## I. Title

Airborne hyperspectral image data of Heron Reef, Australia at 1 meter spatial resolution acquired on 1st and 3rd of July 2002.

## II. Authors

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## III. Description: Abstract and/or further details describing the data

This airborne hyperspectral (19 bands) image data of Heron Reef, Great Barrier Reef, Australia is derived from Compact Airborne Spectrographic Imager (CASI) data acquired on 1st and 3rd of July 2002, latitude -23.45, longitude 151.92. Processing and correction to at-surface data was completed by Karen Joyce (Joyce, 2004). Raw imagery consisted of number of images corresponding to the number of flight paths taken to cover the entire Heron Reef. Spatial resolution is one meter. Radiometric corrections converted the at-sensor digital number values to at surface spectral radiance values using sensor specific calibration coefficients and CSIRO's c-WomBat-c atmospheric correction software. Geometric corrections were done using field collected coordinates of features identified in the image. Projection used was Universal Transverse Mercator Zone 56 South and Datum used was WGS 84. Image data is in TIFF format.

Funding for the data acquisition and field work was provided through a University of Queensland Small Research Grant (2000) "Multi-scale Remote Sensing Approaches for Monitoring and Managing Coral Reefs " to Dr. Stuart Phinn, Dr. David Neil and Dr. William Dennison. Dr's. Arnold Dekker and Vittorio Brando from CSIRO provided advice to guide the image acquisition and processing sequences.

**Image Acquisition date:** 1st and 3rd of July 2002
**Pixel values:** At surface radiance depth corrected
**Projection & Datum**: Universal Transverse Mercator Zone 56 South WGS 84
**Pixel Size:** 1 meter

| Band number | Centre Wavelength | Band-width | Min Wavelength | Max Wavelength |
|---|---|---|---|---|
| 1 | 439 | 20.6 | 428.7 | 449.3 |
| 2 | 459.4 | 20.7 | 449.05 | 469.75 |
| 3 | 478.8 | 18.9 | 469.35 | 488.25 |
| 4 | 498.4 | 20.8 | 488 | 508.8 |
| 5 | 516.1 | 15.3 | 508.45 | 523.75 |
| 6 | 531.1 | 15.3 | 523.45 | 538.75 |
| 7 | 547.1 | 17.2 | 538.5 | 555.7 |

| | | | | |
|---|---|---|---|---|
| 8 | 564 | 9.7 | 559.15 | 568.85 |
| 9 | 574.4 | 11.6 | 568.6 | 580.2 |
| 10 | 596 | 9.8 | 591.1 | 600.9 |
| 11 | 610 | 9.8 | 605.1 | 614.9 |
| 12 | 624.5 | 9.8 | 619.6 | 629.4 |
| 13 | 643.5 | 9.8 | 638.6 | 648.4 |
| 14 | 661 | 11.7 | 655.15 | 666.85 |
| 15 | 675 | 9.8 | 670.1 | 679.9 |
| 16 | 690 | 9.8 | 685.1 | 694.9 |
| 17 | 705 | 7.9 | 701.05 | 708.95 |
| 18 | 732.4 | 8 | 728.4 | 736.4 |
| 19 | 778.5 | 15.7 | 770.65 | 786.35 |

## IV. Related Articles and Data Sets


HEDLEY, J., ROELFSEMA, C. & PHINN, S. R. (2009) Efficient radiative transfer model inversion for remote sensing applications. *Remote Sensing of Environment,* 113**,** 2527-2532. DOI: 10.1016/j.rse.2009.07.008

HEDLEY, J., ROELFSEMA, C. AND PHINN, S.R (2012) Bathymetric map of Heron Reef, Australia, derived from airborne hyperspectral data at 1 m resolution. *Pangaea*. DOI:10.1594/PANGAEA.779522

HEDLEY, J., ROELFSEMA, C., PHINN , S.R AND MUMBY, P.J. (2012) Environmental and Sensor Limitations in Optical Remote Sensing of Coral Reefs: Implications for monitoring and sensor design , *Remote Sensing*, DOI:10.3390/rs4010271.

JOYCE, K. E. (2004) A method for mapping live coral cover using remote sensing *School of Geography, Planning and Architecture.* Brisbane, The University of Queensland

JOYCE, K., PHINN, S., SCARTH AND ROELFSEMA, C. (2003) Method For Determining Live Coral Cover Using Remote Sensing. In: *Proceedings of the 30th International Symposium on Remote Sensing of Environment*, Honolulu Sheraton Hawai'i, November 10-14

LEIPER, I., PHINN, S. & DEKKER, A. G. (2012) Spectral reflectance of coral reef benthos and substrate assemblages on Heron Reef, Australia. *International Journal of Remote Sensing,* 33**,** 3946-3965. DOI: 10.1080/01431161.2011.637675

PHINN, S., JOYCE, K. & ROELFSEMA, C. (2012) Airborne hyperspectral image data of Heron Reef, Australia. *Pangaea*. DOI:10.1594/PANGAEA.788686

SCOPÉLITIS, J., ANDRÉFOUËT, S., PHINN, S., DONE, T. & CHABANET, P. (2011) Coral colonisation of a shallow reef flat in response to rising sea level: quantification from 35 years of remote sensing data at Heron Island, Australia. *Coral Reefs,* 30**,** 951-965. DOI: 10.1007/s00338-011-0774-y