Code_Aster

Version default

Titre : Macro-commande IMPR_ACCE_SEISME
Responsable : ZENTNER Irmela

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Clé : U4.36.08 Révision :
96ccfdd67755

Macro-order `IMPR_ACCE_SEISME`

1 Goal

This macro-order aim at automating the postprocessing of the data resulting from the order `GENE_ACCE_SEISME`. It carries out the following tasks:

- impression of a figure by accélérogramme, i.e. by direction and pulling;
- impression of a figure of all accélérogrammes for each direction;
- calculation speeds then displacements of the signals;
- impression of a figure of all displacements for each direction;
- impression of a figure containing the indicators of harmfulness for each direction;
- impression of a table of statistics on the indicators of harmfulness;
- calculation of the spectra of the signals and calculation of the average spectrum by direction;
- impression of a figure with target spectrum and average spectrum by direction;
- impression of a figure containing all the spectra as well as the target spectrum and the average spectrum by direction;
- calculation of the spectrumS more and less σ ;
- impression of a figure with the spectrumS more and less σ as well as the spectrum σ target for each direction;
- correction of the average spectrum (by a multiplicative factor) so that it is not lower than the target spectrum on a waveband given for each direction;
- calculation and impression on a figure of the geometric mean of the average spectra in the vertical directions if the dimension of the problem is higher or equal to 2.

The figures and tables are created in file `REPE_OUT` temporary repertoire of execution [U4.12.03].

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2   Syntax

```
IMPR_ACCE_SEISME (
     ♦   TABLE        = table                              [table]
     ♦   TITLE        = title                              [K24]

     ◊   NOCI_REFE = _F (
         ♦  |  AMAX              = moy, icinf, icsup    [l_R]
            |  VMAX              = moy, icinf, icsup    [l_R]
            |  DMAX              = moy, icinf, icsup    [l_R]
            |  INTE_ARIAS        = moy, icinf, icsup    [l_R]
            |  DUREE_PHASE_FORTE = moy, icinf, icsup    [l_R]
            |  VITE_ABSO_CUMU    = moy, icinf, icsup    [l_R]
            |  ACCE_SUR_VITE     = moy, icinf, icsup    [l_R]
                   )
     ◊   DURATION          = R                             [R]
     ♦   SPEC_OSCI       = spec_cible                      [function]
     ◊   SPEC_1_SIGMA    = spec_ sig                       [function]
     ◊   LIST_FREQ   = list_freq                           [l_R]
     ◊   FREQ_MIN    = freq_min                            [R]
     ◊   FREQ_MAX    = freq_max                            [R]
     ◊   RATIO_HV    = ration                              [R]

     )
```

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3   Operands

This order uses XMGRACE, but this utility is not available in salome_meca, it thus should imperatively be added on the object computer.

3.1   Keyword `TABLE`

This obligatory keyword makes it possible to provide table resulting from the operator `GENE_ACCE_SEISME` post-to treat.

3.2   Keyword `TITLE`

This keyword obligatory allows to define a title used in the various figures created.

3.3   Keyword factor `NOCI_REFE`

This keyword factor makes it possible to give values of reference for the indicators of harmfulness. For each operand (`AMAX`, `VMAX`, `DMAX`, `INTE_ARIAS`, `DUREE_PHASE_FORTE`, `VITE_ASBO_CUMU`, `ACCE_SUR_VITE`), three values are to be provided, they correspond to the average and the boundaries lower and higher of the confidence interval.

3.4   Keyword `DURATION`

This keyword optional allows to visualize the accélérogrammes over one duration lower than that calculated. The well informed value must thus be lower than the total duration of the accélérogrammes.

3.5   Keyword `SPEC_OSCI`

This obligatory keyword allows to provide the target spectrum. It appears on certain figures to be compared with the calculated spectra. For more details, to see [U4.36.04].

3.6   Keyword `SPEC_1_SIGMA`

This keyword optional allows of to provide the spectrum σ target. If it is indicated, the spectrumS more and less one σ are calculated and printed out with this target spectrum on a figure. For more details, to see [U4.36.04].

3.7   Keyword `LIST_FREQ`

This optional keyword allows to give the list of the frequencies to be taken into account for the calculation of the spectra.

3.8   Keywords `FREQ_MIN` and `FREQ_MAX`

These two optional keywords are to be informed together S . If they are present, one calculates the factor multiplication necessary so that the average spectrum of the accélérogrammes is not lower than the target spectrum, in the frequency band going from `FREQ_MIN` with `FREQ_MAX` .

3.9   Keyword `RATIO_HV`

Dyears the comprising case of a table of the data in the vertical direction (with thus three componentS), this keyword makes it possible to balance the various target spectra so that they are in adequacies with the abundant data.