

Luckily we are not so many!



Science Framework

Goals include:

- *Active* science working groups across the collaboration
- Channels for regular communication, documentation of progress, publication plans
- Sharing of tool development for the benefit of the whole collaboration
- Dynamic organization of science working groups, allowing for young members (in particular) to thrive and take responsibilities
- Regular collaboration meetings

External collaborators

- *Project collaborators*, e.g., individuals that are not part of partnership but that can make significant contributions to one or more specific ZTF key projects.
- *Committee view*: seeking external collaborators (with special skills or resources) is of interest to the partnership as long as they provide a specific complementary/strategic added value to the project. However, special care has to be taken to ensure that it does not lead to internal competition or conflict of interests.

External collaborators

- Galactic and Solar system groups: foresee a relatively small set of external collaborators.
- Transients:
 - i. heavy demand on spectroscopic typing, which SEDM will not be able to meet (e.g., because of resolution, sensitivity or lack of availability).
 - ii. Multi-band photometric follow-up, e.g., near-IR, radio
 - iii. Specific expertise: e.g, calibration, modeling, specific tools, theory, etc

Basic Rules (cmt view)

- Collaboration should be win-win for both parties.
- Should be scientifically focused, i.e., strictly defined area of collaboration.
- Should be supported by MoU that specifies the extent of the collaboration, data rights and publication policies.

Proposed preamble

- *All external collaborations will be approved by the ZTF SSC and will have a well defined MoU with the ZTF Project(s) they are associated with that describes their contribution, the project(s) that they propose to execute with ZTF, the ZTF data that they need access to and the publication policy for their collaboration. A specific ZTF Key Project leader will be listed in the MoU as the Point of Contact (POC) for each project(s). The MoU will have specific start and end dates, and list all members of the collaboration. Any changes to the MoU will need to be approved, in advance, by the ZTF SSC.*
- *In return for their contributions, the main benefit for external collaborators is the privileged access they gain to the private ZTF data stream relevant to the specific science and the opportunity to conduct science investigations within their prescribed projects.*

SSC = Science Steering Committee

Spectroscopic screening: resource collaborators (I)

- For the purposes of spectroscopic screening, ZTF benefits by having access to follow up resources beyond those available to the ZTF collaboration. To this end it is advantageous for ZTF's Transient Key Projects to have Resource Collaborations that can bring such capabilities to bear.
- Since this effort can potentially screen and type almost all potential transients (spanning the interests of most, if not all, ZTF members), care must be taken before setting up one of these collaborations.

The process of “recruiting” external collaborators:

ZTF Key Project leaders should first discuss offers of a Resource Collaboration within their own project and then with other relevant Key Project leaders (e.g., all Key Projects focused on extragalactic supernovae). After having developed a strong case for collaboration they should formally propose to the Chair of the Board.

Spectroscopic screening: resource collaborators (II)

- The proposal for Resource Collaborations will include a formal MoU where both parties describe in detail the extent of the collaboration, the benefits to the ZTF Project and the Resource Collaborator, and data rights. *This is particularly important for cases where spectroscopic screening of yet untyped objects is proposed, or where the identification of the transient changes over time.* In such cases, the MoU must stipulate the consequences of the rights on the part of the collaborators to make any use of the obtained data in the case where *the observed object does not belong to the class outlined* in the original proposal.

Spectroscopic screening: resource collaborators (III)

We propose the following as the standard design for data and publication rights for Resource Collaborations:

- (1) Resource Collaborations will be able to view all potential transients discovered by ZTF. **They will not be able to discuss or share these with anyone outside those covered by their MoU and the members of the ZTF collaboration.**
- (2) Resource Collaborations will undertake rapid reduction of follow-up data and will disseminate these quick-look reductions promptly to the rest of the ZTF collaboration in digital form. Should the screening data indicate that the classified object falls within the science domain of the partner sponsoring the collaboration, further scientific work on these data will progress according to the MoU signed.
- (3) **In the case that the object falls outside the scientific domain of the partner sponsoring the collaboration,** the following rules would apply. First, **unlimited usage of quick-look reductions by any ZTF member is allowed without any requirements placed upon such members.** Next, should ZTF members request additional work from the contributing resource collaboration, and in particular, a paper-quality reduction of the data, a Resource Collaboration has the opportunity to name one “observer” and one “data reducer” to appear on a publication led by a ZTF Key Project per transient that they successfully screened for the ZTF collaboration.
- (4) **Resource Collaborators may not initiate further follow-up of objects which fall outside their partner scientific domain** without the express consent of the associated ZTF Key Project. They forfeit all rights to this data until a ZTF publication is produced that makes this data publicly available. No member of the Resource Collaboration may work on publications or follow-up programs outside of those proposed within the ZTF Key Projects for these transients - unless the transients were discovered and publicly announced prior to being first observed and detected by ZTF.
- (5) If a large number of transients used in a paper by a ZTF Key Project come from a single Resource Collaboration (e.g. papers on rates, statistical comparisons, etc.), their entire collaboration list, as indicated in their MoU, will be offered co-authorship.
- (6) **All quick-look reductions will become public after 2 years.** At this point Resource Collaborators may publish what they want using this data and any ZTF data which is publicly available at that time.

Feedback welcome!