

Updates to Sector 20, Data Release 27 Products

The data products for Sector 20 have been updated. The data release notes have been revised to detail these changes, but a separate announcement is provided here to emphasize the important differences.

The updated data products can best be identified by examining the “DATE” keyword, which identifies the date that the file was created. The “PROCV” keyword can also be used to identify the software version used to create the data file. These keywords take the following values for the old and new data products:

Old data products:

DATE = '2020-02-03' / file creation date.
DATE = '2020-02-04' / file creation date.
PROCV = 'spoc-4.0.17-20200130' / SW version

New data products:

DATE = '2020-03-26' / file creation date.
DATE = '2020-03-27' / file creation date.
DATE = '2020-04-03' / file creation date.
PROCV = 'spoc-4.0.27-20200326' / SW version

Changes to Timestamps

In this revision of the Sector 20 data products, the FFI timestamps have been adjusted to account for several offsets:

- The staggered readouts of the four cameras: the two-second integrations in the cameras are offset by 0.5 seconds, in the order camera 1, camera 3, camera 4, camera 2. The timestamps have been adjusted to reflect this.
- The staggered readouts of the four CCDs within a camera: the readouts of the four CCDs are staggered by 0.020 seconds, in the order CCD 1, CCD 2, CCD 3, CCD 4. The timestamps have been adjusted to reflect this.
- A correction to an error in calculation the start and end times of 2m and 30m data: these values were too high by 2.0 seconds in the original data products. In addition, the start and end times were made more accurate by adding 0.031 s and 0.011 s, respectively.

This revision of the Sector 20 data products has updated and accurate timestamps. Future data releases will include reprocessed data from Sectors 1 to 19 with corrected timestamps. Note that the correction only applies to the timestamps themselves; the reported exposure times in data product headers and flux values (electrons per second) are correct, as they already account for the 20 millisecond relative offset between start and stop times discussed here.

Changes to Stray Light Flags

In this revision of the Sector 20 data products, the predicted stray light flag (bit 12, value 2048) is disabled for the two-minute data products. Instead, the scattered light exclude flag (bit 13, value 4096) identifies cadences at which individual targets are affected by scattered light. The predicted stray light flag (bit 12) continues to be marked in the FFIs and flags times when the Earth/Moon are near the camera FOVs and may interfere with guiding or saturate the detectors. We strongly recommend that users inspect the FFI data before removing images marked with bit 12, because this bit is set based on predictions from mission planning and is known to be conservative with respect to the quality of data usable for analysis.