HOW to use BEAM-II (in R)

- The new version of BEAM is built using R so to use it you need to install R in your system. You can download the free installer (for Linux, OS X, and even Windows) from https://cran.r-project.org
- You need two additional libraries: raster and astrolibR. You can install them easily from the R console:
    - `> install.packages('raster')`
    - `> install.packages('astrolibR')`
- Un-compress the BEAM-II tar package in your work directory. You will obtain two files which are required to run BEAM: beam.r (the actual executable r source code) and extinction_grid_r (up-to-date reddening grid required by beam2.r).
- Your input file must be a simple ASCII file where the first line is a header and the two first columns are sky coordinates (equatorial or galactic). All other columns are not used by BEAM so they can contain any other relevant information from your catalog which will be ALSO included in the output catalogue.
- Run the code from the UNIX command line:
    - `Rscript beam2.r NameOfInputFile NameOfOutputFile`
- If no output file is given, it will be named CompleteOutput_table.beam. The output file will contain all the columns in the original input file, now including the E(J-K) value in the very last column.
- If you are interested in extinction coefficients to correct your magnitudes, you can check my recommended values http://mill.astro.puc.cl/BEAM/coffinfo.php
- PLEASE do not modify the code. If you are better at coding than me (VERY LIKELY!) I would appreciate any feedback or suggestions.

Current VERSION V3.0

2016-05-31 (OGo): Version V1.0 released to VVV team for internal usage and testing. Coverage -1.5 < b < +1.5 , -9.5 < l < +9.5

2016-06-02 (OGo): Version 1.1 Now including uncertainty estimations based on sigma of the Gaussian (J-K) fit added in quadrature to a sigma of 0.08 from the metallicity variations around the Bulge (same assumption as in BEAM-I), de-convolved by an estimation of the intrinsic bulge J-K of the RC from de-reddened Baade's window (0.10).

2016-09-16 (OGo): Version V2.0 released to VVV team for internal usage and testing. Coverage -10 < b < +4.5 , -9.5 < l < +9.5

2017-09-15 (OGo): Version V2.5 now including metallicity maps from Gonzalez et al. (2013)

2018-08-16 (OGo): Version V3.0 released to community.