

Stage	b1	b2	b3	short	special	long	site: purpose
A6 @	'B'	'D'	'O'	pktLen	pp6[9]	pt+d+r+slot	BP: Download Old IU Pkt
A6 @	'B'	'D'	'N'	pktLen	"	pt+d+r+slot	BP: Download New IU Pkt
A6 @	'L'	'D'	'O'	pktLen	"	pt+d+r+slot	LS: Download Old IU Pkt
A6 @	'L'	'D'	'N'	pktLen	"	pt+d+r+slot	LS: Download New IU Pkt
A6 @	'R'	'D'	'O'	pktLen	"	pt+d+r+slot	RP: Download Old IU Pkt
A6 @	'R'	'D'	'N'	pktLen	"	pt+d+r+slot	RP: Download New IU Pkt
A7	'T'	'S'	nAvg	nVal	pp7[9]	datum	Thermal Setup Data Convert
A7	'T'	'R'	FF	FF	"	datum	Thermal RTD Data Convert
A7	'T'	'P'	FF	diaIx	"	datum	Thermal Point Data Convert
A8	'E'	CRS	destID	cmdID	pp8[9]	msMax	DA: Meas.Set Up from IU is END
A8	'D'	CRS	destID	result	"	#msDsc	DA: Meas.Set Up from IU Discarded
A8	'A'	FF	destID	result	"	timOut(64-0) final	DA: Aborted (AD0 after all DAUs report)
A8	'A'	43	acqAbort	hostID+destID	"	timOut (64-0) count	DA: Aborting (AD0 at each DAU report)
A8	'S'	CRS	dQue	tbl#	"	ms#+nPorts	DA: Setup DA Run
A8	'U'	CRS	destID	abt+dsc+comp	"	ms#+msMax	DA: Meas.Set Up from IU (any)
A8 +1x	'T'	hour	min	second	"	msec+IUmsec	DA: Time Stamp + IU msec.
A8 +1x	'H'	F+sl	destID	pktLen	"	pktType	DA: Meas.Set Header Up Convert
A8 +1x		ot					
A9 @	'I'	'X'	'B'	hostID+destID	pp9[9]	cmdStr	IMF Cmd Begins Execution
A9	'I'	'X'	'E'	hostID+destID	"	cmdStr	IMF Cmd Ends Execution
A9 @	'M'	'stas	'dtask'	sendID+destID	"	a-b+c+d	IPC Message Passed from sender to dest.task
+1x	'Q'	k'	'M'	noMsgs	"	monPtr	IPC Message(s) Deleted from Monitor Queue
A9 +1x		'E'					
Bn +	'X'	d[n]	d[n+1]	d[n+2..3]	ppx[X8]	d[n+4..7]	NEXT Extension (8 bytes, n=next)
Cn +	'X'	d[x-7]	d[x-6]	d[x-5..4]	ppx[X8]	d[x-3..x]	LAST Extension (8 bytes, x=last)

Definitions for table items and notes:

- \*\*:
  - @:
  - +1x:
  - #msDsc
  - a+b+c+d:
  - abt
  - acqAbort
  - c[n]:
  - cmdID:
  - cmdLen:
  - cmdSeq#:
  - cmdStr:
  - comp
  - d[n]:
  - destID:
  - dsc
  - 'dtask':
  - dQue:
  - hostID:
  - IUmsec:
  - ms#+nPorts:
  - ms#+msMax:
  - msTotal:
  - mTyp:
  - nPorts:
  - other1:
  - other2:
  - pktLen:
  - pktType:
  - ppx[9]:
  - ppx[X9]:
  - pt+d+r+slot:
  - result:
  - rs+d+r+slot:
  - sendID:
- NOTE: Error events have so many different 2 character modifiers(m0 & m1), they are found in Table D.5.
- NOTE: This event may be extended by Bn and Cn extension items if PP #n value=2.F.
- NOTE: This event recorded only if PP #n's value > 1. Extra A8 & A9 events recorded only if unitary bit 4=1 (0x10).
- # meas.sets discarded so far.
- Last 4 bytes in 12-byte Message Header (sendID+msgVer+msgSize+msgFlag).
- =(acqAbort) DA being aborted.
- # modules aborted with DA0 to stop DA.
- Command code characters [0..2] used as modifier for this event type.
- Binary Command ID of IMF command (16 bits)
- Actual length (bytes) of command string (after any parsing or assembly of fragments).
- Command Sequence #, incremented for every true host command parsed and executed by Host Input task.
- 3-character string (plus a <NUL>) showing name of IMF command.
- 1=FIU comp-set; 0=Normal press-set or other meas-set.
- A particular data byte of a packet or packet header.
- Destination Queue ID (Main task queues (1-A), Secondary task queues (B-14).
- | HSin | Hsout | BPio | LSio | RPio | Cal | FPin | FPout | PDin | PDout |
|------|-------|------|------|------|-----|------|-------|------|-------|
| 1    | 2     | 3    | 4    | 5    | 6   | 7    | 8     | 9    | A     |
| B    | C     | D    | E    | F    | 10  | 11   | 12    | 13   | 14    |
- 1=discard FIU comp-set; 0=Mset sent to host.
- Ascii Character abbreviation of destID's task (see D.0.5).
- Destination Queue for DA meas.set: -2=Cal queue, -1=IU storage queue, 1=Output to host in real-time.
- Task actually executing this event (see top row of destID).
- # of milliseconds since IU started (time stamp from IU itself) before entire time stamp generated from SP clock.
- Measurement Set #(16)+Number of Ports (16).
- Measurement Set #(16)+Maximum # of Meas.Sets to be acquired (16).
- Total # of Meas.Sets to be acquired.
- Module Type.
- Number of ports (16 bits).
- See Table D.5, column 3 for other error-specific short datum passed for this particular error.
- See Table D.5, column 4 for other error-specific long datum passed for this particular error.
- Actual length (bytes) of internal packet.
- Packet Type.
- Label showing PP #x and alternative ASCII view of the nine (9) other data bytes in b1 ,b2, b3, short, and long.
- Label showing PP #x and alternative ASCII view of 8 more (or 8 last) data bytes of an extension item.
- pktType(16)+destID(8)+rack(4)+slot(4).
- An error code (if negative) or OK (if 0 or positive).
- result(16)+destID(8)+rack(4)+slot(4).
- Same as destID except values > 0x14 are Driver Interrupt Senders or special System Priority Markings (see IPC\_MAC.H for values \*\_ITRID).

'stask': Ascii Character abbreviation of sendID's task (see D.0.5).  
tbl#: Data Acquisition (DA) table # (1-4).  
timOut: Count (64= max, 0=timeout) showing time count of AD0 command. Normally 63 if all modules return DA0 response.

**Table D.5 Event Modifiers for PP1 Error Events Only (See A1 in Table D.4)**

1st letter (m0)	2nd letter (m1)	other1	other2
A=Acquisition (Live or @ Setup)	3=Executing a 'xx3' host cmd (SD3/AI3/..) @ Setup {exedau}	tbl#(4)+CRS(8) or CRS	rsspIx/100 (rss) or portMax(16)+rsspIx(16)
	M=Out of Memory (Heap) when IU requests upload of a Meas.Set	acqSize	memSize
	T=Thermal Convert of Meas.Set {datconv}	0	volts(float)
B=Backplane {bptask}	F=Fail	rack(4)+slot(4)+dest(8)	dir[0..3]
	L=Length Check (upload)	0(4)+slot(4)+FF(8)	maxLen(16)+DMAlen(16)
	M=Memory Low (delay) when IU requests to upload a response to previous cmd	0(4)+slot(4)+FF(8)	msgLen
	Q=Queue destination bad (upload)	0(4)+slot(4) +dest(8)	pktType
	R=Retry	0(4)+slot(4)+dest(8)	retry(16)+dir[2..3](16)
	S=Start error (upload)	0(4)+slot(4)+FF(8)	maxLen(16)+DMAlen(16)
	U=Unexpected Response (discarded @ fail)	0(4)+slot(4)+dest(8)	dir[0..3]
C=Calibration	A=AIU Cal (AI3 cmd) {exedau}	CRS	table[portIx]
	C=Coefficient Calculation {cacalc}	CRS	coeff (float)
	D=Data Acquisition Cal {cacalc}	tbl#(8)+ix(8)	0
	P=Pressure Set Fail {execal}	calPt(4)+CRS(12)	defPress(float)
	Q=(may duplicate P above) {execal}	0	0
	S=SDU data read after Pressure Set {execal}	modIx	0
E=Ethernet Driver {i596}	1= SCB Command Loop Spinout {scb_cmd_ack}	FFFF	FFFFFFFF
	2= Action Command Loop Spinout {cb_complete}	cmdnd	FFFFFFFF
	E= Ethernet Bus Error Interrupt	FFFF	bestatus
	I= Interrupt Driver Error Report {cb_comlete}	FFFF	one_cmd_done
	R= Memory Unavalable for Receive Buffers	FFFF	FFFFFFFF
F=Front-Panel	I= Input-task: unknown key received	0	0
	O= Output-task: unknown error received	0	0
H=Host	I=Input packet received by Host Input task from Host driver (normally a cmd or fragment) {hstask}	0	0
	O=Output message sent to Host driver by Host Output task, or queued if driver busy {hstask}	pktType	0
I=IMF	A=Auto Execute IMF Commands in Default Memory (BB-RAM)	0	0
	I=Initialize {exeauto}	0	0
	X=eXecuting IMF cmd in Calibration {execal or fpmain}	0	0
L=Local Slave {l1stask}	C=Chassis firmware msg received	lsIx(4)+slot(4)+dest(8)	tryPtr[0..3]
	F=Fail {bptask}	lsIx(4)+slot(4)+dest(8)	dir[0..3]

	M=Memory Low (delay) when IU requests upload response to prev. cmd	lsIx(4)+slot(4)+FF(8)	msgLen
	Q=Queue destination bad (bad pkt)	lsIx(4)+slot(4)+dest(8)	pktLen(16)+pktTyp(16)
	R=Retry {bptask}	lsIx(4)+slot(4)+dest(8)	retry(16)+dir[2..3](16)
	U=Unexpected response (discarded on fail) {bptask}	lsIx(4)+slot(4)+dest(8)	dir[0..3]
	X=eXtra byte in pkt (LSRP fault)	lsIx(4)+slot(4)+FF(8)	pktDataB[0..3]
M=Message (IPC & other task services)	D=Delay request (task) {ipcexe}	ix(8)+task(8)	noRetry
	Q=Queue destination bad (bad msg) {ipcexe}	dest	msgPtr
	T=Transfer of error to other task {ipcexe}	send(8)+dest(8)	0
P=Pendant	I=Input task: unknown key received {ptask}	0	0
	O=Output task: unknown msg sent {ptask}	0	0
R=Remote Processor {rptask}	C=Chassis firmware msg received	rpIx(4)+slot(4)+dest(8)	tryPtr[0..3]
	F=Fail {bptask}	rpIx(4)+slot(4)+dest(8)	dir[0..3]
	M=Memory Low (delay) when IU requests to upload a response to previous cmd	rpIx(4)+slot(4)+FF(8)	msgLen
	Q=Queue destination bad (bad upload pkt)	rpIx(4)+slot(4)+dest(8)	pktLen(16)+pktTyp(16)
	R=Retry {bptask}	rpIx(4)+slot(4)+dest(8)	retry(16)+dir[2..3](16)
	U=Unexpected response (discarded on fail) {bptask}	rpIx(4)+slot(4)+dest(8)	dir[0..3]
T=TCP/IP (Fusion) {fnsmain}	3=Xmit or Iterate 3xfer {TCPsendData}	err	len
	A=Accept Error {main}	err	msock
	C=Connection {main}	err	FFFFFFFF
	F=Fragmentation {TCPread}	lopCnt	bcnt
	H=Heap Low {ProTCPEvents}	FFFF	nnsel
	I=Intra Hist {process_hit}	err	FFFFFFFF
	L=Listen {passive_TCP}	sock	port#
	M=Main Cannot Open Intra Pair {main}	err	FFFFFFFF
	N=NSelect {ProTCPEvents}	err	nnsel
	O=Open {passive_TCP}	err	port#
	P='PS' Read {TCPread}	bcnt	inbuf[0..3]
	R=Read Size or Overfill {TCPread}	bcnt	overflow
	S=Send Some Data Iteration {Send_Some_Data}	err	ret
	T=Timeout on Nselect {ProTCPEvents}	FFFF	nnsel
	X=eXit of TCP/IP (system or 's') Task {main}	ssock	msock
U=Upload (receive) IU Packet (@ IMF convert)	N=New bad packet {bpconv}	0	inPktType
	O=Old bad packet {bpconv}	0	inPktType
V=Verify (host or front-panel or pendant cmd)	P=Parameter bad {imfver}	ix(8)+cmdId(8)	cmdID[0..3]