Package ‘wrspathrow’

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Title Functions for working with Worldwide Reference System (WRS)
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Depends R (>= 2.10.0), methods
Imports wrspathrowData, sp, raster, rgeos, rgdal
Description Contains functions for working with the Worldwide Reference System
(WRS) 1 and 2 systems used by NASA. WRS-1 applies to Landsat 1-3, WRS-2
applies to Landsat 4-8. The package has functions for retrieving a given
path and row as a polygon, and for retrieving the path(s) and row(s)
containing a given raster or vector.
License GPL (>= 3)
URL https://github.com/azvoleff/wrspathrow
BugReports https://github.com/azvoleff/teamr/wrspathrow
LazyData true
Author Alex Zvoleff [aut, cre]
NeedsCompilation no
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R topics documented:

pathrow_num .......................................................... 2
pathrow_poly .......................................................... 3
test_poly .............................................................. 3
wrs1_asc_desc ......................................................... 4
wrs2_asc_desc ......................................................... 4
wrspathrow ............................................................ 4

Index 5
**pathrow_num**

*Get WRS-2 path/row numbers for a given spatial object*

### Description

Get WRS-2 path/row numbers for a given spatial object

### Usage

```r
pathrow_num(x, wrs_type = "2", wrs_mode = "D", as_polys = FALSE)
```

#### S4 method for signature 'Raster'

```r
pathrow_num(x, wrs_type, wrs_mode, as_polys)
```

#### S4 method for signature 'Spatial'

```r
pathrow_num(x, wrs_type, wrs_mode, as_polys)
```

### Arguments

- **x**: a spatial object
- **wrs_type**: 1 (for WRS-1) or 2 (for WRS-2)
- **wrs_mode**: either 'D' for descending (daytime) or 'A' for ascending
- **as_polys**: if FALSE (default) return a data.frame. If TRUE, return a `SpatialPolygonsDataFrame`.

### Value

data.frame with path and row as integers, or, if as_polys=TRUE, a `SpatialPolygonsDataFrame`

### Examples

```r
## Not run:
library(sp)

pathrow_num(test_poly)

x <- pathrow_num(test_poly, as_polys=TRUE)
plot(x)
plot(test_poly, add=TRUE, lty=2, col="#00ff0050")
text(coordinates(x), labels=paste(x$PATH, x$ROW, sep=' ', '))

## End(Not run)
```
pathrow_poly

Description
Get a polygon giving area of coverage of a given WRS-1 or WRS-2 path and row

Usage
pathrow_poly(wrs_path, wrs_row, wrs_type = "2", wrs_mode = "D")

Arguments
- `wrs_path`: WRS-1 or WRS-2 path as an integer
- `wrs_row`: WRS-1 or WRS-2 row as an integer
- `wrs_type`: 1 (for WRS-1) or 2 (for WRS-2)
- `wrs_mode`: either 'D' for descending (daytime) or 'A' for ascending (nighttime)

Value
list with path and row as integers

Examples
library(sp)

x <- pathrow_poly(225, 61)
plot(x)

test_poly

Description
Contains a SpatialPolygonsDataFrame with a simplified polygon of the area within the Tropical Ecology Assessment and Monitoring (TEAM) network site in Caxiuanã, Brazil.
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>See Also</th>
</tr>
</thead>
<tbody>
<tr>
<td>wrs1_asc_desc</td>
<td><em>Worldwide Reference System - 1 (WRS1)</em> SpatialPolygonsDataFrame</td>
<td>wrs2_asc_desc</td>
</tr>
<tr>
<td></td>
<td>Contains polygons of the area of each path and row for the ascending and</td>
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<td></td>
<td>descending nodes of the WRS1 system.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>wrs2_asc_desc</td>
<td><em>Worldwide Reference System - 2 (WRS2)</em> SpatialPolygonsDataFrame</td>
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<td></td>
<td>Contains polygons of the area of each path and row for the ascending and</td>
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<td></td>
<td>descending nodes of the WRS2 system.</td>
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<td>wrspathrow</td>
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<td>wrspathrow</td>
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<td></td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td></td>
<td>wrspathrow</td>
<td></td>
</tr>
</tbody>
</table>
Index

pathrow_num, 2
pathrow_num, Raster-method
  (pathrow_num), 2
pathrow_num, Spatial-method
  (pathrow_num), 2
pathrow_poly, 3

test_poly, 3

wrs1_asc_desc, 4
wrs2_asc_desc, 4
wrspathrow, 4
wrspathrow-package (wrspathrow), 4