

Package ‘daRt’

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Type Package

Title Read DART Model Outputs

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Description For reading outputs from the Discrete Anisotropic Radiative Transfer (DART) model, formatted in a ``long" dplyr-ready format suitable for efficient analysis.

Github <https://github.com/willmorrison1/daRt>

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Encoding UTF-8

RoxygenNote 6.1.1

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accessors	<i>Access object information</i>
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Description

Generic functions to access information from the objects with classes defined in this package

Usage

```

product(x)

simname(x)

files(x)

bands(x)

iters(x)

variables(x)

variablesRB3D(x)

typeNums(x)

imageType(x)

imageNo(x)

```

Directions-class	<i>Directions data class</i>
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Description

Directions data class that extends [SimulationData-class](#) class.

getData	<i>Main function: get DART data</i>
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Description

Main function to get data from DART simulation outputs in a friendly 'long' data format that is part of an object that extends a [SimulationData-class](#) type object

Usage

```
getData(x, sF)
```

Arguments

x	simulation directory or directories (character) or SimulationFiles-class object
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getFiles	<i>Get DART output filenames</i>
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Description

Get DART output filenames

Usage

```
getFiles(x = "character", sF = "SimulationFilter")
```

Arguments

x	simulation directory or directories (character)
sF	SimulationFilter-class object

Images-class	<i>Images data class</i>
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Description

Image data class extends [SimulationData-class](#) class.

RB3D-class	<i>RB3D class</i>
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Description

RB3D (Radiative Budget 3D) class that extends [SimulationData-class](#) class.

SimulationData-class	<i>Generic SimulationData class</i>
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Description

Generic SimulationData class that extends to data classes for specific DART products

Slots

data data.frame.

See Also

[Images-class](#) [Directions-class](#) [RB3D-class](#)

SimulationFiles-class *SimulationFiles class*

Description

An S4 class to represent the files within a simulation or simulations. Created using the [getFiles](#) method. Specific files within the class are modified by the object with class [SimulationFilter-class](#)

Usage

```
simdir(x)
```

Slots

simulationFilter contains [SimulationFilter-class](#) object

files a data.frame, with each row describing the file

sequenceInfoList a list, with each list element showing the variable permutation(s) within this specific simulation sequence.

simulationFilter *Create [SimulationFilter](#) class*

Description

Function for creating the [SimulationFilter](#) class

Usage

```
simulationFilter(product = "character", ...)
```

Arguments

product One of "directions", "rb3D", "images".

...

See Also

[SimulationFilter-class](#)

`SimulationFilter-class`*SimulationFilter class.*

Description

SimulationFilter class.

Usage

```
product(x) <- value
```

```
iters(x) <- value
```

```
bands(x) <- value
```

```
variablesRB3D(x) <- value
```

```
variables(x) <- value
```

```
typeNums(x) <- value
```

```
imageType(x) <- value
```

```
imageNo(x) <- value
```

Slots

bands character.

variables character.

iters character.

variablesRB3D character.

typeNums character.

imageType character.

imageNo numeric.

product character.

See Also

[simulationFilter](#)

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