

VGR Saturn Archive Evaluation

A. AAREADME.TXT

1. "combined- detached" (3.2 second paragraph should be fixed)
2. "found on line" should be "found on-line" (3.2 3rd paragraph)
3. Opened OK on my Mac
4. Wording was clear throughout
5. The discussion brought up these overall organizational/design issues:
 - a. organization is the same as the compressed data
 - i. But the constraints of 1988 no longer present (faster CPUs)
 - ii. This perpetuates errors (wrong targets, etc.)
 - iii. The satellite names were confused back then
 - iv. You wind up with duplicates due to Volumes 3 and 4
6. Naming convention issues
 - a. Convention based upon being the same as compressed data
 - i. But the constraints of 1988 no longer present
 - ii. the 'C' was for 'count' but who cares now? Could use that character for file type (CLEANED, GEOMED, etc.)

B. /DOCUMENT

1. VICAR label description documents
 - a. .html and .text OK
 - b. .LBL clear and helpful
 - c. document review is noted but have ITAR issues been addressed?
2. PDS DD - did not look at in detail
3. DOCINFO
 - a. OK - clear and helpful
4. Tutorial
 - a. Could mention that byte swapping is not necessary if VICAR s/w is processing these VICAR files
 - b. Section 5.4 1st paragraph says IBIS format is covered in VICAR.HTML. It's not.
5. Processing
 - a. Under (5) RESSAR77, blemish files are referred to as "images". They're not.
 - b. Under (6) ADESPIKE, "what images have been changed" should be "What pixels have been changed"

C. VGISS_0004 Volume

1. ERRATA.TXT
 - a. Are the two column_name examples reversed?
2. INDEX.TAB and SUMDARKS.TAB look OK

D. VGISS_0031 Volume

1. ERRATA.TXT
 - a. Are the two column_name examples reversed?
2. INDEX.TAB looks OK
3. CALIB/CALINFO.TXT looks OK

E. VGISS_0038 Volume

1. MIPL directory
 - a. VGRSCF.LBL
 - i. Format and content of SCF file is unknown. Sorry - FICORGEN is gone along with its SCF file description.
 - b. FICOR77....LBL files
 - i. Format and content of FICOR77 files is unknown. Do you want that information?
 - ii. FICOR77 files are in VAX-format. Do you want unix-format versions?
 - c. BLEMLOC....LBL files
 - i. Format and content of blemish file is unknown. Do you want that information?
2. ERRATA.TXT
 - a. Still no real entries. How about known problems with data corruption, satellite names, etc.?
3. CUMINDEX.TAB
 - a. EXCEL would only import the first 65536 lines. That makes it part way through Volume 28.
 - b. What was imported looks good

F. Label Review

1. 3419147
 - a. Basic labels have identical values to those in old image file
 - b. Found START_TIME, STOP_TIME, S/C CLOCK START COUNT, etc. in the PDS DD.
 - c. How did you get a PIXEL FOV= 5.225×10^{-4} deg (and FOV=.418) for the RAW data?
 - d. What is REFLECTANCE_SCALING_FACTOR doing in RAW/CLEANED image label? Seems like it would be N/A but you've got 6.487×10^{-3} for pixel value to I/F?
 - e. REFLECTANCE_SCALING_FACTOR is 3.3445×10^{-4} in CALIB version PDS label, but is 1.0 in VICAR label.
 - f. CALIB version shows 16-bits properly
 - g. GEOMED version shows 1000x1000 properly
 - h. GEOMED PIXEL_FOV and FOV look right for NAC (WACs look OK, too.)

G. Reseau and blemish removal processing

1. 3419147
 - a. Used PDS RESLOC.DAT and BLEMLOC files to process PDS RAW file. Processed with local RESSAR77; got 0 differences with PDS CLEANED version
 - b. BLEMLOC.DAT label says format is undocumented. I can supply the format description. Otherwise OK. Why no .TAB?
 - c. RESLOC.LBL looks OK; .TAB looks OK
 - d. Reseau removal looks identical to that of ancient processed version

H. Dark current files

1. DC1_NA_31_C3465802_06.IMG
 - a. VICAR complains of bad label
 - b. PDS label looks good. Properly shows 16 bits, but scale factor of 100 is only in description, not a keyword
2. DC1_NA_31_C3458239_06.IMG
 - a. VICAR likes label

- b. PDS label looks good - 16 bits, but scale factor of 100 is only in description, not a keyword
- c. Missing and corrupted data after ~line 480
- 3. Did not check all other DCs for similar missing data or corruption

I. Radiometric Processing

- 1. 3419147
 - a. Image, Cal file, DC file all ran compatibly with local FICOR77
 - b. Cal file FICOR77_VG1_NA_VIOLET.DAT
 - i. label shows source was a converted PCDF from IBM format in 1985; from VAX format in 1996 - good
 - ii. VICAR likes label
 - iii. LBL says format is undocumented. Do you want the documentation?
 - c. FICOR77 results
 - i. DC's are averages (not sums) of 6, so used NUMDC=100 to compensate for scaling
 - ii. Using DC of DC1_NA_31_C3458239_06.IMG & Cal file FICOR77_VG1_NA_VIOLET.DAT with local FICOR77, gives exact match of DN's when using NUMDC=100 and no IOF value. But DC is bad after line ~480. The CALIB version of the image is good, so my processed file doesn't match the CALIB version after that line. CALIB version must have used a better version of the DC than the one archived.

J. Geometric Processing

- 1. 3419147
 - a. GEOMA.TAB looks and imports to EXCEL OK; .LBL file looks OK
 - b. CALIB and GEOMA.DAT ran compatibly with local GEOMA
 - c. Running local GEOMA with CALIB and GEOMA.DAT gives perfect match to GEOMA.IMG
 - d. Running local GEOMA with reslocs from local storage gives perfect match to GEOMA.IMG
 - e. Old GEOM'd file (from the '90s) is one pixel higher than currently processed version and the GEOMA.IMG version (GEOMA probably got updated)
 - f. Relocated the resseau marks used for the local GEOMA. Got another perfect match to GEOMA.IMG