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## **The Landsat Image Mosaic of Antarctica**

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The first-ever true-color, high-resolution digital mosaic of Antarctica has been produced from nearly 1100 Landsat-7 ETM+ images. This project is an early 1999-2001 benchmark data set of the International Polar Year and represents a close and successful collaboration between NASA, USGS, the British Antarctic Survey and the National Science Foundation. The production of the mosaic required the development of new procedures for treating sensor saturation, adjusting for non-diffusive reflectance and for balancing color between images to remove distracting image edges. All adjustments were physically based to achieve the goal that each pixel's value is surface reflectance. This makes this mosaic more than just a pretty picture to guide users to individual scenes, but one where the mosaics can be used directly for quantitative research. The 15-m resolution, pan-sharpened mosaic, numerous derivative mosaics that enhance various ice sheet features, and the individual scenes are all served to the public via a web site hosted by the USGS. This site also enables on-line exploration of the various mosaics, including panning and zooming functions. Datasets can be customized by the user and downloaded. An associated web site, hosted by NASA, uses the mosaic as a means to demonstrate the value of satellite imagery of Antarctica. It is hoped this data set will enable the public and researcher alike a new and realistic view of the seventh continent.