COMPUTER SCIENCES CORPORATION

INTEROFFICE CORRESPONDENCE

to: Mike Bielefelz TA
from: Tyrone Adams
subject: FOS GIMP - ICD 26 PART 2 UPDATES

date: May 6, 1992
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As per our conversation, I'm sending you a copy of the unofficial additions to ICD 26 part 2 as a result of CCR 1402, FOS GIMP. This includes additions to appendix B and appendix G, spacecraft characteristics (SCHF) parameters and science instruments calibration factor (SICF) parameters, respectively. I'm also including the values supplied in the CCR for the SICF parameters.

If you have any questions please call, (301) 497-2634. Thank you.

Tina Pharr
497-2659

B0_x = cos(theta)* B_v2 + sin(theta)* B_v3
B0_y = -sin(theta)* B_v2 + cos(theta)* B_v3
B0_z = B_v1

where theta = -135 degrees

b. Rotate about v2-v3 bisector by -23 degrees

B1_x = B0_x
B1_y = cos(delta)* B0_y + sin(delta)* B0_z
B1_z = -sin(delta)* B0_y + cos(delta)* B0_z

where delta = -23 degrees

c. Rotate about the detector Y axis

B_x = cos(alpha)* B1_x + sin(alpha)* B1_z
B_y = B1_y
B_z = not needed for further calculations

where alpha = 8 deg for red detector
alpha = -8 deg for blue detector

d. Reverse sense of the x component

B_x = - B_x

3. Compute effective geomagnetic field B_eff(x,y), correcting for ExB electron-optical drift, by rotating about the detector z axis by 17.6 degrees

B_eff_x = cos(beta)* B_x + sin(beta)* B_y
B_eff_y = [illegible]

FROM GEORGE

4. Compute [illegible] factor [illegible] is depend[illegible] units wil[illegible] The SMS w[illegible] correct s[illegible]

PITCH / 2048 = DEFLECTIONS

SICF lo[illegible]

SMS mne[illegible]

		X	Y		
SPEC1	R ACCUM	94.4	188.8	70.1	169.1
IMAGE1	~~R IMAGE~~	56.6	113.3	42.0	101.5
SPEC2			47.2	18.3	42.5
IMAGE2	B ACCUM	23.6			
SPEC2P	~~B IMAGE~~	14.2	28.3	11.0	25.5
IMAGE2P					

The a[illegible] expe[illegible]

R PITCH 1521 1834
B PITCH 1584 1846

If th[illegible] than can[illegible] output a[illegible] the NSSC

POL G270H B 2043 47.1 28.2

NAME	TYPE	DIMENSION	UNITS	DESCRIPTION
		FOS CALIBRATION FACTORS		
GIMP_I(i)	C*8	50		INPUT LOOKUP TABLE: LOOKUP TABLE USED BY FOSGIMP TABLE REQUEST TO SCALE X AND Y DEFLECTION OFFSETS.
GIMPXY_O(i)	R*8	50 x 2	DETECTOR DEFLECTION STEPS PER GAUSS	OUTPUT LOOKUP TABLE: LOOKUP TABLE USED BY FOSGIMP TABLE REQUEST TO SCALE X AND Y DEFLECTION OFFSETS. (I,1) = X DEFLECTION OFFSET SCALE FACTOR (I,2) = Y DEFLECTION OFFSET SCALE FACTOR
GIMPDET_O(i)	R*8	50	RED OR BLUE DETECTOR	OUTPUT LOOKUP TABLE: LOOKUP TABLE USED BY FOSGIMP TABLE REQUEST TO INDICATE THE DETECTOR FOR THE ASSOCIATED SCALE FACTOR.
GIMP_C	I*2			LOOKUP TABLE COUNT: COUNT OF ENTRIES IN EACH OF THE ASSOCIATE INPUT/OUTPUT LOOKUP TABLE. VALUE RANGES FROM 1 TO 50.

spacecraft parameter	name	type	units	dim	reftime
ONBOARD COMPUTER PARAMETERS:FOS GIMP					
DELTA TIME TO SYNCHRONIZE FOS GIMP TABLES WITH HOUSEKEEPING SEGMENT 3 OF NEXT MAJOR FRAME	YGMPMFTM1	R*8	sec		
DELTA TIME TO SYNCHRONIZE FOS GIMP TABLES WITH HOUSEKEEPING SEGMENT 1 OF CURRENT MAJOR FRAME	YGMPMFTM2	R*8	sec		
DELTA TIMES TO SYNCHRONIZE FOS GIMP TABLES WITH HOUSEKEEPING SEGMENT 3 OF CURRENT MAJOR FRAME	YGMPMFTM3	R*8	sec		
COEFFICIENTS TABLE START DELTA TIME	YGMPCSTTM	R*8	sec		
ENABLE TABLE LOAD DELTA TIME	YGMPELDTM	R*8	sec		
GIMP TICK - DELTA TIME BETWEEN EACH DELTA-X AND DELTA-Y DEFLECTION OFFSET	YGIMPTICK	I*4	sec		
COEFFICIENTS TABLE NAME	YFGCOEFTB	C*8			
ENABLE TABLE NAME	YFGENBLTB	C*8			
MAXIMUM NUMBER OF BITS TO REPRESENT SCALED X AND Y DEFLECTION OFFSET	YGMPMXBIT	I*4			
DEFAULT VALUE FOR FIRST GIMP TICK	YGMPDTICK	I*4			
DEFAULT VALUE FOR COMPUTATION DURATION	YGMPCDUR	I*4	sec		
ROTATION ANGLE ABOUT THE DIGICON V1 AXIS	YGMPV1	R*8	deg		
ROTATION ANGLE ABOUT THE DIGICON V2-V3 BISECTOR	YGMPV2V3	R*8	deg		
ROTATION ANGLE ABOUT THE DIGICON Y AXIS FOR THE RED DETECTOR	YGMPYRED	R*8	deg		
ROTATION ANGLE ABOUT THE DIGICON Y AXIS FOR THE BLUE DETECTOR	YGMPYBLUE	R*8	deg		
ROTATION ANGLE CORRECTION FOR ExB ELECTRON-OPTICAL DRIFT	YGMPZ	R*8	deg		