



ROOT Issues

=> Github?

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Content

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- ROOT @ Jira
- Collected feedback from team
- Github Issues: Quick Intro
- Project Management with Github Issues
- Experiments
- Conclusion

What's Considered

New Bug Reports @ Github

- Github offers "Issues" for bug reports; data is exportable
- New bug reports would have to be entered there
 - Jira closed for bug submission, only handling of existing bugs
- Will not migrate existing bugs from Jira into Github
 - No need (assumption: Jira will be kept)
 - Saves lots of extra effort

ROOT @ Jira

Projects @ sft.its.cern.ch

- ROOT #1 with >10k issues
 - Out of 24k total on that Jira instance
- LHCb Deployment: 4k
- CORAL / COOL: 3k
- All others < 3k

Projects

- 19 projects in total
- Lots of cross-talk
 - Resolution state
 - Labels
- Coordination of ROOT settings vs the others

- Unresolved
- Fixed
- Completed
- Won't Fix
- Duplicate
- Incomplete
- Not Needed
- Cannot Reproduce
- Clarified
- Ready for test
- Not a Bug
- Deployment/Config Problem
- Expired
- Done
- None
- Cancelled
- Invalid
- Postponed
- Remind
- Work in progress
- Need Info
- Won't Do
- Done, untested
- Fixed - Deployed
- Fixed, waiting for confirmation
- Moved
- Fixed - Not deployed
- Unresolved

Team Feedback

Why to Stay With Jira

- Binding ourselves even more to commercial platform that we don't control
- Not sure to which extent github can replace project management (e.g. bug report plots) - see this meeting
- We cannot customize the Github interface
- We would have to live with two systems (JIRA and Github issues) for quite some time (forever?)
- Would need to combine issue stats from Jira (old issues) and Github (new)

Why to move

- Philippe cannot edit Jira tickets in his Firefox; works for Github
- Lower barrier to entry for physicists to report ROOT bugs
 - No need for CERN account
 - Report templates, see e.g. <https://github.com/numba/numba/issues/new/choose>
- Project management features of GitHub Issues such as milestones, checklists, progress bars - see this meeting

Why to move

- Publicly visible, tighter integration between bug reports, PRs and code: cross-references, issues auto-closed by PRs, **branch-dependent URLs**
- Better notification emails: targeted; relevant info
- Markup language consistent with "the rest of the world": github PR reviews (obviously), Jekyll, codimd
- More streamlined interface



What's that?!

Github Issues: Quick Intro

New Issue

Issue: Bug Report

Create a report to help us improve Numba. If this doesn't look right, [choose a different type](#).

@

Title

Write Preview

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<!--


Thanks for opening an issue! To help the Numba team handle your information efficiently, please first ensure that there is no other issue present that already describes the issue you have (search at <https://github.com/numba/numba/issues?&q=is%3Aissue>).

For more general "how do I do X?" type questions, please speak to us in real time on <https://gitter.im/numba/numba> or post to the Numba mailing list <https://groups.google.com/a/continuum.io/forum/#!forum/numba-users>.

-->

Reporting a bug

Attach files by dragging & dropping, selecting or pasting them. 

 Styling with Markdown is supported

Submit new issue



It looks like this is your first time opening an issue in this project!

Be sure to review the [contributing guidelines](#).

 Remember, contributions to this repository should follow its [contributing guidelines](#).

Issue Labels

- Used for triaging, prioritization, and labelling
- Example from <https://github.com/numba/numba/labels>







3 - Ready for Review	
4 - Waiting on author	Waiting for author to respond to review
4 - Waiting on CI	Review etc done, waiting for CI to finish
4 - Waiting on reviewer	Waiting for reviewer to respond to author
5 - Ready to merge	Review and testing done, is ready to merge
abandoned	Abandoned for whatever reason
AOT	ahead of time compilation issue
ARM	Issue related to ARM ISA
Blocked awaiting long term feature	For PRs/Issues that require the implementation of a long term plan feature
bug	
BuildFarm Passed	For PRs that have been through the buildfarm and passed
caching	Issue involving caching
CUDA	CUDA related issue/PR
discussion	An issue requiring discussion
doc	

Issue Assignment

- Just like for PRs

Filters Labels 51 Milestones 5 [New issue](#)

Clear current search query, filters, and sorts

<input type="checkbox"/> 3 Open ✓ 6 Closed	Author ▾	Label ▾	Projects ▾	Milestones ▾	Assignee ▾	Sort ▾
<input type="checkbox"/> Cache numba.cuda functions on repeated deserialization CUDA needtriage #4590 opened on Sep 19, 2019 by mrocklin						 2
<input type="checkbox"/> Add Numba Python 2 timeline to Python3Statement py2.7 triage wontfix #3917 opened on Mar 31, 2019 by CAM-Gerlach						 5
<input type="checkbox"/> NVIDIA cub support CUDA feature_request #3200 opened on Aug 6, 2018 by sjperkins						 3

Issue List



Want to contribute to numba/numba?

Dismiss ▾

If you have a bug or an idea, read the [contributing guidelines](#) before opening an issue.
If you're ready to tackle some open issues, [we've collected some good first issues for you](#) .

Filters ▾

is:open label:"2 - In Progress"

Labels 51

Milestones 5

New issue

✕ Clear current search query, filters, and sorts

ⓘ 44 Open ✓ 43 Closed

Author ▾

Label ▾

Projects ▾

Milestones ▾

Assignee ▾

Sort ▾

[WIP] Add: iterate empty tuple ✕ 2 - In Progress

#5399 opened 7 days ago by 1844144 Numba 0.50RC

ⓘ 1

💬 2

Advanced Filter

- Simple search box
- Advanced search features
 - Spans virtually all fields: milestone, assigned, author, created date, updated date, closed date...
 - Lots of logical connections: "links" (or doesn't); no assignee or label etc

Search only issues or pull requests
Search by the title, body, or comments
Search within a user's or organization's repositories
Search by open or closed state
Search by public or private repository
Search by author
Search by assignee
Search by mention
Search by team mention
Search by commenter
Search by a user that's involved in an issue or pull request
Search for linked issues and pull requests
Search by label
Search by milestone
Search by project board
Search by commit status
Search by commit SHA
Search by branch name
Search by language
Search by number of comments
Search by number of interactions
Search by number of reactions
Search for draft pull requests
Search by pull request review status and reviewer
Search by when an issue or pull request was created or last updated
Search by when an issue or pull request was closed

Milestones

- Similar to labels, plus stats
- We use those for PRs already

Numba 0.49 RC

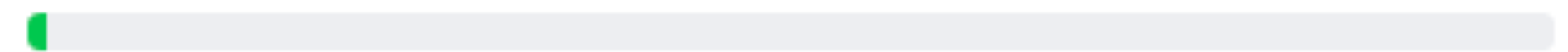
 Due by March 26, 2020  Last updated about 18 hours ago



80% complete 22 open 89 closed

Numba 0.50RC

No due date  Last updated about 24 hours ago



1% complete 69 open 1 closed

Project Management

Milestones, Again

- Similar to labels, plus stats
- We use those for PRs already

Numba 0.49 RC

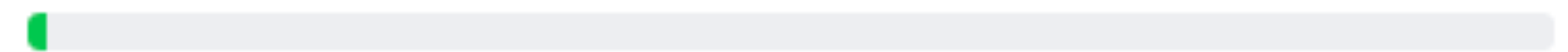
 Due by March 26, 2020  Last updated about 18 hours ago



80% complete 22 open 89 closed

Numba 0.50RC

No due date  Last updated about 24 hours ago



1% complete 69 open 1 closed

Boards

2 Do Next

- Pairwise sum implementation.**
#3046 opened by stuartarchibald
2 - In Progress
Numba 0.50RC
- Fix linkage nature (declspec(dllexport)) of some test functions**
#2942 opened by mingwandroid
4 - Waiting on revi... **good second issue**
Numba 0.50RC

8 Blocked

- [WIP] Cfunc x86 abi**
#3134 opened by SabirAkhadov
4 - Waiting on author **Pending BuildFarm**
- Support LowLevelCallable**
#2999 opened by sklam
2 - In Progress
- np.unique return_counts support**
#2959 opened by leezu
2 - In Progress **Blocked awaiting lo...**
- Tie out jitted call chains.**
#2469 opened by stuartarchibald
Blocked awaiting lo...
Changes requested

16 In Progress

- Wrap conditionals in truth to create predicates.**
#3901 opened by stuartarchibald
2 - In Progress **Blocked awaiting lo...**
- [WIP] Duplicate code with a dynamic aliasing check.**
#3908 opened by DrTodd13
2 - In Progress **ParallelAccelerator**
- R&D inlining.**
#3743 opened by stuartarchibald
2 - In Progress **R&D**
Changes requested
- Add support for cffi structs, pointers and array**
#3753 opened by alendit
2 - In Progress

4 Need Review

- Implement getitem and jitclasses**
#3730 opened by alendit
3 - Ready for Review
Numba 0.44 RC
- Added docstring coding and specified line termin developer docs**
#2977 opened by innovate-
- [WIP] Expansion of developer documentation.**
#2976 opened by innovate-
- [WIP] Implement jitclass constructor arguments.**
#2894 opened by leoschwa
Numba 0.45 RC

Project Management Apps

- Long list <https://github.com/marketplace/category/project-management>



ZenHub ✓

Agile Task Boards, Epics, Estimates and Reports, all within GitHub's UI



WakaTime ✓

Metrics, goals, and time tracking automatically generated from your programming activity



DeepAffects ✓

Metrics for Team Dynamics and Productivity



Stale ✓

Closes stale issues and pull requests



WIP ✓

DO NOT MERGE – as a service



Slack + GitHub ✓

Connect your code without leaving Slack



GitKraken Glo Boards ✓

Free issue/task tracking boards that sync in real-time with GitHub Issues



Octobox ✓

Spend less time managing your GitHub notifications



Jira Software + GitHub ✓

Connect Jira to GitHub



LeanBoard ✓

Whiteboard with sticky notes, connected with your GitHub issue



Azure Boards ✓

Connects Azure Boards with GitHub to



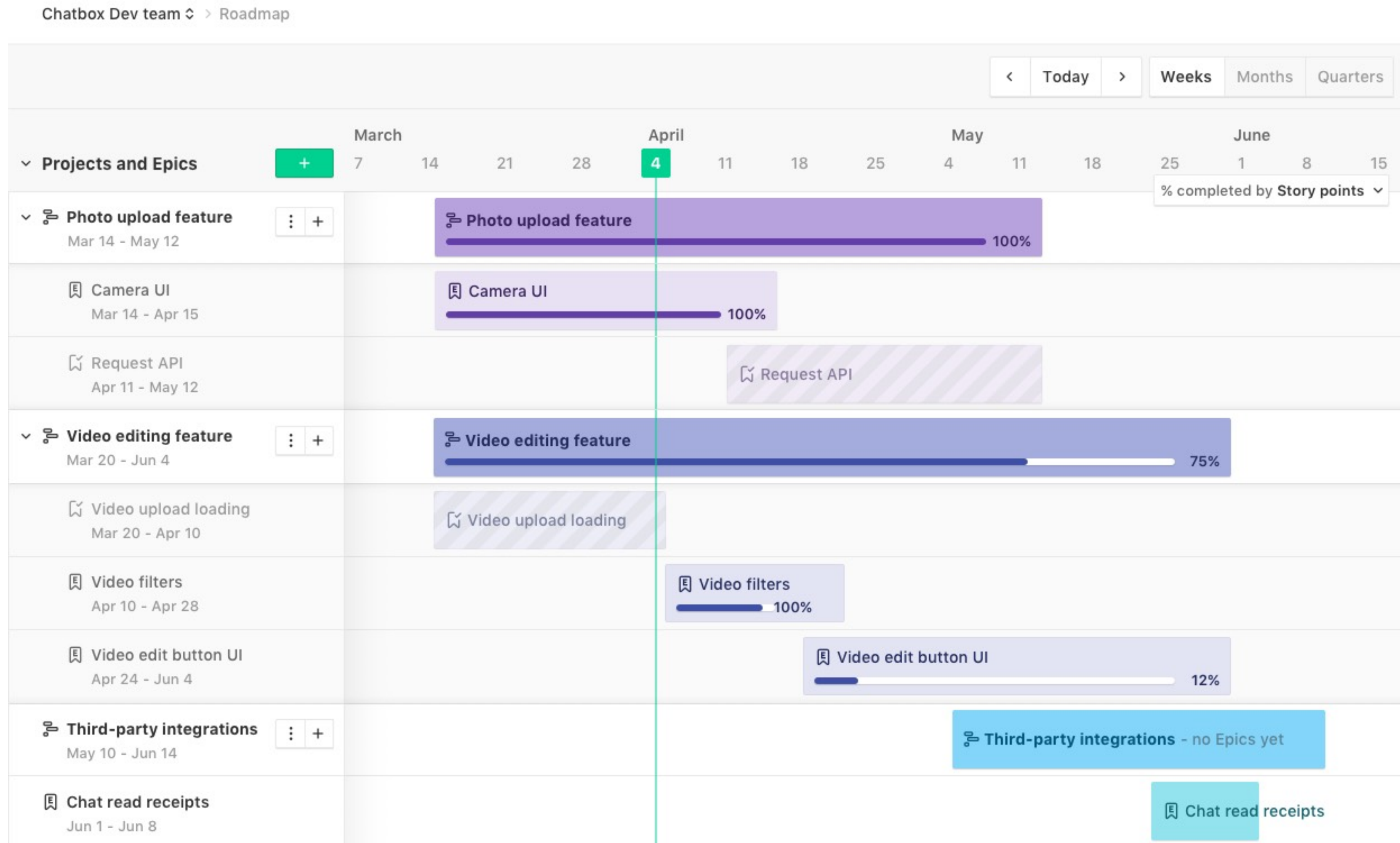
Sync by Unito ✓

Build workflows, connect tools, and teams

App Candidates

- All free for open projects like ROOT!
- Integrated project management: ZenHub
 - Roadmaps, agile epic + story + sprint + milestone, reporting
- Auto labeling (based on ML): Issue-Label Bot
- Notification management: Octobox

ZenHub Roadmap



ZenHub Reporting



Experiments

ALICE

- Jira
 - Used both Jira and Github but duplication was problematic
- Strong resistance to move away from Jira for "political" reasons
 - "private" bugs etc












LHCb

- Uses both Jira and Git**lab** Issues, IIUC:
 - Jira: project management
 - Gitlab Issues: code bugs; e.g. Gaudi @ Gitlab
- Concerned by transition: redirecting new bugs; follow-up on old ones

ATLAS

- Uses Jira
- Never considered moving away from it
- Sees no problems with ROOT moving to Jira
- Requests meaningful message on the then legacy Jira site, if we move

CMS

3 Open ✓ 154 Closed	Author ▾	Label ▾	Projects ▾	Milestones ▾	Assignee ▾	Sort ▾
 New repository L1Trigger-CSCTriggerPrimitives in cms-data pending-assignment 3	#29215 by dildick was closed 8 days ago					
 Fix cms::cuda::ESProduct for zero devices ✓ code-checks-approved comparison-available fully-signed heterogeneous-approved orp-approved tests-approved 15	#29061 by makortel was merged 22 days ago  CMSSW_11_1_X					
 Missing file and xrootd-cms.infn.it alca-approved fully-signed 8	#28983 by silviodonato was closed on Feb 19					
 [Do Not Merge] testing cms-bot changes comparison-pending core-pending pending-signatures tests-pending 2	#28818 by smuzaffar was closed on Jan 29					
 [Do not merge] This is to test new cms-bot statuses per test code-checks-approved comparison-pending core-pending orp-pending pending-signatures requires-external tests-started 4	#28787 by smuzaffar was closed on Jan 29  CMSSW_11_1_X					
 Add CMS_SA_ALLOW before try statements where catch (...) is used to skip static analyzer warning. ✓ code-checks-approved comparison-available core-approved fully-signed orp-approved tests-approved 144	#28715 by gartung was merged on Jan 14  CMSSW_11_1_X					
 Utilities/StaticAnalyzers: Add CMS_SA_ALLOW exceptions on Static Analyzer checks involving Decl. ✓ code-checks-approved comparison-available core-approved fully-signed orp-approved requires-external tests-approved 54	#28630 by gartung was merged on Dec 28, 2019  CMSSW_11_1_X					

Conclusion

Yes / No

- Several benefits to migrate reports of new issues to Github
 - First and foremost: PR + code integration
- No objections from experiments
- Project management tools exist
- If we move, would propose to start minimally (no ZenHub!) and build up as needed

Next steps

- Discuss with SFT projects
- Based on this meeting and these slides

