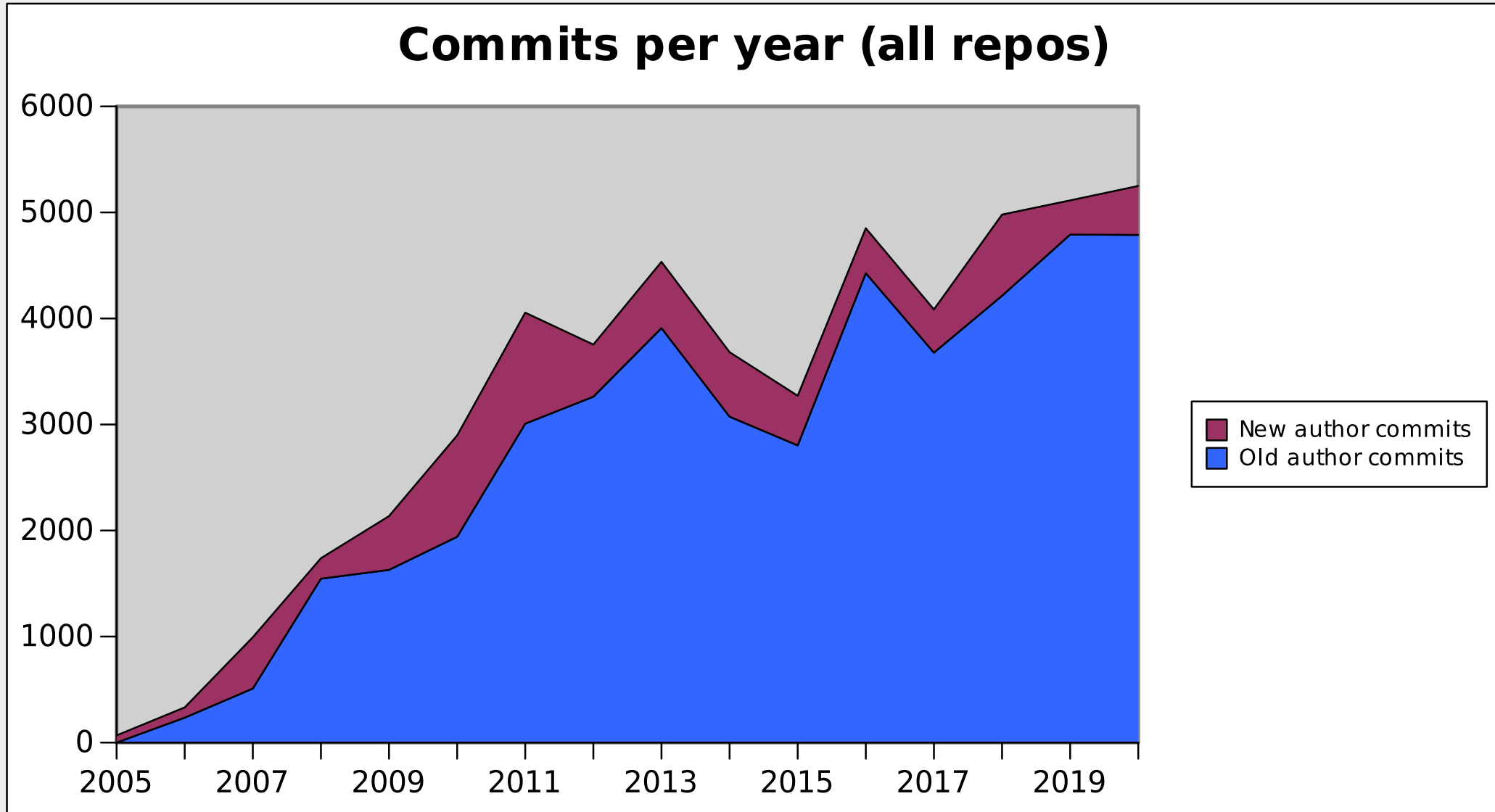# Status report

Daniel P. Berrangé
@
KVM Forum 2020, Virtual
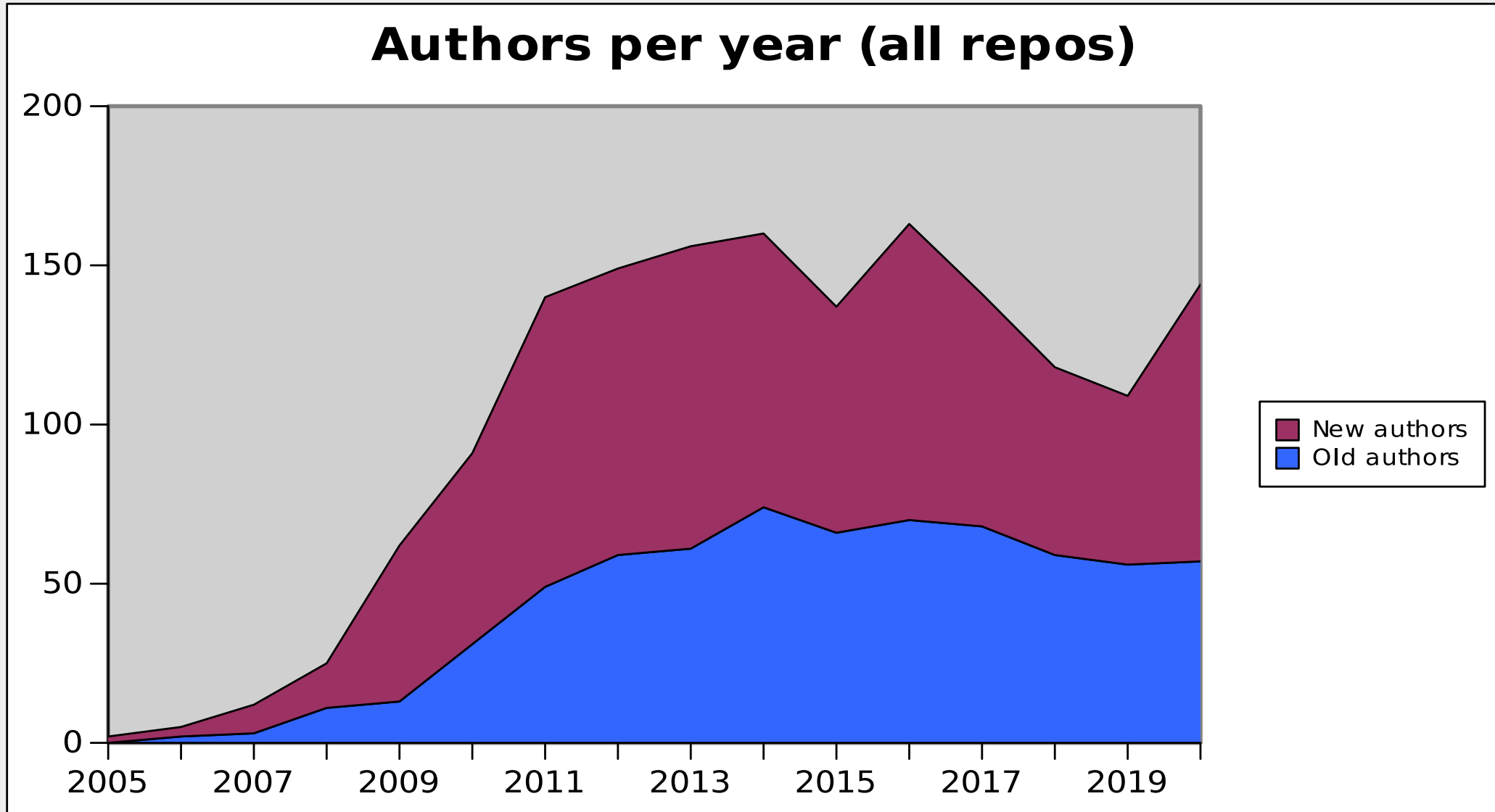
Activity since Jan 1ˢᵗ 2020

- **9 releases (11 by year end)**
- **144 contributors**
  - 87 "new" contributors
- **~4100 commits (est 5200 by year end)**
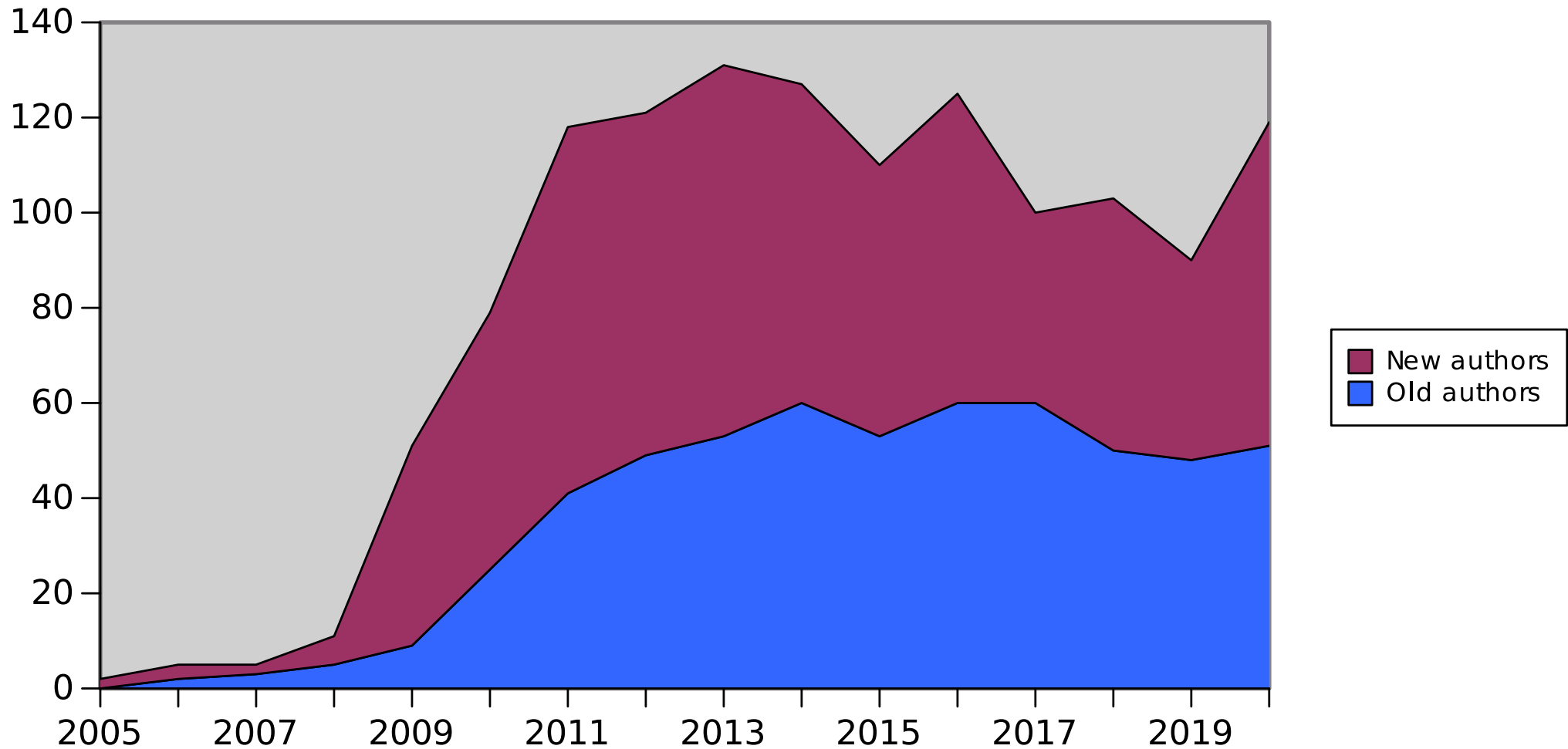 - ~450 commits by "new" contributors

Contributions the last 15 years

Commits per year (all repos)
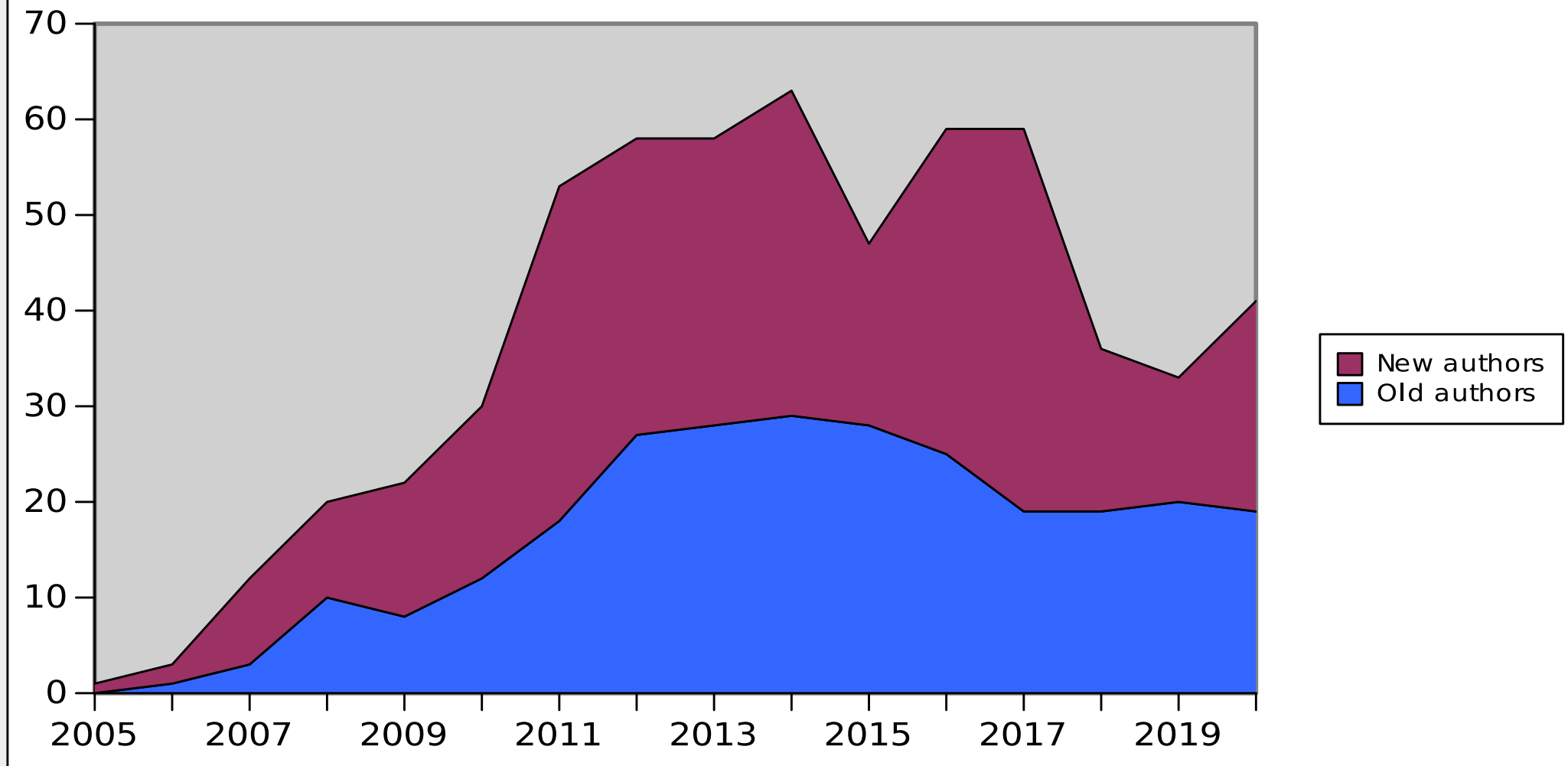
Legend:
- New author commits
- Old author commits

Contributors the last 15 years

Authors per year (all repos)

Legend:
- New authors
- Old authors

Contributors the last 15 years

Authors per year (libvirt-*.git)

New project infrastructure

- **GitLab.com as project infrastructure**
  - Git repos, moved off libvirt.org server
  - Issue trackers, moved off bugzilla
  - Website populated from CI job artifacts
  - CI moved off CentOS Jenkins

New contributor workflow

- **Merge request workflow**
  - Replaces traditional email workflow
  - Used for all repos except main libvirt.git
  - Main libvirt.git to switch at a date TBD

New translation platform

- **Weblate Fedora instance**
  - Replaces Zanata abandonware
  - Directly integrates with GitLab
  - Opens merge requests with author attribution

Technical debt

- **Build system converted to Meson**
  - No more shell, m4, make, autoconf, automake
- **Before:**
  - autogen.sh: 1 min
  - make -j12: 2 min
  - total: 3 min
- **After:**
  - Meson: 18 secs
  - Ninja: 1 min 18 secs
  - Total: 1 min 36 secs

Technical debt

- **Most build scripts in Python 3**
  - Very little Perl code left, Python 2 dropped
- **GLib adopted, GNULIB removed**
- **Documentation converting to RST**
- **Manpages converted to RST**

Technical debt

- **Memory management refactoring**
  - Use abort-on-OOM semantics
  - Use GLib allocation functions
  - Use GCC/Clang __attribute__(cleanup)
- **Drastically simplifies code**
  - Easier to follow code flow
  - Fewer memory leaks
  - More robust code

QEMU driver

- **Refactored block device code**
  - Now uses QEMU "blockdev" instead of "drive"
  - Immediate benefit to all libvirt based apps
  - New checkpoint / backup APIs unblocked
- **Automatic firmware image selection**
- **Support virtio-fs (alternative to 9p)**
- **NIC teaming for failover**

Secondary drivers

- **Virtual network NAT with IPv6**
- **HAL driver removed (udev preferred)**
- **Creation of mediated devices**

Other drivers

- **Xen: support QEMU CLI passthrough**
- **BHyve: many more VM config opts**
- **HyperV: new active contributors**
- **VirtualBox: support 6.0 APIs**

FIN