

# Namelist "Field\_Recording\_Setup"

This data set allows the user

- to define the precision (simple or double) on the data related to the instantaneous fields and the statistical fields.
- to reduce the dimension of the statistical fields in order to get a profile along a given direction. The reduction is made by space averaging over the other directions.

## Full data set of the namelist

```
&Field_Recording_Setup Precision_On_Instantaneous_Fields= 1,
Precision_On_Statistical_Fields= 2 ,
                        Time_Statistics_Enabled= .true. ,
Sample_Rate_For_Statistics= 1 ,
                        Statistic_Space_Average_Type= "NO_SPACE_AVERAGE" /
```

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## Precision\_On\_Instantaneous\_Fields

- Type : Integer Value
  - 1 : Instantaneous fields are recorded in single precision (r4).
  - 2 : Instantaneous fields are recorded in double precision (r8).

## Precision\_On\_Statistical\_Fields

- Type : Integer Value
  - 1 : Statistical fields are recorded in single precision (r4).
  - 2 : Statistical fields are recorded in double precision (r8).

## Time\_Statistics\_Enabled

- Type : Boolean value
  - .true. : For any quantity  $f$ , the statistical computation yields :  $\overline{f(x,y,z)} = \frac{1}{T} \int_0^T f(x,y,z,t) dt$
  - .false. : For any quantity  $f$ , the statistical computation yields :  $\overline{f(x,y,z)} = \frac{1}{N_t} \sum_{n=0}^{n=N_t} f(x,y,z,n) dy$  where  $N_t$  is number of instantaneous fields considered for the computation.

## Statistic\_Profiles

- Type : integer value
- This data defines the direction in which the profile of a statistical quantity is calculated. A space average is performed over the others directions.

- 0 : Statistical fields are not reduced in a profile along a specific direction.
- 1 : The profile is calculated along the I-direction.
- 2 : The profile is calculated along the J-direction.
- 3 : The profile is calculated along the K-direction.

From:

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

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