

# ORCHIDEE NEWS

trunk and configurations with libIGCM

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# ORCHIDEE trunk source code

- **DT\_SECHIBA**
  - Added DT\_SECHIBA in run.def : time step for sechiba and the fast processes, default value DT\_SECHIBA=30min.
  - SPLIT\_DT removed from run.def. Instead it is calculated using dt\_sechiba
  - **dt\_slow changed name into dt\_stomate** for consistency with dt\_sechiba parameter
  - dt\_sechiba and dt\_stomate can be used without passing as argument, they are stored in module constantes\_var
  - **dtradia is replaced by dt\_sechiba**
- **SPRED\_PREC** changed default value to distribute the rain
  - during half of the forcing time step for forcing time steps at 3H or more.
  - Uniform over the forcing time step for smaller forcing time steps

# ORCHIDEE trunk source code

- **PRINTLEV** is added in run.def, BAVARD and LONG\_PRINT are removed.
  - printlev is used in the whole ORCHIDEE to control the text output level.
  - printlev=2 very few print, =3 some more, =4 a lot

```
IF (printlev>=3) WRITE(numout,*) 'Entering season
```

- **Some modules have a local printlev\_loc** which can be set differently in run.def. For example:
  - PRINTLEV\_SECHIBA can be set in run.def
  - In sechiba\_initialize:

```
INTEGER(i_std), SAVE    :: printlev_loc !private to this module  
  
printlev_loc=get_printlev('sechiba')
```

- Do we want to keep this functionality?

# ORCHIDEE trunk source code

- **Structure for `_main` subroutine** : separated into `_initialize`, `_main` and `_finalize`, ticket 168
  - `dim2_driver` calls first `intersurf_initialize_2d`, then in the time loop call `intersurf_main_2d`
  - **only use interface `intersurf_main`** for LMDZ (for retrocompability)
  - `intersurf_main_1d` never used, if you needed let us know!
- Initialize longterm temperature `t2m` without reading `reftemp.nc`, ticket 158
- Removed `control_flags` and `control_type`, the variables are used directly as LOGICAL, ticket 166. For example:
  - before:  
**`control_flags%river_routing = .TRUE.`**
  - now:  
**`river_routing=.TRUE.`**

# Changes to come

- **Remove watchout** : ORCHIDEE\_WATHCOUT and STOMATE\_WATCHOUT will be removed. Ticket 172.
  - The watchout functionality is not longer maintained in ORCHIDEE. We do not know if it is still correct.
- Change default value for **DRIVER\_reset\_time=y**, and SECHIBA\_rested\_time will be removed. Ticket 174
- **Remove forcesoil** program, ticket 124. Currently suspended, can we continue?

# Compiling

- Compiling is done using **makeorchidee\_fcm** by launching main makefile in **modipsl/config/ORCHIDEE\_OL** directory. Compile options are set in ORCHIDEE/arch
- Standard makefiles in the source ORCHIDEE (AA\_make) are not maintained any more: modipsl/modeles/ORCHIDEE/Makefile **obsolete**

*Read about compile methodes in ORCHIDEE:*

<http://forge.ipsl.jussieu.fr/orchidee/wiki/Documentation/UserGuide/CompileMethode>

- Compiling at IPSL cluster **ciclad is added using ifort** compiler. Same options should also work at **climserv**(IPSL cluster). LibIGCM will come at ciclad/climserv.

*Some documentation to compile at new platform:*

[http://forge.ipsl.jussieu.fr/igcmg\\_doc/wiki/DocBenv](http://forge.ipsl.jussieu.fr/igcmg_doc/wiki/DocBenv)

# Configurations using libIGCM

## ORCHIDEE\_OL and LMDZOR\_v6/IPSLCM6

Highlight: **The drivers do not do any hidden modifications.**

- A value set in run.def can only be modified by the driver if it is set equal AUTO or AUTOBLOCKER
- A parameter can not be added by the driver

Extract from OOL\_SEC\_STO/PARAM/run.def:

```
#
#*****
#                               Parameter file list for ORCHIDEE
#*****
# Time
TIME_LENGTH = _AUTOBLOCKER_
TIME_SKIP = _AUTO_

# Input and output
#*****
# If DRIVER_reset_time=y, read the year from forcing file instead of taking it from restart file
DRIVER_reset_time = _AUTO_

# Name of restart to read for initial conditions for the driver
RESTART_FILEIN = _AUTOBLOCKER_

# Name of restart to read for initial conditions
# default = NONE
SECHIBA_restart_in = _AUTOBLOCKER_

# Name of restart to read for initial conditions of STOMATE
# default = NONE
STOMATE_RESTART_FILEIN = _AUTOBLOCKER_
```

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```

**AUTO = nonblocker parameter** can be modified or removed from run.def.

**AUTOBLOCKER = blocker parameter** can not be modified or removed from run.def otherwise the job will stop before executing the model.



# Configurations using libIGCM

## ORCHIDEE\_OL before and LMDZOR\_v5/IPSLCM5\_v5

ORCHIDEE\_OL before: (before rev 2524)

run.def empty – the **drivers(the script) add parameters**

**A parameter already set in run.def will not be modified by the driver**

LMDZOR\_v5/IPSLCM5\_v5:

In .def files all parameters modified by the drivers where set =AUTO

**A parameter set AUTO will be modified by the driver even if the user changed its value**