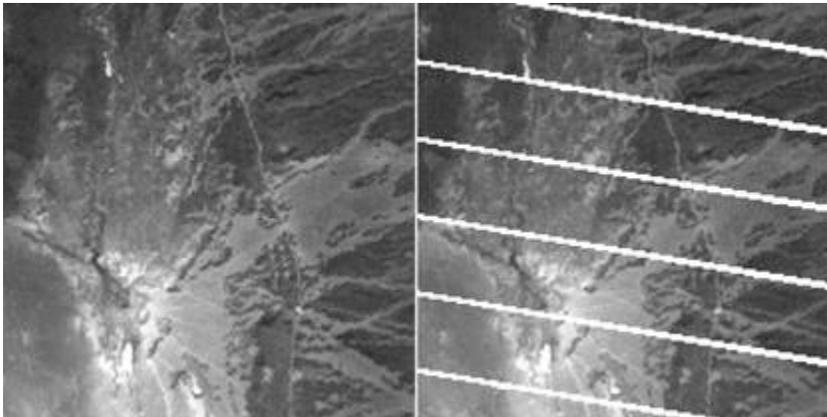


SLC Anomaly for Landsat

Some of the data in the 2005 epoch appears striped with data gaps, due to a problem with the Landsat 7. This problem is referred to as the Scan Line Corrector Anomaly.

Landsat forms its image with a small array of sensors that it sweeps back and forth across its path as it flies over the earth's surface. This whiskbroom style sensor has a mechanism known as a scan line corrector that keeps the whiskbroom aligned with the cross track motion of the satellite's ground track or path. On 31 May 2003 Landsat 7's scan line corrector failed.

Though the satellite has continued to collect imagery, the resulting images have gaps that look like lines across the image. The Figure illustrates what one of these images looks like. On the left is what the image should look like. On that right is the image with the scan line corrector anomaly. Though imperfect, the data that is present is still scientifically valid and useful. Because of the issues with Landsat 5 that is also aging, coupled with the effects of weather, Landsat 5 was unable to collect all the imagery needed for the 2005 epoch. As a result, the flawed Landsat 7 imagery was used to fill the gaps in the 2005 data set.



Though this imagery is defective in the sense that it has stripes or gaps, it is still useful for determining scientific information from that 2005 epoch and it is the official imagery for the Global Land Survey of that date.

For more information on this issue, the official report is:

Preliminary Assessment of the Value of Landsat 7 ETM+ Data Following Scan Line Corrector Malfunction

Including input from Scientists from the USGS, NASA, and the Landsat 7 Science Team
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