PARDIG Dataset Attributions & Acknowledgements

The following data sources were used in training the PARDIG model and/or are used in operationalizing its precipitation estimates:

Copernicus ERA5 Reanalysis
Copernicus Climate Change Service, Climate Data Store, (2023): ERA5 hourly data from 1959 to present. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.adbb2d47. (Accessed on 05-05-2026.)

Generated using or contains modified Copernicus Climate Change Service information. Neither the European Commission nor ECMWF is responsible for any use that may be made of the Copernicus information or data it contains.

ECMWF HRES Analysis
ECMWF HRES datasets (available at www.ecmwf.int). Copyright 2023 ECMWF. ECMWF open data is published under CC BY 4.0.

Source: European Centre for Medium-Range Weather Forecasts (ECMWF). Contains modified data from ECMWF. Neither ECMWF nor the European Commission is responsible for any use that may be made of the information or data it contains.

NOAA GridSat-B1
NOAA Fundamental Climate Data Records (FCDR) first accessed on September 2024 from https://registry.opendata.aws/noaa-cdr-fundamental.

NOAA AMSU-A Brightness Temperature Climate Data Record (CDR)
Zou, Cheng-Zhi; Wang, Wenhui; and NOAA CDR Program (2013): NOAA Fundamental Climate Data Record (FCDR) of AMSU-A Level 1c Brightness Temperature, Version 1.0. NOAA National Climatic Data Center. doi:10.7289/V5X63JT2 [Accessed September 2024].

EUMETSAT EARS-ATMS (Advanced Technology Microwave Sounder)
EUMETSAT (2012): EARS-ATMS - Suomi-NPP and JPSS. EUMETSAT Data Store. Collection ID: EO:EUM:DAT:MULT:EARS-ATMS.

EUMETSAT Metop MHS (Microwave Humidity Sounder)
EUMETSAT (2020): MHS Microwave Humidity Sounder Climate Data Record Release 1 - Metop and NOAA, Version 1.0. EUMETSAT. doi:10.15770/EUM_SEC_CLM_0045.

NASA GPM CORRA 2B

Olson, William S., and GPM Combined Radar-Radiometer Algorithm Team (2022): GPM DPR and GMI Combined Precipitation L2B 1.5 hours 5 km V07 (GPM_2BCMB). Greenbelt, MD, NASA Goddard Earth Sciences Data and Information Services Center (GES DISC) [accessed March 2026] https://doi.org/10.5067/GPM/DPRGMI/CMB/2B/07.

Meteosat (1st, 2nd, and 3rd Generation)
Includes calibrated satellite observations supplied by EUMETSAT under the Creative Commons Attribution 4.0 International (CC BY 4.0) license (https://data.eumetsat.int/). Modification: Google incorporated the data into a global coverage geostationary satellite mosaic (SatWeave).

GOES-R Series (16, 17, 18, and 19)
NOAA Geostationary Operational Environmental Satellites (GOES) is accessed on an ongoing basis from https://console.cloud.google.com/marketplace/product/noaa-public/goes.

Himawari (8 and 9)
Source: Meteorological Satellite Center of Japan Meteorological Agency (JMA) via NOAA NODD (https://console.cloud.google.com/marketplace/product/bigquery-public-data/himawari). Modification: Google incorporated the data into a global coverage geostationary satellite mosaic (SatWeave).

MTSAT Series (1R and 2)
MTSAT geostationary satellite data provided by the Japan Meteorological Agency (JMA) and distributed by the NASA Langley Research Center Atmospheric Science Data Center (ASDC) CERES project.