

# R documentation

## of 'extractNightLights.Rd'

April 10, 2016

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extractNightLights	<i>Extract Night Lights data from regions in a shapefile</i>
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### Description

Extract NOAA night lights data for regions in a SpatialPolygonsDataFrame. For years with two different satellite readings, it first takes the average between the two years.

### Usage

```
extractNightLights(nl.dir = ".", shp, stats = c("sum"))
```

### Arguments

nl.dir	The directory the night lights data is stored in. Default is the current directory.
shp	The SpatialPolygonsDataFrame to extract data from.
stats	A vector of functions to apply to the data within each region, for example c("sum", "mean", "sd"). The default is "sum".

### Examples

```
require(nightlights)
require(rgdal)

# Get a shapefile to work with:
download.file("ftp://ftp2.census.gov/geo/tiger/TIGER2015/COUSUB/tl_2015_25_cousub.zip",
             destfile = "tl_2015_25_cousub.zip")
unzip("tl_2015_25_cousub.zip")
shp <- readOGR(".", "tl_2015_25_cousub")

# Directory where the night lights data are stored:
nl.dir <- "~/night-lights"
```

```
# By default, the function gets the sum of night lights within the regions:
nl.sums <- extractNightLights(nl.dir, shp)

# You can specify other statistics to get, e.g. the mean & standard deviation:
nl.mean.sd <- extractNightLights(nl.dir, shp, stats = c("mean", "sd"))
```

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