

The southern terminus of the hydrology analysis error. Information explained in text box immediately to the north.

Hydrological analysis performed using SRTM satellite data does include a continous stream at this location. The map annotated map provided demonstrates the hydrological analysis differences between ASTER and SRTM data. The blue line on the annotated map is the area on our baseline map that the error occurs. This blue line, and lack of a red line, means that SRTM data determined that there is a flow at the location, but ASTER data did not.

According to hydrology analysis, this large flow suddenly ends at this location and then a large flow suddenly appears to the south (at other text box). However, satelittle imagery reveals that the river is actually continuous. A visual analysis of the source of data revealed that the entirety of the data involved in this error was acquired from the 3rd version of the joint US-Japan Global Digital Elevation Model project. A potential reason for this data is that the river occurs in the base of a valley with one slope slightly steeper in this area of error than before or after the area. It is possible the elevation gradiant of this physical feature may have been inaccurately measured - potentially with a higher elevation being recorded at the actual stream bed than is reality. This error could have manifested itself in my analysis when I determined the locations for water sinks, which would have then viewed the higher elevation than is reality as forcing the stream to come to an abrupt end and pool.

This large area of visual error is because this is a lake. This location could not be masked as nodata, as the ocean locations are, because this lake is not the lowest-elevation feature on the map and there are locations of land with the same elevation as the lake. I would not be able to mask the elevation of the lake without also masking land.

According to hydrological analysis, this stream abruptly ends here. This is the same stream as the error explained in the two text boxes to the right. The data of this area is from the Japan-US Global Digital Elevation Model version 3. the elevation of this area may have been inaccurately measured, even though it is a flat river valley and presumably not the most difficult of terrains to measure.

The stream recontinues here, but the analysis has the size of the stream at a smaller level than it is upstream (text box immediately to the right). This is because the input data does not recognize the presence of the stream between these two locations, and as far as the hydrological analysis data is concerned, these two disjointed ends belong to two entirely different water features. However, satelittle imagery demonstrates that these ends are indeed the same water feature. All data in this area of error is from the United States-Japan Global Digital Elevation model version three. This error may be a result of inaccurate elevation measurement which could portray the missing segment of the water feature as a high elevation than upstream.

This stream suddenly comes to an end here and recontinues at the text box immediately to the left.

