Dear participants,

As you might have noticed, the workshop program is filled with "hands-on" exercises, involving forward modeling and inversions using the Milne-Eddington approximation. On the last day, we will also have a session to show you how to use the Instrument Performance Calculator for the Visible Spectro-Polarimeter (ViSP) of DKIST, one of the instruments offered in the first Call for Proposals. Here some instructions for you to install the necessary software.

Milne-Eddington Inversions

We will be using python as our language and, in particular, we'll be using python notebooks as a guide to the exercises – they are a very powerful didactic tool.

Steps for installation & testing:

+ You will need a python distribution (3.6, 3.7 or 3.8), and some common packages, such as astropy, numpy, scipy and matplotlib.

+ You will find all the notebooks for the exercises, as well as a file named python_install.dat, that describes what packages you need, at:

https://github.com/ivanzmilic/me_inversion_exercises

+ The inversion code we will use has been developed by Jaime de la Cruz Rodriguez (University of Stockholm), and can be found at:

https://github.com/jaimedelacruz/pyMilne

In the same page you'll find the installation instructions in the file README.md (they are repeated in the above python_install.dat)

+ You should first install the code, and follow all the instructions, before you can test the notebooks. The best and easiest way is to try and see if *polarized_me_forward.ipynb* is working.

+ After that, the only thing you miss is the observational data. It is all stored at:

https://drive.google.com/drive/folders/1_OMYq8l_saSis0LJjkq2UQKw-_L1X5R-?usp=sharing

It is about 10 GB, and includes data from Hinode, IBIS, CRISP and GRIS (the latter is the biggest file).

ViSP Instrument Performance Calculator

** The ViSP IPC is written in IDL ***

+ You can download the code, and the manual, at
https://www.nso.edu/telescopes/dkist/instruments/visp/   (note, there are two pdf files in the distribution, but only one on the webpage; this will be corrected)

+ the manual(s) provide examples for you to get started.

Office hours

+ Please install and tests the code/examples before the workshop, so we can have everybody up and running from the very beginning.

+ To make sure everything works well and you are able to use it from the beginning, we are going to have some "office hours" over the week of 07/13 to help you troubleshooting the installation.

+ You fill find us at zoomid:
https://cuboulder.zoom.us/j/7112056476

The schedule is going to be (all times in MDT, which is UT – 6)

Tuesday 17:00 – 18:30 (5pm – 6:30 pm)
Wednesday 12:00 - 13:30 (12pm – 1:30 pm)
Friday 09:00 – 10:30 (9am – 10:30 am)

Feel free to drop by if anything is not working properly.

All the best, looking forward to working with you on spectropolarimetric inversions!

Gianna, Rebecca, Han and Ivan