NSRDB Versions

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Effective Date** | **Data Years\*** | **Notes** |
| 1.0.0 | 2015 | 2005-2012 | Initial release of PSM v1 (no FARMS)   * Satellite Algorithm for Shortwave Radiation Budget (SASRAB) model * MMAC model for clear sky condition * The DNI for cloud scenes is then computed using the DISC model |
| 2.0.0 | 2016 | 1998-2015 | Initial release of PSM v2 (use of FARMS, downscaling of ancillary data introduced to account for elevation, NSRDB website distribution developed)   * Clear sky: REST2, Cloudy sky: NREL FARMS model and DISC model * Climate Forecast System Reanalysis (CFSR) is used for ancillary data * Monthly 0.5º aerosol optical depth (AOD) for 1998-2014 using satellite and ground-based measurements. Monthly results interpolated to daily 4-km AOD data. Daily data calibrated using ground measurements to develop accurate AOD product. |
| 3.0.0 | 2018 | 1998-2017 | Initial release of PSM v3   * Hourly AOD (1998-2016) from Modern-Era Retrospective analysis for Research and Applications Version 2 (MERRA2). * Snow-free Surface Albedo from MODIS (2001-2015) , (MCD43GF CMG Gap-Filled Snow-Free Products from University of Massachusetts, Boston). * Snow cover from Integrated Multi-Sensor Snow and Ice Mapping System (IMS) daily snow cover product (National Snow and Ice Data Center). * GOES-East time-shift applied to cloud properties instead of solar radiation. * Modern-Era Retrospective analysis for Research and Applications, Version 2 (MERRA-2) is used for ancillary data (pressure, humidity, wind speed etc.) |
| 3.0.1 | 2018 | 1998-2017 | Moved from timeshift of radiation to timeshift of cloud properties. |
| 3.0.2 | 2/25/2019 | 1998-2017 | Air temperature data recomputed from MERRA2 with elevation correction |
| 3.0.3 | 2/25/2019 | 1998-2017 | Wind data recomputed to fix corrupted data in western extent |
| 3.0.4 | 3/29/2019 | 1998-2017 | Aerosol optical depth patched with physical range from 0 to 3.2 |
| 3.0.5 | 4/8/2019 | 1998-2017 | Cloud pressure attributes and scale/offset fixed for 2016 and 2017 |
| 3.0.6 | 4/23/2019 | 1998-2017 | Missing data for all cloud properties gap filled using heuristics method |
| 3.1.0 | 9/23/2019 | 2018+ | Complete refactor of NSRDB processing code for NSRDB 2018 |
| 3.1.1 | 12/5/2019 | 2018+,  TMY-2018, TDY-2018, TGY-2018 | Complete refactor of TMY processing code |

\*Note: The “Data Years” column shows which years of NSRDB data were updated at the time of version release. However, each NSRDB file should be checked for the version attribute, which should be a more accurate record of the actual data version.