We provide a brief summary of the SSSC's review of the v2.0 cadence simulations. The SSSC applied the same strategy used in our cadence note and our response to the SCOC November 2022 workshop. Comparing the metrics to the relevant baseline cadence or within a simulation family, reductions in relevant metrics (discovery and light curve inversion) larger than ~5% for Near Earth Objects (NEOs), Trans-Neptunian Objects (TNOs), Main-Belt Asteroids (MBAs) Potentially Hazardous Asteroids (PHAs), and comets were deemed unsuitable. We allow wider swings in the metrics for Jupiter Trojans based on the expected science and their localized positions on sky which will make them very sensitive to cadence modifications. Like our previous cadence note, we provide a silver, green, red label for each of the v2.0 simulations in the linked spreadsheet.

New Baseline: The Baseline 2.0 is satisfactory for the SSSC's science goals. The Inclusion of more of the Northern Ecliptic Spur in the Wide-Fast-Deep (WFD) footprint is welcome.

Filter distribution (bluer_ and long_u families): We prefer the baseline filter allocation over any of the shift to bluer filter allocations simulated. Most of the families with bluer filters (bluer_indxXX,, long_uXX) are worse for Solar System objects than the baseline, especially for the light curve metric. In terms of modifying u-band exposures, we prefer the v2.0 baseline, but the long_u2_ is a good compromise and the least bad for solar system metrics, as long as it is not done simultaneously to any of the bluer_indxXX options.

Presto Color (presto_gapXX, presto_gapXX_mix, and presto_half families): The presto color strategy as implemented in v2.0 has significant negative impacts on Solar System science. We strongly advocate against the presto color strategy being implemented as currently designed into the LSST cadence. The presto_gapXX and presto_gapXX_mix families add a 3rd visit 1.5 to 4 hours later in the same night to the same fields. This has substantial impacts in the amount of well covered (>825 visits) area which would have a large hit on detecting new activity/outbursts or finding rare objects, such as interstellar objects. There is also a substantial hit on all the discovery metrics and the light curve inversion metric. Decreases over baseline range from 15% to over 75% depending on the specific run and Solar System population being considered. The effects are less severe for the presto_half family (where the triplets are done every other night) with a 7-15% drop in discovery statistics, but light curve inversion metrics still take a substantial hit (20-75%). This is particularly true for fainter objects, the main bounty from LSST.

Third visits in a night (long_gaps family): These simulations add a third visit 2-7 hours after a nightly pair separated by the baseline separation. Generally these cadences are fine and only have small effects on the area covered and most Solar System metrics unless this is run frequently(*_nightsoff[**0-2**]* runs). The long_gaps_nightsoff[**5,7]**_delayed-1 and long_gaps_nightsoff6_delayed1827 simulations also hit our light curve metrics hard.

Increasing the time between pairs (long_gaps_np family): These simulations expand the separation between nightly pairs to 2-7 hours. This family generally performs better than the presto color and has less impact on discovery metrics, but this family has poor results for some of the light curve metrics. Three runs satisfy our criteria: long_gaps_np_nightsoff[**5,7**]_delayed-1 and long_gaps_np_nightsoff6_delayed1827.

Twilight NEO v2.0 simulations (twilight_neo_nightpatternXX family): Evening and morning twilight is the only opportunity to observe at low-solar elongation and thus, discover Inner-Earth objects (IEOs; NEOs on orbits interior to Earth's orbit), such as the Vatiras and Atiras. Of the v2.0 simulations, the one with the largest fraction of off/on nights (1 night on/3 nights off -- twilight_neo_nightpattern4) performs the best, but there is still a significant reduction (by ~10%) in some of the Solar System light curve metrics. Other variations of the twilight microsurvey have an even larger impact on the light curve metrics. We ask for additional options for this microsurvey to be explored, with cadence simulations generated with nightly patterns running even less often than what was simulated in v2.0 to see if giving back more time to WFD observing provides a more reasonable balance. To better assess the tradeoffs, we ask that a Vatira population be run through future twilight NEO microsurvey simulations to generate IEO completeness and light curve inversion metrics.

NES coverage as percentage of WFD coverage (vary_NES family): We advocate for the NES to be covered to at least 25% of the WFD level (Baseline is 30%). If the NES drops below 25% of the WFD, we lose a lot of color information on the TNO populations (because the ones in the NES will not move enough on-sky over 10 years to move into the WFD fields). This is reflected in larger than 5% losses in the metrics for the number of TNOs with observations in 3 or more filters. We also lose light curve information on faint NEOs and PHAs. We note that the current metrics don't reflect how the distribution of the NES visits over time could affect detections of transient cometary activity (such as in main belt asteroids) or new comets.

Galactic Plane (GP) coverage as a percentage of WFD coverage (vary_GP family): We require the GP coverage to be <=30% of the WFD level for our science goals. If the GP is >30% of the WFD, we lose light curve information on faint MBAs, PHAs, and Jupiter Trojans.

DDF Observing Strategies (ddf_frac_): The simulations with 3% and 8% of survey time spent on the DDFs produce negligible (<5%) changes in our Solar System metrics – therefore we find both options acceptable. The COSMOS field is the closest DDF to the ecliptic (~8 degrees). If the COSMOS DDF observing is restricted to the early years of the survey, we would prefer the COSMOS DDF to be observed for >2 years, but 3+ years would be ideal for reducing orbit uncertainties.

Microsurveys (virgo_cluster, carina_,smc_movie, roman, local_gal, too_rare, short_exp, north_stripe, mutli_short): The multi_short simulation has very bad effects on the Solar System discovery metrics, particularly on the fainter objects, due to all the short exposures. Our small MBA and PHA light curve metrics take a significant hit with the largest allocation of g-band imaging to the 10 local volume galaxies (the local_gal_bindx2_v2.0 run). The northern stripe to +30 declination simulation (north_stripe) results in our light curve metrics falling just below our thresholds for all small MBAs, PHAs, and NEOs. The rest of the microsuveys have little to no impact on Solar System metrics, which is unsurprising given they take only a few percent of the survey time. Although many individual microsurveys by themselves may have little effect, the combination of several of them may not. This needs to be carefully considered by the SCOC when incorporating the microsurveys into the v3.0 cadence.

Rolling Cadence (rolling, roll_, _six_rolling): Most of the rolling cadences are okay for Solar System science. We note this evaluation is based on the detection and light curve metrics. Further exploration of how the observations are distributed over time on and off roll is still needed. An initial look at long period comet discovery, which can be expected in any direction and at any time through the survey, indicates that rolling cadence does not have a strong impact. There are few scenarios where the Solar System metrics do suffer. We advocate against the 6 band(six_rolling_) rolling cadence and the rolling_ns2_rw0.5 and rolling_ns3_rw0.9_ scenarios as well.

Varying exposure time (vary_expt): The varying exposure simulation has exposure times ranging from 20s to 100s tailored to the observing conditions. All Solar System light curve metrics see significant losses, a ~30% reduction for small NEOs, PHAs, and MBAs. We advocate against this strategy and prefer the fixed exposure times within the baseline 2.0 simulation.