" **FILE M4** "

"**PROGRAM : HO3 velocity fields**"

"**This file is the fourth one of the suite working out calculations reported in :**
  Comments on MECHANICS and THERMODYNAMICS of the BERNOULLI OSCILLATORS Parts I
  and II, (Google search : FEDOA Comments on), by G. Mastrocinque - Department
  of Physics - Engineering Faculty - University of Naples Federico II"

"**Warning : Before this one, please be sure you have run the programs**
  HO3 FS wave equation solve, HO3 SS wave equation solve and **HO3**
  flow and mass functions in the same library to pick up input data"

" **CALCULATION OF VELOCITY FIELDS** "

```
<< Graphics`Legend`
Off[Plot::"plnr"]
"evaluate fields from eqs. (80)-(81); Fig. 11 :"
```

$$f[\xi\_] = n\nu[\xi] + \frac{m\, derphig[\xi]^2}{2\, meff[\xi]};$$

$$vtild[\xi\_, ee\_] = \sqrt{\frac{2\,m}{meff[\xi]}}\ \sqrt{\frac{ee}{h\,\nu c} - 3 + f[\xi]}\ ;$$

```
Plot[{vtild[ξ, en], vtild[ξ, eni], vtild[ξ, enf]}, {ξ, 0, ξfin[n]},
 PlotStyle → {RGBColor[1, 0, 0], RGBColor[0, 1, 0], RGBColor[0, 0, 1]},
```

PlotLegend → {"$\mathbf{E = E_n}$", "$\mathbf{E = E_{ni}}$", "$\mathbf{E = E_{nf}}$"},

```
 LegendPosition → {0.21, -.16}, LegendShadow → None]
"SUITE OF CALCULATIONS : is in file HO3 energy value in
  the same library. Warning : the following program need
  to use data provided by the present and previuos ones"
```

FILE M4

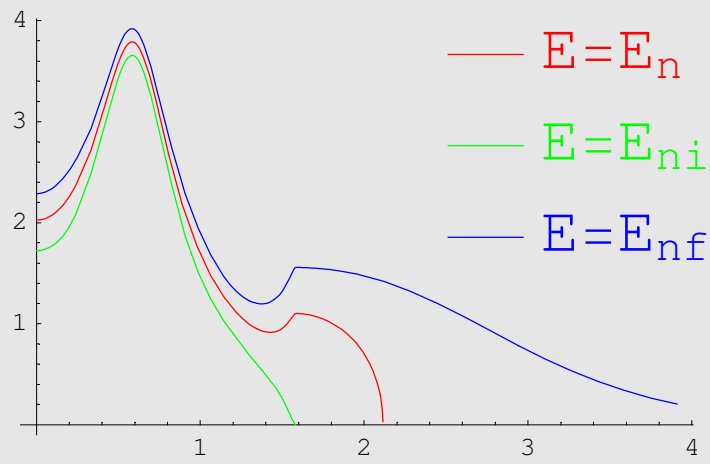PROGRAM : HO3 velocity fields

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CALCULATION OF VELOCITY FIELDS

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- Graphics -

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