

**Federal Service for Hydrometeorology  
and Environmental Monitoring**

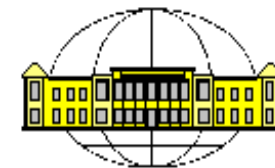


**VOEIKOV  
MAIN GEOPHYSICAL  
OBSERVATORY**

*Since 1849*

WELCOME  
*to*  
World Radiation Data Center

**2009: - 45 Years of Activity**



Main Geophysical  
Observatory.  
Founded in 1849



# Data recommended by the WMO for central collection at the WRDC

Global Solar Radiation

Diffuse (or Sky) Solar Radiation

Direct (Normal) Solar Radiation

Bright Sunshine Duration

Radiation Balance

Long-wave Atmospheric Radiation (Downward)

Terrestrial Long-wave Radiation (Upward)

Reflected Global Solar Radiation

Solar Spectral Radiation



# WRDC ACTIVITY

Central collection and processing of data

Quality control (QC)

Communication with NWS - quality assurance (QA)

Archiving and Time Series Analysis

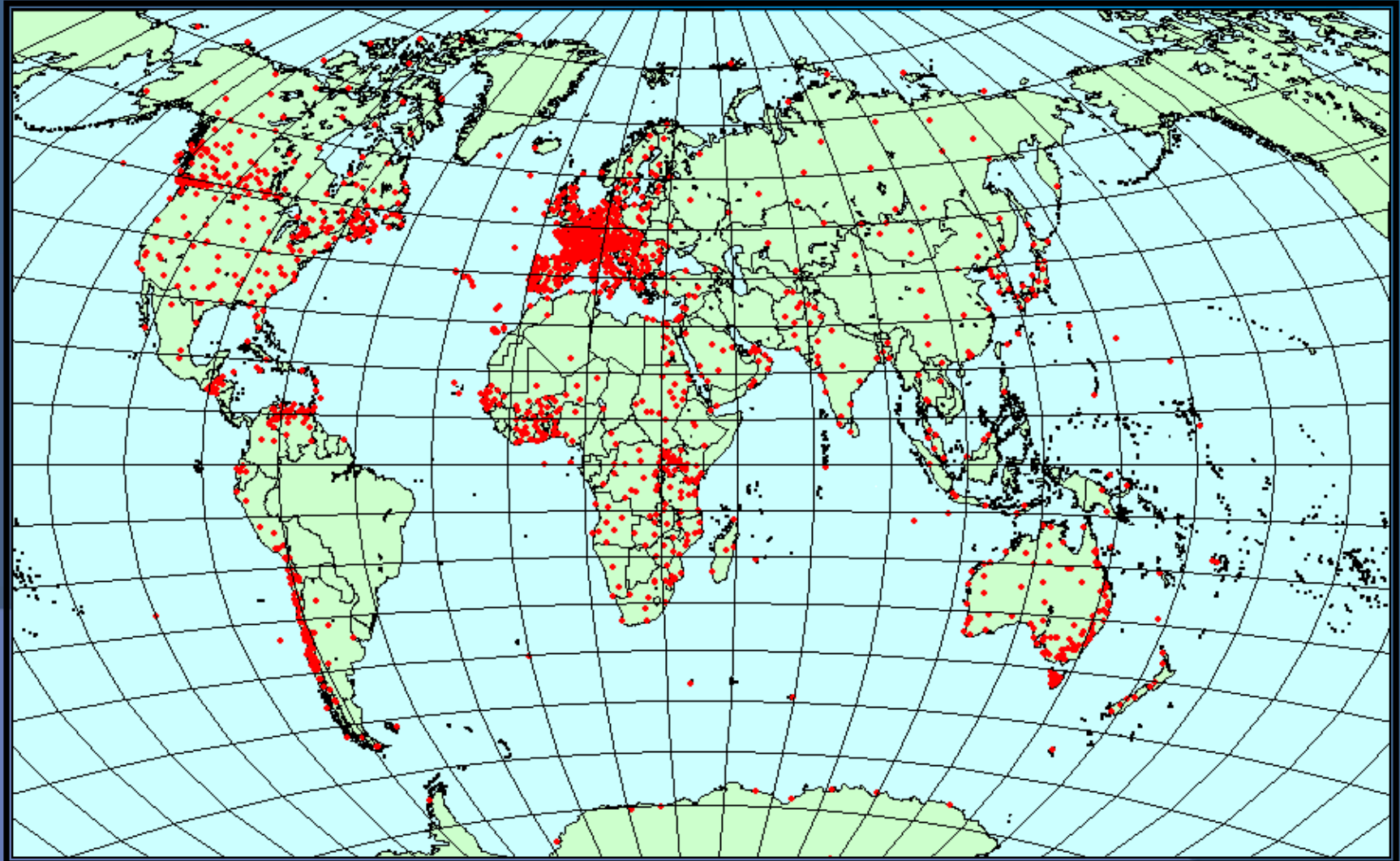
Bulletin “Solar Radiation and Radiation Balance. The World Network”

Information System of WRDC: Server and Database

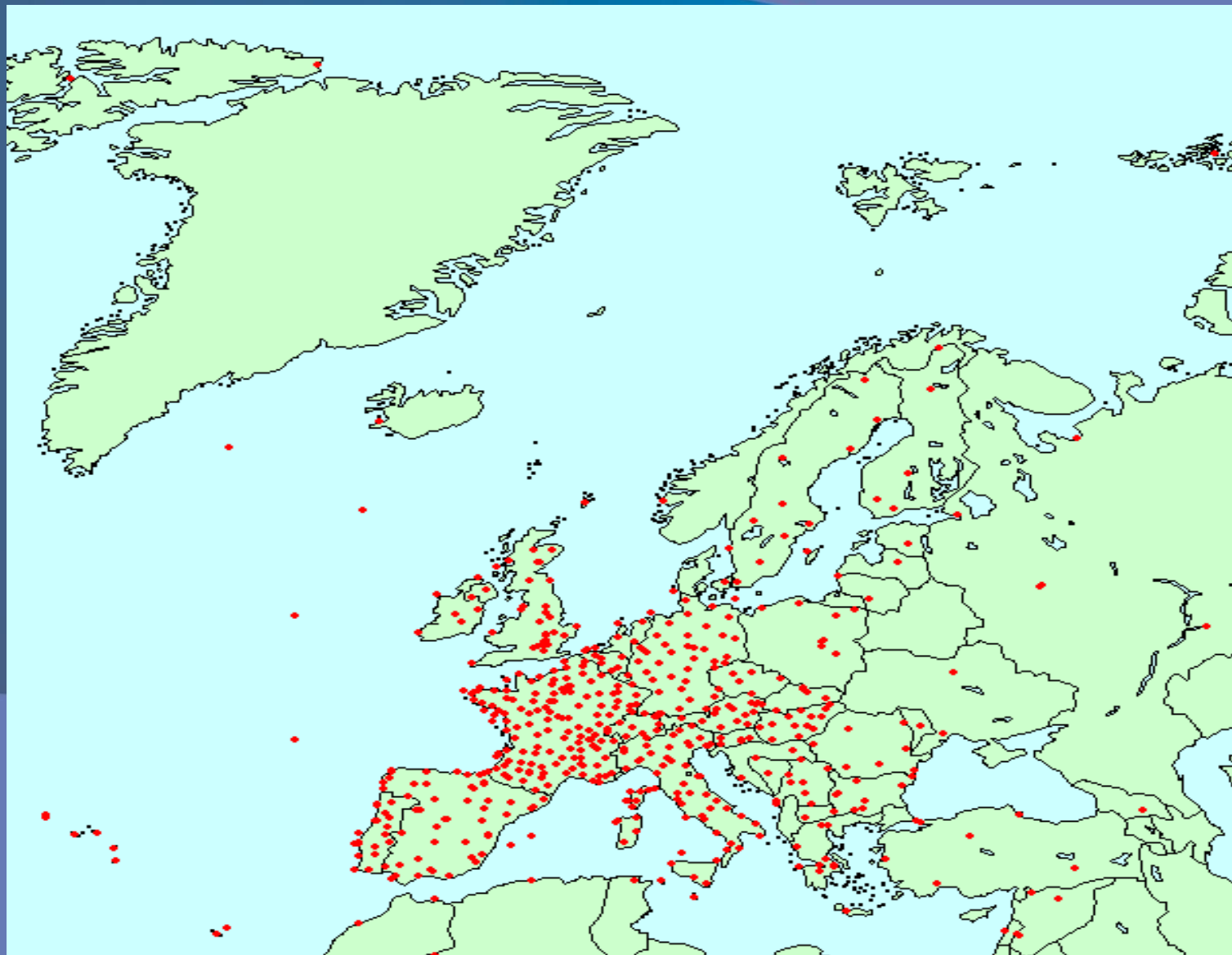
WRDC in the GAW Program



## World Distribution of Actinometry Stations at the WRDC Archive (1964-2008)



# WMO Region VI (Europe)



# Data Exchange

NWS's ↔ WRDC

WRDC ↔ Users (COST 726)

WRDC ↔ GAW (GAWSIS)



# WRDC QC



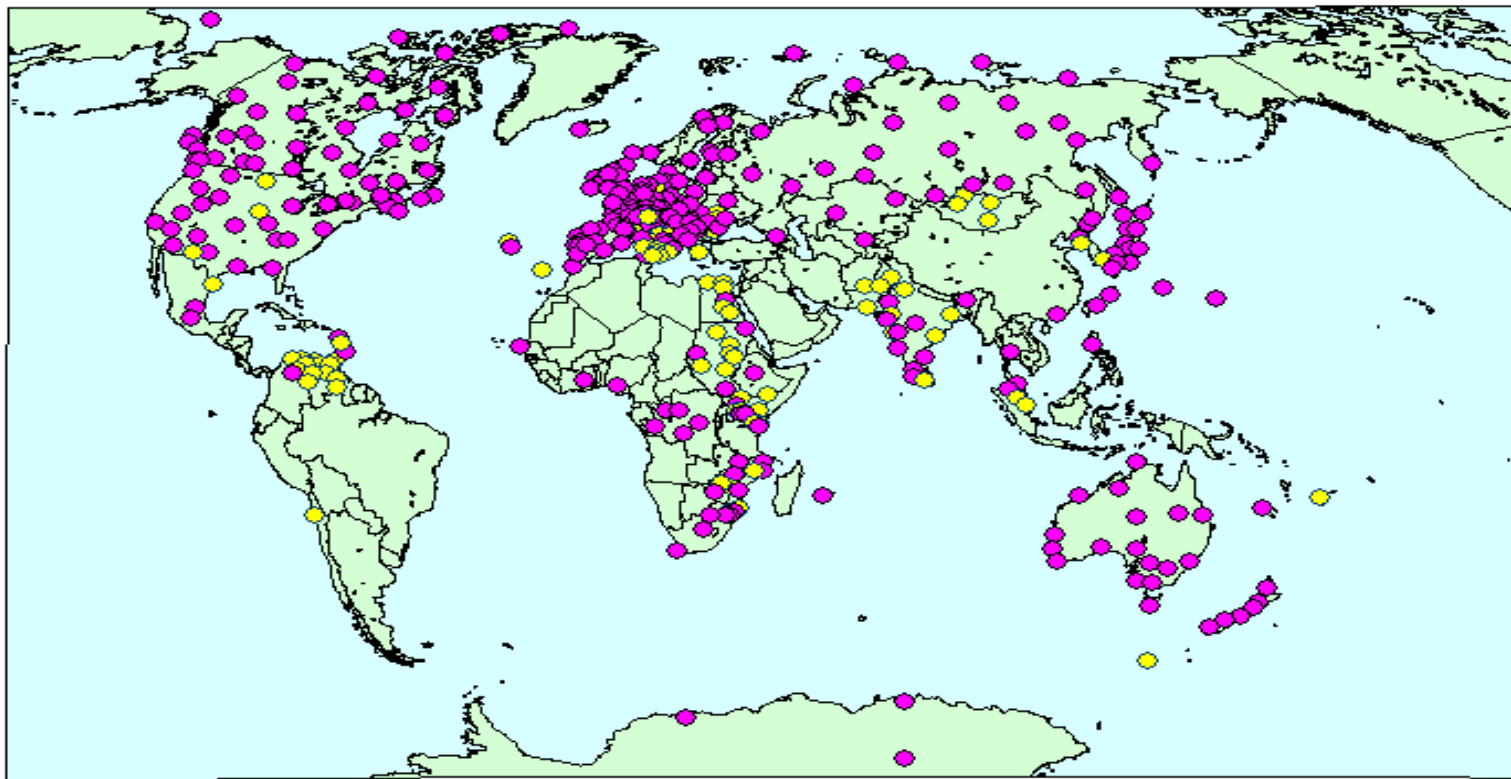


# Quality Checks at the WRDC

- **Automated:**
- Physical boundaries
- Control of following up the WRDC rules of daily and monthly totals calculations
- Checks of calculated and actual totals
- Checks of hourly and daily values in the within setup ranges
- Control of exceedings above TOA values
- Control of values higher than those of probabilistic and climatological levels
- Control of correlation: data of neighbour sites
  
- **Expert assessment**
- Homogeneity and trend Analysis

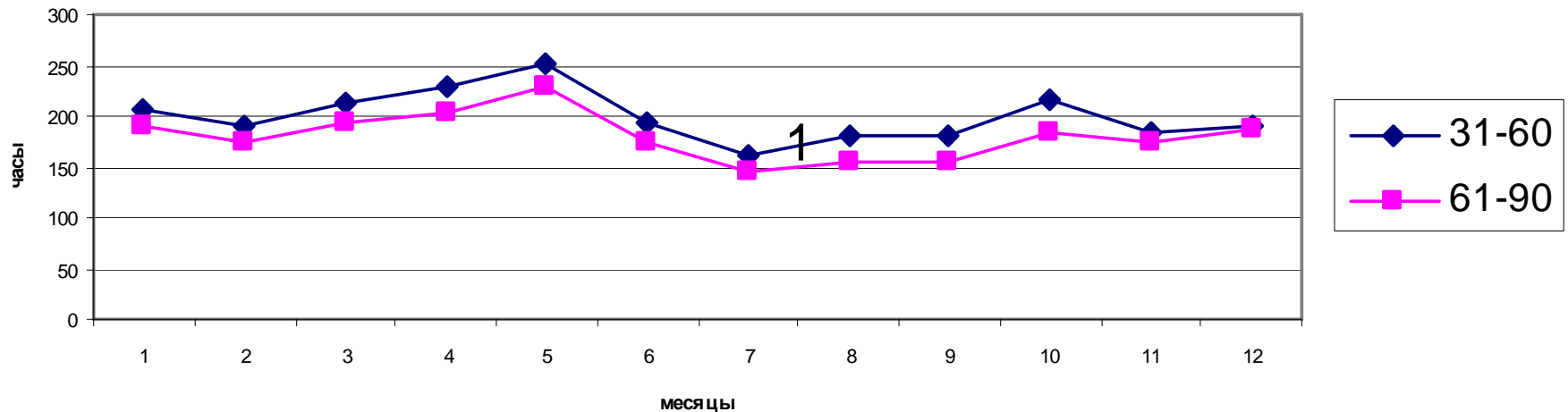


## Homogeneous and Not-Homogeneous Global Radiation at the WRDC Period of Observations > 30 Yrs.)



## An Example: Seasonal Curves of Climatic Norms in Bright Sunshine Duration. Station: Horta, Portugal

Распределение по месяцам продолжительности  
солнечного сияния для ст.Хорта (Португалия) 38 31 N, 28 38  
W.





# Access to the WRDC Data



WRDC - Windows Internet Explorer

http://wrdc.mgo.rssi.ru/



WMO

# World R Data C

*Russian*

WRDC

- Introduction
- Data**
- Publications
- Contributors
- Related Links
- IMPORTANT

The World R  
Centres spo

The WRDC is  
Federal Se  
-formerly U  
St.Petersbu

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Wrdc - Windows Internet Explorer

http://wrdc.mgo.rssi.ru/wrdccgi/protect.exe?wrdc/wrdc.htm

Google

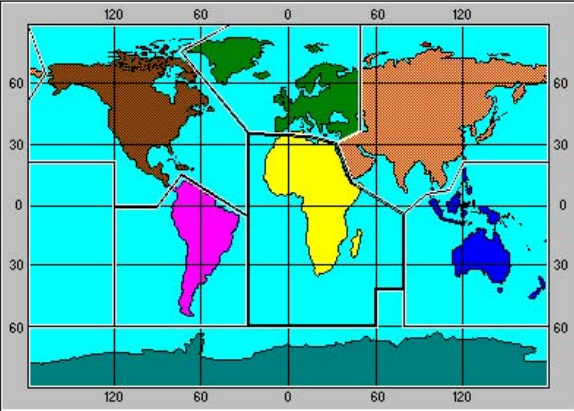
Домой Кодировка Веб-каналы (J) Печать Страница

Сервис  
Справка  
Справочные материалы  
Размер

## WRDC database

You are visitor no. 8602

Welcome to WRDC database!



AFRICA  
ASIA  
EUROPE  
N AMERICA  
S AMERICA  
S-W PACIFIC

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WRDC - Windows Internet Explorer

http://wrdc.mgo.rssi.ru/


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WRDC



WMO

## World Radiation Data Centre



ROSHYDROME

Russian

WRDC

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- [Data](#)
- [Publications](#)
- [Contributors](#)
- [Related Links](#)
- [IMPORTANT](#)

The World Radiation Data Centre (WRDC) is one of recognised World Data Centres sponsored by the World Meteorological Organization (WMO).

The WRDC is a laboratory of [Voeikov Main Geophysical Observatory](#), Russian Federal Service for Hydrometeorology and Environmental Monitoring -formerly USSR State Committee for Hydrometeorology, and is located in St.Petersburg.

The WRDC began as the World Radiation Data Centre in 1964 and produced its first data [publication](#) of Solar Radiation and Radiation Balance Data (The World Network) in 1968.

For more detailed information, please, contact:

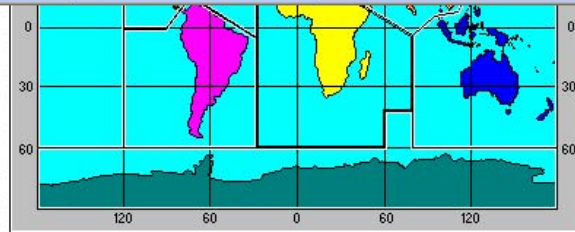
Voeikov Main Geophysical Observatory,  
World Radiation Data Centre,  
7, Karbyshev Str.,  
194021, St.Petersburg,  
Russian Federation.  
tel.: (812) 297-43-90  
fax.: (812) 297-86-61

Please direct any comments or suggestions regarding this site to  
Dr. Anatoly V. Tsvetkov, Head of WRDC.  
tel: (812) 295-04-45.  
e-mail: [wrdc@main.mgo.rssi.ru](mailto:wrdc@main.mgo.rssi.ru)  
e-mail: [tsvetkov@main.mgo.rssi.ru](mailto:tsvetkov@main.mgo.rssi.ru)

Wrdc - Windows Internet Explorer

http://wrdc.mgo.rssi.ru/wrdccgi/proted

Файл Правка Вид Избранное Сервис Справка



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[GAW DATA](#)

[WRDC ARCHIVE IN HTML FORMAT \(preliminary version\)](#) **New**

[WRR changes](#) **New**

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30 апреля 2009 г.

Microsoft PowerPoint - [Презентация1]

Файл Плавка Вид Вставка Формат Сервис Показ слайдов Окно Справка

72%

Arial 18

1

2

3

4

Заметки к слайду

Слайд 2 из 4

Оформление по умолчанию

русский (Россия)

WRDC - Windows Internet Explorer

http://wrdc.mgo.rssi.ru/wrdccgi/protect.

Google

Файл Плавка Вид Избранное Сервис Справка

WRDC

Домой Кодировка Веб-каналы (1)

HOME

GAW

STATIONS

ALGERIA

Tamanrasset

Daily data

Hourly data

ARGENTINA

Ushuaia

Daily data

Hourly data

AUSTRALIA

Cape Grim

Daily data

Hourly data

INFORMATION ON GAW STATIONS

[STATION TAMANRASSET \(global GAW station\)](#)

[STATION USHUAIA \(global GAW station\)](#)

[STATION CAPE GRIM \(global GAW station\)](#)

[STATION DARWIN ARPT \(regional GAW station\)](#)

[STATION WAGGA WAGGA AMO \(regional GAW station\)](#)

[STATION SONNBLICK \(global GAW station\)](#)

[STATION WIEN / HOHE WARTE \(regional GAW station\)](#)

[STATION TARTU-TORAVERE \(contributing GAW station\)](#)

[STATION THESSALONIKI \(regional GAW station\)](#)

[STATION BUKIT KOTOTABANG \(global GAW station\)](#)

[STATION MOUNT KENYA \(global GAW station\)](#)

[STATION RUCAVA \(regional GAW station\)](#)

[STATION ZOSENI \(regional GAW station\)](#)

[STATION KISHINEV \(regional GAW station\)](#)

[STATION POPRAD GANOVCE \(regional GAW station\)](#)

[STATION DAVOS-DORF \(contributing GAW station\)](#)

[STATION JUNGFRAUJOCH \(global GAW station\)](#)

[STATION PAYERNE \(regional GAW station\)](#)

Интернет

30 апреля 2009 г.

100%

Microsoft PowerPoint - [Пр] WRDC - Windows Internet Explorer

Файл Правка Вид Вставка

http://wrdc.mgo.rssi.ru/wrdccgi/protect.exe?wrdc/data\_gaw.htm

Файл Правка Вид Избранное Сервис Справка

WRDC

Докой Кодировка Веб-каналы (1) Печать Страница Сервис Справка

**GREECE**

Thessaloniki

[Daily data](#)

[Hourly data](#)

**INDONESIA**

Bukit Kototabang

[Daily data](#)

[Hourly data](#)

**KENYA**

Mount Kenya

[Daily data](#)

[Hourly data](#)

**LATVIA**

Rucava

[Daily data](#)

[Hourly data](#)

**Station Information:**

**Name :** Mount Kenya, Kenya  
**Latitude:** 0.062 S  
**Longitude:** 37.30 E  
**Elevation:** 3678 m  
**Local time offset from GMT:** +3.0

**Instrumentation:**  
 Global Horizontal (Kipp & Zonen CM11)  
 Diffuse Horizontal (Kipp & Zonen CM11 with shadowband)

**Contributor:**  
 Josiah Kariuki Murageh  
 Kenya Meteorological Department  
 Dagoretti Cornerr P.O. Box 30259  
 00100 Nairobi  
 Kenya  
 Phone: +254734294782 Email: kmurageh@yahoo.co.uk

Daily and monthly averages in J/cm<sup>2</sup> are computed according to WRDC protocol (and subject to rejection by the flagging protocol):

- Daily total values are the total of each hourly irradiance for the day
- Monthly averages are the sum of the daily values divided by the number of days available
- Monthly totals are the monthly average multiplied by the number of calendar days in the month
- Monthly statistics for hourly intervals are the sum and average of the hourly interval for each day under a process similar to the monthly averages and totals above.

flag (F) = 0 (blank in the table) means that a value has good quality flag = 1 - questionable value flag = 2 - bad or missing value

3ам

Действия Автофигуры

Слайд 4 из 4

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30 апреля 2009 г.

пуск

Входящие - О... REPORTS\_Before GAW\_09 WRDC - Windo... WRDC - Windo... Microsoft Powe... EN 8:33



WRDC - Windows Internet Explorer

http://wrdc.mgo.rssi.ru/wrdccgi/protect.exe?wrdc/data\_gaw.htm

Файл Правка Вид Избранное Сервис Справка

WRDC

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**GREECE**

3 Thessaloniki

[Daily data](#)

[Hourly data](#)

4

**INDONESIA**

5 Bukit Kototabang

[Daily data](#)

[Hourly data](#)

6

**KENYA**

Mount Kenya

7 [Daily data](#)

[Hourly data](#)

8

**LATVIA**

Rucava

[Daily data](#)

[Hourly data](#)

[Back](#)

**MOUNT KENYA**  
Hourly data

Global rad.	Diffuse rad.	Direct rad.	Spectral rad.	Downward rad.	Graph	Relations
<a href="#">2002</a>	<a href="#">2002</a>	-	-	-	<a href="#">2002</a>	<a href="#">2002</a>
<a href="#">2003</a>	<a href="#">2003</a>	-	-	-	<a href="#">2003</a>	<a href="#">2003</a>
<a href="#">2004</a>	<a href="#">2004</a>	-	-	-	<a href="#">2004</a>	<a href="#">2004</a>
<a href="#">2005</a>	<a href="#">2005</a>	-	-	-	<a href="#">2005</a>	<a href="#">2005</a>
<a href="#">2006</a>	<a href="#">2006</a>	-	-	-	<a href="#">2006</a>	<a href="#">2006</a>
<a href="#">2007</a>	<a href="#">2007</a>	-	-	-	<a href="#">2007</a>	<a href="#">2007</a>

Интернет 100%

30 апреля 2009 г.

пуск

Входящие - О...

REPORTS\_Before

GAW\_09

WRDC - Windo...

WRDC - Windo...

Microsoft Powe...

EN

8:34

WRDC - Windows Internet Explorer

http://wrdc.mgo.rssi.ru/wrdccgi/protect.exe?wrdc/data\_gaw.htm

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**SWITZERLAND**

Jungfrauoch

[Daily data](#)

[Hourly data](#)

**SWITZERLAND**

Locarno-Monti

[Daily data](#)

[Hourly data](#)

**SWITZERLAND**

Payerne

[Daily data](#)

[Hourly data](#)

**USA**

Bondville

[Daily data](#)

[Hourly data](#)

[Back](#)

**PAYERNE**  
Hourly data

Global rad.	Diffuse rad.	Direct rad.	Spectral rad.	Downward rad.	Graph	Relations
<a href="#">1999</a>	<a href="#">1999</a>	<a href="#">1999</a>	-	<a href="#">1999</a>	<a href="#">1999</a>	<a href="#">1999</a>
<a href="#">2000</a>	<a href="#">2000</a>	<a href="#">2000</a>	-	<a href="#">2000</a>	<a href="#">2000</a>	<a href="#">2000</a>
<a href="#">2001</a>	<a href="#">2001</a>	<a href="#">2001</a>	-	<a href="#">2001</a>	<a href="#">2001</a>	<a href="#">2001</a>
<a href="#">2002</a>	<a href="#">2002</a>	<a href="#">2002</a>	-	<a href="#">2002</a>	<a href="#">2002</a>	<a href="#">2002</a>
<a href="#">2003</a>	<a href="#">2003</a>	<a href="#">2003</a>	-	<a href="#">2003</a>	<a href="#">2003</a>	<a href="#">2003</a>
<a href="#">2004</a>	<a href="#">2004</a>	<a href="#">2004</a>	-	<a href="#">2004</a>	<a href="#">2004</a>	<a href="#">2004</a>
<a href="#">2005</a>	<a href="#">2005</a>	<a href="#">2005</a>	-	<a href="#">2005</a>	<a href="#">2005</a>	<a href="#">2005</a>
<a href="#">2006</a>	<a href="#">2006</a>	<a href="#">2006</a>	-	<a href="#">2006</a>	<a href="#">2006</a>	<a href="#">2006</a>
<a href="#">2007</a>	<a href="#">2007</a>	<a href="#">2007</a>	-	<a href="#">2007</a>	<a href="#">2007</a>	<a href="#">2007</a>

Интернет 100%

30 апреля 2009 г.

пуск

Входящие - О...

REPORTS\_Before

GAW\_09

WRDC - Windo...

WRDC - Windo...

Microsoft Powe...

EN

8:36

WRDC - Windows Internet Explorer

http://wrdc.mgo.rssi.ru/wrdccgi/protect.exe?wrdc/data\_gaw.htm

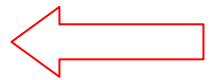
Файл Правка Вид Избранное Сервис Справка

WRDC Домой Кодировка Веб-каналы (1) Печать Страница Сервис Справка

**GLOBAL ATMOSPHERE WATCH (GAW)**

Global Radiation: hourly and daily totals, monthly totals and means for hour intervals.

Country: MOLDOVA



Station: KISHINEV

**Coordinates:**

Latitude = 47°00'N

Longitude = 28°49'E

Elevation = 205

**Year 2009 January**

TIME DATE	00-01	F	01-02	F	02-03	F	03-04	F	04-05	F	05-06	F	06-07	F	07-08	F	08-09	F	09-10	F	10-11	F	11-12	F	12-13	F	13-14	F	14-15	F	15-16	F	16-17	F	17-18	F	18-19	F	19-20	F
1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	20	0	58	0	99	0	119	0	122	0	105	0	72	0	25	0	2	0	0	0	0	0			
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	26	0	26	0	32	0	32	0	23	0	27	0	11	0	1	0	0	0	0	0			
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	38	0	49	0	86	0	117	0	96	0	67	0	22	0	2	0	0	0	0	0			
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	56	0	93	0	113	0	110	0	101	0	75	0	26	0	2	0	0	0	0	0			
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	61	0	94	0	115	0	127	0	98	0	42	0	17	0	1	0	0	0	0	0			
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	12	0	30	0	41	0	35	0	22	0	17	0	9	0	1	0	0	0	0	0			
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	31	0	68	0	93	0	117	0	104	0	75	0	29	0	2	0	0	0	0	0			
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	31	0	50	0	53	0	81	0	77	0	59	0	14	0	2	0	0	0	0	0			
9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	24	0	69	0	106	0	99	0	70	0	127	0	84	0	37	0	4	0	0	0	0	0			
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	19	0	37	0	35	0	47	0	29	0	15	0	7	0	1	0	0	0	0	0			
11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	24	0	69	0	106	0	127	0	131	0	115	0	84	0	34	0	2	0	0	0	0	0			
12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	25	0	71	0	106	0	130	0	134	0	117	0	86	0	36	0	3	0	0	0	0	0			
13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	26	0	72	0	110	0	134	0	136	0	107	0	79	0	30	0	4	0	0	0	0	0			







## WRDC Metadata sent to GAWSIS

<b>2007</b>				IV	V	VI	VII	X	XI	XII
Number of records				390	390	391	395	395	396	396
Data of sending				17/04	15/05	15/06	31/08	15/10	23/11	14/12
<b>2008</b>	I	II	IV	V	VI	VII	IX	X	XI	XII
Number of records	396	397	398	398	398		402	402	402	402
Data of sending	16/01	26/02	10/04	15/05	16/06		25/09	31/10	19/11	25/12
<b>2009</b>	I	II	III	IV						
Number of records	402	402	402	402						
Data of sending	21/01	24/02	19/03	21/04						

**World Radiation Data Centre**

**ASIA**

- [BANGLADESH](#)
- [CHINA](#)
- [DPRK](#)
- [HONG KONG](#)
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- [SHENYANG](#)
- [BEIJING](#)
- [LANZHOU](#)
- [YUZHONG](#)
- [SHANGHAI \(BAOSHAN\)](#)

**Global Radiation (Asia). Daily sums, monthly means and totals.**

**HARBIN**

WMO Index: 50953

Latitude: 45°45'N

Longitude: 126°46'E

Elevation: 0142

Instrumentation:

- global Radiation: TBQ-2-B
- sunshine duration: SS/J
- diffuse Radiation: TBQ-2-B

**Data available**

[1988](#) [1989](#) [1990](#) [1991](#) [1992](#) [1993](#) [1994](#) [1995](#) [1996](#) [1997](#)

[1998](#) [1999](#) [2000](#) [2001](#) [2002](#) [2003](#) [2004](#) [2005](#) [2006](#) [2007](#)



Year 2007

DATE	JAN	F	FEB	F	MAR	F	APR	F	MAY	F	JUN	F	JUL	F	AUG	F	SEP	F	OCT	F	NOV	F	DEC	F
1	275	0	773	0	988	0	1914	0	2418	0	874	0	2470	0	2598	0	2103	0	1599	0	909	0	517	0
2	241	0	838	0	214	0	1822	0	2622	0	463	0	720	0	2244	0	876	0	1497	0	724	0	564	0
3	246	0	915	0	502	0	1566	0	1678	0	2158	0	1324	0	2676	0	2091	0	1525	0	1022	0	604	0
4	416	0	810	0	246	0	1832	0	1818	0	2445	0	1997	0	1909	0	2033	0	1321	0	979	0	570	0
5	408	0	680	0	1008	0	1842	0	2276	0	2031	0	2214	0	1711	0	2089	0	1253	0	899	0	567	0
6	211	0	792	0	1500	0	1339	0	2625	0	1322	0	1645	0	2317	0	2157	0	822	0	869	0	533	0
7	480	0	881	0	1147	0	1943	0	1305	0	2505	0	1661	0	1814	0	859	0	216	0	514	0	544	0
8	409	0	868	0	1491	0	534	0	2258	0	2636	0	1823	0	748	0	663	0	1565	0	785	0	419	0
9	604	0	829	0	1021	0	538	0	2246	0	1602	0	676	0	885	0	458	0	1474	0	768	0	340	0
10	540	0	929	0	930	0	1156	0	2181	0	2313	0	1987	0	660	0	1355	0	1222	0	744	0	422	0
11	579	0	929	0	1552	0	878	0	530	0	2412	0	2122	0	1398	0	1191	0	1373	0	690	0	287	0
12	476	0	818	0	1569	0	1961	0	2174	0	2179	0	1919	0	568	0	1046	0	1474	0	788	0	536	0
13	556	0	503	0	1552	0	1954	0	1129	0	2914	0	2778	0	612	0	1878	0	1397	0	848	0	479	0
14	508	0	511	0	1373	0	2096	0	2041	0	2835	0	2675	0	818	0	885	0	1194	0	824	0	460	0
15	572	0	1009	0	1635	0	845	0	1507	0	2821	0	2753	0	1173	0	515	0	628	0	842	0	258	0
16	626	0	1152	0	1419	0	1358	0	134	0	2259	0	2732	0	1809	0	1415	0	1258	0	803	0	233	0
17	382	0	982	0	1618	0	1731	0	926	0	2261	0	913	0	777	0	1619	0	1205	0	640	0	390	0
18	626	0	1077	0	1746	0	1899	0	988	0	1939	0	1485	0	2029	0	1197	0	1214	0	799	0	487	0
19	561	0	1084	0	1469	0	698	0	1705	0	1428	0	1930	0	1647	0	919	0	1113	0	242	0	403	0
20	578	0	1162	0	1205	0	244	0	1481	0	2230	0	2858	0	1523	0	820	0	781	0	633	0	425	0
21	532	0	1009	0	1215	0	1950	0	2578	0	2990	0	2868	0	1238	0	1761	0	1096	0	696	0	480	0
22	526	0	670	0	648	0	2310	0	1918	0	2918	0	2726	0	2369	0	1768	0	1121	0	708	0	292	0
23	596	0	1251	0	1229	0	2189	0	1042	0	2484	0	2747	0	2168	0	1436	0	1126	0	497	0	391	0
24	640	0	1222	0	634	0	1740	0	525	0	2882	0	2693	0	1391	0	1703	0	751	0	656	0	388	0
25	600	0	586	0	1794	0	2384	0	1026	0	2584	0	2526	0	2185	0	1417	0	1009	0	442	0	327	0
26	507	0	1055	0	1474	0	2617	0	944	0	2817	0	2367	0	1334	0	515	0	1115	0	679	0	204	0
27	748	0	1187	0	1512	0	2200	0	1997	0	1998	0	902	0	2127	0	1687	0	670	0	681	0	221	0
28	610	0	1226	0	1201	0	2342	0	455	0	1076	0	2438	0	2271	0	1645	0	882	0	660	0	176	0
29	227	0	-	-	1127	0	2356	0	1390	0	2642	0	2390	0	2068	0	1429	0	1034	0	569	0	234	0
30	397	0	-	-	1905	0	1645	0	2423	0	2535	0	2042	0	2006	0	1621	0	818	0	615	0	338	0
31	338	0	-	-	257	0	-	-	2830	0	-	-	1008	0	2157	0	-	-	919	0	-	-	461	0
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<b>MEAN</b>	<b>484</b>	<b>0</b>	<b>920</b>	<b>0</b>	<b>1199</b>	<b>0</b>	<b>1663</b>	<b>0</b>	<b>1651</b>	<b>0</b>	<b>2218</b>	<b>0</b>	<b>2045</b>	<b>0</b>	<b>1653</b>	<b>0</b>	<b>1372</b>	<b>0</b>	<b>1118</b>	<b>0</b>	<b>718</b>	<b>0</b>	<b>405</b>	<b>0</b>

Microsoft Excel

Файл Правка Вид Вставка Формат Сервис Данные Окно Справка

Введите вопрос

Arial Cyr 10

Отвечить с изменениями... Закончить проверку...

S1 F

Harbin\_Global\_Rad.xls

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	DATE	JAN	F	FEB	F	MAR	F	APR	F	MAY	F	JUN	F	JUL	F	AUG	F	SEP	F	OCT	F	NOV	F	DEC	F	
2	1	275	0	773	0	988	0	1914	0	2418	0	874	0	2470	0	2598	0	2103	0	1599	0	909	0	517	0	
3	2	241	0	838	0	214	0	1822	0	2622	0	463	0	720	0	2244	0	876	0	1497	0	724	0	564	0	
4	3	246	0	915	0	502	0	1566	0	1678	0	2158	0	1324	0	2676	0	2091	0	1525	0	1022	0	604	0	
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6	5	408	0	680	0	1008	0	1842	0	2276	0	2031	0	2214	0	1711	0	2089	0	1253	0	899	0	567	0	
7	6	211	0	792	0	1500	0	1339	0	2625	0	1322	0	1645	0	2317	0	2157	0	822	0	869	0	533	0	
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21	20	578	0	1162	0	1205	0	244	0	1481	0	2230	0	2858	0	1523	0	820	0	781	0	633	0	425	0	
22	21	532	0	1009	0	1215	0	1950	0	2578	0	2990	0	2868	0	1238	0	1761	0	1096	0	696	0	480	0	
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25	24	640	0	1222	0	634	0	1740	0	525	0	2882	0	2693	0	1391	0	1703	0	751	0	656	0	388	0	
26	25	600	0	586	0	1794	0	2384	0	1026	0	2584	0	2526	0	2185	0	1417	0	1009	0	442	0	327	0	
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30	29	227	0	-	-	1127	0	2356	0	1390	0	2642	0	2390	0	2068	0	1429	0	1034	0	569	0	234	0	
31	30	397	0	-	-	1905	0	1645	0	2423	0	2535	0	2042	0	2006	0	1621	0	818	0	615	0	338	0	
32	31	338	0	-	-	257	0	-	-	2830	0	-	-	1008	0	2157	0	-	-	919	0	-	-	461	0	
33	SUM	15015	0	25748	0	37181	0	49883	0	51170	0	66553	0	63389	0	51230	0	41151	0	34672	0	21525	0	12550	0	

Готово

Сумма=0

ФИКС 30 апреля 2009 г.

пуск

Входящие - О...

REPORTS\_Before

GAW\_09

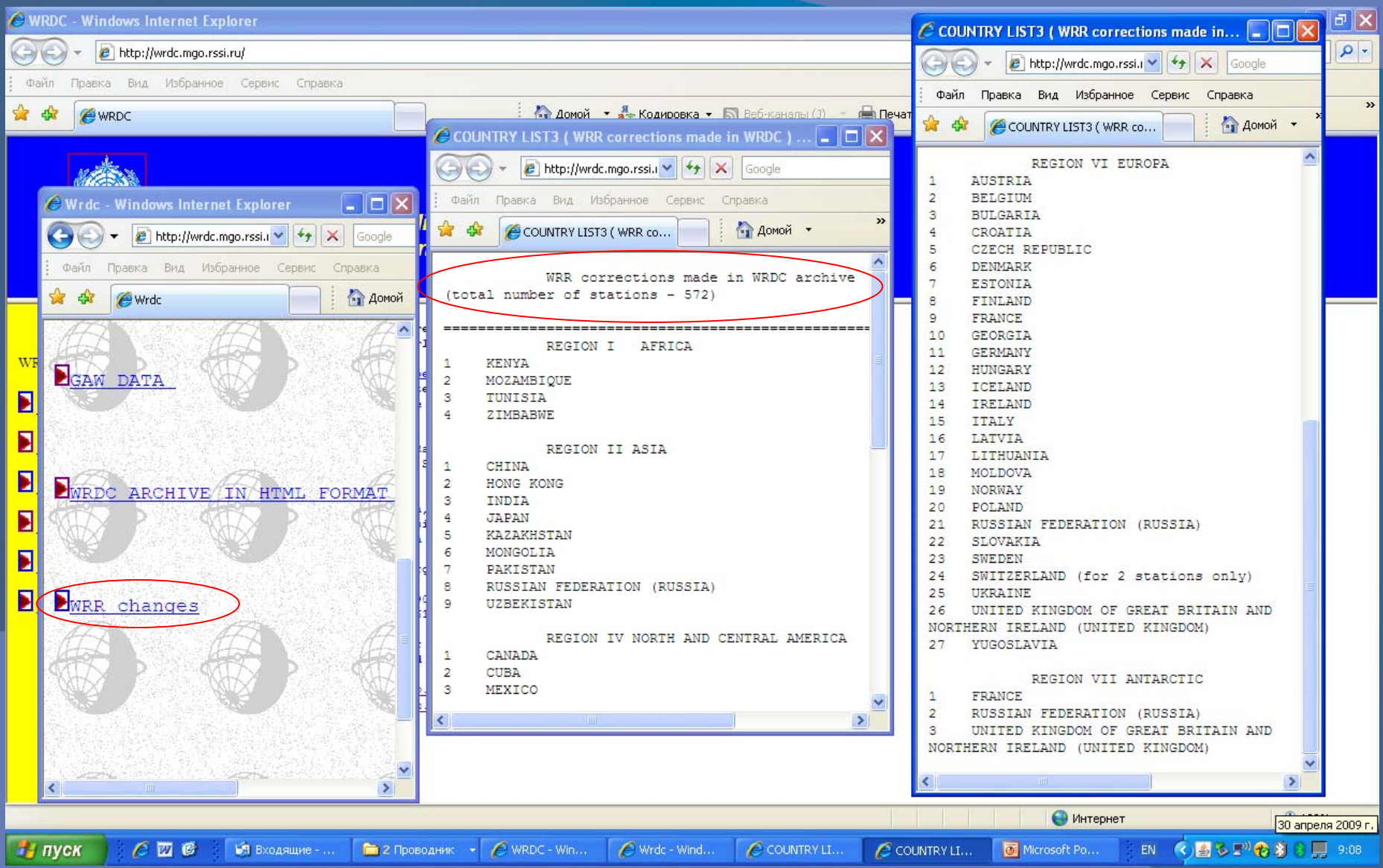
Internet Ex...

Microsoft Powe...

Microsoft Excel

EN

8:58



**WRDC - Windows Internet Explorer**  
 http://wrdc.mgo.rssi.ru/

Файл Правка Вид Избранное Сервис Справка

WRDC

**Wrrdc - Windows Internet Explorer**  
 http://wrdc.mgo.rssi.ru/

Файл Правка Вид Избранное Сервис Справка

Wrrdc

[GAW DATA](#)

[WRDC ARCHIVE IN HTML FORMAT](#)

[WRR changes](#)

**COUNTRY LIST3 ( WRR corrections made in WRDC ) ...**  
 http://wrdc.mgo.rssi.ru/

Файл Правка Вид Избранное Сервис Справка

COUNTRY LIST3 ( WRR co...

WRR corrections made in WRDC archive  
 (total number of stations - 572)

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REGION I AFRICA

- 1 KENYA
- 2 MOZAMBIQUE
- 3 TUNISIA
- 4 ZIMBABWE

REGION II ASIA

- 1 CHINA
- 2 HONG KONG
- 3 INDIA
- 4 JAPAN
- 5 KAZAKHSTAN
- 6 MONGOLIA
- 7 PAKISTAN
- 8 RUSSIAN FEDERATION (RUSSIA)
- 9 UZBEKISTAN

REGION IV NORTH AND CENTRAL AMERICA

- 1 CANADA
- 2 CUBA
- 3 MEXICO

**COUNTRY LIST3 ( WRR corrections made in ...**  
 http://wrdc.mgo.rssi.ru/

Файл Правка Вид Избранное Сервис Справка

COUNTRY LIST3 ( WRR co...

REGION VI EUROPA

- 1 AUSTRIA
- 2 BELGIUM
- 3 BULGARIA
- 4 CROATIA
- 5 CZECH REPUBLIC
- 6 DENMARK
- 7 ESTONIA
- 8 FINLAND
- 9 FRANCE
- 10 GEORGIA
- 11 GERMANY
- 12 HUNGARY
- 13 ICELAND
- 14 IRELAND
- 15 ITALY
- 16 LATVIA
- 17 LITHUANIA
- 18 MOLDOVA
- 19 NORWAY
- 20 POLAND
- 21 RUSSIAN FEDERATION (RUSSIA)
- 22 SLOVAKIA
- 23 SWEDEN
- 24 SWITZERLAND (for 2 stations only)
- 25 UKRAINE
- 26 UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND (UNITED KINGDOM)
- 27 YUGOSLAVIA

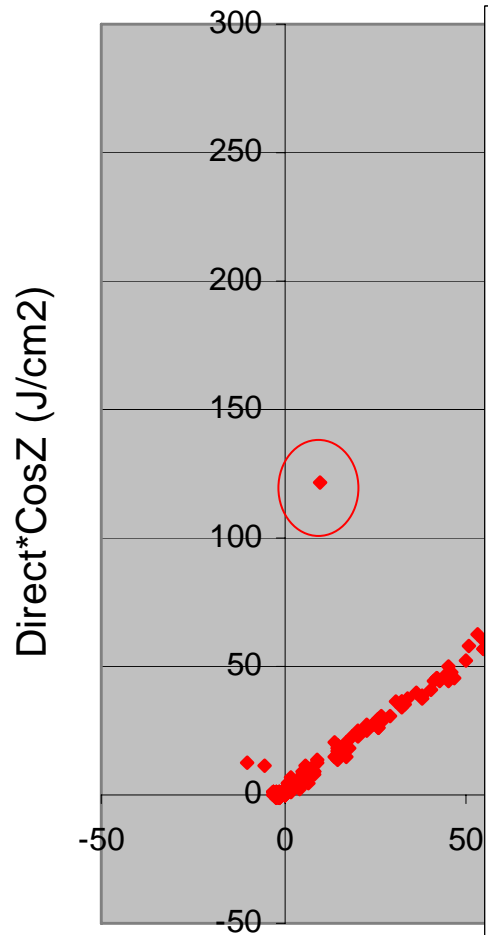
REGION VII ANTARCTIC

- 1 FRANCE
- 2 RUSSIAN FEDERATION (RUSSIA)
- 3 UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND (UNITED KINGDOM)

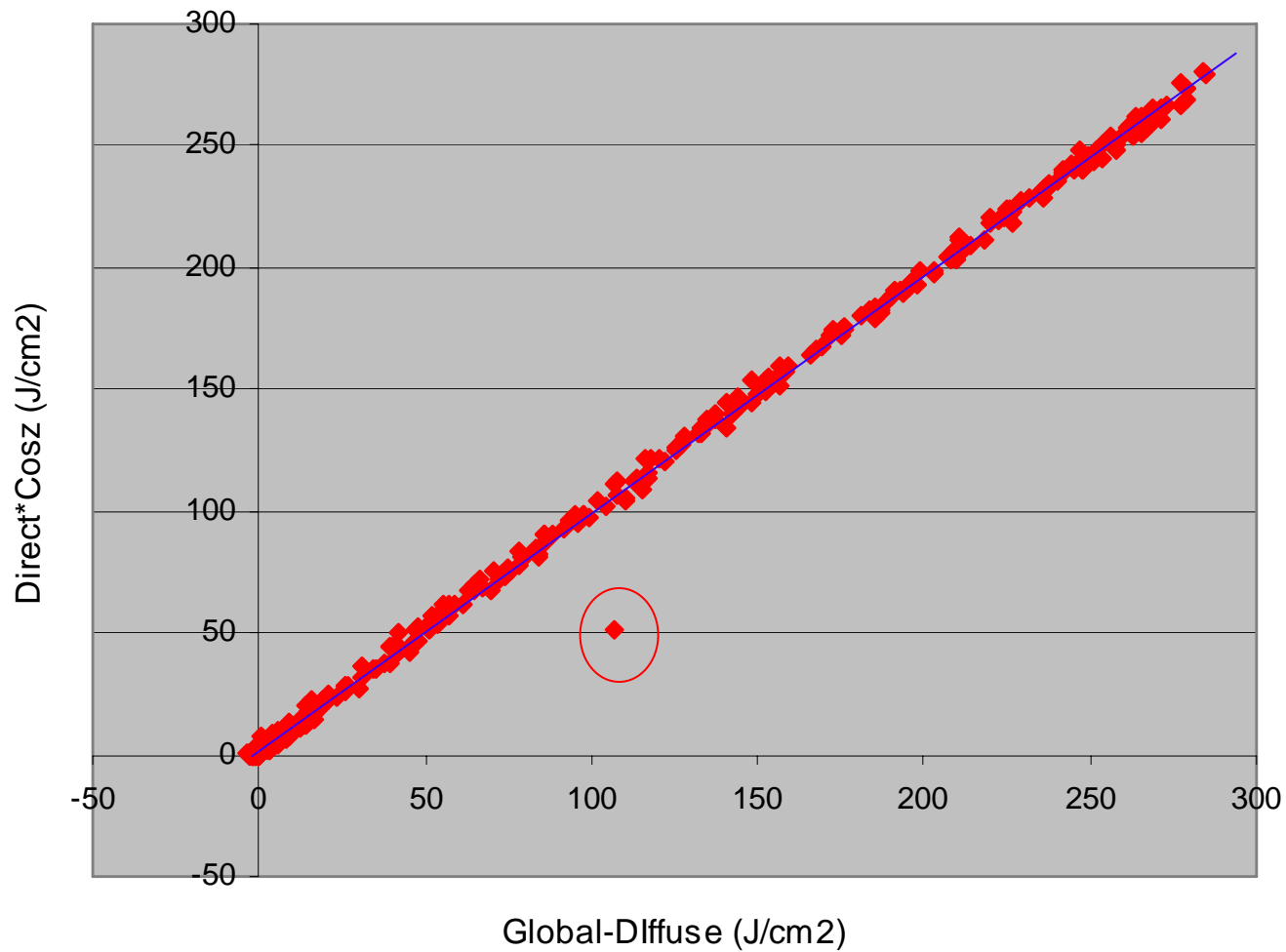
Интернет 30 апреля 2009 г.

пущ Входящие - ... 2 Проводник WRDC - Win... Wrrdc - Wind... COUNTRY LI... COUNTRY LI... Microsoft Po... EN 9:08

Boulder, February 2009

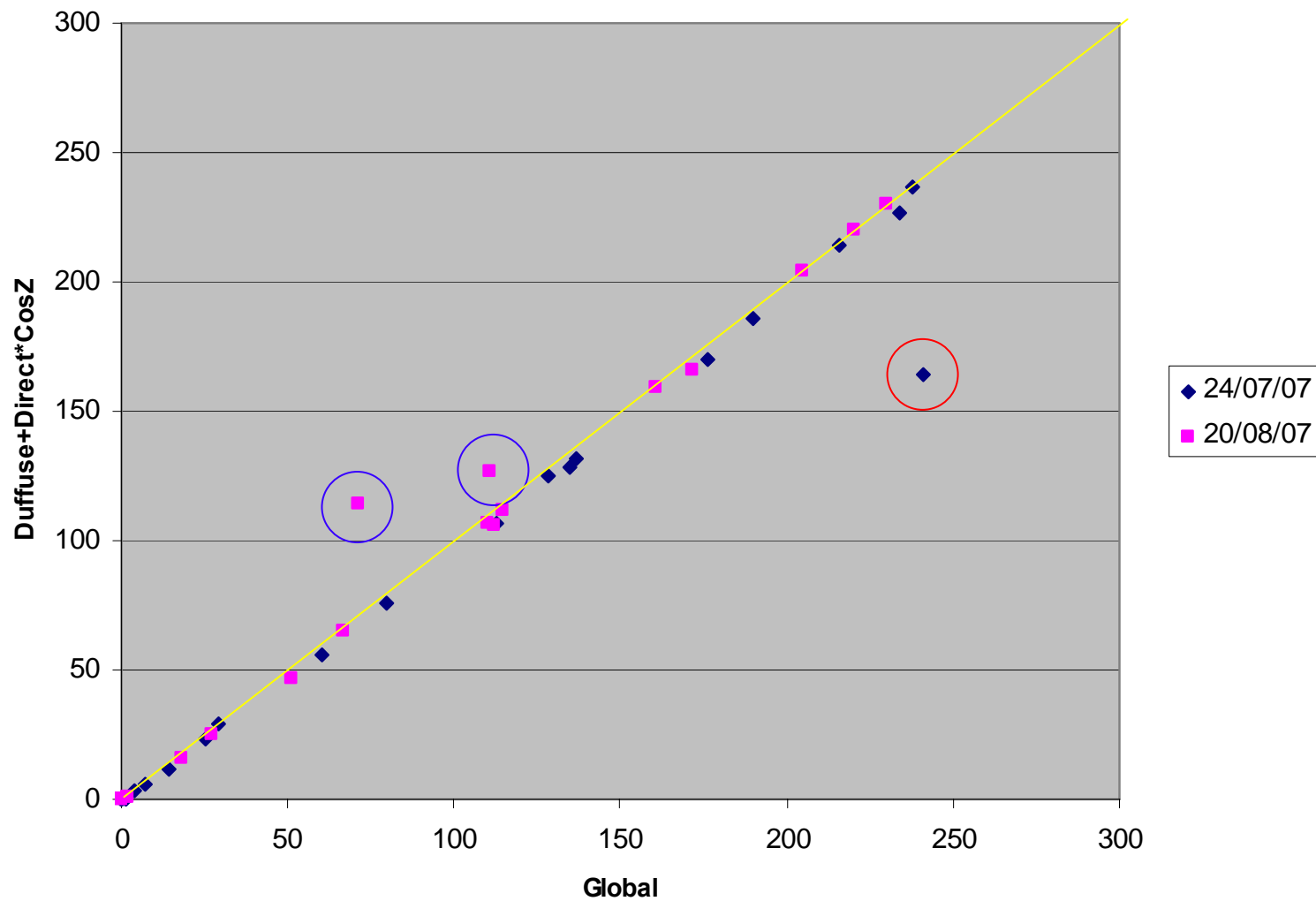


Boulder, March 2009



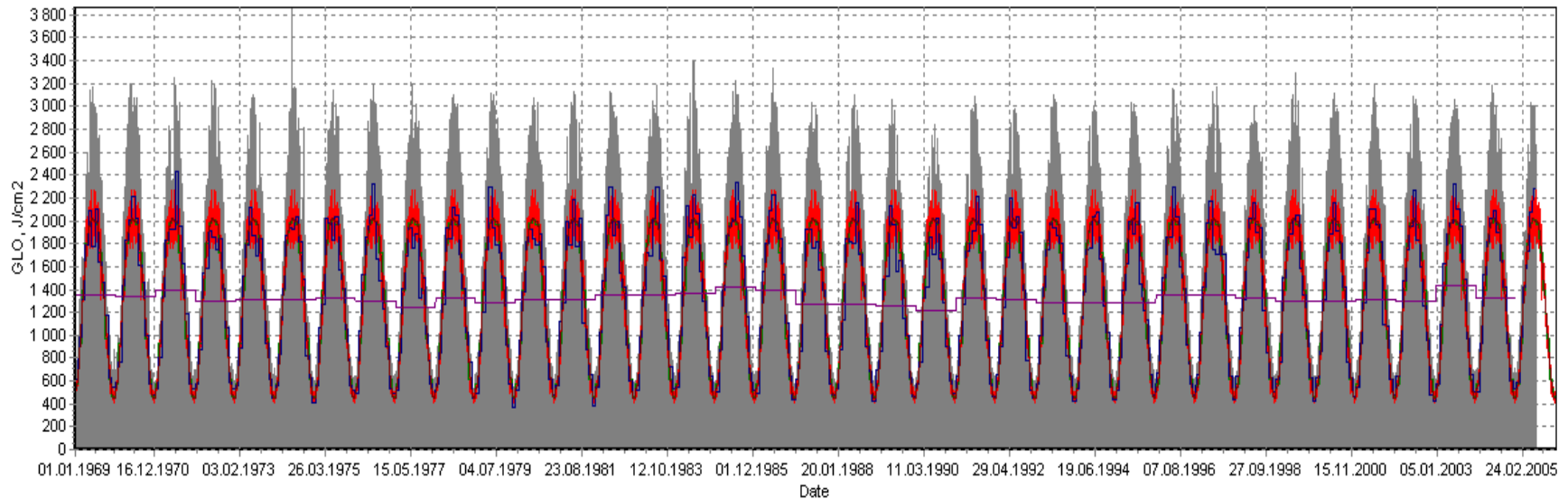


### Tartu / Toravere

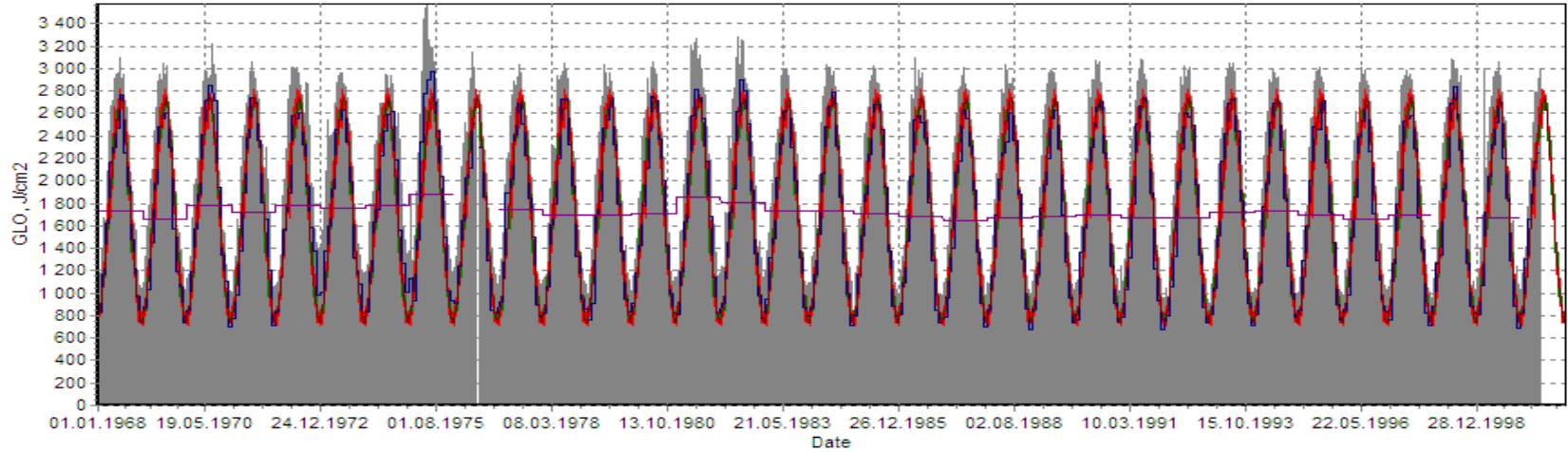


An Example of the time series of global radiation daily values (grey), annual means (violet) and seasonal component (red color).

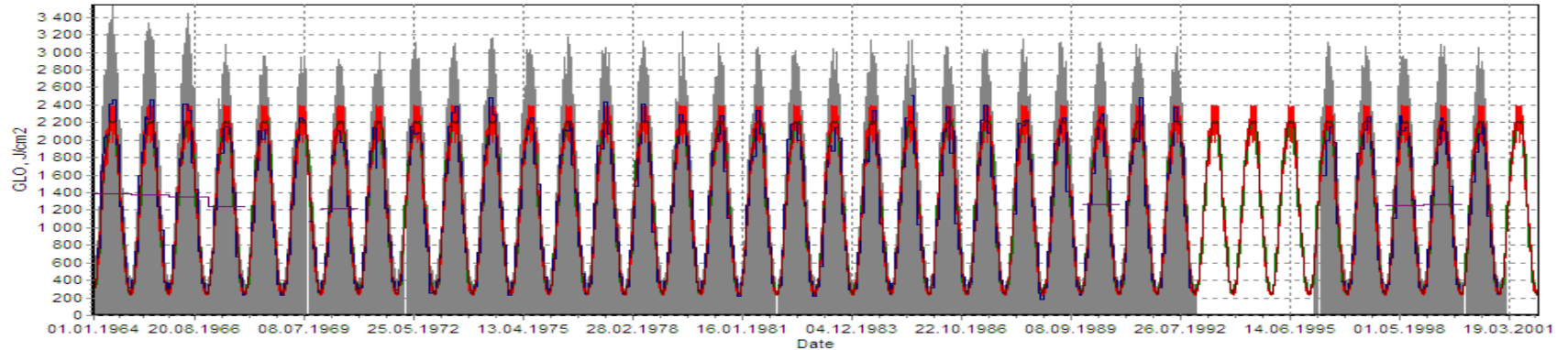
DAVOS (SWITZERLAND), 1969 - 2005  
Global Radiation



SIDI BOU SAID (TUNISIA), 1968 - 2000  
Global Radiation



EDMONTON / STONY PLAIN (CANADA), 1964 - 2001  
Global Radiation









**GAW WDC Experts Team at WRDC/MGO In October 2008**

## Near Future Plans:

Modernization of Internet Line (to Provider with OptoFiber)

*Thank you for your attention*

