**PDS Review (for May 15, 2018) of “International Halley Watch Near Nucleus Images of Comet Halley v2.0”**

**Reviewer: Nalin Samarasinha**

**Issues/comments related to various documentations:**

**1. Readme file aareadme.txt:**

Date stamp says ”2006” but I suspect it must be a later date since some corrections were done much later.

**2. orientation-time-scale-revs.asc file:**

**(a) Point #3 regarding comet tail direction** – In many images, comet tail is not seen (primarily due to the spatial scales involved); however, dust parabola can be seen in some continuum images. Therefore, the latter could also act as a diagnostic “feature”/“tool” to resolve the 180-deg ambiguity in orientation. A dust parabola is spatially distinct to a dust tail. I assume there was no mix-up between “dust tail” and “dust parabola” in the determinations trying resolve the ambiguity (no mention is being made on the dust parabola). A clarification is appropriate.

**(b) References to file extensions –** The references mention time-revisions.txt, revision-summary.txt, and known-issues.txt files but the file extensions are in fact .asc (rather than .txt). Please clarify or correct the file names.

**(c)** It is not clear how orientations for non-continuum images (gas species) were derived, especially as there were not many stars in them? Were you considering the orientation of continuum images from the same observatory for a given night? Even for the same observatory, the image orientations occasionally change.

**3. known-issues.asc file:**

Please list the file names in numerical order (as that would make it easier to follow).

**4. Relevant to content in filelist.tab file:**

Is it possible to include the relevant references (e.g., References to NNSN) from the IHW publication in electronic form? That would provide necessary supplementary information such as filter name abbreviations, filter information etc in an easily accessible way. Also, refer to reference.cat.

**5. Nomenclature for subdirectories under the directory data:**

It is buried in filelist.lbl file that each subdirectory contains images for a given year and month (identified by the subdirectory name). The user may have to dig to find this information. It is appropriate to have this information in a location such as in a readme file too.

**Image headers and keywords:**

1. I suggest that the definition for CROTA1 in the image header to be “position angle of sample axis in deg, N->E =90 deg” as the current “position angle of sample axis, N->E” is ambiguous. Also, the units are currently not given.
2. Is it correct to say all images, by definition, should have CROTA1=-90 and SENSE=T? If that is the case, then exceptions to this rule are AAT images. E.g., NNSN1640 has CROTA1=96. This could be in conflict with the sentence “Images with axes that are not orthogonal to north and east may have also been revised” found in orientation-time-scale-revs.asc file. As I understand, AAT is the only observatory, which consistently had images not orthogonal to north and east.
3. What is really SPEC-EVT key word? At least the ones I looked at are “T”.

**Image orientations:**

A random sample of images (including some of those which were known to had issues) was checked and no specific issues regarding the orientation were found. However, note that this is only a small percentage of the total dataset.