General Liens

**CRITICAL LIENS**

* leisa.cat
	+ Lines 103, 144, 171, etc.: Please include PDS reference id string (REFERENCE\_KEY\_ID value) for references included in the ref.cat file.
* mvic.cat
	+ Line 46: ”Integration” is misspelled
	+ Line 236: Please include PDS reference id string (REFERENCE\_KEY\_ID value) for references included in the reference catalog file.
* ref.cat
	+ Many of these references use “et al.”, but all authors should be listed where reasonable. [Note from Anne Raugh: I can’t find it written down, but I seem to remember that at some point the PDS Management Council decided that “reasonable” was a number like 6 or 8, and that for author lists longer than that you would list the first half dozen, followed by a notation like “and 127 others”.]
	+ Reference MCEWEN1991 needs a title and DOI, if one exists.
* IMAGE files
	+ Using QUBE keywords like CORE\_NULL in an IMAGE object is not usually a good idea. If you have “No Data” flag values in an IMAGE object, use one (or more) of the keywords MISSING\_CONSTANT, INVALID\_CONSTANT, NULL\_CONSTANT, or UNKNOWN\_CONSTANT to define flag values. You can define them the same way you define constants for QUBE core values (hex codes in MSB format), it’s just that image software is not likely to look for QUBE constants when attempting to display an IMAGE.

**ADDITIONAL LIENS**

* alice.cat
	+ The “required reading” list includes the “SOC Instrument Interface Control Document (ICD)” but does not indicate where this can be found.

[Note from A.Raugh: This would be a place to reference the new document set collection, if that seems reasonable in terms of timeline.]

* + Please add the REFERENCE\_KEY\_ID for STERNETAL2008 where that reference is cited in the text. [AR: This is already listed in ref.cat.]
	+ The acronym “HVPS” needs to be defined the first time it is used.
	+ The INSTRUMENT\_REFERENCE\_INFO object at the end of the file should be sorted to alphabetic order, if time permits.
* leisa.cat
	+ There is a “required reading” link to an article that is only available behind a pay wall. If possible, get permission to include a draft of the article in the archive. [AR: Typically, when a publisher gives us permission to do that, we say prominently that this is a pre-publication draft included by the kind permission of, blah blah blah, and then include the DOI of the final article.]
	+ Line 82: Spell out “SOC” the first time it is used.
	+ Line 92: Remove full stop (‘.’) at the end.
	+ Line 103: Add full stop at end (“See Reuter…”).
	+ Line 113: “f8.7beam” should be “f8.7 beam”.
	+ Line 114: “push-broom” should be hyphenated (compound adjective).
	+ Line 150: Spell out “JDSU”.
	+ Line 232: “algorithms” should be “algorithm”.
	+ Line 391 and 415: Remove full stop at end of line (consistency)
	+ Line 439: States “The details of the DARK\_SKY compression algorithm will not be covered here” should probably be followed by some sort of reference to a place where they are covered.
* lorri.cat
	+ The acronyms “ApID” and “APID”, if indeed they are the same, should be consistently capitalized. If they are not the same, one should be expunged. In addition, it/each should be define the first time it is used.
* mvic.cat
	+ Line 46: “Integration” is misspelled
	+ Line 48: “which height” should be “where height”.
	+ Line 78-79 (“FIELD OF VIEW”): Adjust awkward line break and lack of indenting on continued line.
	+ Line 200: Reviewer recommends “rewording the sentence”. [AR: I’m not sure why. It’s not heart-wrending prose, but I don’t think it’s confusing. Personally, I’d replace the first two sentences with something like this:

RALPH housekeeping data are included as part of the dataset. The housekeeping data comprise a long list of parameters, only a few of which are relevant for ensuring the validity of the data.

But if you want to make “data” singular, you’re on your own…]

* nh.cat
	+ Line 81: “km/h” would be preferable to “kmph”.
	+ The acronym “MET” should be defined the first time it is used.
* nhsc.cat
	+ Line 76: “low-light level” should be “low-light-level”. [Note from A. Raugh: This is technically correct, though it looks weird, because all three words comprise a compound adjective modifying “observations”.]
	+ Line 125: Missing full stop (‘.’) at the end of the paragraph.
* ref.cat
	+ Some references are missing DOIs. Please include them wherever possible.
	+ If possible, please make the reference format uniform: naming authors with either initials or names, but not mixed; always use page numbers in journals; etc. [AR: This is a “nice to have” item, and should probably be kicked up to the mission if all datasets are using the same, cumulative ref.cat file.]
	+ FOUNTAINETAL2008 is also behind a pay wall. See comment for similar situation in leisa.cat.
* rex.cat
	+ Typos noted (without location):
		- “predicable”
		- “redundanct”
		- “Inteface”
		- “the the sky”
		- “Sun in it’s aperture” [AR: “it’s” should be “its”]
		- “apropo” should be “apropos of”, and in a technical document should be replaced with “with respect to”
	+ Under “SPECIFICATIONS” is this line:

FREQUENCY RESOLUTION: 3E-13 (delta-f/f)

Is this resolution or stability?

* + There is a mention of the SOC\_INST\_ICD as being provided “with this data set”. Instrument catalog files should never assume they are in a context of any data set. This reference should be replaced with either a specific data set ID or the ID of the (pending) documentation set. [AR: You could also create a document/ directory in the affected data set and put a copy of the ICD in there, but that would be the least desirable option at this point as it just contributes to document copy proliferation.]
* QUBE files
	+ Consider using SPECTRAL\_QUBE instead of QUBE, to accommodate GDAL users. [AR: SPECTRAL\_QUBE is a generalization of QUBE. It may or may not make your life easier as you are re-generating things from ISIS3. If it does – great! If not, at least the ‘fix’ is simple for GDAL users, so it’s not tragic.]
* Data labels
	+ The following keywords are required in all mission data products:
		- START\_TIME
		- STOP\_TIME
		- SPACECRAFT\_CLOCK\_START\_COUNT
		- SPACECRAFT\_CLOCK\_STOP\_COUNT

[AR: At least some of these aren’t likely to be relevant. You may set these keywords to “N/A” if appropriate.]