

Benthic photosynthetically active radiation (bPAR or benthic PAR) at Yongala, Myrmidon, Palm Passage and Heron Island South, April 2016 to November 2017 (NESP 2.3.1, AIMS and IMOS)



[Metadata](#) | [Metadata \(XML\)](#)

Title	Benthic photosynthetically active radiation (bPAR or benthic PAR) at Yongala, Myrmidon, Palm Passage and Heron Island South, April 2016 to November 2017 (NESP 2.3.1, AIMS and IMOS)
Date	
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Abstract	<p>This dataset contains benthic photosynthetically active radiation (PAR; bPAR) at the Q-IMOS Myrmidon, Palm Passage and Heron Island South mooring stations from May 2016 through to November 2017.</p> <p>**This dataset is currently under embargo until 31-Dec-2019.</p> <p>This dataset was collected to provide in situ reference data for calibration/validation of a remote sensing ocean color model to estimate bPAR (benthic photosynthetically active radiation) as part of NESP Tropical Water Quality Hub project 2.3.1. The mooring is maintained as part of the Queensland IMOS (Q-IMOS) mooring network, which collects oceanographic and water quality data at several stations. bPAR sensors were installed at four stations: Myrmidon (MYD), Palm Passage (PPS), Heron Island South (HIS) and Yongala (YGL).</p> <p>Methods:</p> <p>A WETLabs Environmental Characterization Optics (ECO) PARSB sensor was deployed and clamp-mounted to a permanent mooring wire at a fixed depth within the water column in each of three mooring sites, Myrmidon (MYD), Palm Passage (PPS), and Heron Island South (HIS). Each PAR sensor was programmed to collect 5-second blocks of data every 15 minutes. At the fourth site, Yongala (YGL), a SEABIRD SBE16PLUS V2 SEACAT profiler with PARSB auxiliary sensor “facing” upward was deployed 0.5 m above the bottom substrate.</p> <p>After each period of deployment, data were downloaded and the instrument’s optical component was checked, characterized and tested to ensure the quality and validity of the data between deployments. For each recovery period, the data were analysed and quality controlled such that: (i) data records in the beginning and end of each deployment were excluded to ensure that only stable PAR measurements were included in the analysis, (ii) data points when instrument failure was experienced due to instrument’s internal battery power problems were also excluded. Night-time values were forced to zero by applying an offset based on the dark count readings of the sensor for each deployment period.</p> <p>Table 1. Summary of mooring stations and in situ data collection</p> <table border="1"> <thead> <tr> <th>Mooring station</th> <th>Latitude (°S)</th> <th>Longitude (°E)</th> <th>Region</th> <th>Nominal station</th> <th>Depth</th> <th>Deployment start</th> </tr> </thead> </table>	Mooring station	Latitude (°S)	Longitude (°E)	Region	Nominal station	Depth	Deployment start
Mooring station	Latitude (°S)	Longitude (°E)	Region	Nominal station	Depth	Deployment start		

YGL -19.302 147.621 Shallow inshore, seasonally turbid 30m 19 Sep 2015
PPS -18.308 147.167 Deep, outer shelf, clear oceanic 70m 28 May 2016
MYD -18.220 147.344 Deep, shelf edge, clear oceanic 192m 25 May 2016
HIS -23.513 151.955 Shallow inshore, intermediate 46m 03 Apr 2016

Data Dictionary:

- bPAR: benthic photosynthetically available radiation
- bPARoffset: offset (i.e., night time dark readings) corrected bPAR values

Metadata language eng

Character set UTF8

Hierarchy level Dataset

OnLine resource

Linkage <https://eatlas.org.au/data/uuid/bdd23f22-5ccd-438f-ad31-9add487c43c9>

Protocol WWW:LINK-1.0-http--metadata-URL

Linkage <https://apps.aims.gov.au/metadata/view/2005f12d-86da-41a4-90c5-4352b682ca2a>

Protocol WWW:LINK-1.0-http--link

Linkage <https://eatlas.org.au/nesp-twq-2/benthic-light-2-3-1>

Protocol WWW:LINK-1.0-http--related

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Topic category Biota

Extent

Description Yongala

Description Palm Passage

Description Myrmidion

Description Heron Island South

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