

Year boundary

Year Boundary

The TIEGCM needs special care for any run that crosses the year boundary. The TIEGCM input namelist declares model start and stop time via a tuple

tiegcm1.9x.inp

```
START_YEAR=2001
START=360,0,0
STOP=365,0,0
```

Where `START` and `STOP` define day number, hour and minute. This run starts on day 360: December 26, 2001 and ends on day 365: December 31, 2001. Note that on leap years, the valid range of day numbers is 1 (January 1) through 366 (December 31).



Example of incorrect namelist

Here's an example namelist that will fail with the TIEGCM:

tiegcm1.9x.inp

```
START_YEAR=2000
START=365,0,0
STOP=1,0,0
```

With this namelist, the TIEGCM will exit saying the dates are invalid.

Solution

The TIEGCM input namelist has a special option for crossing year boundaries: A run must be split into two segments. This is best explained by example. Consider the run

- Starts December 30, 2011
- Ends January 2, 2012

You must run this in two segments:

1. First segment: Run to end of 2011.

tiegcm1.9x-001.inp

```
START_YEAR=2011
START=364,0,0
STOP=366,0,0
HIST = 2,0,0
OUTPUT = 'Example_tie_2011-12-30T00-00-00.nc', 'Example_tie_2012-01-01T00-00-00.nc'
```

2. Second segment: Run from the start of 2012, using the last output file from segment-001 as the restart history for segment-002.

tiegcm1.9x-002.inp

```
START_YEAR=2012
START=1,0,0
STOP=2,0,0
HIST = 1,0,0
OUTPUT = 'Example_tie_2012-01-01T00-00-00.nc', 'Example_tie_2012-01-02T00-00-00.nc'
```

Implications

[MakeltSo](#) will properly handle the 20-day spinup interval for the [TIEGCM spinup interval](#). However, [MakeltSo](#) does not properly handle the year boundary for the run interval you request. If you need to cross a year boundary for any TIEGCM or CMIT run, please check out [TIEGCM Year Boundary SPINUP](#) documentation.