

Command Reference: ReadNwsCard()

Read all time series from an National Weather Service CARD file

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The `ReadNwsCard()` command reads all the time series in a National Weather Service River Forecast System CARD file (see the **NWSCard Input Type Appendix**). This command can be used to read the following formats:

- Single time series format.
- Ensemble format file, such as generated by the National Weather Service ESPADP software. Each trace will be identified using the historical year for the start of the trace (as the TSID sequence number), and will be available as a time series for other commands.

The full time series identifier for each time series is set using location = station identifier, data source = blank, data type = data type, and data interval = data interval from file header (see also the `Read24HourAsDay` parameter below).

The following dialog is used to edit the command and illustrates the syntax for the command when reading a single time series.

Edit ReadNwsCard() Command

Read time series from an NWS Card format file, using information in the file to assign the identifier.
The file may contain one time series or be an ESP trace ensemble file (in NWS Card format) with multiple time series.
Specify an EnsembleID and name if processing an ensemble file to facilitate additional ensemble processing.
Specify a full path or relative path (relative to working directory) for a NWS Card file to read.
The working directory is: C:\Develop\TSTool_SourceBuild\TSTool\test\regression\UserManualExamples\TestCases\CommandReference\ReadNwsCard
If reading 24Hour data as Day and the input period is specified, specify hour 24 of the day or hour 0 of the following day.
Specifying the input period will limit data that are available for fill commands but can increase performance.
Specify date/times using an hour format (e.g., YYYY-MM-DD HH or MM/DD/YYYY HH, where HH is evenly divisible by the interval).
If not specified, the period defaults to the global input period (or all data if the global period is not specified).

NWS card file to read:

Alias to assign: Insert: Optional - use %L for location, etc. (default=no alias).

EnsembleID to assign: Required - if reading an ensemble file.

Ensemble name: Optional - if reading an ensemble file.

Units to convert to: Optional - default is units from file.

Read 24 hour as day: ☒ Optional - convert 24Hour interval to 1Day interval (default=False).

Input start: Optional - overrides the global input start.

Input end: Optional - overrides the global input end.

Command:

```
ReadNwsCard(Alias="03567500", InputFile="Data\03567500.CARD", NewUnits="CMSD", InputStart="1960-01-01 24", InputEnd="2000-12-31 24", Read24HourAsDay=True)
```

ReadNwsCard_SingleAlias

ReadNwsCard() Command Editor

The following dialog illustrates reading an ensemble file, assigning the alias to Location-DataType-Interval-TraceNumber.

Edit ReadNwsCard() Command

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 Specify an EnsembleID and name if processing an ensemble file to facilitate additional ensemble processing.
 Specify a full path or relative path (relative to working directory) for a NWS Card file to read.
 The working directory is: C:\Develop\TSTool_SourceBuild\TSTool\test\regression\UserManualExamples\TestCases\CommandReference\ReadNwsCard
 If reading 24Hour data as Day and the input period is specified, specify hour 24 of the day or hour 0 of the following day.
 Specifying the input period will limit data that are available for fill commands but can increase performance.
 Specify date/times using an hour format (e.g., YYYY-MM-DD HH or MM/DD/YYYY HH, where HH is evenly divisible by the interval).
 If not specified, the period defaults to the global input period (or all data if the global period is not specified).

NWS card file to read:

Alias to assign: Insert: Optional - use %L for location, etc. (default=no alias).

EnsembleID to assign: Required - if reading an ensemble file.

Ensemble name: Optional - if reading an ensemble file.

Units to convert to: Optional - default is units from file.

Read 24 hour as day: Optional - convert 24Hour interval to 1Day interval (default=False).

Input start: Optional - overrides the global input start.

Input end: Optional - overrides the global input end.

Command:

```
ReadNwsCard(Alias="%L-%T-%I-%z", InputFile="Data/TDAO3.QA.ESP", EnsembleID="Ensemble_TDAO3", NewUnits="CMS", Read24HourAsDay=True)
```

ReadNwsCard

ReadNwsCard() Command Editor

The command syntax is as follows:

```
ReadNwsCard(Parameter=Value,...)
```

The following older command syntax is updated to the above syntax when a command file is read:

```
TS Alias = ReadNwsCard(Parameter=Value,...)
```

Command Parameters

Parameter	Description	Default
InputFile	The name of the NWS Card input file to read, surrounded by double quotes to protect spaces and other special characters.	None – must be specified.
Alias	The alias to assign to the time series, as a literal string or using the special formatting characters listed by the command editor. The alias is a short identifier used by other commands to locate time series for processing, as an alternative to the time series identifier (TSID).	None – must be specified.
EnsembleID	Specify when reading an ensemble file to cause an ensemble object to be created, which can be referenced by other commands.	Do not create an ensemble object.
EnsembleName	The ensemble name corresponding to EnsembleID.	None.
NewUnits	The units to convert to after the read.	Do not convert the units.
Read24HourAsDay	If True, read 24Hour time series as if the data were Day interval. Because NWS Card format uses hours 1 to 24, treating as 24Hour results in values being saved at hour zero of the next day. Reading as Day interval causes the values to be stored without the shift.	False – read as hourly and shift data at hour 24 to zero of the next day.
InputStart	Not used with ensembles. The start of the period to read – specify if the read period should be different from the global query period. If Read24HourAsDay=True, specify the period using either hour 24 of the start day, or hour 0 of the next day. This parameter must be specified to hour precision with hour's aligning with the file's data.	Use the global input period or if not specified read all the data in the file.
InputEnd	Not used with ensembles. The end of the period to read – specify if the read period should be different from the global query period. If Read24HourAsDay=True, specify the period using either hour 24 of the start day, or hour 0 of the next day. This parameter must be specified to hour precision	Use the global input period or if not specified read all the data in the file.

The following command file reads a card file containing one time series, reading 24Hour data as Day:

```
ReadNwsCard(Alias="03567500", InputFile="Data\03567500.CARD",
  InputStart="1960-01-01 24", InputEnd="2005-12-31 24",
  Read24HourAsDay=True)
```

The following example command reads an ensemble file, converts the data (from CFS) to CMS, and reads 24Hour data as Day:

```
ReadNwsCard( InputFile="Data/TDAO3.QA.ESP", EnsembleID="Ensemble_TDAO3",
  NewUnits="CMS", Read24HourAsDay=True)
```

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