



Climate data records from representative meteorological stations for the basic climatic districts in Bulgaria

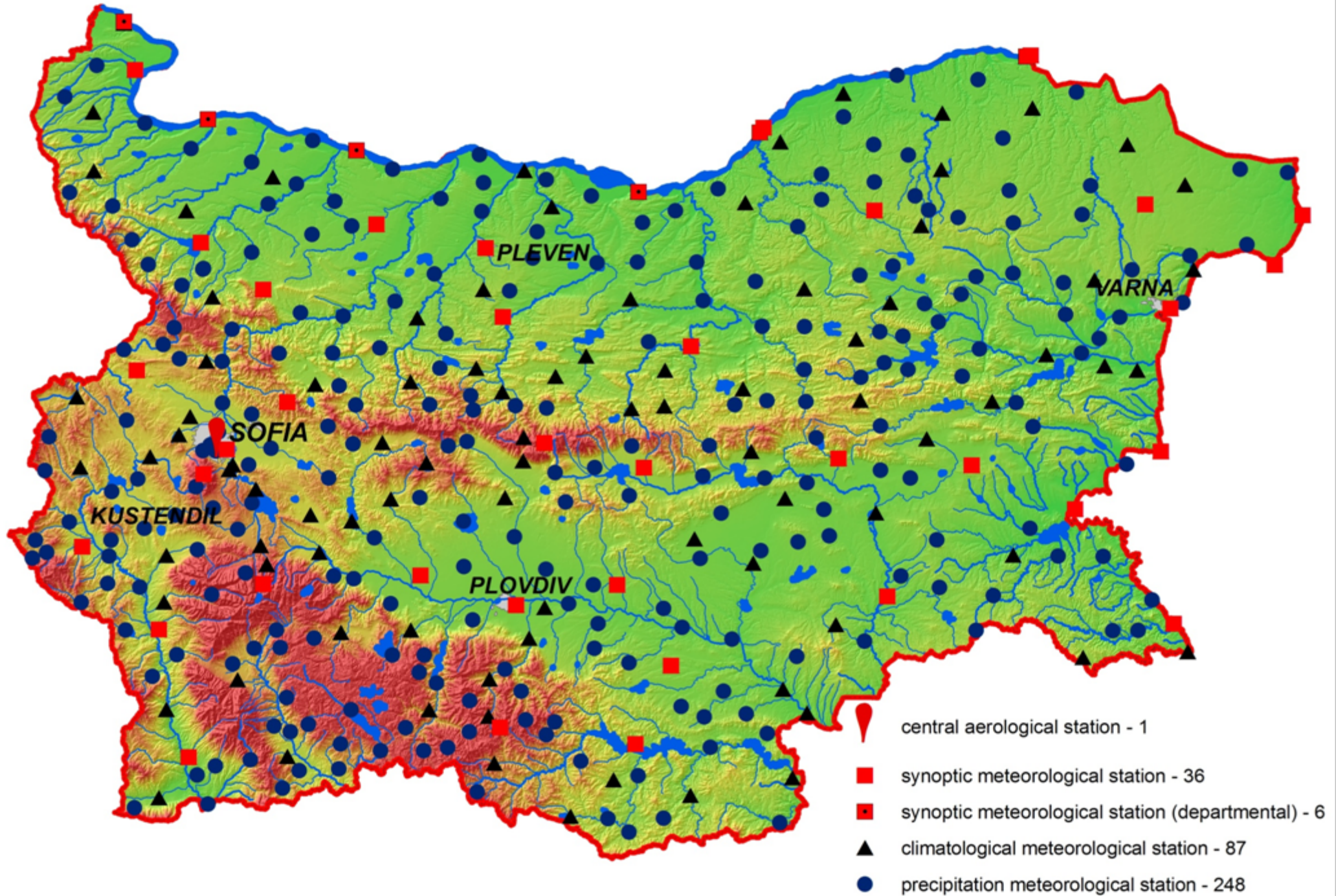
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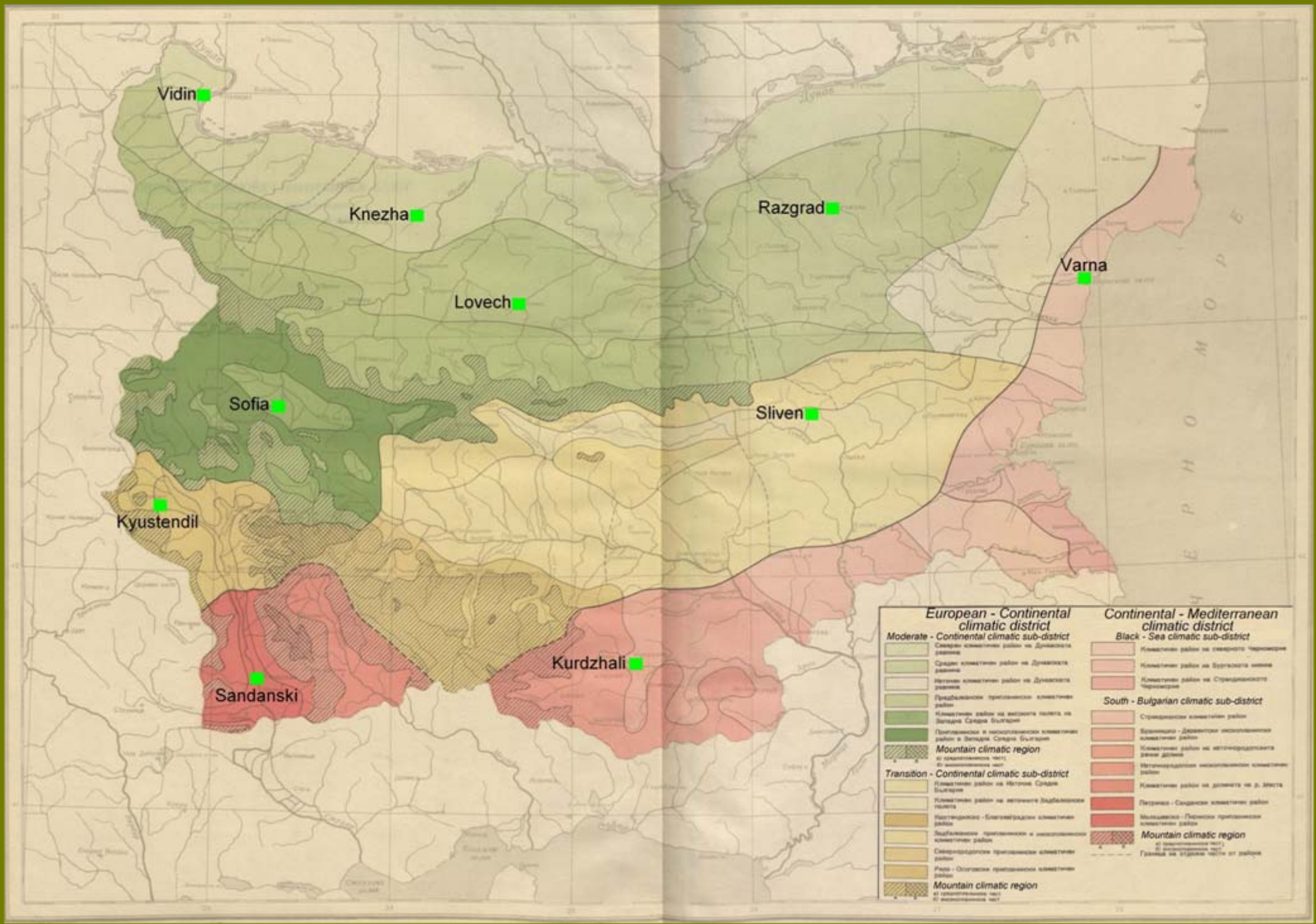
SINOPTIC, CLIMATOLOGICAL AND PRECIPITATION METEOROLOGICAL STATIONS OF NIMH



The climate data records in paper form are stored in the Meteorological Archive of the NIMH–BAS from the beginning of the respective measurements.

All available digitized climate data is imported and stored in the Meteorological database (MDB) of the NIMH–BAS.

At the moment – transfer of the MDB from Microsoft SQL Server 2000 to Microsoft SQL Server 2012.



Climatic dividing into districts of Bulgaria

Climatic districts

European-Continental district

Vidin, Knezha, Lovech, Razgrad, Sofia, Kyustendil, Sliven

Continental-Mediterranean district

Sandanski, Kurdzhali, Varna

Climatic sub-districts

Moderate-Continental climatic sub-district

Vidin, Knezha, Lovech, Razgrad and Sofia

Transition-Continental climatic sub-district

Kyustendil and Sliven

South-Bulgarian climatic sub-district

Sandanski and Kurdzhali

Black-Sea climatic sub-district

Varna

Stations metadata

Station name	WMO code	Latitude	Longitude	Altitude (m)	Starting date
Vidin	15502	43.9942 N	22.8526 E	31	01.10.1907
Knezha	15520	43.4800 N	24.0696 E	117	01.01.1910
Lovech	15525	43.1633 N	24.7007 E	220	01.06.1937
Razgrad	15549	43.5662 N	26.5079 E	346	01.01.1946
Varna	15552	43.2125 N	27.9525 E	39	01.01.1959
Sliven	15640	42.6777 N	26.3399 E	259	01.01.1892
Kurdzhali	15730	41.6468 N	25.3853 E	337	16.10.1929
Sandanski	15712	41.5501 N	23.2674 E	206	01.05.1930
Kyustendil	15601	42.2838 N	22.7131 E	520	01.01.1892
Sofia-CMS	15614	42.6553 N	23.3847 E	586	01.02.1952

Metadata about meteorological variables in MDB

<i>Meteo element</i>	<i>Vidin</i> 01.10.1907	<i>Knezha</i> 01.01.1910	<i>Lovech</i> 01.06.1937	<i>Razgrad</i> 01.01.1946	<i>Varna</i> 01.01.1959
Minimum air temperature	01.04.1910	01.01.1926	01.01.1952	01.01.1951	01.01.1959
Maximum air temperature	01.04.1910	01.01.1926	01.01.1952	01.01.1951	01.01.1959
Hourly air temperature	01.01.1910	01.01.1926	01.01.1952	01.01.1951	01.01.1959
Precipitation	01.01.1910	01.01.1926	01.01.1952	01.01.1951	01.01.1959
Air pressure	16.03.1953	07.09.1944	01.01.1955	01.09.1978	01.08.1984
Relative humidity	01.01.1910	01.01.1926	01.01.1952	01.01.1951	01.01.1959
Cloud cover	01.01.1910	01.01.1926	01.01.1952	01.01.1951	01.01.1959
Wind direction and speed	01.01.1910	01.01.1926	01.01.1952	01.01.1951	01.01.1959
Sunshine duration	01.05.1970	01.08.1942	NO	NO	01.03.1950

Metadata about meteorological variables in MDB

<i>Meteo element</i>	<i>Sliven</i> 01.01.1892	<i>Kurdzhali</i> 16.10.1929	<i>Sandanski</i> 01.05.1930	<i>Kyustendil</i> 01.01.1892	<i>Sofia-CMS</i> 01.02.1952
Minimum air temperature	01.01.1900	16.10.1929	01.01.1931	01.01.1906	01.02.1952
Maximum air temperature	01.01.1900	16.10.1929	01.01.1931	01.01.1906	01.02.1952
Hourly air temperature	01.01.1900	16.10.1929	01.01.1931	01.01.1906	01.02.1952
Precipitation	01.01.1900	16.10.1929	01.01.1931	01.01.1906	01.02.1952
Air pressure	01.01.1900	01.12.1956	01.01.1931	01.01.1906	01.10.1952
Relative humidity	01.01.1900	16.10.1929	01.01.1931	01.01.1906	01.02.1952
Cloud cover	01.01.1900	16.10.1929	01.01.1931	01.01.1906	01.02.1952
Wind direction and speed	01.01.1900	16.10.1929	01.01.1931	01.01.1906	09.05.1952
Sunshine duration	01.03.1975	01.01.1950	01.08.1950	01.03.1961 – 28.02.1962; 01.09.1968	01.06.1952

Length of digitized and non-digitized climate records at the climatic terms for 10 selected synoptic stations in Bulgaria

<i>Synoptic station</i>	<i>Length of digitized records</i>	<i>Length of records available only in paper form</i>
Vidin	04.1910 – 2011	10.1907 – 1909
Knezha	01.1926 – 2011	–
Lovech	01.1952 – 2011	–
Razgrad	01.1951 – 2011	1946 – 1950
Varna	01.1959 – 2011	–
Sliven	01.1900 – 2011	1892 – 1899
Kurdzhali	10.1929 – 2011	–
Sandanski	01.1931 – 2011	–
Kyustendil	01.1906 – 2011	1892 – 1905
Sofia – CMS	02.1952 – 2011	–

Climatic terms: 05, 12, 19 UTC

Length of digitized and non-digitized climate records at the synoptic terms for 10 selected synoptic stations in Bulgaria

<i>Synoptic station</i>	<i>Length of digitized records</i>	<i>Length of records available only in paper form</i>
<i>Vidin</i>	07.1998 – 2011	1979 – 1998
<i>Knezha</i>	07.1998 – 2011	1954 – 1998
<i>Lovech</i>	07.1998 – 2011	1975 – 06.1998
<i>Razgrad</i>	06.1999 – 2011	1979 – 05.1999
<i>Varna</i>	04.1999 – 2011	1984 – 03.1999
<i>Sliven</i>	01.1997 – 2011	1957 – 1996
<i>Kurdzhali</i>	01.1997 – 2011	1959 – 1996
<i>Sandanski</i>	07.1998 – 2011	1950 – 06.1998
<i>Kyustendil</i>	07.1998 – 2011	1954 – 06.1998
<i>Sofia – CMS</i>	01.1992 – 2011	1960 – 1991

Synoptic terms: 00, 03, 06, 09, 12, 15, 18, 21 h UTC

Concluding remarks

- Almost all available paper records from synoptic stations (with observation at synoptic and climatic terms) at the climatic terms are digitized while at the synoptic terms they are digitized only for the last decade.
- Available paper records from climatological stations (with observations only at the climatic terms) are practically digitized from the beginning of the respective measurements.
- In respect to paper records about meteorological phenomena they are digitized only for the last two decades.
- Significant part of the information from precipitation stations (one observation per day) is digitized – the whole period 1960–2010 and for some of the stations – the period 1950–1959 or the entire period.
- In order to digitize all available paper records from the meteorological stations in Bulgaria, additional human recourses have to be involved.
- Ten synoptic stations from the meteorological network of the NIMH–BAS, representative for the climatic districts of Bulgaria, have been selected to contribute MEDARE project and the results of climate metadata inventory about observational history of the stations and different meteorological variables are presented.



**Thank you
for your attention!**

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