Summer 2019 - Speedwell Weather Gridded Data Inventory

The gridded data sets listed below are available for no additional charge to SuperPack® Premium users on a reasonable request basis. These data sets can be accessed directly by users of the Speedwell Weather System via API. We are continuously adding gridded data and will therefore be updated on a regular basis.

Please contact us for further information relating to the provision of Settlement Data based on gridded data.

ARC2 - NOAA Climate Prediction Center (CPC)

Description: Africa region rainfall climatology using 3 hourly infrared satellite imagery (EUMETSAT)
and hourly/24 hour rainfall totals from WMO reporting rain gauges (GTS)

Earliest Data: 1983-01-01
Latest Data: 3 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Rain	N	Africa: 0.1(~10) x 0.1(~10) degrees(km)	Daily	mm	A

HR = Speedwell derived high resolution product
    Y = available
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    X = coming soon

Bureau of Meteorology (Australia)

Description: Reanalysis of quality controlled surface rainfall observations, projected to a regular grid. Series is revised over time as further improvements in data quality applied

Earliest Data: Rain 1900-01-01, Temperature 1911-01-01, Solar 1990-01-01
Latest Data: 2 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Rain	N	Australia: 0.05(5) x 0.05(5) degrees (km)	Daily	mm	A
Solar Radiation	N	Australia: 0.05(5) x 0.05(5) degrees (km)	Daily	MJ/m^2	A
Temperature Maximum	N	Australia: 0.05(5) x 0.05(5) degrees (km)	Daily	C	A
Temperature Minimum	N	Australia: 0.05(5) x 0.05(5) degrees (km)	Daily	C	A

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CHIRPS - Climate Hazards Group (CHG)

Description: A global rainfall estimate, derived from satellite imagery using algorithms to estimate rainfall at the surface based upon cloud top temperatures

Earliest Data: 1981-01-01
Latest Data: 6 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Rain	N	Global: 0.05(5) x 0.05(5) degrees (km)	Daily	mm	A

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NOAA Climate prediction Centre (CPC)

Description: CPC Unified Gauge-Based Analysis of Global Daily Precipitation Project

Earliest Data: 1979-01-01 (1948-01-01 for CONUS)
Latest Data: 2 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Rain	N	Global: 0.5(~50) x 0.5(~50) degrees (km)	Daily	mm	A
Rain	N	CONUS: 0.25 (~25) x 0.25 (~25) degrees (km)	Daily	mm	A
Rain	Y	CONUS: 0.05 (~5) x 0.05 (~5) degrees (km)	Daily	mm	A

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Deutscher Wetterdienst (DWD)

Description: German gridded daily rain

Earliest Data: 1931-01-01
Latest Data: 2 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Rain	N	Germany: 0.01(1) x 0.01(1) degrees (km)	Daily	mm	A

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ERA5

Description: ERA5 is produced using 4DVar data assimilation in CY41R2 of ECMWF's Integrated Forecast System (IFS), with 137 hybrid sigma/pressure (model) levels in the vertical, with the top level at 0.01 hPa

Earliest Data: 1979-01-01 (extending back to 1950-01-01 during 2020 from ECMWF)
Latest Data: 3 month lag, expected to change to near real-time 2020 (source ECMWF)

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Dew Point Temperature 2m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Pressure—Sea Level	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	Pa	X
Pressure—Surface	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	Pa	X
Rain	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	mm	X
Rain	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m	A
Sea Surface Temperature	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Snow Depth	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m	X
Solar Radiation	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	J m^2	X
Solar Radiation	Y	Asia: 0.05(5) x 0.05(5) degrees (km) Europe: 0.05(5) x 0.05(5) degrees (km)	Daily	J/cm^2	X
Temperature 2m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	A
Temperature Maximum	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Temperature Maximum	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	X
Temperature Minimum	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	K	X
Temperature Minimum	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	X
Temperature T24	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	X
Wave Direction	Y	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	degrees	A
Wave Significant Height of Wind Waves	Y	Global: 0.14(16) x 0.14(16) degrees (km)	Hourly	m	A
Wave Significant Height of Swell	Y	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m	A
Wave Period	Y	Global: 0.14(16) x 0.14(16) degrees (km)	Hourly	s	A
Wind Direction 10m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	degrees	X
Wind Direction 80m	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	Daily	degrees	X
Wind Direction 100m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	degrees	X
Wind Speed 10m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m/s	X
Wind Speed 10m	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	m/s	X
Wind Speed 80m	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	Daily	m/s	X
Wind Speed 100m	N	Global: 0.25(~25) x 0.25(~25) degree (km)	Hourly	m/s	X

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ERA Interim

Description: The data assimilation system used to produce ERA-Interim is based on a 2006 release of the IFS (Cy31r2). The system includes a 4-dimensional variational analysis (4D-Var) with a 12-hour analysis window

Earliest Data: 1980-01-01
Latest Data: 3 months ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Dew Point Temperature 2m	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Pressure - Sea Level	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	Pa	A
Pressure - Surface	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	Pa	A
Rain	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m	A
Rain	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	mm	A
Sea Surface Temperature	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Daily	K	A
Snow Depth (Water)	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m	A
Soil Temperature Layer 1	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Soil Temperature Layer 2	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Soil Temperature Layer 3	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Soil Temperature Layer 4	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Solar Radiation	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	J m^2	A
Solar Radiation	Y	Asia: 0.05(5) x 0.05(5) degrees (km) Europe: 0.05(5) x 0.05(5) degrees (km) United States: 0.05(5) x 0.05(5) degrees (km)	Daily	J/cm^2	A
Temperature 2m	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Temperature Maximum	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Temperature Maximum	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	A
Temperature Minimum	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	K	A
Temperature Minimum	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	A
Temperature T24	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	° C	A
Volumetric Soil Water Layer 1	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m^3	A
Volumetric Soil Water Layer 2	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m^3	A
Volumetric Soil Water Layer 3	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m^3	A
Volumetric Soil Water Layer 4	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m^3	A
Wave Direction	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	degrees	A
Wave Direction	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	6-hourly	degrees	A
Wave Height & Swell -significant	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m	A
Wave Height & Swell -Significant	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	6-hourly	m	A
Wave Period	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	6-hourly	s	A
Wind Direction 10m	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	degrees	A
Wind Direction 80m	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	Daily	degrees	A
Wind Speed 10m	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m/s	A
Wind Speed 10m	Y	Asia: 0.05(5) x 0.05(5) degrees (km)	Daily	m/s	A
Wind Speed 80m	Y	Europe: 0.05(5) x 0.05(5) degrees (km) Global: 0.14(16) x 0.14(16) degrees (km)	Daily	m/s	A
Wind U Component 10m	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m/s	A
Wind V Component 10m	N	Global: 0.75(~80) x 0.75(~80) degree (km)	Hourly	m/s	A

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Earth Observation System (EOS)

Description: Global 16-day composite of the MODIS Vegetation Index (NDVI) included in the MOD13C1 product

Earliest Data: 2000-02-18
Latest Data: 1 month ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
NVDI : MOD13C1	N	Global: 0.05(5) x0.05(5) degrees (km)	16 days	NDVI	A

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MERRA 2

Description: The second Modern-Era Retrospective analysis for Research and Applications (MERRA-2) is a NASA atmospheric reanalysis, using an upgraded version of the Goddard Earth Observing System Model, Version 5 (GEOS-5) data assimilation system.

Earliest Data: 1980-01-01
Latest Data: 1.5 months ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Rain	Y	Europe: 0.05(5) x0.05(5) degrees (km) South America: 0.05(5) x0.05(5) degrees (km)	Daily	mm	A
Solar Radiation	Y	South America: 0.05(5) x0.05(5) degrees (km)	Daily	J/cm^2	A
Temperature Maximum	Y	Europe: 0.05(5) x0.05(5) degrees (km) South America: 0.05(5) x0.05(5) degrees (km)	Daily	° C	A
Temperature Minimum	Y	Europe: 0.05(5) x0.05(5) degrees (km) South America: 0.05(5) x0.05(5) degrees (km)	Daily	° C	A
Temperature T24	Y	Europe: 0.05(5) x0.05(5) degrees (km) South America: 0.05(5) x0.05(5) degrees (km)	Daily	° C	A
Wind Direction 10m	Y	Europe: 0.05(5) x0.05(5) degrees (km)	Daily	m/s	A
Wind Direction 10m, 50m, 100m	Y	South America: 0.05(5) x0.05(5) degrees (km)	Daily	degrees	A
Wind Speed 10m, 50m, 100m	Y	South America: 0.05(5) x0.05(5) degrees (km) United States: 0.05(5) x0.05(5) degrees (km)	Daily	m/s	A

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UK Met Office

Description: Global SST & Sea Ice Analysis, L4 OSTIA, 0.05 deg daily

Earliest Data: 2007-01-01
Latest Data: 2 days ago

Data Element Name	HR	Region / Resolution	Daily / Hourly	Units	Status
Sea Surface Temperature : L4 OSTIA	N	Global: 0.05(5) x0.05(5) degrees (km)	Daily	K	A

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