

## ISIS - UserTestPlan #4505

### mimap2isis - Import PDS formatted Kaguya MI MAP file to ISIS3 cube format

2016-11-01 11:00 AM - Tammy Becker

<b>Status:</b> Feedback	<b>Estimated time:</b> 0.00 hour
<b>Priority:</b> Normal	
<b>Assignee:</b> Robert Sucharski	
<b>Category:</b> Applications	
<b>Target version:</b> FY17 Sprint 3	
<b>Description</b> Mentor: Trent Hare  As part of the pixel offset issue (import/export)	
<b>Related issues:</b> Related to ISIS - Bug #2244: Pixel (Line/Sample) Projection Offset Issue <b>In Progress</b> Related to ISIS - Feature #2358: ISIS capability to work with Kaguya MI L3C5 ... <b>Feedback</b>	

#### History

##### #1 - 2016-11-01 11:01 AM - Tammy Becker

- Related to Bug #2244: Pixel (Line/Sample) Projection Offset Issue added

##### #2 - 2016-11-01 11:02 AM - Tammy Becker

- Related to Feature #2358: ISIS capability to work with Kaguya MI L3C5 data added

##### #3 - 2016-11-02 11:08 AM - Jason Laura

- Status changed from Acknowledged to New

##### #4 - 2016-11-02 12:01 PM - Jason Laura

- Story points set to 2

Similar testing to pds2isis test plan. Run the program and verify the output in the label. Trent will provide the correct values to test with.

##### #5 - 2016-11-02 12:01 PM - Jason Laura

- Status changed from New to Acknowledged

##### #6 - 2016-11-09 12:09 PM - Trent Hare

These are going to be preliminary numbers I'm not sure what the correct values should be!

(1) grab map projected Kaguya L35 data (please place in testing location):  
/usgs/shareall/TEMP/thare/MI\_L3C5\_9.9.16/MIA\_3C5\_03\_02024S140E3586SC.img

(2) A bug was just fix and not in stable so first set isis. This fix correctly adjusts the incorrect PDS SAMPLE\_PROJECTION\_OFFSET log into prog21 to run beta area  
\$ isis /work/projects/isis/latest/m02358/isis

(3) run conversion  
\$ mimap2isis from=MIA\_3C5\_03\_02024S140E3586SC.img to=MIA\_3C5\_03\_02024S140E3586SC\_mimap.cub setnullrange=yes nullmin=-30000 nullmax=-30000

(4) test ProjectionOffset X,Y using maplab (in typical ISIS latest area)  
maplab from=MIA\_3C5\_03\_02024S140E3586SC\_mimap.cub map=MIA\_3C5\_03\_02024S140E3586SC\_maplab.cub sample=0.5 line=0.5 coordinates=latlon lat=-13.73339844 lon=358.31103516

Now look at X,Y offsets in both ISIS cubes. They should be the same (but are not).

Just using the pure Simple Cylindrical map projections equation they should be

X = 10865191.07999640 (X = min\_lon \* PI/180.0 \* 1737400) where min\_lon = 358.3110352  
Y = -416442.65341059 (Y = max\_lat \* PI/180.0 \* 1737400) where max\_lat=-13.73339844

ISIS sets them to these values (mimap.cub)  
UpperLeftCornerX = -51207.65772 for a difference of 7.41497739  
UpperLeftCornerY = -416449.95948 for a difference of 7.50025059

ISIS is apparently also wrapping the the min longitude 358.3110352 (min\_Lon - 360) to -1.68896484 (which must be another issue in the label). Perhaps ISIS is running (min\_lon - 360) for Longitudes above 180? Anyway, using this the map projection equation would be:

X = -51215.07269739 (X = -1.68896484 PI/180.0 \* 1737400)

If ISIS is converting the Lons then it should be reflected in the ISIS output label. Currently they are still being reported as ~358 degrees.

Summary:  
X is wonky but seems correct but with a 1/2 pixel offset  
Y seems correct but but with a 1/2 pixel offset

So products in PDS standard are suppose to apply a PIXEL\_OFFSET by adding 0.5 pixels to get to the corner from the pixel center. For this label the offset should be 0.0.

**#7 - 2016-11-09 12:24 PM - Robert Sucharski**

- Assignee set to Robert Sucharski

**#8 - 2016-11-10 09:07 AM - Robert Sucharski**

- Status changed from Acknowledged to Assigned

**#9 - 2016-11-10 10:47 AM - Jason Laura**

- Target version changed from 3.5.0 (FY17 UserTestPlan Sprint #1) to FY17 Sprint 3

**#10 - 2016-11-10 10:53 AM - Jason Laura**

- Status changed from Assigned to Acknowledged

**#11 - 2016-11-15 11:21 AM - Robert Sucharski**

- Status changed from Acknowledged to In Progress

**#12 - 2016-11-21 01:58 PM - Robert Sucharski**

- Status changed from In Progress to Resolved

**#13 - 2016-11-23 11:27 AM - Marjorie Hahn**

- Status changed from Resolved to In Review

**#14 - 2016-11-30 04:53 PM - Marjorie Hahn**

- Status changed from In Review to Feedback

Looks good to me, I would just delete the "StepNumber=" field altogether and also note whether the test is currently passing or failing under "Pass/Fail".