

Variables	Long name	Units	Figures or Tables
GridID	0.1°×0.1° precipitaion grid number within Sichuan Basin (28°-32°N, 102°-108°E)		
LAT	Latitude		
LON	Longitude		
AveDPreHrs	Average daytime precipitation hours of SB	hours/day	Figure 2
AveNPreHrs	Average nighttime precipitation hours of SB	hours/day	Figure 2
AveDPreRate	Average daytime hourly precipitation rate of SB	mm/h	Figure 2
AveNPreRate	Average nighttime hourly precipitation rate of SB	mm/h	Figure 2
LGH_LA	low geopotential height and low aerosol group		
LGH_HA	low geopotential height and high aerosol group		
HGH_LA	high geopotential height and low aerosol group		
HGH_HA	high geopotential height and high aerosol group		
D_l_Hrs	Average daytime grid precipitation occurrence for light rain	hours/day	Figure 3
D_m_Hrs	Average daytime grid precipitation occurrence for moderate rain	hours/day	Figure 3
D_h_Hrs	Average daytime grid precipitation occurrence for heavy rain	hours/day	Figure 3
D_l_Rate	Average daytime hourly grid precipitation rate for light rain	mm/hour	Figure 3
D_m_Rate	Average daytime hourly grid precipitation rate for moderate rain	mm/hour	Figure 3
D_h_Rate	Average daytime hourly grid precipitation rate for heavy rain	mm/hour	Figure 3
N_l_Hrs	Average nighttime grid precipitation occurrence for light rain	hours/day	Figure 3
N_m_Hrs	Average nighttime grid precipitation occurrence for moderate rain	hours/day	Figure 3
N_h_Hrs	Average nighttime grid precipitation occurrence for heavy rain	hours/day	Figure 3
N_l_Rate	Average nighttime hourly grid precipitation rate for light rain	mm/hour	Figure 3
N_m_Rate	Average nighttime hourly grid precipitation rate for moderate rain	mm/hour	Figure 3
N_h_Rate	Average nighttime hourly grid precipitation rate for heavy rain	mm/hour	Figure 3
PRO_l	Daytime occurrence proportion for light rain	%	Figure 4
PRO_m	Daytime occurrence proportion for moderate rain	%	Figure 4
PRO_h	Daytime occurrence proportion for heavy rain	%	Figure 4
BJT	Beijing time by adding 8 hours to the UTC time		
l_RRO	Ratio of regional precipitation occurrence for light rain	%	Figure 5
m_RRO	Ratio of regional precipitation occurrence for moderate rain	%	Figure 5
h_RRO	Ratio of regional precipitation occurrence for heavy rain	%	Figure 5
l_RRR	Ratio of precipitation rate for light rain		Figure 5
m_RRR	Ratio of precipitation rate for moderate rain		Figure 5
h_RRR	Ratio of precipitation rate for heavy rain		Figure 5
PosDPreRate	Average daytime hourly precipitation rate with positive vorticity	mm/hour	Figure S3
PosNPreRate	Average nighttime hourly precipitation rate with positive vorticity	mm/hour	Figure S3
NegDPreRate	Average daytime hourly precipitation rate with negative vorticity	mm/hour	Figure S3
NegNPreRate	Average nighttime hourly precipitation rate with negative vorticity	mm/hour	Figure S3