Inner-Tracker DAO/LUMI data format Version 1.3 Date: 2020-10-05 S-link 128b Bit# order 5 2 0 15 | 14 | 13 | 12 | 11 | 10 9 8 7 6 4 3 1 **Notes** (following Word page) 0x00000000 Magic #1 (0xC3) 7 3 bit major version, 5 bit minor version Ver Major (1) Ver Minor (3) 0x0000001 6 Error Flags **Chip Count** 0x00000002 Reserved 5 0x00000003 Trig source ВХ 4 Trig source: bit 0 → TCDS; bit 1 → LUMI 0x00000004 Orbit # MSBs 3 2 0x0000005 Orbit # LSBs 0x00000006 Reserved 1 Reserved 0 0x00000007 Chip 1 offset (in 16-bit words)(MSBs) 7 0x00000008 0x00000009 Chip 1 offset (in 16-bit words)(LSBs) 6 Chip N offset (MSBs) ... Chip N offset (LSBs) Padding to 128 bit word size 0 padding filled with '0's ... Magic #3 (0xE) Res Error flags End bit # 7 Error flag bit $0 \rightarrow LOS$; bit $1 \rightarrow time-out$... Chip 1 size (in 16-bit words) 6 Raw chip 1 binary data . . . Raw chip 1 binary data Padding bits (End bit #) Unused bits are padding with '0's ... Error flags Magic #3 (0xE) End bit # Res ... Chip N size (in 16-bit words) ... Raw chip N binary data ... Raw chip N binary data Padding bits (End bit #) ... Padding to 128 bit word size 0 ... Magic #2 (0x3C) 7 Reserved Reserved 6 5 Reserved ... Reserved 4 ... Reserved 3 ... Reserved 2 Reserved 1

Max size = 8+8+((2 + 2 + MAX CHIP SIZE) * N CHIPS) = 16+ (~54000 * N CHIPS)

Reserved

END

0

S-link Rocket payload

Bit position	127	119	111	103	92	87	79	71	63	22	47	39	31	23	15	~
S-Link Header	BOE V rsvd				Global_Event_ID				rsvd I	d E Ph. type L1A type & content		Source_ID				
S-Link Payload		7		6	5		4	4		3		2		1		0
S-Link Payload		···														
S-Link Payload		7		6	5		4		3		2		1			0
S-Link Trailer	EOE	EOE rsvd		Event_Length		E	BX_ID	Orbi		t_ID		CR	CRC(16b)		tatus	
								-					_			

N Payload 16bit word number