

Border_Domain_Boundary_Conditions

This data setup allows the user to define the boundary conditions at the ends of the domain like symmetric planes or periodical conditions.

The Full data set of the namelist

```
&Border_Domain_Boundary_Conditions
  West_BC_Name = "None" ,
  East_BC_Name = "None" ,
  Back_BC_Name = "Periodic" ,
  Front_BC_Name = "Periodic" ,
  North_BC_Name = "None" ,
  South_BC_Name = "None" /
```

- The name of each end is given by its orientation with respect to the adjoined fluid cells, namely “WEST”, “EAST”, “BACK”, “FRONT”, “SOUTH” and “NORTH” for the directions “i-1”, “i+1”, “j-1”, “j+1”, “k-1” and “k+1” respectively.
- By default the domain is enclosed. The boundary conditions defined by default at the ends of the domain are walls. These wall boundary conditions are set with the namelists ["Heat_Wall_Boundary_Condition_Setup"](#), ["Velocity_Wall_Boundary_Condition_Setup"](#) or ["Species_Wall_Boundary_Condition_Setup"](#)
- Walls can be partially or totally removed either by inlet/outlet boundary conditions (see the namelists [Inlet_Boundary_Condition](#), [Outlet_Boundary_Condition](#)) or the boundary conditions showed here (symmetric plans or periodical conditions).
- Variables set to “None” can be removed (default value).



Find [here](#) some examples

Definition of the data set

West_BC_Name

- Type : character String
- Definition of values :
 - “None” : The boundary conditions is already defined like walls (default boundary condition), inlets or outlets (defined in the data file) and they are not replaced. In this case, this variable can be removed. “None” is the default value.

- “Symmetric” : Symmetrical plane
- “Periodic” : Periodical condition

East BC Name

- Type : integer value
- As previously for the EAST end.

Back BC Name

- Type : integer value
- As previously for the BACK end.

Front BC Name

- Type : integer value
- As previously for the FRONT end.

South BC Name

- Type : integer value
- As previously for the SOUTH end.

North BC Name

- Type : integer value
- As previously for the NORTH end.

From:
<https://sunfluidh.lisn.upsaclay.fr/> - Documentation du code de simulation numérique SUNFLUIDH

Permanent link:
https://sunfluidh.lisn.upsaclay.fr/doku.php?id=sunfluidh:border_domain_boundary_conditions_namelist_setup

Last update: **2018/01/17 09:18**

