COS FUV01 Detector Telemetry Values for the CS FSW "Limits Monitoring" Task

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1. OVERVIEW OF TELEMETRY LIMITS MONITORING

As is the case with most subsystems within HST instruments, the COS FUV Detector subsystem will have specific, key telemetry items monitored by the CS FSW "Limits Monitoring" Task. This document specifies which FUV telemetry items should be monitored, what the high and low limit values are for these telemetry items, what the persistence value should be for an out of limit event to trigger a response by the CS FSW, and what the appropriate response should be for out of limits events.

2. REFERENCES

1. COS SER THM-017, "Pre-Test Thermal Desgin and Analysis Report"
2. FUV01 T-V Data Notebook; Thermocouple and Thermistor Data Plots from the May 2001 Thermal-Vac Testing of the FUV01 Detector at CASA-ARL.

3. FUV01 TELEMETRY LIMITS MONITORING VALUES

The following two tables summarize the Telemetry Limits Monitoring values for the COS FUV01 Detector Subsystem. The first table shows the limits values, in engineering units. The second table shows the raw telemetry values that correspond to these engineering units – in addition to the persistence values required to trip an out of limit event, and the appropriate response to safe the hardware in the event of an out of limit violation.

Table 3-1 : FUV01 Telemetry Limits – Engineering Values

COS Mnemonic	FUV Mnemonic	Description	Low	High	Units
LDCEACTT	LFTACT	Actuator temp	-20.0	65.0	ºC
LDCAMPAT	LFTAMPA	Amp A temp	-20.0	50.0	ºC
LDCAMPBT	LFTAMPB	Amp B temp	-20.0	50.0	ºC
LDCETEMP	LFTDCE	DCE temp	-20.0	53.0	ºC
LDCDVAAT	LFTDVAA	Det Vacuum Assy A Temp	-20.0	48.0	ºC
LDCDVABT	LFTDVAB	Det Vacuum Assy B Temp	-20.0	48.0	ºC
LDCHVFMT	LFTHVFM	HVFM temp	-20.0	48.0	ºC
LDCHVPST	LFTHVPS	HVPS temp	-20.0	51.0	ºC
LDCIPT	LFTIP	Ion Pump temp	-20.0	48.0	ºC
LDCLVPCT	LFTLVPC	LVPC temp	-20.0	60.0	ºC
LDCTDCAT	LFTTDCA	TDC A temp	-20.0	57.0	ºC
LDCTDCBT	LFTTDCB	TDC B temp	-20.0	58.0	ºC
LDCM15D	LFVM15D	DCE -15V	-16.7	-13.7	V
LDCM15TA	LFVM15TA	TDC A -15V	-16.7	-13.7	V
LDCM15TB	LFVM15TB	TDC B -15V	-16.7	-13.7	V
LDCM5TA	LFVM5TA	TDC A -5V	-5.8	-4.8	V
LDCM5TB	LFVM5TB	TDC B -5V	-5.8	-4.8	V
LDCP15D	LFVP15D	DCE +15V	13.7	16.7	V
LDCP15TA	LFVP15TA	TDC A +15V	13.5	16.5	V
LDCP15TB	LFVP15TB	TDC B +15V	13.4	16.4	V
LDCP5DA	LFVP5DA	DCE-A +5V	4.5	5.5	V
LDCP5DB	LFVP5DB	DCE-B +5V	4.5	5.5	V
LDCP5DC	LFVP5DC	DCE-C +5V	4.5	5.5	V
LDCP5TA	LFVP5TA	TDC A +5V	4.5	5.5	V
LDCP5TB	LFVP5TB	TDC B +5V	4.4	5.4	V
LDCLVPCP	LFVPMON	LVPC Power	0.0	62.0	W

Table 3-2 : FUV01 Telemetry Limits – Raw Values, Persistance, and Response

COS Mnemonic	FUV Mnemonic	Low Raw	High Raw	Persistance	Response
LDCEACTT	LFTACT	236	65	5 min	Reset Detector
LDCAMPAT	LFTAMPA	236	93	1 min	Reset Detector
LDCAMPBT	LFTAMPB	236	93	1 min	Reset Detector
LDCETEMP	LFTDCE	236	86	1 min	Reset Detector
LDCDVAAT	LFTDVAA	236	97	1 min	Reset Detector
LDCDVABT	LFTDVAB	236	97	1 min	Reset Detector
LDCHVFMT	LFTHVFM	236	97	1 min	Reset Detector
LDCHVPST	LFTHVPS	236	91	1 min	Reset Detector
LDCIPT	LFTIP	236	97	1 min	Reset Detector
LDCLVPCT	LFTLVPC	236	73	1 min	Reset Detector
LDCTDCAT	LFTTDCA	236	79	1 min	Reset Detector
LDCTDCBT	LFTTDCB	236	77	1 min	Reset Detector
LDCM15D	LFVM15D	228	186	30 sec	Turn Off Detector
LDCM15TA	LFVM15TA	131	145	30 sec	Turn Off Detector
LDCM15TB	LFVM15TB	131	145	30 sec	Turn Off Detector
LDCM5TA	LFVM5TA	125	135	30 sec	Turn Off Detector
LDCM5TB	LFVM5TB	125	135	30 sec	Turn Off Detector
LDCP15D	LFVP15D	186	228	30 sec	Turn Off Detector
LDCP15TA	LFVP15TA	137	168	30 sec	Turn Off Detector
LDCP15TB	LFVP15TB	136	167	30 sec	Turn Off Detector
LDCP5DA	LFVP5DA	184	225	30 sec	Turn Off Detector
LDCP5DB	LFVP5DB	184	225	30 sec	Turn Off Detector
LDCP5DC	LFVP5DC	183	223	30 sec	Turn Off Detector
LDCP5TA	LFVP5TA	184	225	30 sec	Turn Off Detector
LDCP5TB	LFVP5TB	182	222	30 sec	Turn Off Detector
LDCLVPCP	LFVPMON	0	186	5 min	Turn Off Detector