

## Structure of data sd\_mode\_empi

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### Summary:

The structure of data sd\_proj\_mesu inherit the structure of data sd\_resultat ([D4.06.08]). It makes it possible to store the empirical modes used by the reduction of model.

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## 1 Introduction

This structure of data inherits the structure of data `sd_resultat` ([D4.06.08]). It makes it possible to store the empirical modes used by the reduction of model.

## 2 Fields

The possible fields are the following:

- UN nodal field of temperature `TEMP` (based on `TEMP_R`);
- UN nodal field of displacements `DEPL` (based on `DEPL_R` or `DEPL_C`);
- UN nodal field of flow `FLUX_NOEU` (based on `FLUX_R`);
- UN nodal field of constraints `SIEF_NOEU` (based on `SIEF_R`).

The component count of each size is constant from one node to another (forced current of the reduction of model). In particular, fields `DEPL` and `TEMP` cannot contain components of the type `LAGR`.

When the empirical base was built by the mode "glouton" (`DEFI_BASE_REDUITE` with `OPERATION='GLOUTON'`), it contains in more the products of the matrices by the mode (for reasons of effectiveness).

These fields are of nodal type (basedS on `DEPL_R` or `DEPL_C`) and the names go from `PROD_BASE_MATR_1` with `PROD_BASE_MATR_8`.

## 3 Parameters and variables of access

The parameters stored in the structure of data are the following:

Name	Type	Description	Variable access	of
FREQ	R	Calculated frequency of the empirical mode: corresponds in fact to the singular value resulting from the SVD (decomposition in singular values)	YES	
MODEL	K8	Name of the model on which was built the empirical base	NOT	
NUME_MODE	I	Number of the empirical mode	YES	
NOM_CHAM	K24	Reference symbol of the field for the empirical mode ( <code>TEMP</code> , <code>DEPL</code> , <code>FLUX_NOEU</code> or <code>SIEF_NOEU</code> )	NOT	
NUME_PLAN	I	Number of the plan when a base of type flax is usedéc (see <code>DEFI_BASE_REDUITE/TYPE_BASE</code> . It is worth zero when the base is of type 3D.	YES	
NB_SNAP	I	Many stereotypes on which was built the empirical base	NOT	