1.8.2 newsimhelper - Tool

Package synthesis
Module newsimulator

Tool to help newsimulator

Description
newsimhelper helps newsimulator by providing information such as antenna locations in a convenient form. newsimhelper usually need not be called directly.

Constructors

newsimhelper	Construct a newsimhelper tool

Functions

close	Close the newsimhelper tool
getallstations	Get all stations known to newsimhelper
getarray	Get a specific array
getarrays	Get all arrays known to newsimhelper
type	Return the type of this tool

newsimhelper - Constructor

Package synthesis
Module newsimulator
Tool newsimhelper

Construct a newsimhelper tool

Synopsis
newsimhelper(schedtable)

Description
This is used to construct newsimhelper tools. An optional argument is the name of a table containing the antenna locations drawn from Craig Walker's SCHED data file. Usually the table in the AIPS++ data repository (geodetic/SCHED_locations) is adequate and should be used (the default).

Arguments

schedtable	Table of antenna locations Allowed: Table Default: unset	

Returns
newsimhelper tool

Example

```
include 'newsimhelper.g';
- ns:=newsimhelper()
- ns.getarrays()
VLAA VLAB VLAC VLAD VLBA EVN ATCA6.0A ATCA6.0B ATCA6.0C ATCA6.0D
ATCA1.5A ATCA1.5B ATCA1.5C ATCA1.5D ATCA0.75A ATCA0.75B ATCA0.75C
ATCA0.75D ATCA0.375 ATCA0.210 ATCA0.122A ATCA0.122B ATCA0.244
- ns.getarray('ATCA0.244')
[names=ATCA_01 ATCA_03 ATCA_05 ATCA_07 ATCA_09 ATCA_37, diam=[22 22 22
22 22 22] , telescope=ATCA0point244, x=[-4.75245e+06 -4.75242e+06
-4.75239e+06 -4.75235e+06 -4.75232e+06 -4.7494e+06] , y=[2.79033e+06
2.79038e+06 2.79043e+06 2.79048e+06 2.79054e+06 2.7955e+06] ,
z=[-3.20049e+06 -3.20049e+06 -3.20049e+06 -3.20049e+06 -3.20049e+06
-3.20049e+06] , mount=alt-az alt-az alt-az alt-az alt-az alt-az,
offset=[0 0 0 0 0 0] ]
```

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newsimhelper.close - Function

Package	synthesis
Module	newsimulator
Tool	newsimhelper

Close the newsimhelper tool

Synopsis
close()

Description
This is used to close newsimhelper tools.

Returns
Bool

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newsimhelper.type - Function

Package	synthesis
Module	newsimulator
Tool	newsimhelper

Return the type of this tool

Synopsis
type()

Returns
String or fail

Description
This function returns the string 'newsimhelper'. It is used so that in a script, you can make sure this *Glish* variable is a newsimhelper tool.

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newsimhelper.getarrays - Function

Package	synthesis
Module	newsimulator
Tool	newsimhelper

Get all arrays known to newsimhelper

Synopsis
getarrays()

Description
newsimhelper contains definitions of various arrays. These are defined in terms of the names (the DBNAME column) in the SCHED_locations file located in the data repository geodetic area. The names currently known are:

VLAA VLAB VLAC VLAD VLBA EVN ATCA6.0A ATCA6.0B ATCA6.0C ATCA6.0D ATCA1.5A ATCA1.5B ATCA1.5C ATCA1.5D ATCA0.75A ATCA0.75B ATCA0.75C ATCA0.75D ATCA0.375 ATCA0.210 ATCA0.122A ATCA0.122B ATCA0.244

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newsimhelper.getarray - Function

Package	synthesis
Module	newsimulator
Tool	newsimhelper

Get a specific array

Synopsis
getarray(arrayname)

Description
newsimhelper contains definitions of various arrays. These are defined in terms of the names (the DBNAME column) in the SCHED_locations file located in the data repository geodetic area. The names currently known are:
VLAA VLAB VLAC VLAD VLBA EVN ATCA6.0A ATCA6.0B ATCA6.0C ATCA6.0D ATCA1.5A ATCA1.5B ATCA1.5C ATCA1.5D ATCA0.75A ATCA0.75B ATCA0.75C ATCA0.75D ATCA0.375 ATCA0.210 ATCA0.122A ATCA0.122B ATCA0.244
getarray returns a record containing the information in a format ready to be used in newsimulator.

Arguments

arrayname	Name of array Allowed String Default 'VLAD'

Returns
newsimhelper tool

Example

```
include 'newsimhelper.g';
- ns:=newsimhelper()
```

```
- ns.getarrays()
VLAA VLAB VLAC VLAD VLBA EVN ATCA6.0A ATCA6.0B ATCA6.0C ATCA6.0D
ATCA1.5A ATCA1.5B ATCA1.5C ATCA1.5D ATCA0.75A ATCA0.75B ATCA0.75C
ATCA0.75D ATCA0.375 ATCA0.210 ATCA0.122A ATCA0.122B ATCA0.244
- ns.getarray('ATCA0.244')
[names=ATCA_01 ATCA_03 ATCA_05 ATCA_07 ATCA_09 ATCA_37, diam=[22 22 22
22 22 22] , telescope=ATCA0point244, x=[-4.75245e+06 -4.75242e+06
-4.75239e+06 -4.75235e+06 -4.75232e+06 -4.7494e+06] , y=[2.79033e+06
2.79038e+06 2.79043e+06 2.79048e+06 2.79054e+06 2.7955e+06] ,
z=[-3.20049e+06 -3.20049e+06 -3.20049e+06 -3.20049e+06 -3.20049e+06
-3.20049e+06] , mount=alt-az alt-az alt-az alt-az alt-az alt-az,
offset=[0 0 0 0 0 0] ]
```

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newsimhelper.getallstations - Function

Package	synthesis
Module	newsimulator
Tool	newsimhelper

Get all stations known to newsimhelper

Synopsis
getallstations()

Description
newsimhelper contains definitions of various arrays. These are defined in terms of the names (the DBNAME column) in the SCHED_locations file located in the data repository geodetic area. The names currently known are:
VLAA VLAB VLAC VLAD VLBA EVN ATCA6.0A ATCA6.0B ATCA6.0C ATCA6.0D
ATCA1.5A ATCA1.5B ATCA1.5C ATCA1.5D ATCA0.75A ATCA0.75B ATCA0.75C
ATCA0.75D ATCA0.375 ATCA0.210 ATCA0.122A ATCA0.122B ATCA0.244
getallstations returns a string containing all station names known to newsimhelper.

Arguments

Returns
String

Example

```
include 'newsimhelper.g';
- ns:=newsimhelper()
- ns.getallstations()
ALGOPARK ARECIBO ATCA_01 ATCA_02 ATCA_03 ATCA_04 ATCA_05 ATCA_06
ATCA_07 ATCA_08 ATCA_09 ATCA_10 ATCA_104 ATCA_104 ATCA_11 ATCA_12
ATCA_13 ATCA_14 ATCA_15 ATCA_16 ATCA_17 ATCA_18 ATCA_19 ATCA_20
ATCA_21 ATCA_22 ATCA_23 ATCA_24 ATCA_25 ATCA_26 ATCA_27 ATCA_28
ATCA_29 ATCA_30 ATCA_31 ATCA_32 ATCA_33 ATCA_34 ATCA_35 ATCA_36
ATCA_37 AZORES BLKBUTTE BR-VLBA BREST CAMB32 CARNUSTY CHLBOLTN CRIMEA
DS14 DSS14 DSS15 DSS43 DSS45 DSS63 DSS65 EFLSBERG ELY FD-VLBA FORTLEZA
FORTORD FORTORDS GBANK_TS GBT GGAO7108 GILCREEK GO GOLDMARS GOLDS_TS
GOLDVENU GORF7102 GRASSE HALEAKAL HARTRAO HATCREEK HAYSTACK HN-VLBA
HOBART26 HOFN HOHENFRG HOHNBERG HRAS_085 JB_Mk_2 JODLMKI KALYAZIN
KARLBURG KASHIM34 KASHIMA KAUAI KOKEE KP-VLBA KP12 KWAJAL26 LA-VLBA
MADRD_TS MADRID64 MARCUS MARPOINT MATERA MEDICINA METSAHOV MIZNAO10
MK-VLBA MOJAVE12 MOPRA NL-VLBA NOBEY_6M NOTO NRAO140 NRAO20 NRAO85_1
NRAO85_3 NYALES20 OHIGGINS ONSALA60 ONSALA85 OV-VLBA OVRO_130 OVRO_MMA
PARKES PENTICTN PICOVEL PIETOWN PLATTVIL PRESIDIO PT_REYES RICHMOND
ROBLD_TS ROBLED32 SANTIA12 SC-VLBA SESHAN25 SEST SHANGHAI TDBIN_TS
TIDBIN64 TIGOCONC TIGOWTZL TORUN TOULOUSE TROMSONO TRYSILNO TSUKUBA
URUMQI USSURIYSK USUDA_64 USUDA_TS VLA VLA_E1 VLA_E10 VLA_E12 VLA_E14
VLA_E16 VLA_E18 VLA_E2 VLA_E20 VLA_E24 VLA_E28 VLA_E3 VLA_E32 VLA_E36
VLA_E4 VLA_E40 VLA_E48 VLA_E5 VLA_E56 VLA_E6 VLA_E64 VLA_E7 VLA_E72
VLA_E8 VLA_E9 VLA_MAS VLA_N1 VLA_N10 VLA_N12 VLA_N14 VLA_N16 VLA_N18
VLA_N2 VLA_N20 VLA_N24 VLA_N28 VLA_N3 VLA_N32 VLA_N36 VLA_N4 VLA_N40
VLA_N48 VLA_N5 VLA_N56 VLA_N6 VLA_N64 VLA_N7 VLA_N72 VLA_N8 VLA_N9
VLA_OUT VLA_W1 VLA_W10 VLA_W12 VLA_W14 VLA_W16 VLA_W18 VLA_W2 VLA_W20
VLA_W24 VLA_W28 VLA_W3 VLA_W32 VLA_W36 VLA_W4 VLA_W40 VLA_W48 VLA_W5
VLA_W56 VLA_W6 VLA_W64 VLA_W7 VLA_W72 VLA_W8 VLA_W9 VNDNBERG WB_RT0
WB_RT1 WB_RT2 WB_RT3 WB_RT4 WB_RT5 WB_RT6 WB_RT7 WB_RT8 WB_RT9 WB_Tied
WESTFORD WETTZELL YEBES YELLOWKN YLOW7296
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