Hi Mitch,

Thanks for including me in this peer review. I'm impressed at all the
work that has gone into these volumes! Overall I think they look very
good. Here are my detailed findings. Feel free to contact me if
anything isn't clear, or you have questions.

Amy

Completeness & Documentation:

  *   The documentation, seems clear, accessible, consistent and
       complete.   It's very comprehensive given the age of the data,
       and processing descriptions are accessible and useful, both now
       and for future image-processing savvy users. I found it very
       easy to get familiar with the data set layout and dig into the
       data.

  *   The ancillary data provided with the data sets seems complete.
       From browse products to calibration support files, the files are
       easy to locate and straightforward to use.

  *   In the TUTORIAL.TXT, user is directed to ignore the 224 line
       prefix bytes in RAW files as not useful, but perhaps a reference
       to the documentation on the raw CD volumes would be helpful
       (especially because that structure isn't described elsewhere on
       the new volumes.) [NO CHANGE. We reviewed the documentation from the
original CDs. The documentation describes a 243-byte engineering table and 36-byte line suffix
(not prefix) structure, which are part of the compressed (.IMQ) files. These structures bear no
obvious relationship to the contents of the engineering table and prefix bytes in the
uncompressed files. We have added a comment to TUTORIAL.TXT and to the raw image
labels noting that the structures of these objects are undocumented.]

  *   MIPL is now the Multimission "Instrument" Processing Lab, no
       longer "Image". Several documents need to be updated. [CORRECTED in
AAREADME.TXT, PROCESSING.TXT, TUTORIAL.TXT, and DATASET.CAT]

Compliance with PDS Standards:

  *   I ran vtool on VGISS_7207. When using pdsdd.text from the
       DOCUMENT directory, Vtool failed due to the TEXT object starting
       on line 6. When that object was removed, there were still
       numerous warnings (see attached, uniquely sorted list of
       warnings). Given that keywords aren't explicitly addressed
       elsewhere in the documentation (as would otherwise occur in a
       modern Software Interface Specification (SIS)), I suggest these
       warnings be resolved. [NO CHANGE. The file PDSDD.TXT is included for
documentation purposes and was never intended to support Vtool. It only contains information
already in pdsdd.full. We have added comments in the PDS object description and in
DOCINFO.TXT to make this clear. Sorry for the confusion.]

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     For reference, here's how I called Vtool
     (the pdsdd.full is the 7/11/13 version):

     vtool-2.3.0/bin/VTool VGISS_7207_peer_review/DATA/C27*/*LBL -d
pdsdd.full, VGISS_7207_peer_review/DOCUMENT/PDSDD.TXT -I
VGISS_7207_peer_review/DOCUMENT/ -a -v 2 -r
VGISS_7207_peer_review_vtool.rpt
```

* In the INDEX.TAB, the *RESLOC.DAT/.TAB products are mis-
  identified as *RESLOC.IMG. Recommend they be handled the way
  the *GEOMA.DAT/.TAB products are treated in the index (I.e. a
  single entry for the .DAT file), or somehow explained. Also,
  it would be helpful to clarify the single index entry for the
  .DAT/.TAB products in the INDXINFO.TXT. [FIXED. We have corrected the
  tables. We have also expanded the description of the PRODUCT_ID in every index label to
  explain how we handle .DAT/.TAB file pairs that use the same combined-detached label.]

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Compatibility with VICAR software:
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* I tested a sampling of .IMG, .DAT and blemish files using
  VICAR. All worked as expected with a variety of programs.

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Assessment of image processing:
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* Sometimes the "cleaned" version of the image exacerbates
  artifacts and removes detailed information due to interpolation.
  For example,

  * on VGISS_7207, the C2700224* cleaned image (and those
    subsequently processed) include smear along limb of Uranus due
    to reseau removal

  * on VGISS_5106, the C1559058* cleaned image (and those
    subsequently processed) intensify the corrupted lines at the
    top of the image, replace good pixels with edge effects in the
    lower left of the image, and remove the moon (or possible Death
    Star) in the lower right of the image.

  These flaws are not too surprising, given the difficulty involved
  in this type of systematic processing, and as long as the raw image
  is preserved, the information isn't lost. However, a warning to
  the user about this should be included somewhere on the volume,
  perhaps in the processing notes or errata.

[Thank you for giving us specific examples of "cleaning" that has gone awry. We have
investigated the specific examples you cited.

In the case of the Jupiter image C1559058, the moon/"Death Star" feature you mentioned is
a known blemish, visible at the same image location in adjacent raw images, even though

the pointing is different. It was correct for it to have been removed during the processing from RAW to CLEANED. Second, the processing did not "intensify corrupted lines" because an examination of the raw files revealed the modified lines to be all zeros in the raw file, meaning that the pixels were lost in transmission. When this happens, the cleaning process attempts to interpolate across the lost pixels. This appears to exacerbate a problem in this case, but in fact the processing only changes pixels that were already lost.

In the case of the Uranus image C2700224, this is an illustration of a well-known situation that occurs when a reseau marking lands atop a sharp brightness transition. Once again, however, the processing only changes pixels that were already lost; it does not modify valid pixels.

We agree that these issues need to be explained better, and TUTORIAL.TXT has been updated to note these possibilities.]