Operator LIRE_TABLE

1 Drank

Lira a file containing an array.

This command makes it possible to read an array written in a file under format TABLEAU, ASTER or a format says LIBRE.

With formats TABLEAU and ASTER, the file can come directly from an IMPR_TABLE to the same format.
Format LIBRE, as its name indicates it, is more flexible. It is necessary however to observe certain conditions so that the columns are correctly identified and to obtain result waited.

Product a concept of the type counts.

2 Syntax

```
Tb [array] = LIRE_TABLE (

      ♦UNITE=              ific  ,                          [I]

      ◊FORMAT=/              "TABLEAU",                     [DEFAULT]
                           /"ASTER",
                           /"LIBRE",

      ◊NUMÉRIQUE_TABLE=/1           ,                           [DEFAULT]
                           /nume  ,                    [I]

      ◊SEPARATEUR=/           ""                        [DEFAULT]
                           /sep   ,                    [K]

                ◊RENOMME_PARA=' UNIQUE"                    [K]

      ◊TITER=titer              ,                        [l_K]

      ◊INFO=/1                  ,                        [DEFAULT]
                           /2  ,                         [I]

)
```

3 Operands

3.1 Operand UNITE

Number D" logical unit of the file containing the arrays with reading.

3.2 Operand FORMAT

Name of the format under which the array of the file was written.

3.2.1 Remarks

During the reading of the values, one tries to interpret the value like whole, real, real with the comma instead of the point like decimal separator, failing this like a character string.

The value of blank cell is not the same one with format TABLEAU, ASTER and LIBRE.

3.2.2 Format TABLEAU

It acts of the format by default.
With format TABLEAU, the command estimates the number of columns present in the file. For that, the lines are cut out by means of the SEPARATEUR. The number of columns of the array is then supposed being the maximum found on all of the lines.
The lines starting with character # are regarded as comments and are added to the title of the array.
Among the values one can find (-), who means that there is no value for this parameter.
There are no delimitations to separate several arrays in a file. It is considered that the end of an array was reached when the number of columns falls.
Format TABLEAU must make it possible to read again the arrays printed with IMPR_TABLE with the same format. However, contrary to the Aster format , the type is automatically given according to the values read. The type of character strings can thus be different.

3.2.3 Aster format

the Aster format requires certain characteristics illustrated in the following table:

```
#DEBUT_TABLE
#TITER line 1 of the text of title
#TITER line 2 and following
 INTITULE   PATH      SEGMENT   RESU      NOM_CHAM    INST          SIXX
 K8         K16       I         K8        K16         R             R
 GLOBAL     CHEM1     1         SIG       SIGM_ELNO   0.00000E+00   - 1.48981E+07
 GLOBAL     CHEM1     -         SIG            -      1.00000E+00   - 2.48981E+07
 GLOBAL     CHEM1     2         SIG       SIGM_ELNO   1.00000E+00   - 3.48981E+07
…
#FIN_TABLE
```

Any array with the Aster format begin with key word **#DEBUT_TABLE** and ends in **#FIN_TABLE**. In fact the delimitations make it possible to know where the reading starts and where it stops.
#DEBUT_TABLE is then followed by lines of titles which are obligatorily preceded by key word **#TITER**.
Follow then line containing all the names of the parameters, then line containing all the types of these parameters. These types belong obligatorily to the following list: K8, K16, K24, K32, K80, I, R.
the following lines give the value of all the parameters.
Among the values one can find (-), who means that there is no value for this parameter.
The Aster format must make it possible to read again the arrays printed with IMPR_TABLE with the same format.

3.2.4 Format LIBRE

format LIBRE is very close to format TABLEAU except that character # does not have particular meaning and that the absence of value for a parameter corresponds to a null string.

3.3 Operand NUME_TABLE

It is possible to read an array among several in a file. One indicates the number of the ième array to reading. By default, the first array is read.

3.4 Operand SEPARATEUR

Several consecutive separators count only for one. The separator by default is a space.
To indicate that the fields are separated by a tabulation, one will indicate: SEPARATEUR=' \ you.

3.5 Operand RENOMME_PARA

In an array, all the parameters must be distinct. If it is not the case in the file with reading, the reading fails because the array cannot be produced.
By specifying, RENOMME_PARA = "UNIQUE" (only possible choice if the key word is indicated), if a parameter read were already met, one adds a numbered suffix of the form to him: "_i ".
Example: two columns are named INST in the file. The array will be produced with a parameter named INST and the second named INST_1.

3.6 Operand TITER

Titrates attached to the product concept by this operand [U4.03.01].
This title replaces that of the array read.

3.7 Operand INFO

With INFO = 2 , of the details on the data read are displayed. They are very numerous and may find it beneficial only to understand why a file is not read as it was expected.

4 Creation

4.1 examples of an array to format "ASTER" with IMPR_TABLE

In this example (extracted from zzz128b), one writes several arrays with format "ASTER" in a file.

```
TOUT=POST_RELEVE_T (ACTION=_F (INTITULE = "RESU_U2",
                               NOEUD = ("B", "IT, "OF, "E", "F",),
                               RESULTAT = U2,
                               NOM_CHAM = "DEPL",
                               TOUT_ORDRE = "OUI',
                               TOUT_CMP = "OUI',
                               OPERATION = "EXTRACTION"))

IMPR_TABLE (UNITE=37,
            TABLE=TOUT,
            FORMAT=' ASTER')

IMPR_TABLE (UNITE=37,
            TABLE=TOUT,
            FORMAT=' ASTER',
```

```
                NOM_PARA= ("NOEUD", "INST", "ABSC_CURV",
                           "DX",  "DY",  "DZ",  "DRX",    )
                 )
```

4.2 Reading of arrays to format "ASTER" with LIRE_TABLE

```
TT2=LIRE_TABLE (UNITE=37,
                FORMAT=' ASTER',
                NUME_TABLE=1,
                TITER=' VALIDATION OF LIRE_TABLE',)

TT_RED=LIRE_TABLE (UNITE=37,
                   FORMAT=' ASTER',
                   NUME_TABLE=2,
                   TITER=' VALIDATION OF LIRE_TABLE',
                  )
```

4.3 Reading of table to format LIBRE

Is for example a table such as this one in OpenOffice Calc:

Table produced in OpenOffice		
recorded with the format csv with the semicolon like separator		
and without separator of text		
Column A	Column B	Column C
label1	111	0,09
name 2.222		10,09
valeur3	444	2240,18
exemple4	888	994640,73
ligne5	1776	883240965,82

One records it in format text (format CSV) with the semicolon like separator of columns and without framing the character strings (without separator of text).
The following textual file is obtained:

```
Table produced in OpenOffice; ;
record with the format csv with the semicolon like separator; ;
and without separator of text; ;
; ;
Column A; Column B; Column C
label1; 111; 0,09
name 2; 222; 10,09
valeur3; 444; 2240,18
exemple4; 888; 994640,73
ligne5; 1776; 883240965,82
```

to read it in Code_Aster, one can make:

```
= LIRE_TABLE (UNITE=55,
                  FORMAT=' LIBRE',
                  SEPARATEUR='; ',)
```