

# DCPAM Reference Manual

GFD Dennou Club

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# 1 Module `dycore_hs94forcing_mod`

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- Version: \$Id: dycore\_hs94forcing.f90,v 1.6 2005/01/24 14:47:04 morikawa Exp \$
- Tag Name: \$Name: \$
- Change History:

## 1.1 Overview

Call `hs94forcing_mod` .

## 1.2 Error Handling

## 1.3 Known Bugs

## 1.4 Note

## 1.5 Future Plans

## 1.6 Dependency

```
use type_mod,      only : STRING, DBKIND
```

## 1.7 Public Interface

```
private
public :: dycore_hs94forcing_init      ! subroutines
public :: dycore_hs94forcing          ! subroutines
public :: dycore_hs94forcing_end      ! subroutines
```

## 1.8 Procedure Interface

### 1.8.1 Initialize module and

`hs94forcing_mod` を初期化する。

```
subroutine dycore_hs94forcing_init( Dims )
```

### Dependency

```
use constants_mod , only: constants_init
use spml_mod      , only: spml_init
use dycore_type_mod, only: DYCORE_DIMS
use dycore_grid_mod, only: dycore_grid_init, im, jm, km, nm
use hs94forcing_mod, only: hs94forcing_init
use dc_trace,      only: BeginSub, EndSub, DbgMessage
```

### Input

```
type(DYCORE_DIMS), intent(in)  :: Dims ! 次元データ全種
```

## 1.8.2 Calculate Heating and Dissipation for "Held and Suarez(1994)"

```
subroutine dycore_hs94forcing( Vars_b, Vars_n, Vars_a )
```

### Dependency

```
use dycore_type_mod, only: DYCORE_VARS, &
    &                      STRING, DBKIND, INTKIND
use dycore_time_mod, only: DelTime
use constants_mod , only: R0
use spml_mod      , only: xya_wa, wa_Div_xya_xya, &
    &                      wa_LaplaInv_wa, wa_xya, &
    &                      xya_GradLat_wa, xya_GradLon_wa
use hs94forcing_mod, only: hs94forcing
use dc_trace      , only: BeginSub, EndSub, DbgMessage
```

### Input

```
type(DYCORE_VARS), intent(in)  :: Vars_b ! 格子点データ全種 (t-
    t)
type(DYCORE_VARS), intent(in)  :: Vars_n ! 格子点データ全種 (t)
```

### Output

```
type(DYCORE_VARS), intent(inout):: Vars_a ! 格子点データ全種 (t+
    t)
```

### 1.8.3 Terminate module

hs94forcing\_mod の終了処理を行なう。

```
subroutine dycore_hs94forcing_end
```

#### Dependency

```
use dycore_type_mod, only: STRING, DBKIND, INTKIND
use hs94forcing_mod, only: hs94forcing_end
use dc_trace,          only: BeginSub, EndSub, DbgMessage
```