

# Package ‘rtide’

May 9, 2026

**Title** Tide Heights

**Version** 0.0.11

**Description** Calculates tide heights based on tide station harmonics. It includes the harmonics data for 637 US stations. The harmonics data was converted from <https://github.com/poissonconsulting/rtide/blob/main/data-raw/harmonics-dwf-20151227-free.tar.bz2>, NOAA web site data processed by David Flater for 'XTide'. The code to calculate tide heights from the harmonics is based on 'XTide'.

**License** GPL-3

**URL** <https://github.com/millerlp/rtide>

**BugReports** <https://github.com/millerlp/rtide/issues>

**Depends** R (>= 4.0)

**Imports** abind, chk, dttr2, tibble, utils

**Suggests** covr, ggplot2, scales, spelling, testthat (>= 3.0.0)

**Config/testthat/edition** 3

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.3.2

**Language** en-US

**NeedsCompilation** no

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**Repository** CRAN

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brandywine	<i>Brandywine Tide Height Data</i>
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### Description

High/Low Tide Predictions from [https://tidesandcurrents.noaa.gov/tide\\_predictions.html](https://tidesandcurrents.noaa.gov/tide_predictions.html).

### Usage

brandywine

### Format

A tbl data frame:

**Station** The station name (chr).

**DateTime** The date time (time).

**MLLW** The tide height in m (dbl).

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harmonics	<i>Harmonics</i>
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### Description

A object of class tide\_harmonics providing tidal harmonic data for US stations.

### Usage

harmonics

**Format**

An object of class tide\_harmonics of length 4.

**Details**

Converted from harmonics-dwf-20151227-free, NOAA web site data processed by David Flater for XTide.

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is.tide\_harmonics      *Is tide\_harmonics*

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**Description**

Tests if object inherits from class tide\_harmonics.

**Usage**

```
is.tide_harmonics(x)
```

**Arguments**

x                      The object to test.

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monterey                *Monterey Tide Height Data*

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**Description**

High/Low Tide Predictions from [https://tidesandcurrents.noaa.gov/tide\\_predictions.html](https://tidesandcurrents.noaa.gov/tide_predictions.html).

**Usage**

```
monterey
```

**Format**

A tbl data frame:

**Station** The station name (chr).

**DateTime** The date time (time).

**MLLW** The tide height in m (dbl).

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tide_datetimes	<i>Tide Date Times</i>
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**Description**

Generates sequence of date times.

**Usage**

```
tide_datetimes(
  minutes = 60L,
  from = as.Date("2015-01-01"),
  to = as.Date("2015-12-31"),
  tz = "America/Los_Angeles"
)
```

**Arguments**

minutes	An integer of the number of minutes between tide heights
from	A Date of the start of the period of interest
to	A Date of the end of the period of interest
tz	A string of the time zone.

**Value**

A POSIXct vector.

**Examples**

```
tide_datetimes()
```

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tide_height	<i>Tide Height</i>
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**Description**

Calculates tide height at specified stations based on the supplied harmonics object.

**Usage**

```
tide_height(
  stations = "Monterey Harbor",
  minutes = 60L,
  from = as.Date("2015-01-01"),
  to = as.Date("2015-01-01"),
  tz = "UTC",
  harmonics = rtide::harmonics
)
```

**Arguments**

stations	A character vector of stations to match - treated as regular expressions.
minutes	An integer of the number of minutes between tide heights
from	A Date of the start of the period of interest
to	A Date of the end of the period of interest
tz	A string of the time zone.
harmonics	The harmonics object.

**Value**

A data frame of the tide heights in m by the number of minutes for each station from from to to.

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tide_height_data	<i>Tide Height Data</i>
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**Description**

Calculates tide height at specified stations at particular date times based on the supplied harmonics object.

**Usage**

```
tide_height_data(data, harmonics = rtide::harmonics)
```

**Arguments**

data	A data frame with the columns Station and DateTime.
harmonics	The harmonics object.

**Value**

A data frame of the tide heights in m.

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tide_slack_data	<i>Tide Slack Data</i>
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**Description**

Determines the closest slack tide for specified stations at particular date times based on the supplied harmonics object.

**Usage**

```
tide_slack_data(data, harmonics = rtide::harmonics)
```

**Arguments**

data	A data frame with the columns Station and DateTime.
harmonics	The harmonics object.

**Value**

A data frame of the slack tide date times and heights in m.

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tide_stations	<i>Tide Stations</i>
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**Description**

Gets vector of matching stations.

**Usage**

```
tide_stations(stations = ".*", harmonics = rtide::harmonics)
```

**Arguments**

stations	A character vector of stations to match - treated as regular expressions.
harmonics	The harmonics object.

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