

## Probe\_Quantities\_Enabled



This data set allows the user to link any chosen physical quantity with probes. The time series of the physical quantity are recorded in a file in ASCII format named `n_yyyyy.d`, where “n” refers to the name of the physical quantity (i.e. `n=u` for the i-velocity component, `n=t` for the temperature, `n=r` for the density, `n= p` for the pressure,...). ‘yyyyy’ is the subdomain number which the probes belong to (particularly useful when the simulation is performed with a MPI domain decomposition approach). Data are ordered in columns, the first refers to the time, the second refers to the first probe and so on ... the position of each probe is written on the first line of each file.

## Full data set of the namelist

```
&Probe_Quantities_Enabled Temporal_Series_For_Quantity_Enabled(:)= .true.  
, .true., .true., .false., .false., .true. /
```

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## Definition of the data set

### Temporal\_Series\_For\_Quantity\_Enabled

- Type : Allocatable array of boolean values. The array size is automatically made.
- Each array component is associated to a physical quantity in this order :
  - component of velocity along the I-direction
  - component of velocity along the J-direction
  - component of velocity along the K-direction
  - Temperature
  - Pressure
  - Density
  - Mass fraction of Species 1 (if it exists)
  - ...
  - Mass fraction of Species n (if it exists)
- Each element of the array must be initialized by the values `.true.` or `.false.`
- The user can activates the chosen physical quantity in order to get time-series related to the probes placed over the domain (see the namelist “Probe\_Location”).

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

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