

## Running HYDR\_NV with gfortran compiler on Linux system

- Download the package source file HYDR-NV-2025-10-31.tgz from [MEDOC](#) website :
- (**gfortran** compiler is required)
- Unpack the package by typing the following linux command :  
**tar -xvzf HYDR-NV-2025-10-31.tgz**
- Go to the folder HYDR\_NV :  
**cd HYDR\_NV**
- The folder contains two cases of atmosphere: solar atmosphere (SUN folder corresponding to VAL3C model) and stellar atmosphere (ALTAIR folder). SUN and ALTAIR folders contain the following files :  
makefile, hydr\_nv.f90, fort.3 (input file), visu21.f90
- Run the code by typing :  
**make**  
**./hydr\_nv**
- The output files are : fort.8 (iteration message), fort.21 (emergent intensities for 3 directions and for each transition line), fort.22 ( $L\alpha$  intensities versus frequency and emission angle), fort.24 (atmospheric parameters, electron density  $N_e$ , hydrogen density  $N_H$ ), fort.28 (mean intensities)
- The folder **results** contains the output files corresponding to a test case (input : fort.3) to be able to check if your results are good
- To visualize the line profiles (fort.21), use the following program visu21.f90 by typing :  
**gfortran -o visu21 visu21.f90**  
**./visu21**  
The output file is **v21.ps**

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