ESO pipelines on the latest macOS version(s)

John Pritchard - 2022-05-20 - Comments (0) - Data processing and analysis software resources

Typically ESO releases new versions of its pipeline software once a year, usually in May, and usually this means the last 3 or 4 macOS releases at that time are supported, see here for the currently officially supported macOS versions. Apple on the other hand usually releases a new macOS version each year in around October. This means that typically there are ~7 months each year when the latest macOS version is not (yet) officially supported.

What this really means is that ESO has not yet built and thoroughly tested its pipelines under the the new macOS version and thus does not yet provide MacPorts binary packages for the new macOS version.

However, because of the way MacPorts works, as soon as MacPorts is supported for the new macOS version -- which usually happens within a week or three of the release of the new macOS version -- it is possible to (at least) attempt to install the ESO pipelines via MacPorts. Not finding any binary packages available from ESO, MacPorts will then simply attempt to build the packages from source code. In most recent cases, this has worked without any problems and the pipelines and even esoreflex all worked (almost) perfectly, even though they were not officially supported.

Occasionally there are difficulties due to the few packages that rely on the GNU gcc compilers (rather than the Xcode clang compiler), because it can take some days, weeks, months before a usable GNU GCC compiler is available under MacPorts.

The recent launch of the new Apple Silicon (a.k.a. M1 a.k.a. aarm64) hardware added an extra layer of complexity, in particular concerning esoreflex, which is distributed as a binary package and thus did not have support for the new Apple Silicon hardware -- all the pipelines (except the ones relying on GNU GCC) on the otherhand built OK and could thus be used straight away from the command line esorex interface.

As of now (see last update of this article), the complete ESO software stack, including esoreflex, is fully operational on the latest macOS version (currently macOS-12 a.k.a. Monterey), on both Intel and Apple Silicon hardware.

It should however always be remembered, that when using pipelines on a macOS version not officially supported, it is *possible* that, because of new compiler/library versions or for other strange reasons, a pipeline somehow behaves peculiarly and produces results that are not "scientifically correct", i.e. user beware and use with care.

As always, if you have questions or concerns or need assistance related to running ESO pipelines on even the latest, officially non-supported hardware or macOS version, please create a ticket.

- Tags
- ESO software
- pipeline
- software installation