

Hyperspectral Change Detection Dataset

This dataset can be used to perform change detection techniques in multitemporal hyperspectral images.

It includes two different hyperspectral scenes from the AVIRIS sensor:

- The **Santa Barbara** scene, taken on the years 2013 and 2014 with the AVIRIS sensor over the Santa Barbara region (California) whose spatial dimensions are 984 x 740 pixels and includes 224 spectral bands.
- The **Bay Area** scene, taken on the years 2013 and 2015 with the AVIRIS sensor surrounding the city of Patterson (California) whose spatial dimensions are 600 x 500 pixels and includes 224 spectral bands.

Dataset description

|| Santa Barbara || Bay Area || |---|---|---|---| | | **Absolute** | **Percentage** | **Absolute** | **Percentage** | **Changed Pixels** | 52134 | 7.16% | 38425 | 12.81% | **Unchanged Pixels** | 80418 | 11.04% | 34211 | 11.40% | **Unknown Pixels** | 595608 | 81.80% | 227364 | 75.79% | **Total** | 728160 | 100.00% | 300000 | 100.00% |

It also includes a hyperspectral scene from the HYPERION sensor:

- The **Hermiston city** scene, taken on the years 2004 and 2007 with the HYPERION sensor over the Hermiston City area (Oregon) whose spatial dimensions are 390 x 200 pixels and includes 242 spectral bands. 5 types of changes related with crop transitions are identified in this scene.

Dataset description

Hermiston City

Class of change	Number of samples
Type 1	5558
Type 2	1331
Type 3	79
Type 4	1557
Type 5	1461
Total	9986

The format and dimensions of the files can be checked in the readme file of each scene.

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You can use this dataset on your publication. When including a link to this dataset, please use this page instead of linking the file directly.

INFORMACIÓN

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Licenza

DESCARGAR

-  Repositorio Gitlab
-  Descargar de Gitlab

PUBLICACIONES

- Stacked autoencoders for multiclass change detection in hyperspectral images*
International Geoscience and Remote Sensing Symposium IGARSS 2018, 2018
- GPU Framework for Change Detection in Multitemporal Hyperspectral Images*
10th International Symposium on High-Level Parallel Programming and Applications, 2017