc checked su
48	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Memory location in memory dump packet does not reflect current location only the request
49	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	When going from safe to idle whilst safe pointing (and settled), code incorrectly complains
50	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	New countrate table needs to be implemented. The new table is calculated using better mc
51		<input type="checkbox"/>	ICU Software	25-Feb-03	The EEPROM table of internal limit values (used in the ICU's limit checking software) are i
52	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Safety circuit needs to be disabled during filter wheel move.
53	Yes	<input type="checkbox"/>	ICU Software	25-Feb-03	Filter wheel loses position occasionally (see also MSSL NCR 28 and Goddard NCR SWIF
54		<input type="checkbox"/>	ICU Software	25-Feb-03	AT sequence table needs to be defined by PSU.
55	Yes	<input type="checkbox"/>	ICU Software	03-Mar-03	uvotman.adb has no check for a total exposure time of zero before dividing by it.
56	Yes	<input type="checkbox"/>	ICU Software	03-Mar-03	The sequence PT-slew-PT results in an Ada constraint exception.
57	Yes	<input type="checkbox"/>	ICU Software	04-Mar-03	The table generation utility crashes with a segmentation fault when the error message it is
58	Yes	<input type="checkbox"/>	ICU Software	21-Mar-03	NHK.PUT can crash with a stack overflow when 1ppsA fails over to an already failed 1pps
59	Yes	<input type="checkbox"/>	ICU Software	21-Mar-03	IEEE out of range actions should be changed.
60	Yes	<input type="checkbox"/>	ICU Software	26-Mar-03	When the DEM is powered on, after 2.5 to 3 min the DPU starts to send the DPU 5V ref in
61	Yes	<input type="checkbox"/>	ICU Software	26-Mar-03	During the IST Dry Run, the ICU was changing from SAFE state to IDLE state when it was
62		<input type="checkbox"/>	ICU Software	31-Mar-03	While checking the code, it was noticed that if a centroid table or window table fails on verif
63	Yes	<input type="checkbox"/>	ICU Software	31-Mar-03	Window table keeps getting loaded because there is a wrong value for the detector window
64	Yes	<input type="checkbox"/>	ICU Software	02-Apr-03	At Spacecraft time 13:12:10.02, UVOT ICU sent a message saying that it had noticed that
65	Yes	<input type="checkbox"/>	ICU Software	03-Apr-03	The PT tables supplied for the 'Day in the Life' test incorrectly specified the centre of the im
66	Yes	<input type="checkbox"/>	ICU Software	30-Apr-03	If the HVs are disabled (using the /ihvenable off command) whilst either Vmcp23 or Vcatho

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67		<input type="checkbox"/>	ICU Software	19-Jun-03	When there are a lot of limit violation messages, the housekeeping task can be too slow and
68		<input type="checkbox"/>	ICU Software	19-Jun-03	When the Spacecraft polling of the ICU is disabled (1pps disabled also?) and there is a he
69	Yes	<input type="checkbox"/>	ICU Software	19-Jun-03	When the UVOT ICU does a check that Uranus and Neptune are in the field of view the off
70	Yes	<input type="checkbox"/>	ICU Software	19-Jun-03	If a safepointing observation collects too many counts over the damage budget for UVOT, t
71	Yes	<input type="checkbox"/>	ICU Software	19-Jun-03	If a safepointing is immediately followed by a slew, UVOT will sometimes (approx. 30%) no
72	Yes	<input type="checkbox"/>	ICU Software	19-Jun-03	Many of the goto safe and stick in safe error recovery actions don't need to stick in safe as
73		<input type="checkbox"/>	ICU Software	19-Jun-03	During the functional test on REDUNDANT on 12.05.2003 and 29.05.2003 the safety circu
74		<input type="checkbox"/>	ICU Software	22-Jul-03	The watchdog telecommand runs code which has a delay which means it can't be sent twic
75		<input type="checkbox"/>	ICU Software	22-Jul-03	If the ICU loses DPU heartbeats it gives Ada exceptions after 1-2 days.
76		<input type="checkbox"/>	ICU Software	22-Jul-03	If the first copy of EEPROM tables is corrupt, there's no NHK to say so.
77		<input type="checkbox"/>	ICU Software	22-Jul-03	EEPROM reads/writes can conflict because they are not mutex protected. So don't dump a
78		<input type="checkbox"/>	ICU Software	22-Jul-03	ICU_MEM_MANAGER mem dumps increment the task counter once per dump not once p
79		<input type="checkbox"/>	ICU Software	22-Jul-03	ICU_MEM_MANAGER CRC reports give the wrong start address when more than a small
80		<input type="checkbox"/>	ICU Software	22-Jul-03	Threshold is not set to 15 on startup: only important if the camera is on.
81		<input type="checkbox"/>	ICU Software	22-Jul-03	If the DPU heartbeat data are "suspect" they are still used. This may not be a problem.
82		<input type="checkbox"/>	ICU Software	22-Jul-03	Task accepts have delays which should not be there.
83		<input type="checkbox"/>	ICU Software	22-Jul-03	When the watchdog is tripped to go from safe to basic, the NEXT STATE shows SAFE an
84	Yes	<input type="checkbox"/>	ICU Software	01-Aug-03	It was noticed by visual inspection in July 2003 that the acquisition mode is not set to 3 initi
85		<input type="checkbox"/>	ICU Software	05-Aug-03	At 12:54:41 UTC on 2003-08-05 there was an apparent limit violation of the ICU CPU boar
86		<input type="checkbox"/>	ICU Software	08-Aug-03	When the state transition SAFE to IDLE gets interrupted, the code will probably think that e
87		<input type="checkbox"/>	ICU Software	12-Aug-03	There was a problem with these PPTs:
88		<input type="checkbox"/>	ICU Software	10-Oct-03	Change redundant window offset from 54 to 56.
89		<input type="checkbox"/>	ICU Software	17-Oct-03	The following stars:
90		<input type="checkbox"/>	ICU Software	30-Oct-03	Code inspection of routine ang_dist in the astro package indicates that if the two positions
91		<input type="checkbox"/>	ICU Software	06-Nov-03	The ICU calculation to determine the XRT determined position in the UVOT image is incorr
92		<input type="checkbox"/>	ICU Software	06-Nov-03	The mechanism task can tip the task monitor watchdog when the tm is off or there are err