Current state?   EB + py wheel + do-it-yourself

IMAS Core + IMAS Python => python wheel, <u>solved</u>

IMAS Core + IMAS HLI (Matlab, C++, Fortran, …) + DataDictionary

- EasyBuild (compile from source, but "easier")
    - **automated compiling from source + creates modules**
    - large overhead & maintenance load when not used by local IT
    - not suitable for containers, packaged applications, further distribution, etc.

- Compile from source (with suggested Ubuntu dependency list)
    - compiling from source
    - get all dependencies manually

Linux package system - for IMAS HLIs

Why?
- *system package-based HPC infrastructure*
- *docker/apptainer containers, user-managed workstations, etc.*
- *non-easybuild modules (manually writing a Modulefile)*
- *easier compile-from-source for HLIs with pre-compiled AL-Core*

IMAS Core with a "standard set of backends"
- *Purpose: shared dependency library for HLIs*
- al-core (runtime)
- **al-core-dev** (with headers, static lib, cmake config)

Used on COMPASS

IMAS Matlab - runtime, supports "some set of Matlab versions"
- *Purpose: provides MEX routines*
- al-matlab-dd3
- al-matlab-dd4

Used on COMPASS (module)

IMAS C++/Fortran - dev with headers, cmake, etc.
- *Purpose: provides headers & pre-compiled code for one DD version*
- al-cpp-fortran-dd4-dev

TODO?

-dev style packages (with headers, etc.)
- needs some CMakeLists.txt adjustments to allow compiling HLI against system-wide **al-core**
  - adjust "install()" directives
  - link to system-wide **al-core-dev**

DD version management **- complication…**
- fixed major DD version
- new releases with minor DD updates?
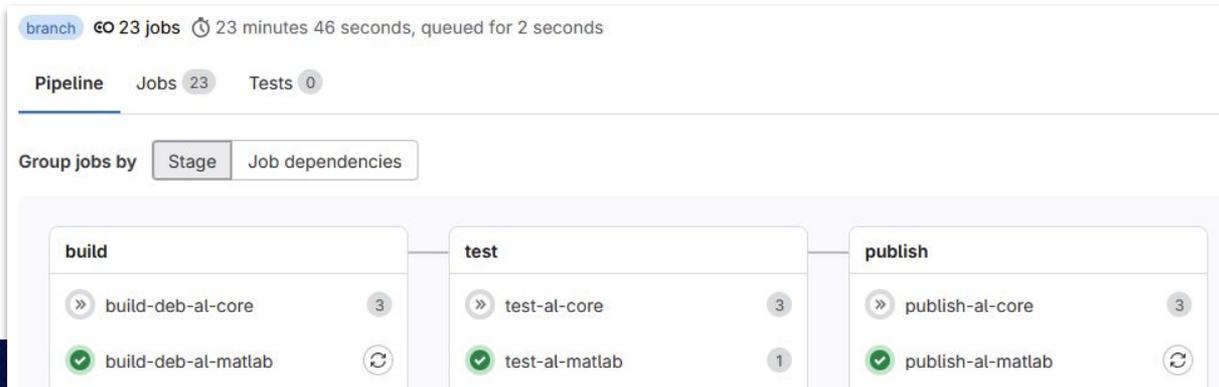
CI Pipeline

Compile in image

- specific Ubuntu version
- install deps
- **cmake --build**

Package (.deb, .rpm)

- a few extra lines in CMakeLists.txt
- **cpack**

Publish

- **github releases** would be enough?
- (or host a dedicated deb/rpm repository?)

branch ↩ 23 jobs ⏱ 23 minutes 46 seconds, queued for 2 seconds

Pipeline | Jobs 23 | Tests 0

Group jobs by | Stage | Job dependencies

build		
» build-deb-al-core	3	
✓ build-deb-al-matlab	↻	

test		
» test-al-core	3	
✓ test-al-matlab	1	

publish		
» publish-al-core	3	
✓ publish-al-matlab	↻	