EFFICIENT AND SAFE ASTRONOMY RESEARCH WITH DOCKER - TUTORIAL INSTRUCTIONS

Please follow **links** to access external resources

If you have any questions, please contact Mateusz Malenta at **mateusz.malenta@manchester.ac.uk**

If you would like to get the feel of what the tutorial will cover, please **feel free to read through the tutorial repository.** If you have any questions, feedback or spot any bugs, please **submit an issue** and we will resolve it as soon as possible.

In order to get the most out of this tutorial, **you will need a working Docker installation** on your machine. Please follow the **official Docker installation guide** for the detailed instructions on how to install it on your host OS. We will be using the CLI version of Docker, but feel free to install any additional GUI software that is available for your host OS. The final part of the tutorial will be using DockerHub. We therefore recommend you **create a free DockerHub account** if you want to follow the exercises in that section

We will use a number of **Dockerfiles** throughout the tutorial, so **make sure you have them downloaded and can access them easily**. You can either use git to clone the entire tutorial repository, or copy the individual Dockerfiles if you do not have git installed. You can find the Dockerfiles in the course section directories. For example, **Section 2 directory** contains 4 Dockerfiles which we will use for our exercises. If you want to examine the Dockerfile you can either do that through the repository by clicking on the file name or if you download the files to your machine, you can use any text editor to view and/or edit these files - these are regular text files and no extra software is required.

If you already have Docker installed, please make sure it is a relatively recent version, as we will be using some new(er) features. We will be using new CLI syntax, introduced with Docker 1.13 (January 2017) and multi-stage builds introduced with Docker 17.05.0-ce (May 2017). To check your installation version run `docker --version`
If you have an older version of Docker installed, please make sure you update it as soon as possible (if possible). Newer versions provide not only the new features described above, but also important security updates.

If you experience problems with your installation, we are organising an installation session a week before the tutorial. **Please register for one of the two available sessions** if you experience any problems with your installation and would like to receive help.

We are aware that the installation requires root/admin privileges on your host computer and some institutions do not make it possible or easy to install such software on the machines they support. We are working on providing a **limited number of virtual machines** for participants who will not be able to install Docker, but we would like to use this as a last resort.