

Metadata for Tidal Data Exchange

Station Name **Rarotonga, Cook Islands**

Date of Supply Monday, 15 September 2025

Identification		
Station Number	BoM=200855 ATT=65980 WMO=91844	
Name	Rarotonga, Cook Islands	
Latitude and Estimated Positional Uncertainty	-21.204753	+/- 3m
Longitude and Estimated Positional Uncertainty	-159.785296	+/- 3m
Map Name	N/A	
Map Number	N/A	
Map Grid Northing	N/A	
Map Grid Easting	N/A	
Type of Readings		
Heights	Observations	
Progress *	See comments section.	
Update Frequency *	Real Time	
Available Format Type *	DIGITAL, text	
Measurement Units		
Tidal Heights	metres	
Reference Frame		
Time Zone	UTC	
Vertical Reference Frame	Tide Gauge Zero (m)	
TGBM Name/Number	BM27	
TGBM Elevation relative to the vertical reference	5.370 m TGZ (2012)	
Estimated Positional Uncertainty	+/- 2mm	
Horizontal Reference Frame Direction of Stream Readings Depth of Stream Readings (relative to Vertical Reference Frame) Estimated Positional Uncertainty	World Geodetic System 1984 (WGS84)	
Search Words *	Marine, Oceanography, Water, Rarotonga, Cook Islands	
Data Owner Details		
Name	Bureau of Meteorology	
Postal Address	GPO Box 1289, Melbourne VIC 3001	
Street Address	700 Collins Street, Docklands, VIC 3008	
Telephone		
Facsimile		
Email	tides@bom.gov.au	
Internet	www.bom.gov.au	
Contact Officer Details		
Name	Marine and Antarctic, Environmental Prediction Services	
Position	Tidal Services	
Telephone		
Email	tides@bom.gov.au	
Data Custodian Details		
Name	Bureau of Meteorology	
Postal Address	GPO Box 1289, Melbourne VIC 3001	
Street Address	700 Collins Street, Docklands, VIC 3008	
Telephone		

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Facsimile	
Email	tides@bom.gov.au
Internet	www.bom.gov.au
Contact Officer Details	
Name	Marine and Antarctic, Environmental Prediction Services
Position	Tidal Services
Telephone	
Email	tides@bom.gov.au
Details of the Readings Provided Herewith	
Date of readings supplied	
From	2/19/1993
To	Current
The time interval between readings (If the readings are for high & low water then enter "Zero")	1-minute (average of 60, 1-second samples) 6-minutes (weighted average of 4, 1-minute readings) Hourly (filtered with a cut-off of 2 hours)
Are the readings averaged or filtered	See above. 1-minute samples are logged at the end of each minute, 6-minute centred on 0.1-hour increments
Are there any access constraints (such as commercial-in-confidence or constraint on the use or distribution to third parties).	No
Objective Quality Assessment of Tidal Observations (Height or Stream)	
Instrument	
Type	Digital data logger
Model	Sutron 9000 (1993-2012)/Telmet 320 RTU (2012-current)
Sensor	
Type	Acoustic-in-air sensor
Model	Aquatrak® Transducer
Frequency of System Calibrations	
Field calibration and Laboratory calibration	every 2 years every 2 years
Frequency of Water Level Checks	
Estimate of the Precision of the Water Level Checks	
Time (Std Dev in Minutes)	1mm +/-
Height (Std Dev in metres)	
System Resolution	
Estimated Local Uncertainty	
Status of the Readings	
Description of the validation process including a statement detailing how:	
1. The instrumental biases were treated	Standard deviations
2. Outliers were selected and dealt with	Reported
3. Breaks in the record were dealt with	Recovered where possible
Date of Validation	Checked each month, for previous month
Name of Person certifying the validation	Tidal Services
Details required with the supply of tidal constituent constants	
All of the details required above	
The name and version of the software used to calculate the constants	Tans

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The tidal constituent model used (particularly noting the treatment of the constituents Sa and Ssa) and specifying any related (inferred) constituent constants	Doodson's method
The date span used to prepare the constituent constants	1993-2023 (for 2026)
The reference time zone for the constituents	Local (+1000)
The vertical datum to which the constituents apply	TGZ
A precision estimate of predictions based on the constituent constants (for example, standard deviation of the analysis residuals)	Standard Deviation is 0.0783
Additional details required with the supply of tidal predictions	
All of the details required above	
A statement describing the tidal prediction process used	Doodson's method
The name and version of the software used to calculate the predictions	Tipp5
A list of the constituent constants used or if the list is not provided, the donor agency's identifier of the list	Standard 112 Constituent list

Comments on data by Port Authority

- Pacific Sea Level and Geodetic Monitoring (PSLGM)
- Climate and Ocean Support Program for the Pacific (COSPPac)