

RIHMI contribution to ERA-CLIM2 WP3_1

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Main problems

Search of missing data and filling in gaps in State Fund Databases of standard meteorological observations

Creation of appropriate metadata sets (stations history, physics-geographic description etc.)

Creation of specialized high-quality data sets

Again, time of observation is a serious problem, especially for wide fUSSR territory!!!!

Contribution to WP3 item 3_1

- A. Rescue of U/A Data (priority 1 – highest).
-
- A group of U/A stations (41 stations from Russia and fUSSR territory) is identified. The review showed that the time period covered is varying from station to station, the earliest is 1936, the latest is December 1960. The data are disseminated in three sources:
- computer media (not all stations, poor vertical resolution - not all levels, few standard pressure levels only)
- handwritten tables
- computerized views of old punch-card formats

Contribution to ERA CLIM2: complement rescue of upper-air data

- Aktyubinsk, 1955

Станция *Актыубинск* Стр. 3 Год 1955

Макет № 2	Макет № 4	H	B	t	γ	u	q	d	v	w	Макет № 3	Макет № 5
		7.26	400	-362		48						
4		8.00	358	-420	0.81	46				397		
4		9.00	309	-504	0.84	46						
	9	9.19	300	-520		46						
5		10.00	264	-578	0.74	46						
5		11.00	225	-656	0.78	46						
		11.50	208	-681	0.50	46				370		
10		12.25	200	-678		-						

Макет № 2	Макет № 4	H	B	t	γ	u	q	d	v	w	Макет № 3	Макет № 5
4		8.00	357	-435	0.81	30						
4		9.00	307	-526	0.91	30						
	9	9.16	300	-538		30						
	1	10.00	263	-612	0.86	30						
		10.77	231	-664	0.68	-				342		
5		11.00	222	-670	0.26	-						
		11.54	204	-682	0.22	-						
10		12.16	200	-680		-						

Contribution to ERA CLIM2: rescue of upper-air data

Moscow 27612:

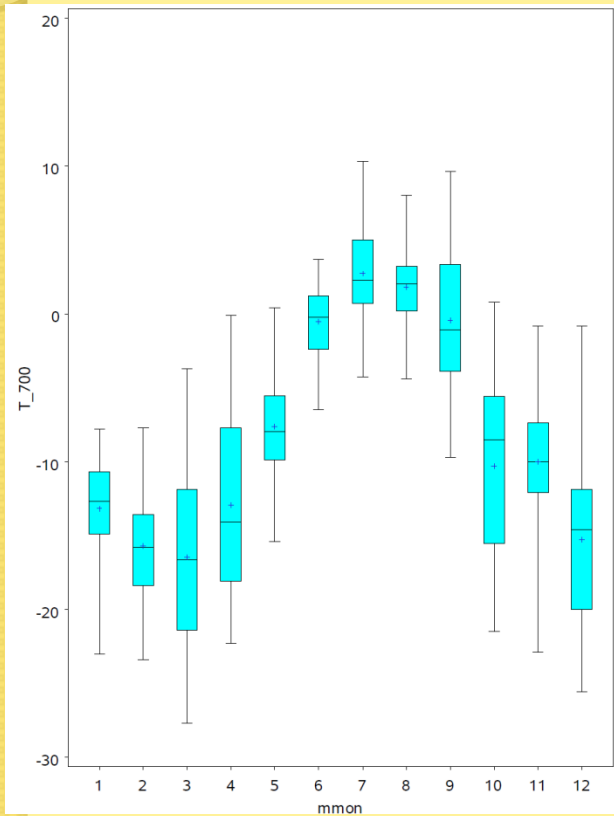
In IGRA, beginning on 09 of 1963!

Only standard pressure levels plus surface

Use of tables – the only way to have time series for Moscow since 1939 without gaps!

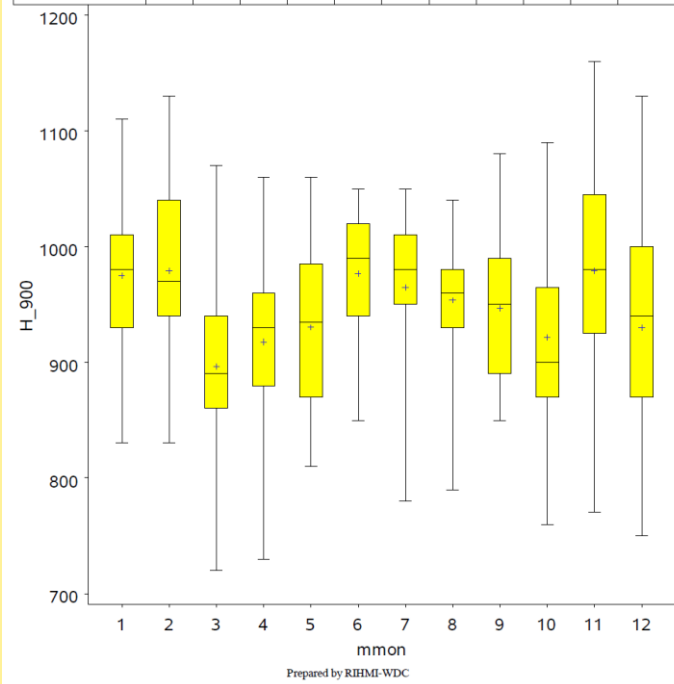
#2761219630901009999	7				
10 85000	1609B	115B-9999	100	60	
10 70000	3200B	15B-9999	100	60	
10 50000	5816B	-160B-9999	100	100	
10 40000	7446B	-282B-9999	80	60	
10 30000	9439B	-465B-9999	100	50	
10 20000	12031B	-608B-9999	80	120	
10 10000	16380B	-540B-9999	90	20	
#2761219630901129999	9				
21100400B	184	242B-9999-9999-9999			
20 90800	1046B	180B-9999-9999-9999			
10 85000	1609B	125B-9999	110	100	
10 70000	3209B	22B-9999	110	90	
10 50000	5837B	-150B-9999	120	100	
10 40000	7486B	-265B-9999	110	110	
10 30000	9500B	-418B-9999	70	120	
10 20000	-9999	-9999 -9999	80	110	
10 10000	16621B	-520B-9999	50	10	
#2761219630902009999	7				
10 85000	1600B	122B-9999	140	30	
10 70000	3191B	15B-9999	120	80	
10 50000	5816B	-150B-9999	120	70	
10 40000	7468B	-268B-9999	110	90	
10 30000	9479B	-410B-9999	120	100	
10 20000	12131B	-572B-9999	70	100	
10 10000	16581B	-532B-9999	70	50	

Pre-QC of U/A data



STATISTICS FOR F,T AND U ON STANDARD PRESSURE LEVELS FOR R CAO
 STATISTICS FOR F,T AND U ON STANDARD PRESSURE LEVELS FOR BIG TABLES
 STATISTICS FOR F YEAR=1945

Overall Statistics													
Min	720					Mean	947.6622					Max	1160
Pooled Std Dev	71.58791												
Extremes and means by month													
Min	830	830	720	730	810	850	780	790	850	760	770	750	
Mean	974.898	979.0741	896.2903	917.6667	930.3125	976.6234	964.9254	953.8462	946.7241	921.6667	979.0625	929.8889	
Max	1110	1130	1070	1060	1060	1050	1050	1040	1080	1090	1160	1130	



Contribution to WP3 item 3_1

TX 38989 TAKHTA BAZAR 35.90 62.97 349 1951 1996	RS 28698 OMSK 54.93 73.40 91 1963 2007
TI 38954 KHOROG 37.50 71.50 2080 1956 1994	RS 28440 SVERDLOVSK 56.80 60.63 288 1946 1994
TX 38687 CHARDZHOU 39.08 63.60 190 1949 1994	RS 26781 SMOLENSK 54.75 32.07 236 1946 2007
UZ 38457 TASHKENT 41.27 69.27 491 1963 2004	RS 26702 KALININGRAD 54.70 20.62 21 1950 2001
UZ 38413 TAMDY 41.73 64.62 220 1958 1991	LG 26422 RIGA 56.97 24.03 26 1946 2005
TX 38392 TASHAUZ 41.83 59.97 87 1946 1997	EN 26038 TALLINN 59.45 24.80 34 1947 2007
GG 37549 TBILISI 41.68 44.95 490 1963 2004	RS 25913 MAGADAN 59.58 150.78 118 1950 2007
GG 37260 SUHUMI 43.02 41.03 118 1963 1992	RS 25703 SEIMCHAN 62.92 152.42 206 1955 2007
RS 37018 TAUPESE 44.10 39.07 95 1950 2007	RS 25428 OMOLON 65.22 160.50 253 1957 2007
KZ 36177 SEMIPALATINSK 50.35 80.25 196 1946 1995	RS 24790 SUSUMAN 62.78 148.13 649 1959 1991
KZ 35746 ARALSKOE MORE 46.78 61.67 60 1946 1996	RS 23933 SAMAROVO 60.97 69.07 44 1946 2004
RS 34880 ASTRAKHAN 46.35 47.97 -22 1947 2007	RS 23884 PODKAMENNAIA-TUNGUSKA 61.60 90.00 60 1950 2007
UP 34300 KHARKOV 49.93 36.28 148 1946 2007	RS 23552 TARKO-SALE 64.92 77.82 27 1955 1998
RS 34172 SARATOV 51.56 46.03 166 1947 1998	RS 23472 TURUKHANSK 65.78 87.95 37 1963 2007
UP 33946 SIMFEROPOL 45.02 33.98 280 1950 2007	RS 23205 NARIAN MAR 67.65 53.02 9 1963 2007
UP 33837 ODESA 46.48 30.63 42 1963 2007	RS 22802 SORTOVALA 61.72 30.72 17 1949 1991
UP 33658 CHERNIIVTSI 48.27 25.97 246 1963 2007	RS 20891 KHATANGA 71.98 102.47 32 1950 2007
UP 33317 SHEPETIVKA 50.17 27.05 278 1957 2007	RS 20292 MYS CHELIUSKIN 77.72 104.28 16 1949 1997
RS 31369 NIKOLAYEVSK-NA-AMURE 53.15 140.70 46 1959 2007	
RS 31088 OKHOTSK 59.37 143.20 8 1963 2007	
RS 30692 SKOVORODINO 54.00 123.97 400 1950 1996	
RS 29634 NOVO-SIBIRSK 55.03 82.90 143 1957 2007	
RS 28722 UFA 54.82 56.15 104 1946 2007	

41 U/A fUSSR stations were processed, QCd, put to output format and provided to UBERN and ECMWF

For most stations, start year is in second half of 1940's

Considering that each day has 3 or 4 soundings – it is a huge input for ERA CLIM2

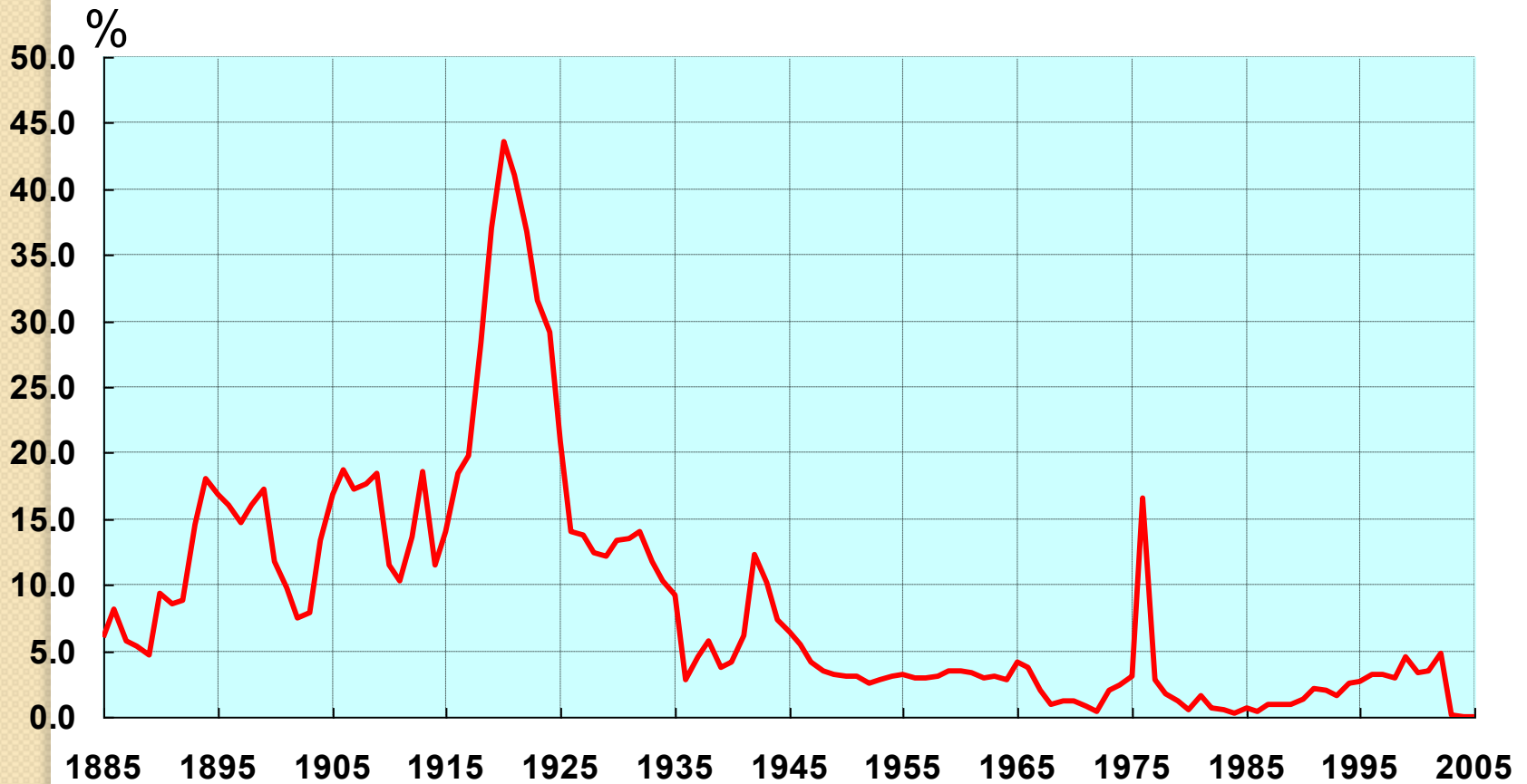
Origin of data inhomogeneity in Russia

- **Change in the observation procedure**
- **Change in meteorological data processing procedures**
- **Instrumental change**
- **Displacement of meteorological stations**
- **AGAIN, TIME OF OBSERVATION – SHOULD BE REPROCESSED!!!**

Origin of data inhomogeneity in Russia

Years	Times\day	Format
1891 - 1935	Three (7, 13, 21 Local Time)	A
1936 - 1965	Four (1, 7, 13, 19 LT)	B
1966 - 1976	Eight (3, 6, 9... Moscow Time)	C
1977 - 1984	Eight (3, 6, 9... Moscow Time)	D
1985 - 1992	Eight (3, 6, 9... Moscow Time)	E
1993 - now	Eight (3, 6, 9... Greenwich Time)	E

The missing data in standard meteorological observations (On computer-readable media in RIHMI-WDC)





RUSSIAN BASELINE HYDROMETEOROLOGICAL DATA SETS FOR CLIMATOLOGICAL STUDIES

Meteo.ru - Climate - Climate and human health - Windows Internet Explorer

http://meteo.ru/english/climate/cl_data.php

МЕТЕО.РУ

RIHMI-WDC

News Data Technology Publish **Climate**

Baseline Climatological Data Sets

[Coordinates of meteorological stations](#)

[AIR TEMPERATURE \(Monthly Data\)](#)

[PRECIPITATION \(Monthly Data\)](#)

Questions, notes and proposals to:
bulygina@meteo.ru

THREE-HOURLY METEOROLOGICAL OBSERVATIONS

[DAILY SOIL TEMPERATURE AT DEPTHS TO 320 CM](#)

SNOW COVER CHARACTERISTICS

[ROUTINE SNOW SURVEYS](#)

[CURRENT RADIOSONDE DATA](#)

[MEAN VALUES FOR POLAR RUSSIAN AEROLOGICAL STATIONS](#)

Готово Интернет 100%

пуск Microsoft O... Climate Change... Adobe Photoshop Windows Comm... Meteo.ru - Clim... EN 11:31

исори - Удаленный доступ к ЯОД-архивам - Microsoft Internet Explorer

Файл Правка Вид Избранное Сервис Справка

Назад Поиск Избранное

Адрес: <http://aisori.meteo.ru/ClimateE> Переход

Data sampling

Data sampling is provided by Web technology [Aisori - Remote access to DDL-archives](#)
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V.M.Veselov - veselov@meteo.ru, I.R.Pribylskaya - i.r.pribylskaya@mail.ru

All data are made available free of charge

Enter your "Login" and "Password" and press the button "OK".
If you forget your "Login" and "Password", fill in the field "E-mail" and press the button "OK".
Your "Login" and "Password" will be recovered and reported to you by E-mail.

Login

Password

E-mail

OK Registration Help Exit

Интернет

пуск Аисори - Удале... Adobe Photoshop 20:18

THREE-HOURLY METEOROLOGICAL OBSERVATIONS

<http://meteo.ru/english/climate/thmo.php>

To create (mainly based on manual digitizing and on data management and check) the sub-daily data for the 600 stations over the territory of Russia. This data set will cover gaps in the period from the earliest available observations till 1966 and will complement the data set for these 600 stations since 1966 which is currently in open access on RIHMI Web site.

As much as 65 stations will be added

SNOW COVER CHARACTERISTICS

<http://meteo.ru/english/climate/snow.php>

To create (mainly based on manual digitizing and on data management and check) data set of daily snow cover observations. These daily snow cover observations at meteorological stations include snow depth measurements and determination of the snow cover extent over the near-station territory and the character (type) of snow cover. As much as 65 stations will be added to the existing database

Will be mentioned in WP3_3 Report



Thank you for attention!