Pkt Name	Ancillary Science Pkt			Size	1368	Octets					
App Id	19			Frequency	1	Hz					
				Interval	1	seconds					
Offset	Name	idx	Size in Octets	Mnemonics	Ident.# Mask	Description	Type	Data Range/Formula	Shared Memory Address		
0	Primary Header		6								
6	Secondary Header(time stamp)		8			Time when sent from task					
14	Shot counter		1	GANSHOTC		First shot of frame	UINT_8				
15	AD Checkin Flag, Mask=0x01			GANADPRESF	0x01	1=AD tlm in ancillary pkt, 0=tlm NOT in ancillary pkt					
15	PC Checkin Flag, Mask 0x02			GANPCPRESF	0x02	1=PC tlm in ancillary pkt, 0=tlm NOT in ancillary pkt					
15	CD Checkin Flag, Mask 0x04			GANCDPRESF	0x04	1=CD tlm in ancillary pkt, 0=tlm NOT in ancillary pkt					
15	GP Checkin Flag, Mask 0x08			GANGPPRESF	0x08	1=GP tlm in ancillary pkt, 0=tlm NOT in ancillary pkt					
15	CT Checkin Flag, Mask 0x10			GANCTPRESF	0x10	1=CT tlm in ancillary pkt, 0=tlm NOT in ancillary pkt					
15	Task Data Present in Ancillary Flags		1	GANPKTPRES	0x1F	Flags described above	UINT_8				
16	***Altimeter Digitizer Task Section***										
16	Shot Counter	1	2	GANADSHC		As recorded for the data that follows	UINT_16	1- 200	N/A		
18	Altimeter Dig. Range Window Rmin	2	4	GANADRMIN		Address in nanosecond reslution measured from the location of the Trasnmit Pulse Peak	UINT_32	0 - 5100000	0015h		
22	Altimeter Dig. Range Window Rmax	3	4	GANADRMAX		Address in nanosecond reslution measured from the location of the Trasnmit Pulse Peak	UINT_32	0 - 5100000	0016h		
26	Background Noise Search Offset Startpoint	4	4	GANADNTO		Address in nanoseconds resolution of the start of the 1-km Background Noise search area measured from the end of search window.	INT_32	0 - 5000000	0002h		
30	4 ns Filter Enable Mask	6		GANADF4EN	0x0001	0=Disable, 1=Enable					
30	8 ns Filter Enable	7		GANADF8EN	0x0002	0=Disable, 1=Enable					
30	16 ns Filter Enable Mask	8		GANADF16EN	0x0004	0=Disable, 1=Enable					
30	32 ns Filter Enable Mask	9		GANADF32EN	0x0008	0=Disable, 1=Enable					
30	64 ns Filter Enable Mask	10		GANADF64EN	0x0010	0=Disable, 1=Enable					
30	128 ns Filter Enable Mask	11		GANADF128EN	0x0020	0=Disable, 1=Enable					
30	Filter Enable Mask	5	4	GANADFMASK	0x003F	Indicates filters selected used for this frame. This parameter is commandable	Bit Field (UINT_32)	0x0 - 0x3F	003ch		
34	Shot Counter for PDL waveform	12	4	GANADPDLSHC		As recorded for the data that follows	UINT_32	1 - 200	N/A		
38	Post Delay Laser Pulse Response Start Address	13	4	GANADPDLWST		Start Address of Post Laser Pulse in nanosecond resolution relative to first sample of the waveform.	UINT_32	0 - 500000	0320h		
42	Sampled Post Delay Pulse Waveform	14	32	GANADPDLW		32 8-bit data samples. Note: the offset for this data is from Transmit Pulse Peak	UINT_8	0 - 255	0321h to 0328h		
74	OTS Laser Pulse Response Start Address	15	4	GANADOTSWST		Start Address of the following four OTS Laser Pulse waveforms in nanosecond resolution relative to first sample of the waveform.	UINT_32	0 - 500000	0330h		
78	Shot Counter for OTS #1	16	4	GANADOTS1SHC		Corresponds to the data that follows	UINT_32	1 - 200	N/A		
82	Sampled OTS Pulse Waveform #1	17	32	GANADOTS1W		32 8-bit data samples. Note: the offset for this data is from laser fire (location 0).	UINT_8	0 - 255	0331h to 0338h		
114	Shot Counter for OTS #2	18	4	GANADOTS2SHC		Corresponds to the data that follows	UINT_32	1 - 200	N/A		
118	Sampled OTS Pulse Waveform #2	19	32	GANADOTS2W		32 8-bit data samples. Note: the offset for this data is from laser fire (location 0).	UINT_8	0 - 255	0331h to 0338h		
150	Shot Counter #3	20	4	GANADOTS3SHC		Corresponds to the data that follows	UINT_32	1 - 200	N/A		
154	Sampled OTS Pulse Waveform #3	21	32	GANADOTS3W		32 8-bit data samples. Note: the offset for this data is from laser fire (location 0).	UINT_8	0 - 255	0331h to 0338h		
186	Shot Counter for OTS #4	22	4	GANADOTS4SHC		Corresponds to the data that follows	UINT_32	1 - 200	N/A		
190	Sampled OTS Pulse Waveform #4	23	32	GANADOTS4W		32 8-bit data samples. Note: the offset for this data is from laser fire (location 0).	UINT_8	0 - 255	0331h to 0338h		
222	Location of transmit pulse seach window (start)	24	4	GANADXSST		Reflects commanded value	UINT_32	0 - 300000	0000h		
226	Number of No Threshold Crossing Shots for Error Condition for Surface Echo Compression	25	4	GANADFFLIM		Reflects commanded value	UINT_32	0 - 255	N/A		
230	Spare Telemetry Byte	26	1	GANADSPARE1			UINT_8	N/A	N/A		
231	Surface Echo Land Type for Compression	27	1	GANADSURFTYPE		0=sea, 1=land, 2=sea/ice, 3=land/ice	UINT_8	0 - 3	N/A		
232	Value of 'p' used for frame	29	2	GANADCOMPP		AD compresssion factor P	UINT_16	1, 2, 4, 8	N/A		
234	Value of 'q' used for frame	31	2	GANADCOMPQ		AD compresssion factor Q	UINT_16	1, 2, 4, 8	N/A		
236	Value of 'N' used for frame	33	2	GANADCOMPN		# of samples to compress by P	UINT_16	Land: 0-544; Sea: 0-200	N/A		
238	Value of 'r' used for frame	35	2	GANADCOMPR		AD compresssion factor R	UINT_16	1, 2, 4, 8	N/A		
240	Transmit Pulse Threshold Value	36	2	GANADXTHR		Reflects commanded value or default	UINT_16	0 - 255	0001h		
242	Range Window Weighting Scale Factor A1 Coefficient for 4 ns filter	37	4	GANADWP[1]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	001dh		
246	Range Window Weighting Scale Factor A2 Coefficient for 4 ns filter	38	4	GANADWP[2]		Reflects commanded value or default	FLOAT (IEEE754)	-100.000 to 0.000	001eh		
250	Range Window Weighting Scale Factor A3 Coefficient for 4 ns filter	39	4	GANADWP[3]		Reflects commanded value or default	FLOAT (IEEE754)	-1000.000 to 0.000	001fh		

254	Range Window Weighting Scale Factor A4 Coefficient for 4 ns filter	40	4	GANADWP[4]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	0020h		
258	Range Window Weighting Scale Factor A1 Coefficient for 8 ns filter	41	4	GANADWP[5]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	0021h		
262	Range Window Weighting Scale Factor A2 Coefficient for 8 ns filter	42	4	GANADWP[6]		Reflects commanded value or default	FLOAT (IEEE754)	-100.000 to 0.000	0022h		
266	Range Window Weighting Scale Factor A3 Coefficient for 8 ns filter	43	4	GANADWP[7]		Reflects commanded value or default	FLOAT (IEEE754)	-1000.000 to 0.000	0023h		
270	Range Window Weighting Scale Factor A4 Coefficient for 8 ns filter	44	4	GANADWP[8]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	0024h		
274	Range Window Weighting Scale Factor A1 Coefficient for 16 ns filter	45	4	GANADWP[9]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	0025h		
278	Range Window Weighting Scale Factor A2 Coefficient for 16 ns filter	46	4	GANADWP[10]		Reflects commanded value or default	FLOAT (IEEE754)	-100.000 to 0.000	0026h		
282	Range Window Weighting Scale Factor A3 Coefficient for 16 ns filter	47	4	GANADWP[11]		Reflects commanded value or default	FLOAT (IEEE754)	-1000.000 to 0.000	0027h		
286	Range Window Weighting Scale Factor A4 Coefficient for 16 ns filter	48	4	GANADWP[12]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	0028h		
290	Range Window Weighting Scale Factor A1 Coefficient for 32 ns filter	49	4	GANADWP[13]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	0029h		
294	Range Window Weighting Scale Factor A2 Coefficient for 32 ns filter	50	4	GANADWP[14]		Reflects commanded value or default	FLOAT (IEEE754)	-100.000 to 0.000	002ah		
298	Range Window Weighting Scale Factor A3 Coefficient for 32 ns filter	51	4	GANADWP[15]		Reflects commanded value or default	FLOAT (IEEE754)	-1000.000 to 0.000	002bh		
302	Range Window Weighting Scale Factor A4 Coefficient for 32 ns filter	52	4	GANADWP[16]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	002ch		
306	Range Window Weighting Scale Factor A1 Coefficient for 64 ns filter	53	4	GANADWP[17]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	002dh		
310	Range Window Weighting Scale Factor A2 Coefficient for 64 ns filter	54	4	GANADWP[18]		Reflects commanded value or default	FLOAT (IEEE754)	-100.000 to 0.000	002eh		
314	Range Window Weighting Scale Factor A3 Coefficient for 64 ns filter	55	4	GANADWP[19]		Reflects commanded value or default	FLOAT (IEEE754)	-1000.000 to 0.000	002fh		
318	Range Window Weighting Scale Factor A4 Coefficient for 64 ns filter	56	4	GANADWP[20]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	0030h		
322	Range Window Weighting Scale Factor A1 Coefficient for 128 ns filter	57	4	GANADWP[21]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	0031h		
326	Range Window Weighting Scale Factor A2 Coefficient for 128 ns filter	58	4	GANADWP[22]		Reflects commanded value or default	FLOAT (IEEE754)	-100.000 to 0.000	0032h		
330	Range Window Weighting Scale Factor A3 Coefficient for 128 ns filter	59	4	GANADWP[23]		Reflects commanded value or default	FLOAT (IEEE754)	-1000.000 to 0.000	0033h		
334	Range Window Weighting Scale Factor A4 Coefficient for 128 ns filter	60	4	GANADWP[24]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to +100.000	0034h		
338	Background Noise A1 Coefficient for 4ns Filter	61	4	GANADNP[1]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to 10.000	0003h		
342	Background Noise A2 Coefficient for 4ns Filter	62	4	GANADNP[2]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	0004h		
346	Background Noise A3 Coefficient for 4ns Filter	63	4	GANADNP[3]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	0005h		
350	Background Noise A1 Coefficient for 8ns Filter	64	4	GANADNP[4]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to 10.000	0006h		
354	Background Noise A2 Coefficient for 8ns Filter	65	4	GANADNP[5]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	0007h		
358	Background Noise A3 Coefficient for 8ns Filter	66	4	GANADNP[6]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	0008h		
362	Background Noise A1 Coefficient for 16ns Filter	67	4	GANADNP[7]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to 10.000	0009h		
366	Background Noise A2 Coefficient for 16ns Filter	68	4	GANADNP[8]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	000ah		
370	Background Noise A3 Coefficient for 16ns Filter	69	4	GANADNP[9]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	000bh		
374	Background Noise A1 Coefficient for 32ns Filter	70	4	GANADNP[10]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to 10.000	000ch		
378	Background Noise A2 Coefficient for 32ns Filter	71	4	GANADNP[11]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	000dh		
382	Background Noise A3 Coefficient for 32ns Filter	72	4	GANADNP[12]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	000eh		
386	Background Noise A1 Coefficient for 64ns Filter	73	4	GANADNP[13]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to 10.000	000fh		
390	Background Noise A2 Coefficient for 64ns Filter	74	4	GANADNP[14]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	0010h		
394	Background Noise A3 Coefficient for 64ns Filter	75	4	GANADNP[15]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000to +10.000	0011h		
398	Background Noise A1 Coefficient for 128ns Filter	76	4	GANADNP[16]		Reflects commanded value or default	FLOAT (IEEE754)	0.000 to 10.000	0012h		
402	Background Noise A2 Coefficient for 128ns Filter	77	4	GANADNP[17]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	0013h		
406	Background Noise A3 Coefficient for 128ns Filter	78	4	GANADNP[18]		Reflects commanded value or default	FLOAT (IEEE754)	-10.000 to +10.000	0014h		
410	Spare Telemetry Byte	79	1				UINT_8	N/A	N/A		
411	Enable/Disable Auto Gain Calculation	80	1	GANADAGENAB		0=Fixed, 1=Auto; Reflects commanded value or default	UINT_8	N/A	N/A		
412	Enable/Disable Use of 4ns Filter for Auto Gain Calculation	81	1	GANADAGFILT		0=Select, 1=Raw; Reflects commanded value or default	UINT_8	N/A	N/A		
413	Return Gain Value	82	1	GANADFIXGAIN		Reflects commanded value or default	UINT_8	0 - 200	N/A		
414	Auto Gain Calculation A1 Parameter	83	4	GANADAGAP[1]		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
418	Auto Gain Calculation A2 Parameter	84	4	GANADAGAP[2]		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
422	Auto Gain Calculation A3 Parameter	85	4	GANADAGAP[3]		Reflects commanded value or default	FLOAT (IEEE754)		N/A		

426	Auto Gain Calculation A4 Parameter	86	4	GANADAGAP[4]		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
430	Auto Gain Calculation B1 Parameter	87	4	GANADAGBP[1]		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
434	Auto Gain Calculation B2 Parameter	88	4	GANADAGBP[2]		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
438	Auto Gain Calculation B3 Parameter	89	4	GANADAGBP[3]		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
442	Auto Gain Calculation B4 Parameter	90	4	GANADAGBP[4]		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
446	Auto Gain Calculation C0 parameter	91	4	GANADAGCP[1]		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
450	Auto Gain Calculation C1 parameter	92	4	GANADAGCP[2]		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
454	Auto Gain Calculation Vref Parameter	93	4	GANADAGVREF		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
458	Auto Gain Calculation Zmin Parameter	94	4	GANADAGZMIN		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
462	Auto Gain Calculation Zmax Parameter	95	4	GANADAGZMAX		Reflects commanded value or default	FLOAT (IEEE754)		N/A		
466	Auto Gain Calculation Vmin Parameter	96	1	GANADAGVMIN		Reflects commanded value or default	UINT_8	0 - 255	N/A		
467	Auto Gain Calculation Ginit Parameter	97	1	GANADAGGINIT		Reflects commanded value or default	UINT_8	0 - 255	N/A		
468	Auto Gain Calculation Gmin Parameter	98	1	GANADAGGMAX		Reflects commanded value or default	UINT_8	0 - 255	N/A		
469	Auto Gain Calculation Gmax Parameter	99	1	GANADAGGMIN		Reflects commanded value or default	UINT_8	0 - 255	N/A		
470	Tolerance for Coincidence of Filters	100	4	GANADFCTOL		Reflects commanded value or default	UINT_32	0 - 2000	0037h		
474	Range Window Dump (waveform time) Offsets for 4 ns filter	101	4	GANADRWTO[1]		Reflects commanded value or default	INT_32	0-500	0017h		
478	Range Window Dump (waveform time) Offsets for 8 ns filter	102	4	GANADRWTO[2]		Reflects commanded value or default	INT_32	0-500	0018h		
482	Range Window Dump (waveform time) Offsets for 16 ns filter	103	4	GANADRWTO[3]		Reflects commanded value or default	INT_32	0-500	0019h		
486	Range Window Dump (waveform time) Offsets for 32 ns filter	104	4	GANADRWTO[4]		Reflects commanded value or default	INT_32	0-500	001ah		
490	Range Window Dump (waveform time) Offsets for 64 ns filter	105	4	GANADRWTO[5]		Reflects commanded value or default	INT_32	0-500	001bh		
494	Range Window Dump (waveform time) Offsets for 128 ns filter	106	4	GANADRWTO[6]		Reflects commanded value or default	UINT_32	0-500	001ch		
498	Spare bytes	108	2				UINT_8				
500	Surface (Pulse) Return Threshold Values for All Filters (4 ns through 128 ns filters)	107	6	GANADRTHR[1..6]		Reflects commanded value or default. 6 bytes total; byte 1 represents 4ns filter, byte 2 = 8ns, etc.	UINT_8		0035h to 0036h		
506	FIR Filter Coefficients	109	8	GANADFFIR[1..8]		Reflects commanded value or default. Total of 8 bytes	UINT_8		003ah to 003bh		
514	Filter Weight Min Std Deviation	110	4	GANADWMINSTD		Reflects commanded value or default	FLOAT (IEEE754)	0.0001 - 1.0	003dh		
518	Filter Noise Minimum thresholds for 4 ns filter	111	4	GANADNMIN[1]		Reflects commanded value or default	FLOAT (IEEE754)	0-255	003eh		
522	Filter Noise Minimum thresholds for 8 ns filter	112	4	GANADNMIN[2]		Reflects commanded value or default	FLOAT (IEEE754)	0-255	003fh		
526	Filter Noise Minimum thresholds for 16 ns filter	113	4	GANADNMIN[3]		Reflects commanded value or default	FLOAT (IEEE754)	0-255	0040h		
530	Filter Noise Minimum thresholds for 32 ns filter	114	4	GANADNMIN[4]		Reflects commanded value or default	FLOAT (IEEE754)	0-255	0041h		
534	Filter Noise Minimum thresholds for 64 ns filter	115	4	GANADNMIN[5]		Reflects commanded value or default	FLOAT (IEEE754)	0-255	0042h		
538	Filter Noise Minimum thresholds for 128 ns filter	116	4	GANADNMIN[6]		Reflects commanded value or default	FLOAT (IEEE754)	0-255	0043h		
542	Filter reject mask for leading edge	117	4	GANADFRLEF		Reflects commanded value or default	UINT_32				
546	Filter reject mask for trailing edge	118	4	GANADFRTEF		Reflects commanded value or default	UINT_32				
550	Spare Telemetry Bytes	119	22			Spare Telemetry	UINT_8	N/A	N/A		
572	***Photon Counter Task Section***										
572	Spare	1	2			Spare	UINT_16	NA	NA		
574	SPCM 1 RAW Counts Mask	3		GANSPCMRC[1]	0x000000FF			0-255			
574	SPCM 2 RAW Counts Mask	4		GANSPCMRC[2]	0x0000FF00			0-255			
574	SPCM 3 RAW Counts Mask	5		GANSPCMRC[3]	0x00FF0000			0-255			
574	SPCM 4 RAW Counts Mask	6		GANSPCMRC[4]	0xFF000000			0-255			
574	SPCM 1-4 Raw Counts	2	4	GANSPCMRC		Photon Counter Bd address 0xB1800018	UINT_32	0-4294967295	NA		
578	SPCM 5 RAW Counts Mask	8		GANSPCMRC1[1]	0x000000FF			0-255			
578	SPCM 6 RAW Counts Mask	9		GANSPCMRC1[2]	0x0000FF00			0-255			
578	SPCM 7 RAW Counts Mask	10		GANSPCMRC1[3]	0x00FF0000			0-255			
578	SPCM 8 RAW Counts Mask	11		GANSPCMRC1[4]	0xFF000000			0-255			
578	SPCM 5-8 Raw Counts	7	4	GANSPCMRC1		Photon Counter Bd address 0xB180001C	UINT_32	0-4294967295	NA		
582	SPCM Gate Delay	12	2	GANPCSPCMG		Photon Counter Bd address 0xB1000004	UINT_16	0-65535	NA		
584	PC Background #1 Delay	13	2	GANPCBKGN1			UINT_16	0-65535	NA		
586	PC Background #2 Delay	14	2	GANPCBKGN2		Photon Counter Bd address 0xB1000008	UINT_16	0-65535	NA		
588	PC Range Gate (Lidar) Delay	15	2	GANPCMBLID			UINT_16	0-65535	NA		
590	SPCM 1 Mask				0x0100						
	SPCM 2 Mask				0x0200						
	SPCM 3 Mask				0x0400						
	SPCM 4 Mask				0x0800						
	SPCM 5 Mask				0x1000						
	SPCM 6 Mask				0x2000						
	SPCM 7 Mask				0x4000						
	SPCM 8 Mask				0x8000						
590	SPCM status	16	2	GANSPCMSTAT	0xFF00	Photon Counter Bd address 0xB1800004	UINT_16	0-65535	NA		
592	***Cloud Digitizer Task Section (Freq & Time Bd Data)***										
592	Spare		2			Spare	UINT_16	0-65535	NA		

594	Attenuation = 0.				0x0002						
594	Attenuation = 1/1.77.				0x0004						
594	Attenuation = 1/3.16.				0x0008						
594	Attenuation = 1/5.6.				0x0010						
594	Attenuation = 1/10.				0x0020						
594	A/D output and CD Amplifier Attenuation(gain) setting		2	GANCDADOA		Cloud Digitizer Bd address 0xB2800004	UINT_16	0-65535	NA		
596	Background #1 Delay		2	GANCDBKD		Cloud Digitizer Bd address 0xB2000004	UINT_16	0-65535	NA		
598	Background #2 and Range Gate Delay		4	GANCDBKLID[4]		Cloud Digitizer Bd address 0xB2000008	UINT_8	0-4294967295	NA		
602	Detector status		2	GANCDDSTAT		Cloud Digitizer Bd address 0xB2400004	UINT_16	0-65535	NA		
604	Spare		2			Spare	UINT_16	NA	NA		
606	Shot Counter for start of Frame		2	GANCDSHTCST		Corresponds to first 40 bit counter sample	UINT_16	1-200	NA		
608	Shot Counter	1	2	GANCDSHTC		As recorded when the next two values were read	UINT_16	1-200	NA		
610	Fire Acknowledge Time(from Freq and Time Bd)	1	5	GANCDFAT		Freq & Time Board Tlm, 40 bit counter	UINT_40	0-0xFFFFFFFFFF	NA		
615	Fire Command Time(from Freq and Time Bd)	1	5	GANCDFCT		Freq & Time Board Tlm, 40 bit counter	UINT_40	0-0xFFFFFFFFFF	NA		
620	***The above 3 values are added for shots 2 through 39.***		468								
1088	***GPS/DEM Section***										
1088	Latitude	1	2	GANGPLAT		S/C latitude calculated from s/c position data in degrees	INT_16	-90 to +90			
1090	Longitude	2	2	GANGPLONG		S/C longitude calculated from s/c position data in degrees	INT_16	0 to 180			
1092	Height (Hsat)	3	4	GANGPHSAT		S/C geodetic altitude of s/c above earth's surface in kilometers.	FLOAT (IEEE754)	0.0 to 1000.0			
1096	Rsat	4	4	GANGPRSAT		Distance from s/c to center of earth in kilometers.	FLOAT (IEEE754)	0.0 to 10,000.0			
1100	Rmin	5	4	GANGPRMIN		Range window start in kilometers.	FLOAT (IEEE754)	0.0 to 1000.0			
1104	Rmax	6	4	GANGPRMAX		Range window stop in kilometers.	FLOAT (IEEE754)	0.0001 to 1000.0			
1108	Wmin	7	4	GANGPWMIN		Minimum window size. Default is 2km	FLOAT (IEEE754)	0.0001 to 1000.0			
1112	Wmax	8	4	GANGPWMAX		Maximum window size. Default is 11km	FLOAT (IEEE754)	0.0 to 1000.0			
1116	Hoffmin (DEM uncertainty + bias)	9	4	GANGPHOFFMIN		Offset associated with the minimum height. Default is 1.125km	FLOAT (IEEE754)	-1000.0 to 1000.0			
1120	Hoffmax (DEM uncertainty - bias)	10	4	GANGPHOFFMAX		Offset associated with the maximum height. Default is negative 0.875km	FLOAT (IEEE754)	-1000.0 to 1000.0			
1124	Rbmin	11	4	GANGPRBMIN		Bias added to the mimimum range for Altimeter Digitizer (in kilometers). Default is 0.	FLOAT (IEEE754)	-1000.0 to 1000.0			
1128	Rbmax	12	4	GANGPRBMAX		Bias added to the maximum range for Altimeter Digitizer (in kilometers). Default is 0.	FLOAT (IEEE754)	-1000.0 to 1000.0			
1132	PC Range Bias	13	4	GANGPPCBIAS		PC Range Bias. Default is -41km	FLOAT (IEEE754)	-1000.0 to 1000.0			
1136	CD Range Bias	14	4	GANGPCDBIAS		CD Range Bias. Default is -41km	FLOAT (IEEE754)	-1000.0 to 1000.0			
1140	Surface Type	15	1	GANGPSURFTYP		Surface type. 0=sea 1=land 2=sea_ice 3=land_ ice. The default is sea (0).	UINT_8	0-3			
1141	Position data status flag	16	1	GANGPPOSVLD		Set to 0 if receiving position data and no errors, 1 if not receiving position data, and 2 if processing errors encountered on position data received.	UINT_8	0-2			
1142	Spacecraft time & position packet data	17	40			Spacecraft position and GPS Time command packet received over 1553 bus minus 8 byte CCSDS command header. Format is defined in spacecraft ICD.	See BALL Spacecraft to GLAS ICD for details				
1182	Shot Count for 1553 Spacecraft Time and Position packet.	18	2	GANGPSHOTCNT		Shot count captured by RT task when it receives spacecraft time and position packet. Only lower 8 bytes valid.	UINT_16	1-200			
1184	Spare byte in GLAS MET below	19	1	GANGPMETSP1		Spare GLAS MET byte that is not used.	UINT_8	N/A			
1185	GLAS MET for 1553 Spacecraft Position and command packet.	20	6	GANGPMETPOS		GLAS MET captured by RT task when it receives spacecraft time and position packet. Time is in microseconds. 8 bytes allotted for GLAS MET but only the middle 6 bytes actually used.	UINT_48	0 to 0xFFFFFFFFFFFF			
1191	Spare byte in GLAS MET above	21	1	GANGPMETSP2		GLAS MET expedite flag. This flag not used.	UINT_8	N/A			
1192	DEM minimum byte	22	1	GANGPMINBYTE		DEM miminum elevation byte used to calculate hmin	UINT_8	0x00 to 0xFFFFFF			
1193	DEM maximum byte	23	1	GANGPMAXBYTE		DEM maximum elevation byte used to calculate hmax	UINT_8	0x00 to 0xFFFFFF			
1194	Range data source	24	1	GANGPRNGSRC		Source of range data: 0=s/c time & pos pkt 1=uplinked DEM bytes 2=uplinked Rmin/Rmax	UINT_8	0-2			
1195	High order byte of GPS 10 Sec Pulse 40 bit count value	25	1	GANGP40BIT1		Last 40-bit count value from frequency & time board. Corresponds to the last GPS 10 second pulse.	UINT_8	0xFF			
1196	Low order 4 bytes of GPS 10 Sec Pulse 40 bit count value	26	4	GANGP40BIT4		Last 40-bit count value from frequency & time board. Corresponds to the last GPS 10 second pulse.	UINT_32	0xFFFFFFFF			
1200	Spare byte in GLAS MET below	27	1	GANGPMETSPR1		Spare GLAS MET byte that is not used.	UINT_8	N/A			
1201	GLAS MET for GPS 0.1 Hz Pulse	28	6	GANGPMET		GLAS MET at time of last GPS 10 sec pulse. Time is in microseconds. 8 bytes allotted for GLAS MET but only the middle 6 bytes actually used.	UINT_48	0 to 0xFFFFFFFFFFFF			
1207	Spare byte in GLAS MET above	29	1	GANGPEXPEDFL		GLAS MET expedite flag. This flag is not used.	UINT_8	N/A			

1208	GP ancillary data spare bytes	30	8	GANGPFILL		GP ancillary data spare bytes for future growth	UINT_8 * 8	N/A			
1216	***C&T Task Section***										
1216	Etalon Calibration - Current mode		1	GANCTEMODE		OFF=0, Acquire=1, Tracking=2	UNIT_8				
1217	Etalon State		1	GANCTESTATE		Idle=0, Init=1, Set Temp=2, Settle=3, Average=4, 5=Openloop, 6=Modified	UINT_8				
1218	Etalon Temperature Settle Time		1	GANCTETMPSET		in seconds	UINT_8				
1219	Etalon tracking low transmission flag			GANCTELOWTR	0x01	0 = Good 1 = Low					
1219	Etalon tracking active flag			GANCTETRACK	0x02	0 = Paused 1 = Active					
1219	Etalon tracking test mode flag			GANCTETEST	0x04	0 = Normal 1 = Test					
1219	Etalon tracking openloop mode flag			GANCTEOLMODE	0x08	0 = Normal 1 = OpenLoop					
1219	Etalon tracking openloop update toggle			GANCTEOLUPD	0x10						
1219	Etalon Flags		1	GANCTEFLAGS		Etalon status flags	UINT_8				
1220	Etalon Averaged on-axis transmission		4	GANCTETRON			FLOAT (IEEE754)				
1224	Etalon Averaged off-axis transmission		4	GANCTETROFF			FLOAT (IEEE754)				
1228	Etalon temperature error		4	GANCTEDTEMP		In degrees	FLOAT (IEEE754)				
1232	Etalon tracking loop filter output		4	GANCTETOUT			FLOAT (IEEE754)				
1236	Etalon tracking failure average		4	GANCTETFAVG			FLOAT (IEEE754)				
1240	Etalon start temperature for acquire command		1	GANCTESTRTT			UINT_8				
1241	Etalon stop temperature for acquire command		1	GANCTESTOPT			UINT_8				
1242	Etalon temperature step for acquire command		1	GANCTETSTEP			UINT_8				
1243	Etalon averaging time for acquire command		1	GANCTEAVGTIM		in seconds	UINT_8				
1244	Etalon temperature setle time for acquire cmd		2	GANCTESTLTIM		in seconds	UINT_16				
1246	Etalon averaging update counter		1	GANCTEAVGUP			UINT_8				
1247	Spare byte		1	GANCTASPARE			UINT_8				
1248	Etalon FBack Mon val (Pin Diode A)		40	GANCTDPA		From LMB. Each corresponds to one of the 40 shots in the frame	UINT_8				
1288	Etalon FBack Mon val (Pin Diode B)		40	GANCTDPB		From LMB. Each corresponds to one of the 40 shots in the frame	UINT_8				
1328	Etalon 532 Energy		40	GANCTE532		From LMB. Each corresponds to one of the 40 shots in the frame	UINT_8				