**Supplement S1**

**S-1.1 Hardware S1 File**

All image processing was completed on the SeaWulf cluster at the Institute for Advanced Computational Science (Stony Brook University, Stony Brook, NY), using GPU nodes equipped with Nvidia K80 GPUs @ 2.91 DP Teraflops. Other CUDA-enabled GPUs would also be sufficient.

**S-1.2 Python Packages S1 Table**

The code requires a variety of packages for Python 3:

|  |  |
| --- | --- |
| Package | version |
| Conda | 4.5.8 |
| Dominate | 2.3.1 |
| Pillow | 5.1.0 |
| Scikit-image | 0.14.0 |
| Scikit-learn | 0.19.1 |
| Scipy | 1.10 |
| Torch | 0.4.0 |
| Torchfile | 0.1.0 |
| Torchvision | 0.2.1 |

**S-1.3 Satellite Imagery S2 Table**

We acquired imagery from Digital Globe’s WorldView-3 sensor via the Digital Globe Foundation.

See <https://discover.digitalglobe.com/> for details on individual scenes and a preview.

|  |  |  |
| --- | --- | --- |
| **Scene ID** | **Location** | **Date** |
| 1040010003121A00 | Peninsula Valdes, Argentina | 14 Oct. 2014 |
| 1040010029924200 | Maui, Hawaii, USA | 13 Feb. 2013 |