

# Spring 2025 HDF5 Release

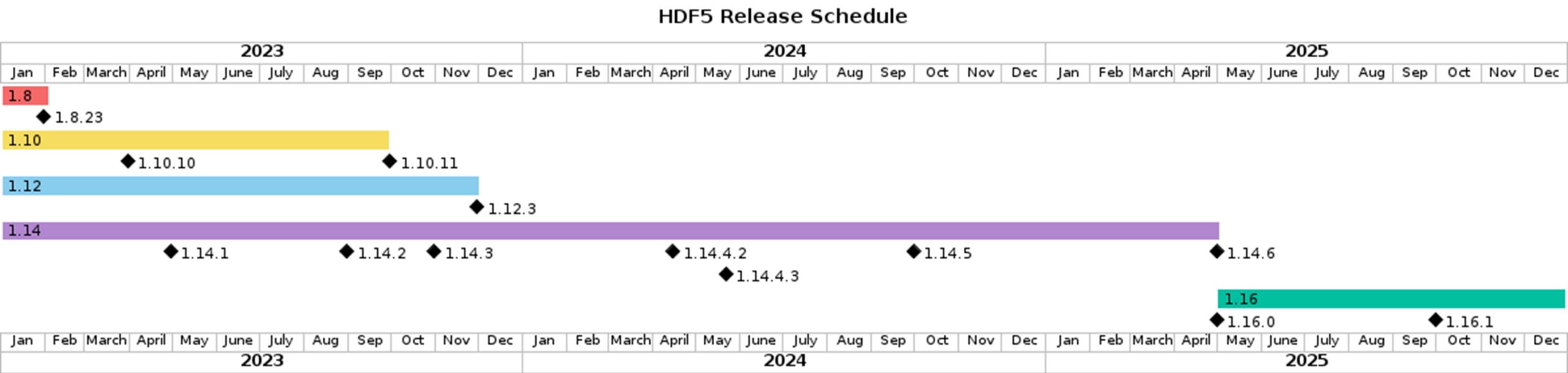
Dana Robinson

Call the Doctor – 15 Oct 2024

# What have I been telling people?

- The next release of HDF5 will be 1.16.0
- The reason for having a major release (instead of 1.14.6) is to get complex number support out ASAP
- We will minimize breaking changes so upgrading from 1.14 will be as easy as possible

# Former release schedule



This is no longer the plan

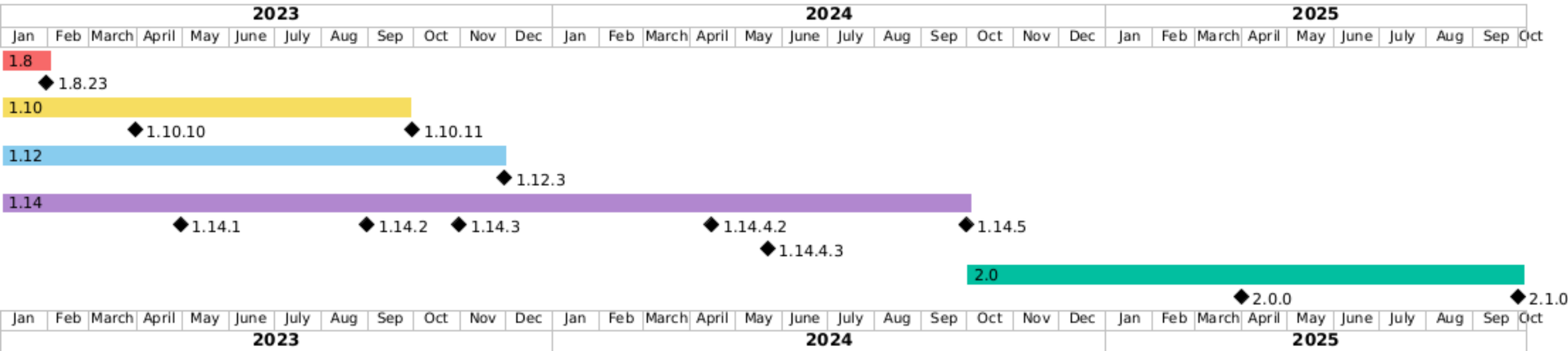
Sorry! 

# The current release plan

- The next release of HDF5 will be 2.0.0
- This will be a normal major release
- There will be no more releases of HDF5 1.14

# Current release schedule

**HDF5 Release Schedule**



# What will be in HDF5 2.0.0 (tentative)

- Semantic versioning (<https://semver.org>)
- Revisit library defaults (cache sizes, etc.)
- Complex number support
- Update some less commonly-used API calls
  - `H5Iregister_type()` will lose the `hash_size` parameter
  - `H5Pset_external()` `offset` parameter `off_t` → `hdoft_t`
  - `H5Tdecode()` will take a new `buf_size` parameter
- Fix oss-fuzz bugs and other crashers
- Additional cloud-optimized HDF5 fixes

# What will NOT be in HDF5 2.0.0 (tentative)

- Drop Autotools support
- No gif tools (gif2h5 and h52gif)
  - These are not heavily used, not well-maintained, and have CVE issues
- Drop the C++ wrappers (maybe)
  - These have not been actively supported for some time
  - Based on C++98, updated (sort of) to use C++11
  - Header-only wrappers exist that use modern C++
    - e.g.: <https://github.com/BlueBrain/HighFive>
- Drop 32-bit support



# As a reminder...

- You can specify a particular file format version to target
  - `H5Fset_libver_bounds()`
- You can specify a particular API to target
  - `HDF5_ENABLE_DEPRECATED_SYMBOLS`
  - `(HDF5_)DEFAULT_API_VERSION`
- I hope to get a migration guide out before the 2.0.0 release
  - Carefully explain version number scheme (file format, etc.)
  - How to use the file format version APIs
  - How to configure the library to use older APIs
  - Version-by-version guide to updating your software

Questions?