

Review comments (Ron Joyner, Steven Adams)

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\*\*\*\*\* Conformance to ISO standard \*\*\*\*\*

(1a) There are 78 files in \U-RINGS\SORCDATA\RU\*.TXT that have a single line (line 6) that is 83 characters long. Should it be edited to be 78 characters?

RESPONSE: These are files retrieved from tape dumps and represent the original "source" data for this archive. In the interest of preserving them exactly, we have not modified any long lines.

(1b) There is one file (\SOFTWARE\OAL\EXAMPLES\README.TXT) where line 1 is 81 characters long. (Just a text file, easy to reformat.)

RESPONSE: Fixed.

(1c) Missing extensions to make ISO compliant

change                \SOFTWARE\OAL\IDL\IDLMAKE  
to                    \SOFTWARE\OAL\IDL\IDLMAKE.MAK

and change            \SOFTWARE\OAL\SOURCE\MAKEFILE  
to                    \SOFTWARE\OAL\SOURCE\MAKEFILE.MAK

RESPONSE: Fixed.

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\*\*\*\*\* Required files on volume \*\*\*\*\*

(2a) No cumulative index - but in light of prev conversation, okay.

(2b) Root level data directories - place under a DATA directory?

SPICE  
S\_RINGS  
U\_RINGS

RESPONSE: There is no specific requirement for a directory named "DATA". This change would also create an unnecessarily deep directory tree, because each of the directories named has subdirectories and sub-subdirectories. No change.

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\*\*\*\*\* Test Ingestion \*\*\*\*\*

(5a) DATASET.CAT

change line 9 to allow successful ingestion, (opening quote on same line as keyword. Same "problem" as we prev discussed.)

```
DATA_SET_NAME          =  
    "VG1/VG2 SR/UR RSS RESAMPLED RING OCCULTATION V1.0"
```

to

```
DATA_SET_NAME          = "  
    VG1/VG2 SR/UR RSS RESAMPLED RING OCCULTATION V1.0"
```

RESPONSE: These lines are now wrapped and should ingest properly.

(5b) DSCOLL.CAT  
same as above

RESPONSE: These lines are now wrapped and should ingest properly.

(5c) VOLDESC.CAT  
Needs VOLUME\_ONLINE object to be able to ingest. Modified and  
ingested.

RESPONSE: This is an internal PDS matter. We are glad to hear that the volume was successfully ingested.

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\*\*\*\*\* label verifier \*\*\*\*\*

AAREADME.TXT, ERRATA.TXT & VOLDESC.CAT

line 4, 4, 14 DATA\_SET\_ID = "VG1/VG2-SR/UR-RSS-4-OCC-V1.0"  
not a standard value

RESPONSE: Understood. To be rectified upon final ingest.

\CATALOG\VOLDESC.CAT

line 6, 7, & 14 not standard values, probably okay

line 23 INSTITUTION\_NAME = "AMES RESEARCH CENTER"  
should be  
INSTITUTION\_NAME = "NASA/AMES RESEARCH CENTER"

line 24 FACILITY\_NAME = "SPACE SCIENCE DIVISION"  
should be  
FACILITY\_NAME = "SPACE SCIENCE LABORATORY"

RESPONSE: Line 23 has been fixed. Line 24 has not, because "SPACE SCIENCE LABORATORY" is not correct. The correct FACILITY\_NAME is "SPACE SCIENCE DIVISION".

\CATALOG\DSCOLL.CAT

line 16 PRODUCER\_INSTITUTION\_NAME = "AMES RESEARCH CENTER"

PRODUCER\_INSTITUTION\_NAME is not a required or optional keyword of the DATA\_SET\_COLLECTION\_INFO object. Will need to be removed from file.

RESPONSE: Fixed.

\CATALOG\PERSON.CAT

line 14 & 42 change "AMES RESEARCH CENTER" to "NASA/AMES RESEARCH CENTER"

RESPONSE: Fixed.

line 71, 105, 304 change "RADIO SCIE" to "RS" or "RAD"???"  
"RADIO SCIE" is not a valid std value

RESPONSE: Changed to "RS"

line 219 "IBM THOMAS J. WATSON RESEARCH CENTER" not a valid std value

RESPONSE: This is correct and will need to be added to the standard value list.

line 274 change "STANDFORD UNIVERSITY" to "STANFORD UNIVERSITY"

RESPONSE: Fixed.

\DOCUMENT\RS\*S\_DOC.TXT, (where \* - 1, 2, 3, or 4)

line 8 PRODUCT\_TYPE = DOCUMENTATION  
not a valid std value

RESPONSE: To be added to the dictionary.

line 13 INSTRUMENT\_ID = RSSVG1S  
not a valid std value, maybe should be "RSS-VG1S" which is a valid std value

RESPONSE: Fixed.

line 17 START\_EARTH\_RECEIVED\_TIME not in data dictionary  
should be EARTH\_RECEIVED\_START\_TIME

RESPONSE: Fixed.

line 18 STOP\_EARTH\_RECEIVED\_TIME not in data dictionary  
should be EARTH\_RECEIVED\_STOP\_TIME

RESPONSE: Fixed.

\DOCUMENT\CALIB\SDATA\RS1C1S2.LBL, RS1C1S3.LBL, RS1C1X2.LBL, RS1C1X3.LBL, RS2C1S2.LBL, RS2C1S3.LBL, RS2C1X2.LBL, RS2C1X3.LBL, and others in directory

line 12 SAMPLING\_PARAMETER\_NAME = NOMINAL\_RADIUS  
not a valid std value

RESPONSE: To be added to the dictionary.

\S\_RINGS\CALIB\RS1C1S.LBL (and other label files in this directory)

line 10 PRODUCT\_TYPE = CALIBRATION\_MODEL  
not a valid std value

RESPONSE: Keyword deleted.

line 17           INSTRUMENT\_ID = RSSVG1SE  
                  not a valid std value, as above

RESPONSE: Keyword deleted.

line 29           OCCULTATION\_TYPE = RADIO  
                  not in data dictionary, not a valid keyword

RESPONSE: Keyword deleted.

line 45           TELESCOPE\_LONGITUDE = -355.75199  
                  invalid value, must be between +180 and -180

RESPONSE: Keyword deleted.

line 47           COORDINATE\_SYSTEM\_ID = (J2000,B1950)  
                  not valid std values

RESPONSE: Keyword deleted.

line 51           FEATURE\_NAME = "RING SYSTEM"  
                  not a valid std value

RESPONSE: Keyword deleted.

line 72           SAMPLING\_PARAMETER\_NAME = NOMINAL\_RING\_RADIUS  
                  not a valid std value

RESPONSE: To be added to the dictionary.

following keywords not in data dictionary

line 29           OCCULTATION\_TYPE  
line 52           REFERENCE\_TIME  
line 53           RING\_SEMIMAJOR\_AXIS  
line 54           RING\_ECCENTRICITY  
line 55           RING\_INCLINATION  
line 56           RING\_PERICENTER\_LONGITUDE  
line 57           RING\_ASCENDING\_NODE\_LONGITUDE  
line 58           PERICENTER\_PRECESSION\_RATE  
line 59           NODAL\_REGRESSION\_RATE  
line 60           RING\_RADIAL\_MODE  
line 61           RING\_RADIAL\_MODE\_AMPLITUDE  
line 62           RING\_RADIAL\_MODE\_PHASE  
line 63           RING\_RADIAL\_MODE\_FREQUENCY

RESPONSE: We are in the process of adding all of these.

\S\_RINGS\EASYDATA\KM000\_2\RS1P1S07.LBL (and other label files in this and like directories (\S\_RINGS\EASYDATA\\*\\*.LBL) The report for this subdirectory is 22079 lines. I did not look at every file or error, but most seem to be as detailed below. Will need to re-verify after the below changes are made.)

line 87           double quote needs to be removed on this line.  
                  (i.e. lines 86, 87, & 88) (or use single quotes)

                  values from the corresponding source data file,  
                  S\_RINGS/SORCDATA/"RS1S1B3.DAT", using program  
                  DOCUMENT/PROGRAMS/SEASY1.FOR."

                  should be

values from the corresponding source data file,  
S\_RINGS/SORCDATA/RS1S1B3.DAT, using program  
DOCUMENT/PROGRAMS/SEASY1.FOR."

line 163            need closing double quote for DESCRIPTION keyword value

same keyword problems as detailed above (not in dd)

RESPONSE: All of the above have been fixed.

\SOFTWARE\OAL\OALGUIDE.LBL

line 21            ADOBE\_PDF not a standard value, however "ADOBE PDF" is one  
                  however.

                  change DOCUMENT\_FORMAT = ADOBE\_PDF  
                  to DOCUMENT\_FORMAT = "ADOBE PDF"

RESPONSE: Fixed.

\U\_RINGS\CALIB\RU1C1X.LBL (and other label files in this directory)

line 10            PRODUCT\_TYPE = CALIBRATION\_MODEL  
                  not a valid std value

RESPONSE: To be added to the dictionary.

line 17            INSTRUMENT\_ID = RSSVG2UD  
                  not a valid std value (as above)

RESPONSE: Changed to "RSS-VG2U".

line 29            OCCULTATION\_TYPE = RADIO  
                  keyword not in data dictionary (as above)

line 30            FEATURE\_NAME = "RING SYSTEM"  
                  not a valid std value (as above)

line 43            SAMPLING\_PARAMETER\_NAME = NOMINAL\_RING\_RADIUS  
                  not a valid std value (as above)

RESPONSE: All of the above to be added to the dictionary.

\U\_RINGS\EASYDATA\KM00\_025\RU1P1X4E.LBL (and other label files in this  
subdirectory)

line 12            SOURCE\_PRODUCT\_ID = RU1D1X4E.TAB  
                  RU1D1X4E.TAB need to be in quotes (because the string

includes

                  a period). Change to:

                  SOURCE\_PRODUCT\_ID = "RU1D1X4E.TAB"

                  (Note: all label files in this subdirectory has this problem)

RESPONSE: All fixed.

line 163            need closing quote for DESCRIPTION keyword value

                  (Note: all label files in the \U\_RINGS\EASYDATA\ directory

have this problem - also in the \S\_RINGS\EASYDATA\ directory)

RESPONSE: All fixed.

same keyword problem as described above, not in data dictionary. Need to globally fix and re-validate volume.)

RESPONSE: Same responses as above.

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\*\*\*\*\* Table RECORD\_TYPE \*\*\*\*\*

Re: label files in \S\_RINGS\ and \U\_RINGS\ directories and subdirectories

Current data label files have

RECORD\_TYPE = STREAM

Label files in this directory and subdirectories refer to tables. The label files should describe the data files, not themselves. Tables are never "STREAM", they are of type "FIXED\_LENGTH". They need to be change to . . .

RECORD\_TYPE = FIXED\_LENGTH

for all data label files in these directories.

RESPONSE: All fixed.

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\*\*\*\*\* References \*\*\*\*\*

RESPONSE for all comments on REF.CAT: We have adopted the provided REF.CAT file, with minor further edits for formatting and line wrapping.

(4a) Per the Standards, PDS uses the AGU format for references. There are a whole bunch of errors in the REF.CAT file. It is easier and will take less time to just edit your REF.CAT than it will be to document all the errors. See the new REF.CAT attached.

However . . . do need clarification on the following:

(4b) ANDERSONETAL1987A

This reference is already in the data dictionary as ANDERSONETAL1987B.

Two differences between what is already ingested and what is on volume:

(1) Volume reference, "...Preliminary Results..."

Ingested reference, "...Results..." ("Preliminary" missing)

- (2) Volume reference, "...and 5 Principal..."  
Ingested reference, "...and Five Principal..."

Check title to see if "Preliminary" is in title and if "5" is a digit or spelled out.

(4c) ANDERSONETAL1987B

This reference is already in the data dictionary as ANDERSONETAL1987.

Two differenced between what is already ingested and what is on volume. Need to find out correct citation and ingest that one.

- (1) Authors are different between two citations, all names are there in both, but order is different.
- (2) Ingested reference has page numbers as "L141-L143" and volume reference has page numbers as "141-143". Which is correct?

Check order of author names and page numbers.

(4d) BIRDETAL1997

Reference in data dictionary is improperly formed, (i.e. words in title that should be capitalized are not). Volume reference is correct. Re-ingest.

(4e) BENNER1997, BURATTI1997, CUNNINGHAM1997, CUZZIETAL1984

In data dictionary and this volume as . . .

BENNER1997

"...in Encyclopedia of Planetary Sciences, J.H. Shirley and R.W. Fairbridge, editors, Chapman and Hall, London, 1997."

BURATTI1997

"...in Encyclopedia of Planetary Sciences (J.H. Shirley and R.W. Fairbridge, editors), London: Chapman and Hall, 1997."

CUNNINGHAM1997

"...in Encyclopedia of Planetary Sciences (J.H. Shirley and R.W. Fairbridge, editors), London: Chapman and Hall, 1997."

Changed to conform to AGU/PDS citation standards. See attached.

CUZZIETAL1984

As above, which is correct? (Editors in "()" and "pp.")

Data dictionary

"Cuzzi, J.N., J.J. Lissauer, L.W. Esposito, J.B. Holberg, E.A. Marouf, G.L. Tyler, and A. Boischot, Saturn's Rings: Properties and Processes, in Planetary Rings, R. Greenberg and A. Brahic, eds., University of Arizona Press, Tucson, 73-199, 1984."

This volume

"Cuzzi, J.N., J.J. Lissauer, L.W. Esposito, J.B. Holberg, E.A. Marouf, G.L. Tyler, and A. Boischot, Saturn's Rings: Properties and Processes, in Planetary Rings (R. Greenberg and A. Brahic, Eds.), University of Arizona Press, Tucson, pp. 73-199, 1984."

(4f) DSN810-5

Is there a publication date/year for this document?

(4g) ESHLEMANETAL1977

This volume has "G.S. Levy" as a co-author and the data dictionary reference does not have him/her as a co-author.

Should he be included?

(4h) ESHLEMANETAL1979A

This reference already in the data dictionary as ESHLEMANETAL1979.

(4i) ESHLEMANETAL1983

The proper words in title should be capitalized. They are not.

(4j) ESPOSITOETAL1983A

This reference already in data dictionary, and the reference on this volume does not have the title words capitalized. Fix so as not to "update" upon ingestion.

(4k) ESPOSITOETAL1991 and FRENCHETAL1991

Edited to conform to AGU/PDS citation standards. See attached.

(4l) FRENCHETAL1993

Last word in title not capitalized.

(4m) GRAPSETAL1995

Some words in title not capitalized. Fixed. See attached.

(4n) GRESHETAL1989



Data dictionary:

Gresh, D.L., E.A. Marouf, G.L. Tyler, P.A. Rosen, and R.A. Simpson, Voyager Radio Occultation by Uranus Rings - I. Observational Results, *Icarus*, 78, 131-168, 1989.

This volume:

Gresh, D.L., E.A. Marouf, G.L. Tyler, P.A. Rosen, and R.A. Simpson, Voyager Radio Occultation by Uranus' Rings I: Observational Results, *Icarus*, 78, 131-168, 1989.

Diff is "Uranus Rings - I." and "Uranus' Rings I:". Which is correct?

(4o) GURROLA1995

Edited to conform to AGU/PDS citation standards, (location of institution). See attached.

(4p) HUIETAL1991

Some words in title not capitalized. Fixed. See attached.

(4q) KRISHERETAL1990

Data dictionary reference different from reference on this volume. Title different as well as volume info. Which is correct?

Data dictionary reference:

Krisher, T.P., J.D. Anderson, and J.K. Campbell, Test of the Gravitational Redshift Effects at Saturn, *Physical Review Letters*, 64, No. 12, 1990.

This volume reference:

Krisher, T.P., J.D. Anderson, and J.K. Campbell, Test of the Gravitational Redshift Effect at Saturn, *Physical Review Letters*, 64, 1322-1325, 1990.

Two differences are: "Effects" and "Effect"  
and: "64, No. 12, 1990" and "64, 1322-1325, 1990"

(4r) LEVYETAL1981

Data dictionary author is "L.L. Tyler", this volume has "G.L. Tyler". Which is correct? (Note: LINDALETAL1981 and LINDALETAL1983 has "G. L. Tyler", so that one is probably correct. His name is coming up a lot. The data dictionary reference is "wrong".) Reingest.

Title word not capitalized on this volume, but is in data dictionary. Fixed. See attached.

(4s) LINDALETAL1981

Data dictionary has volume "86A", this volume has "86". Which is correct?

(4t) LINDALETAL1987

Data dictionary has "...Voyager 2 spacecraft, Journal..." this volume has "...Voyager 2, Journal...". Which is the correct title? If it does indeed include "spacecraft", it should be "Spacecraft".

(4u) LINDALETAL1990

Data dictionary does not capitalize words in title. The reference on this volume does. Injest this version to "fix" data dictionary.

(4v) MAROUF&TYLER1982

Reference on this volume does not have appropriate commas. Fixed. See attached.

(4w) MAROUFETAL1983

Titles different between data dictionary and this volume. Which is correct? (Note: reference pub, vol, pp., and year same.) If the title on this volume is correct name, appropriate words need to be capitalized. (Fixed, see attached.)

Data dictionary:

"Particle Size Distributions in Saturn's Rings at Wavelengths of 3.6 and 13 cm from Voyager 1 Radio Occultation"

This volume:

"On obtaining the forward phase functions of Saturn ring features from radio occultation observations"

(4x) MAROUF&TYLER1985

Data dictionary has:

"...Research, 5, No. 8, 117-120, 1985."

This volume has:

"...Research, 5, 117-120, 1985."

Which is correct? Isn't "5" the volume number?

(4y) ROSENETAL1991A and ROSENETAL1991B

Some words in title not capitalized. Fixed, see attached.

(4z) SIMPSONETAL1984

SIMPSONETAL1984 is already in the data dictionary, but the ref on this volume is completely different. Is this a new reference? If so, it needs to be renamed "SIMPSONETAL1984B".

(4aa) SIMPSONETAL1983B

Some words not capitalized in title. Fixed, see attached.

(4ab) TYLERETAL1981A

This is a new reference. TYLERETAL1981 already exists, (this volume has as TYLERETAL1981B.) This reference should be labeled, "TYLERETAL1981B". Fixed, see attached.

(4ac) TYLERETAL1981B

This reference is already in the data dictionary as "TYLERETAL1981". Renamed, see attached. There are two differences between the ref in the data dictionary and the one on this volume:

data dictionary has:

"...of Jupiteros Rings:..."

this volume has:

"...of Jupiter's Rings:..."

The ref on this new volume is correct, reingest. And...

data dictionary has:

"...Research, 86A, 8699-8703,..."

this volume has:

"...Research, 86, 8699-8703,..."

which is correct? Fix and reingest.

(4ad) TYLERETAL1983

Data dictionary has: "3.6 and13 cm" and this volume has "3.6 and 13 cm". Reference in data dictionary is incorrect, reingest with the reference from this volume.

(4ae) TYLERETAL1986

Data dictionary reference correct. The reference on this volume is missing a space. Fixed, see attached.

"Science, 233,79-84, 1986." changed to "Science, 233, 79-84, 1986."

(4af) ZEBKERETAL1983

Reference in data dictionary correct. Version on this volume does not have words in title capitalized. Fixed, see attached.

(4ag) ZEBKER&TYLER1984

Version of reference in data dictionary does not follow AGU/PDS standards. Version on this volume does not capitalize words in title. Fix and reingest.

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\*\*\*\*\* Spell check \*\*\*\*\*

root:\AAREADME.TXT

line 125                    significant  
line 156                    transmissivities ???  
line 184                    dscribing

RESPONSE: "transmissivities" is correct. Others, fixed.

\CATALOG\DATASET.CAT

multi lines            transmissivity ???

RESPONSE: "transmissivity" is correct.

\CATALOG\REF.CAT

line 361                ROSENETAL1991B  
                         "Marouf,and" should be "Marouf, and"

RESPONSE: Fixed.

\CATALOG\RS1SINST.CAT

line 435                ". . . one 64-m and and one 26-m . . ."  
                         shoud be  
                         ". . . one 64-m and one 26-m . . ."

RESPONSE: Fixed.

\CATALOG\RS2UINST.CAT

line 451                ". . . one 64-m and and one 26-m . . ."  
                         shoud be  
                         ". . . one 64-m and one 26-m . . ."

RESPONSE: Fixed.

line 572                ". . . were were 20 KHz . . ."

shoud be  
". . . were 20 KHz . . ."

RESPONSE: Fixed.

line 680 "Synthesizr"

RESPONSE: Fixed.

\CATALOG\SOFTWARE.CAT

line 99 ". . . tree (^STRUCTURE amd ^CATALOG . . ."  
"amd" should be "and"?

RESPONSE: Fixed.

\CATALOG\VG1HOST.CAT

line 222 PhotoPolarimiter (other docs have "Photopolarimeter",  
DSCOLL.CAT)

line 350 as above

RESPONSE: Fixed.

\CATALOG\VG2HOST.CAT

line 233 PhotoPolarimeter (other docs have "Photopolarimeter",  
DSCOLL.CAT"

line 364 as above

RESPONSE: Fixed.

\DOCUMENT\PDSDD.TXT

line 941 ". . . indentifies . . ."  
should be  
". . . identifies . . ."

RESPONSE: Fixed.

line 2021 ". . . the radres element . . ."??"

RESPONSE: Fixed.

\DOCUMENT\RS1S\_DOC.TXT

line 109 ". . . period of the the sinusoid . . ."  
remove one instance of "the"

RESPONSE: We are preserving a document as provided by the Voyager RSS team,  
so we do not wish change anything here, or in any of the other files  
RS\*S\_DOC.TXT.

line 514 "HalfWords" should be "Halfwords" or "halfwords"

\DOCUMENT\RS2S\_DOC.TXT

line 109 ". . . period of the the sinusoid . . ."  
remove one instance of "the"

line 513 "HalfWords" should be "Halfwords" or "halfwords"

\DOCUMENT\RS3S\_DOC.TXT

line 106           ". . . period of the the sinusoid . . ."  
remove one instance of "the"

line 476           "HalfWord" should be "Halfword" or "halfword"

line 510           "HalfWords" should be "Halfwords" or "halfwords"

\DOCUMENT\RS4S\_DOC.TXT

line 106           "... period of the the sinusiod . . ."  
should be  
". . . period of the sinusoid . . ."

line 476           "HalfWord", other places in doc have "Halfword"

line 510           "HalfWords", as above

\S\_RINGS\DATAINFO.TXT

four occurances of "subirectory" (subdirectory)

line 24           "subirectory" (subdirectory)

RESPONSE: Fixed.

\S\_RINGS\EDITDATA\DATAINFO.TXT

line 53           "diffractio" shoud be "diffraction"???

RESPONSE: Fixed.

\SOFTWARE\SOFTINFO.TXT           "Makefile", should be "makefile"???

RESPONSE: Fixed.

\SOFTWARE\OAL\L3GUIDE.TXT

line 3 "User's Guide", line 12 "users's guide". Change line 12

line 120           "e.g" should be "e.g."

RESPONSE: We are not the authors of this document and have not changed it.

\SOFTWARE\OAL\V13NOTES.TXT

line 22           "Makefile" should be "makefile"???

RESPONSE: We are not the authors of this document and have not changed it.

\SOFTWARE\OAL\EXAMPLES\README.TXT

line 2           "Makefile" should be "makefile"???

RESPONSE: We are not the authors of this document and have not changed it.

\SOFTWARE\PROFILE\AAREADME.TXT

line 14           "other indendent variable." should be

"other independent variable."???

RESPONSE: Fixed.

line 315 "coefficiencts" should be "coefficients"

RESPONSE: Fixed.

\U\_RINGS\DATAINFO.TXT

four occurances of "subirectory" (subdirectory)

RESPONSE: Fixed.

\U\_RINGS\EASYDATA\DATAINFO.TXT

five occurances of "subirectory" (subdirectory)

RESPONSE: Fixed.

\U\_RINGS\GEOMETRY\GEOMINFO.TXT

line 116 "inclinates"???

RESPONSE: Fixed ("inclinations").

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\*\*\*\*\* General questions (from Ron) \*\*\*\*\*

1. Are the VG1HOST and VG2HOST on this volume the latest available?

RESPONSE: Yes.

2. Has VG\_2801 been archived yet?

RESPONSE: Yes.

Content-Type: application/vnd.ms-pki.seccat;  
name="new\_REF.CAT"  
Content-Disposition: inline;  
filename="new\_REF.CAT"

Attachment converted: Data:new\_REF.CAT (????/----) (000332E1)