Future Directions & Roadmap

TOAST Workshop - 2019 Trieste

New Features

- Documentation!
- TOAST can call external map-making code (e.g. libmadam), but there are also built-in tools that can do some map-making operations. Performance improvements coming.
- Timestream processing- many techniques exist from current and previous experiments. Trying to generalize and integrate useful common things..
- Supporting new architectures: next NERSC computer in ~1 - 1.5 years will have AMD Epyc processors with 64 or 128 "traditional" cores and NVIDIA GPUs on half the nodes.
- Better workflow interfacing with the spt3g package (both the data format and the HTC pipeline tools).

API Improvements

- Now that code has been applied in a variety of use cases, we can see some issues with interfaces.
- Any API changes need a well documented and discussed implementation and transition plan. Too much code depends on the current interfaces for a "quick" change.
- However, we should still aim to improve interfaces and make things easier:
    - Observation / TOD: Perhaps moving to a pure source and sink model, where the "observation" is just a data container (needs more thought).
    - Make it easier to instantiate operators from config files.