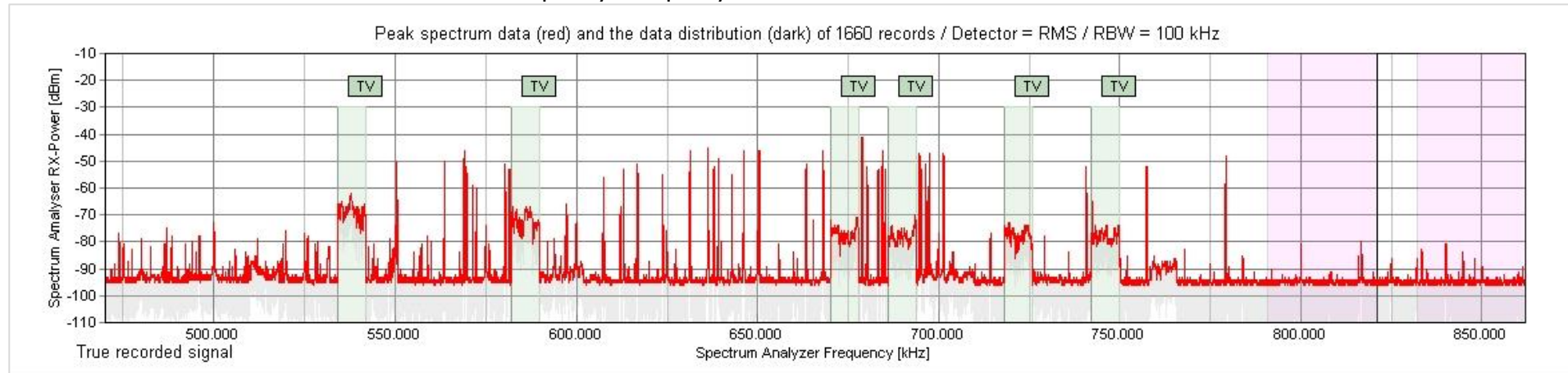


## **Eurovision Song Contest 2011**

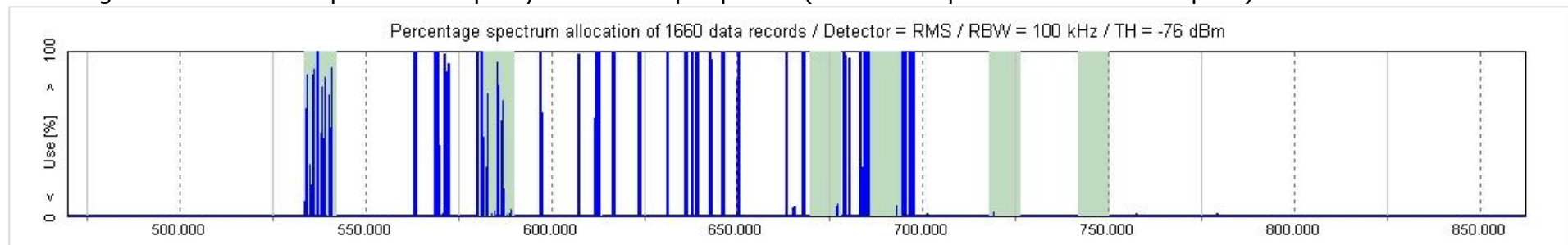
Annex with detailed illustration of the 15-day spectrum recording

**Evaluation of the 1<sup>st</sup> day of the DKE spectrum recording: 01.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue = occupied, Light blue = TV, White = unoccupied):

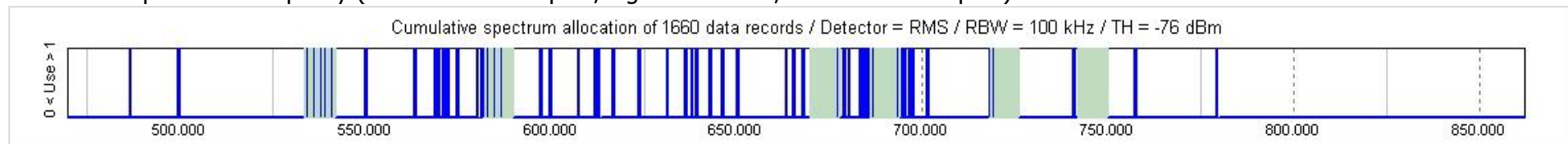
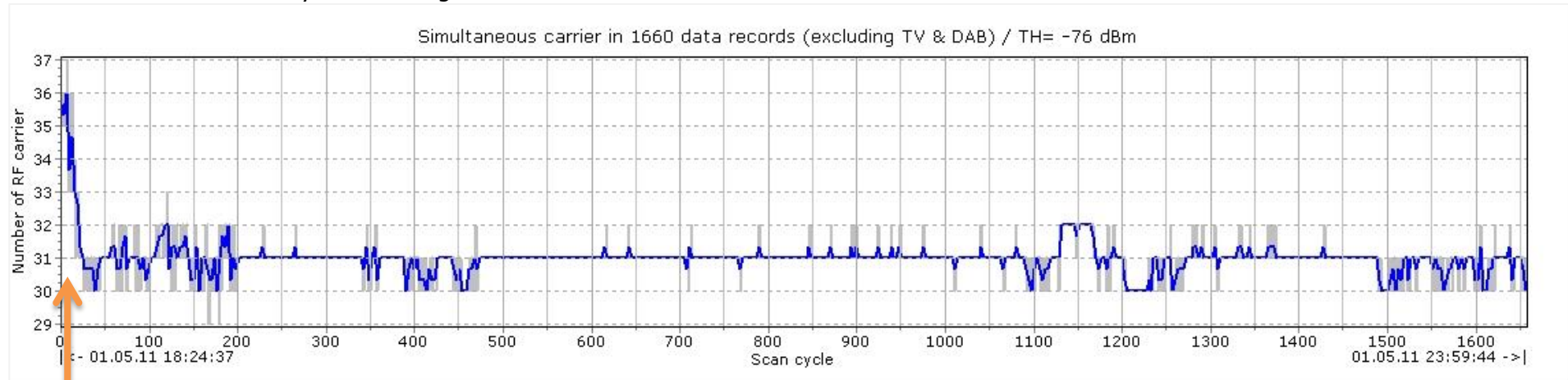


Illustration of simultaneously recorded signals:



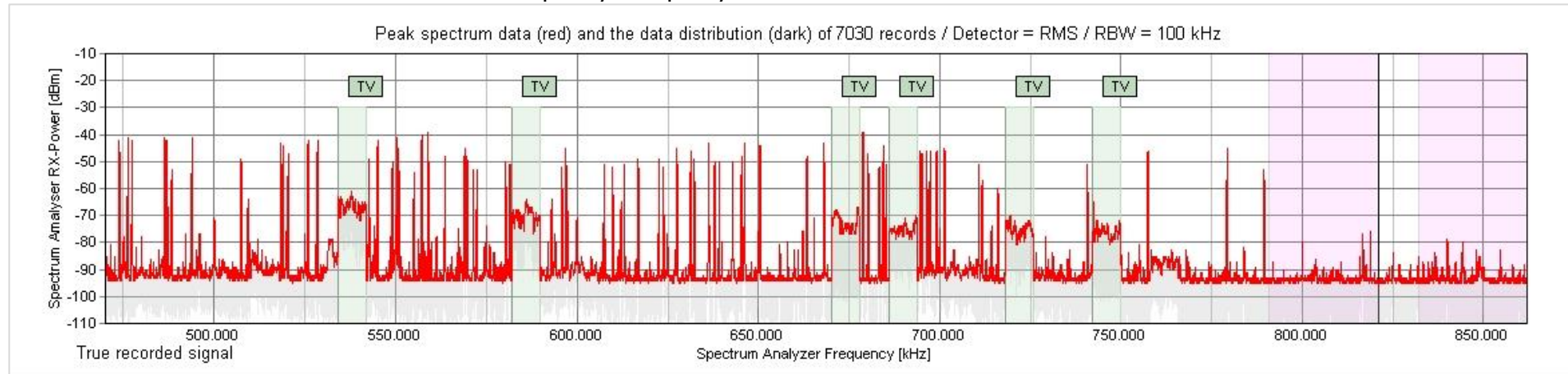
Up to 18:30  
Technical rehearsal

Tabular summary of the spectrum occupancy in the 470-862 MHz range:

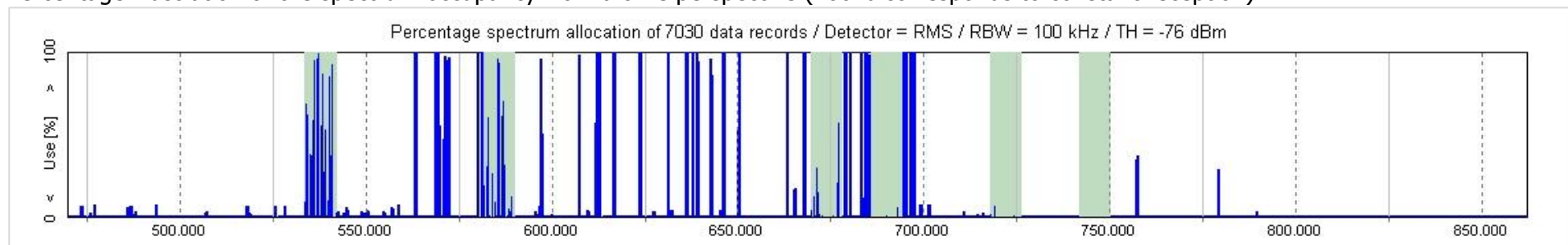
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	40	Bandwidth < 500 kHz	2
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	8
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	21
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	8
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	8

**Evaluation of the 2<sup>nd</sup> day of the DKE spectrum recording: 02.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

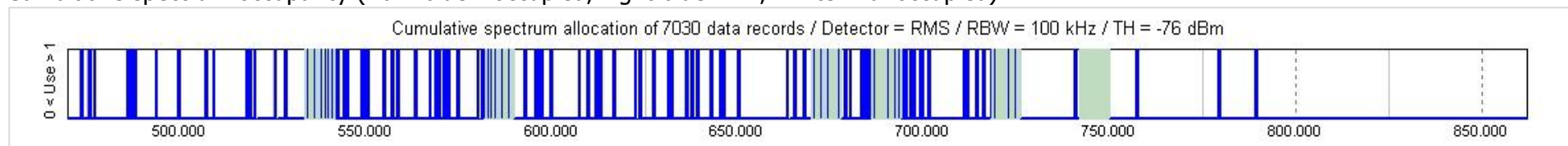
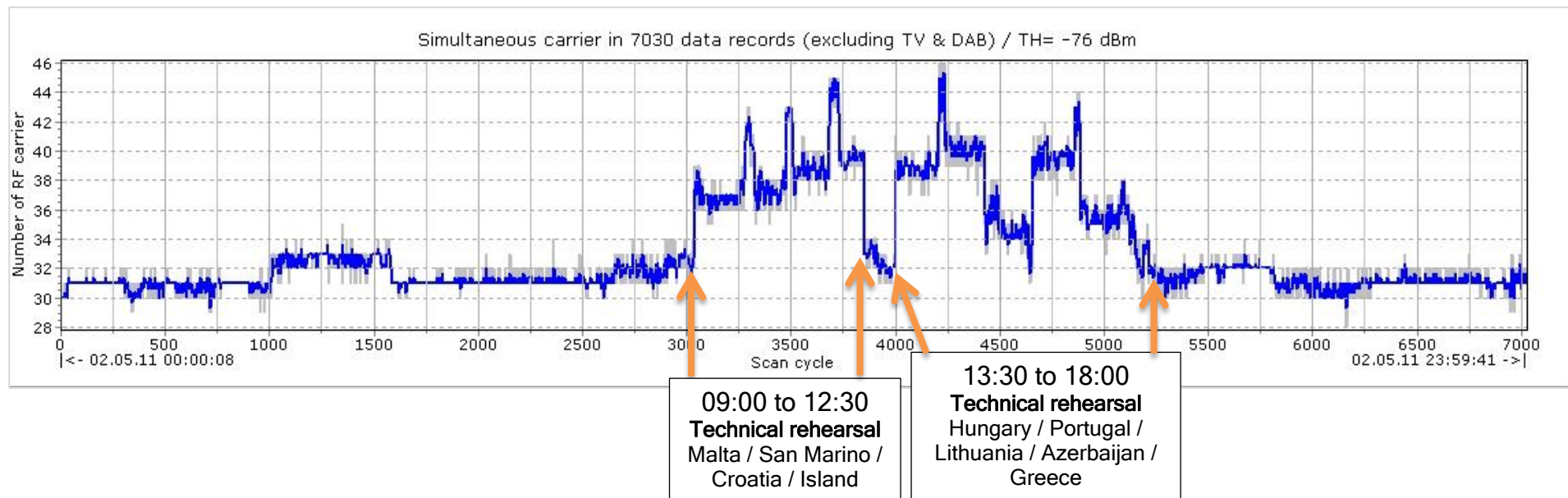


Illustration of simultaneously recorded signals:



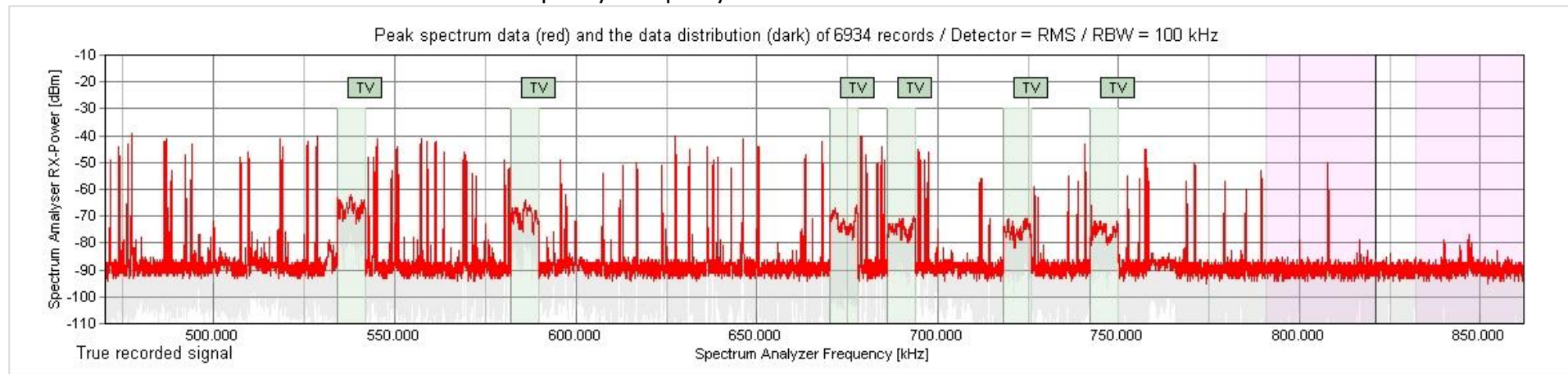
Tabular summary of the spectrum occupancy in the 470-862 MHz range:

Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	77	Bandwidth < 500 kHz	9
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	15
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	42
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	13
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	5

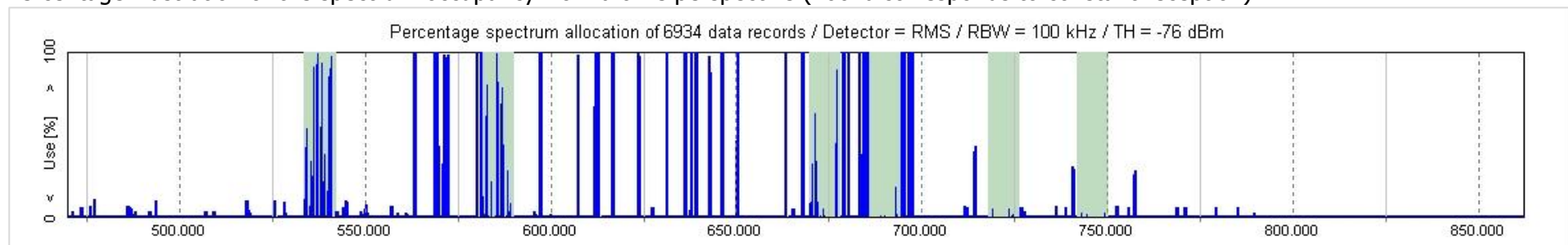


**Evaluation of the 3<sup>rd</sup> day of the DKE spectrum recording: 03.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

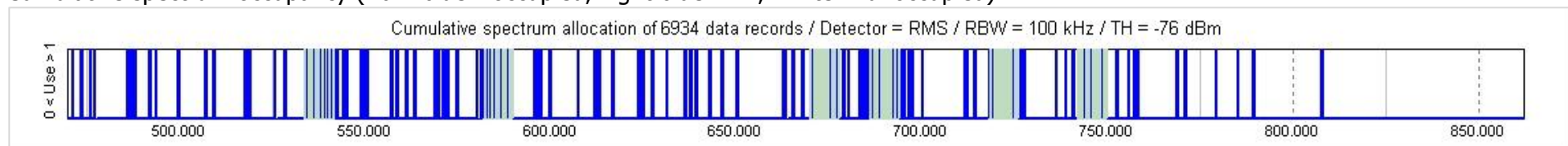
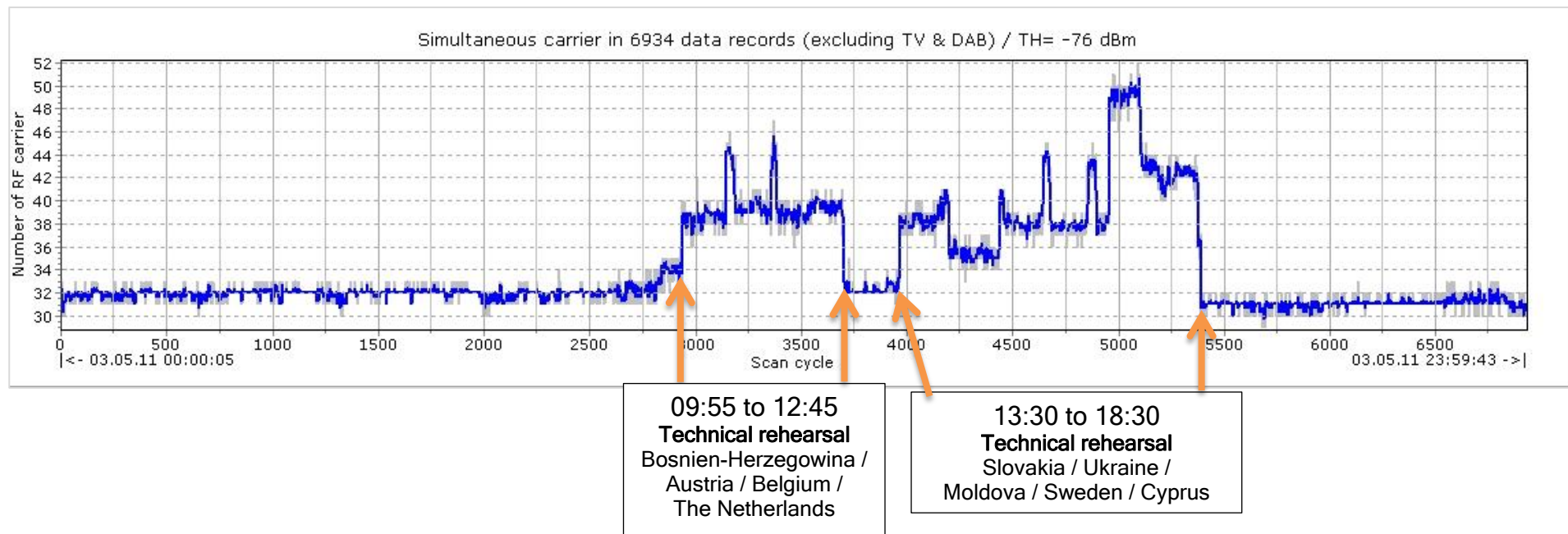


Illustration of simultaneously recorded signals:

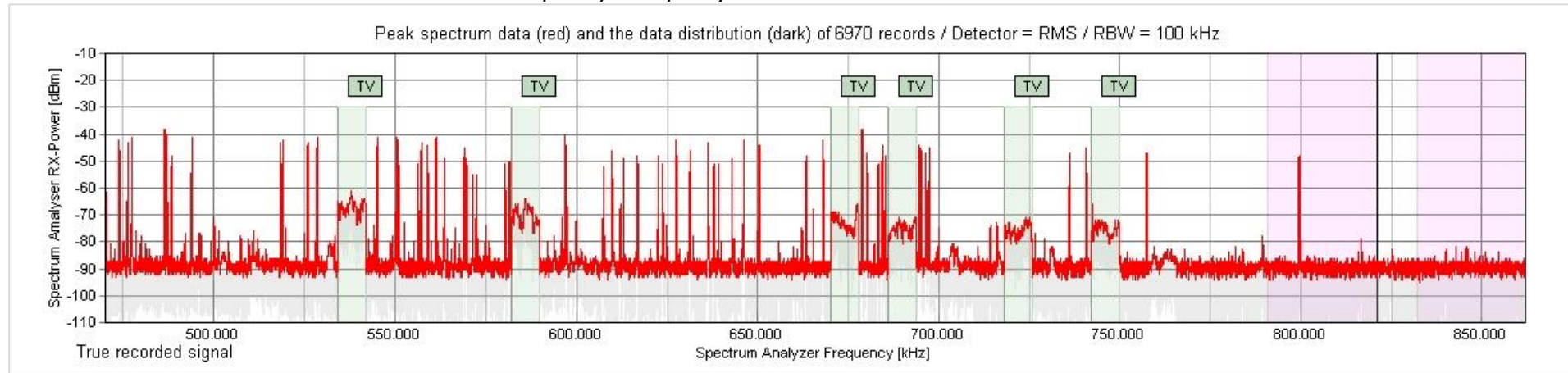


Tabular summary of the spectrum occupancy in the 470-862 MHz range:

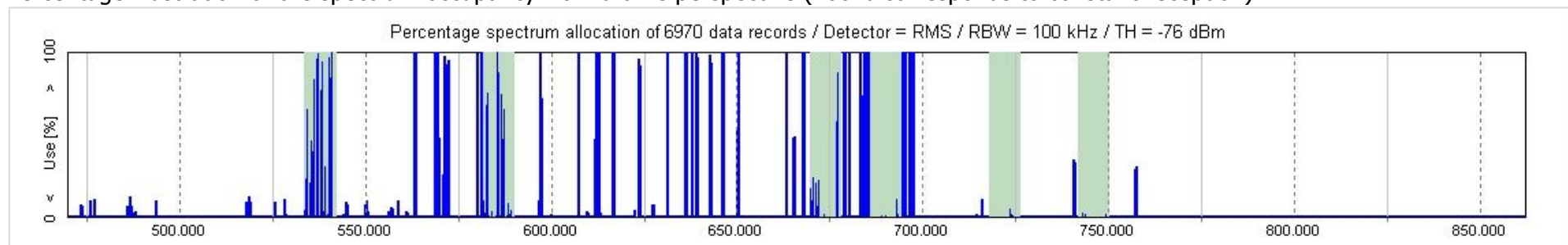
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	80	Bandwidth < 500 kHz	7
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	15
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	45
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	15
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	5

**Evaluation of the 4<sup>th</sup> day of the DKE spectrum recording: 04.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

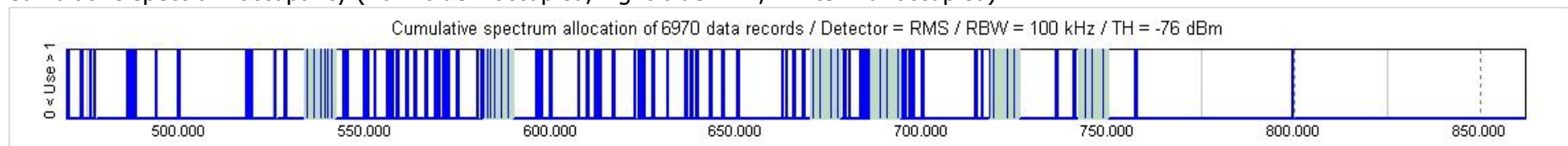
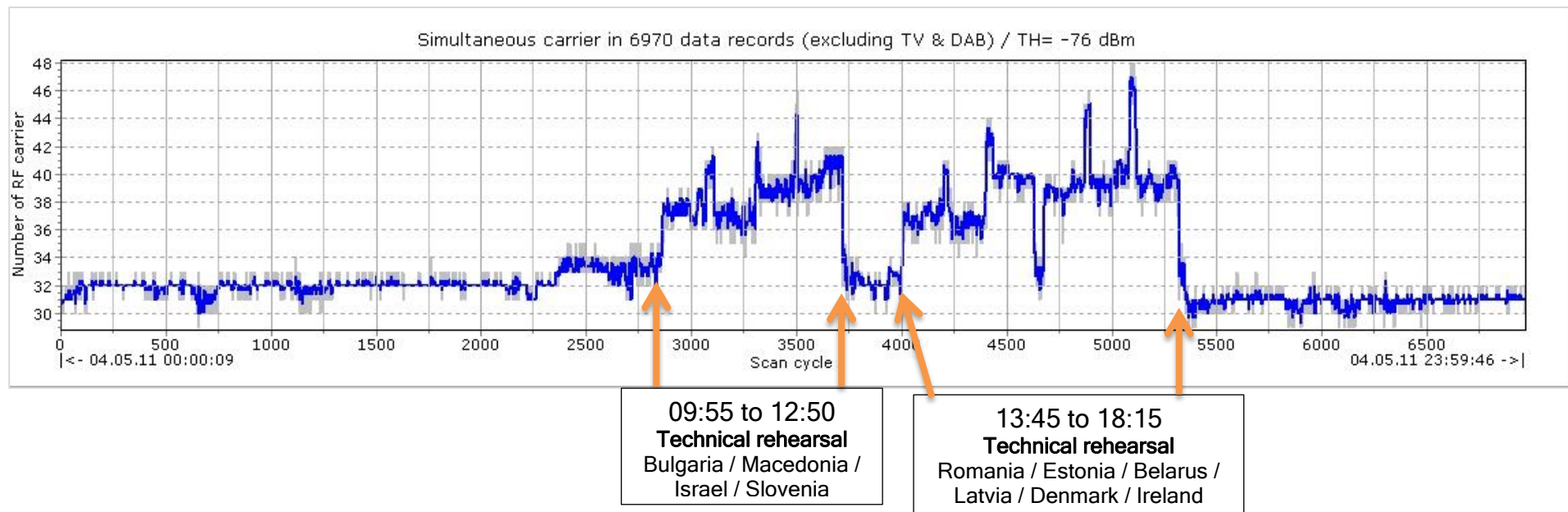




Illustration of simultaneously recorded signals:

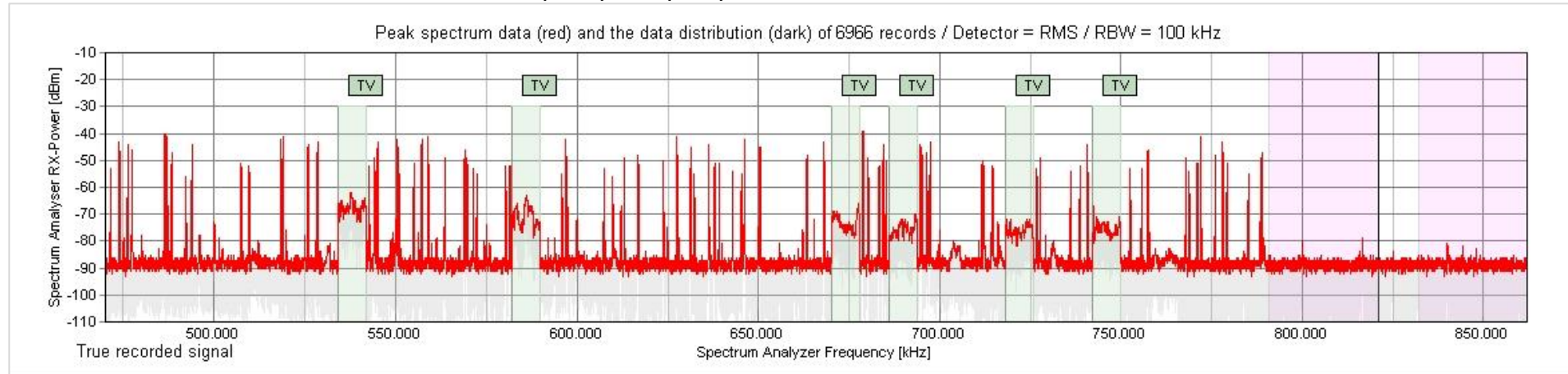


Tabular summary of the spectrum occupancy in the 470-862 MHz range:

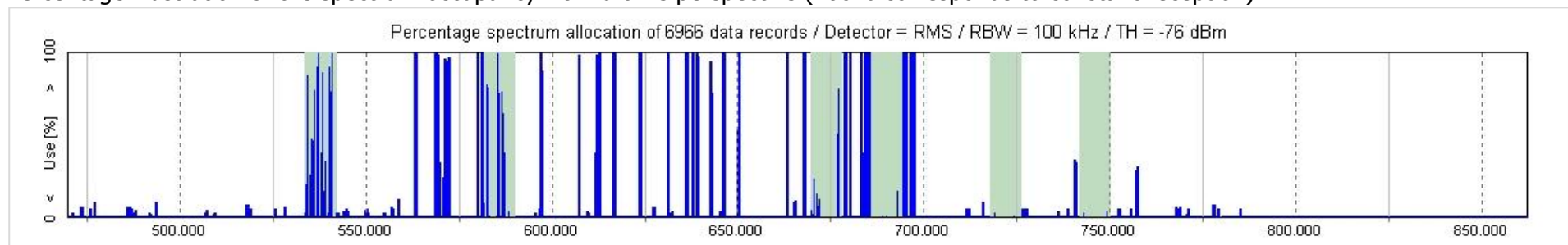
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	65	Bandwidth < 500 kHz	6
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	13
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	34
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	13
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	6

**Evaluation of the 5<sup>th</sup> day of the DKE spectrum recording: 05.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

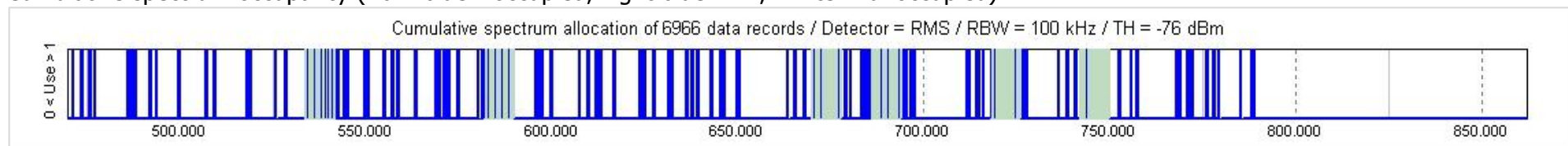
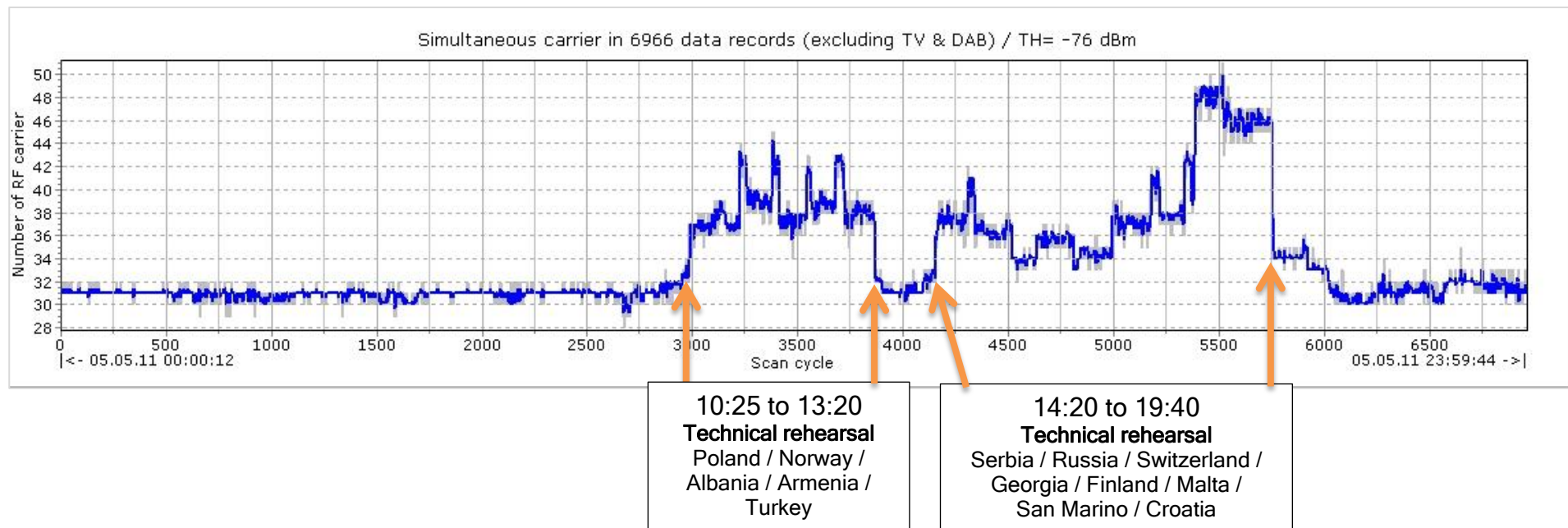


Illustration of simultaneously recorded signals:

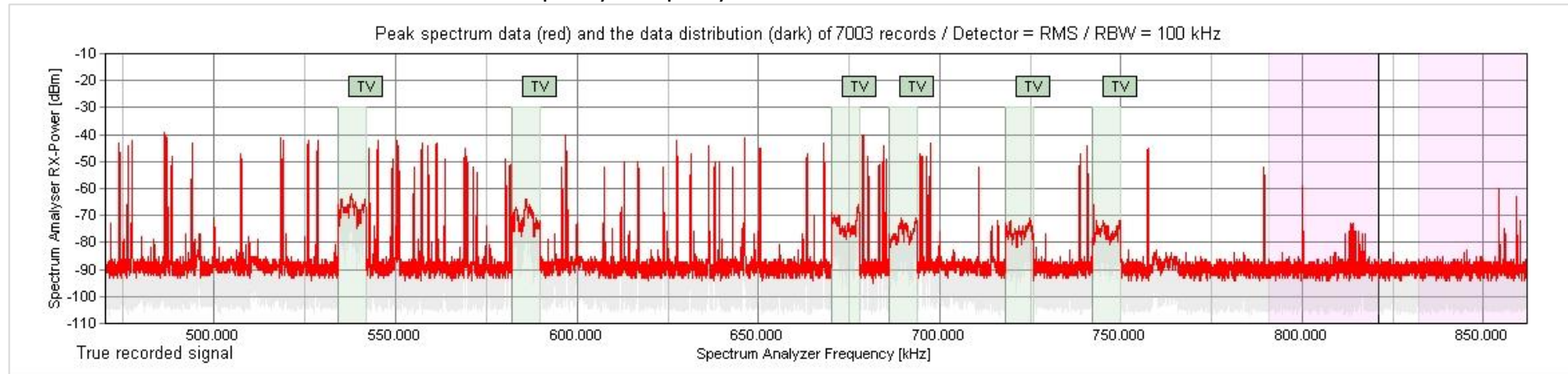


Tabular summary of the spectrum occupancy in the 470-862 MHz range:

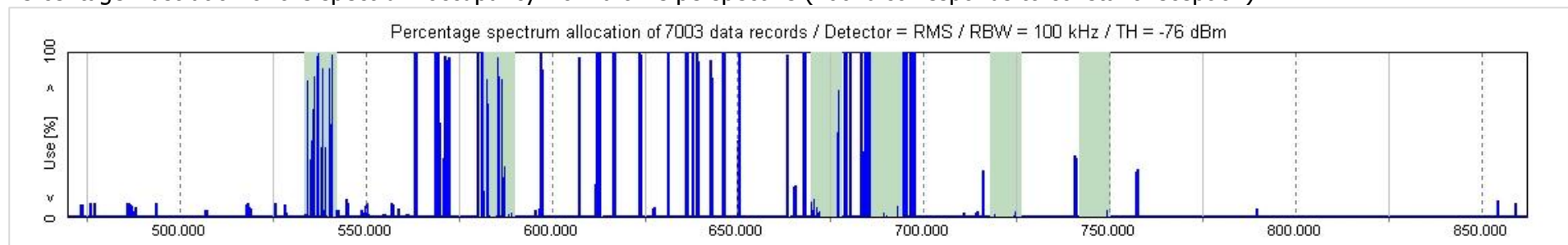
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	88	Bandwidth < 500 kHz	9
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	18
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	51
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	13
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	4

**Evaluation of the 6<sup>th</sup> day of the DKE spectrum recording: 06.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

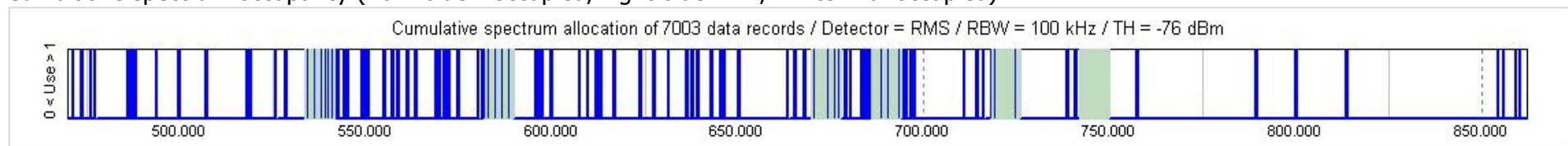
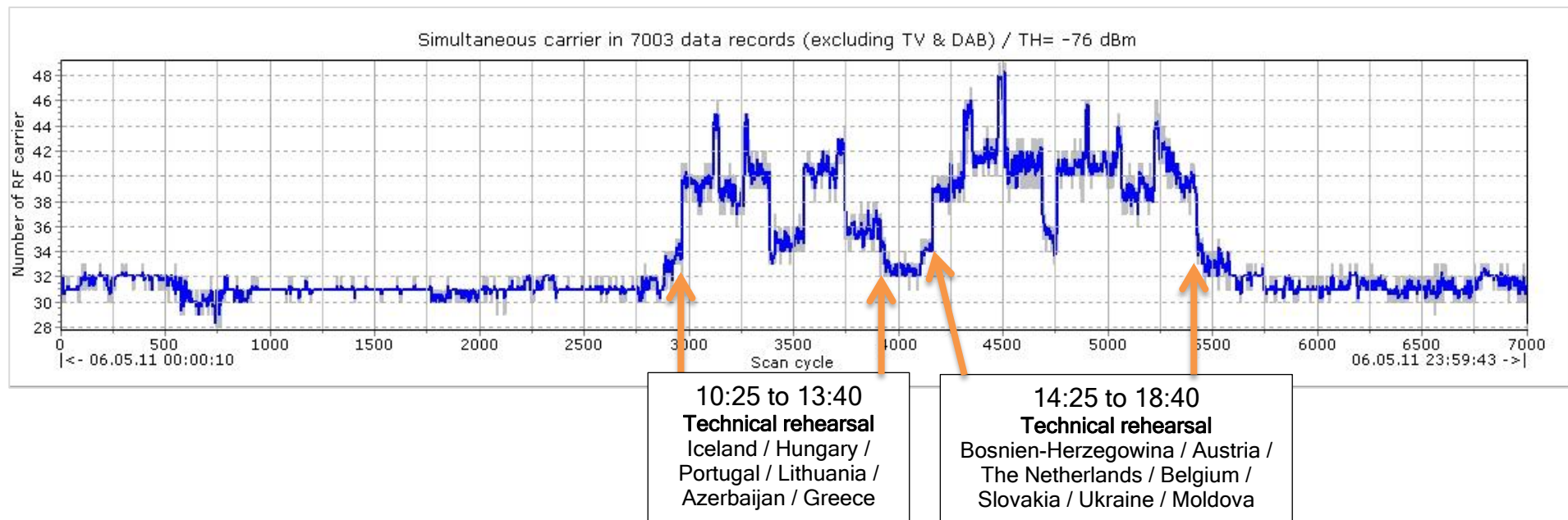




Illustration of simultaneously recorded signals:



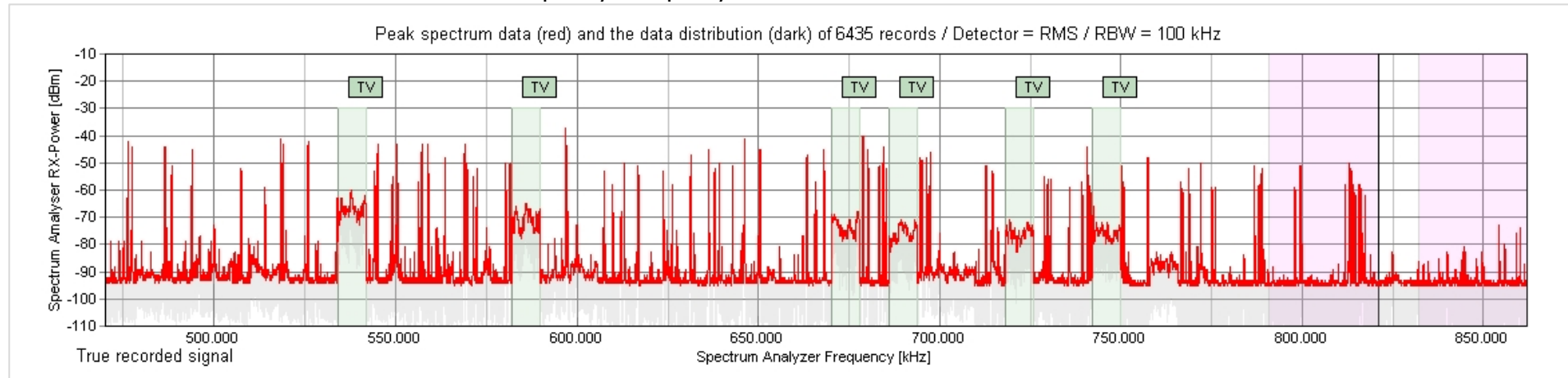
Tabular summary of the spectrum occupancy in the 470-862 MHz range:

Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	71	Bandwidth < 500 kHz	7
Bandwidth 200 to 500 kHz	1	Bandwidth 500 to 1000 kHz	11
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	41
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	12
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	8

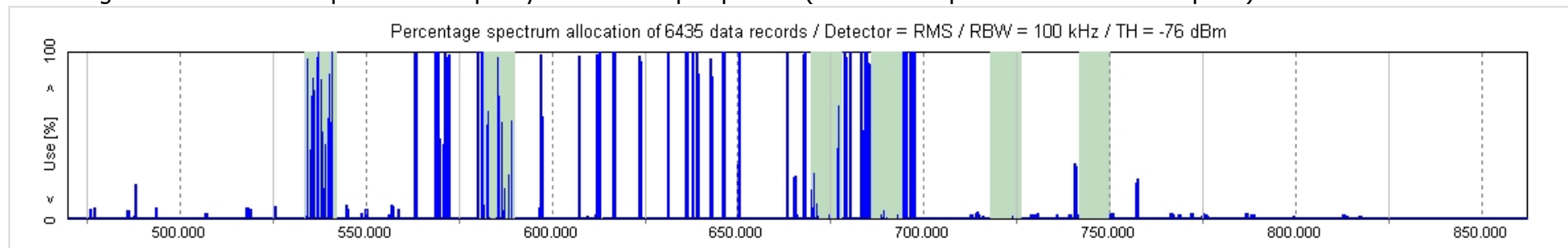


**Evaluation of the 7<sup>th</sup> day of the DKE spectrum recording: 07.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

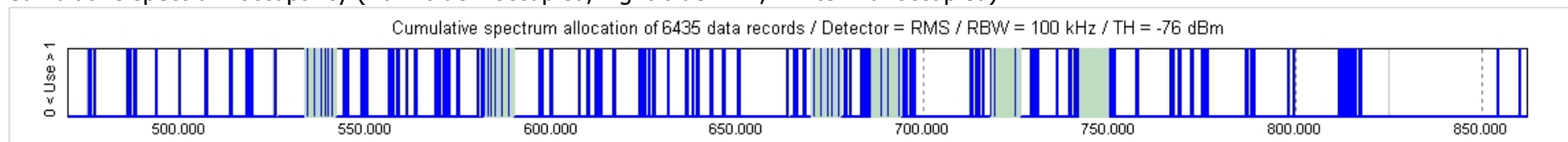
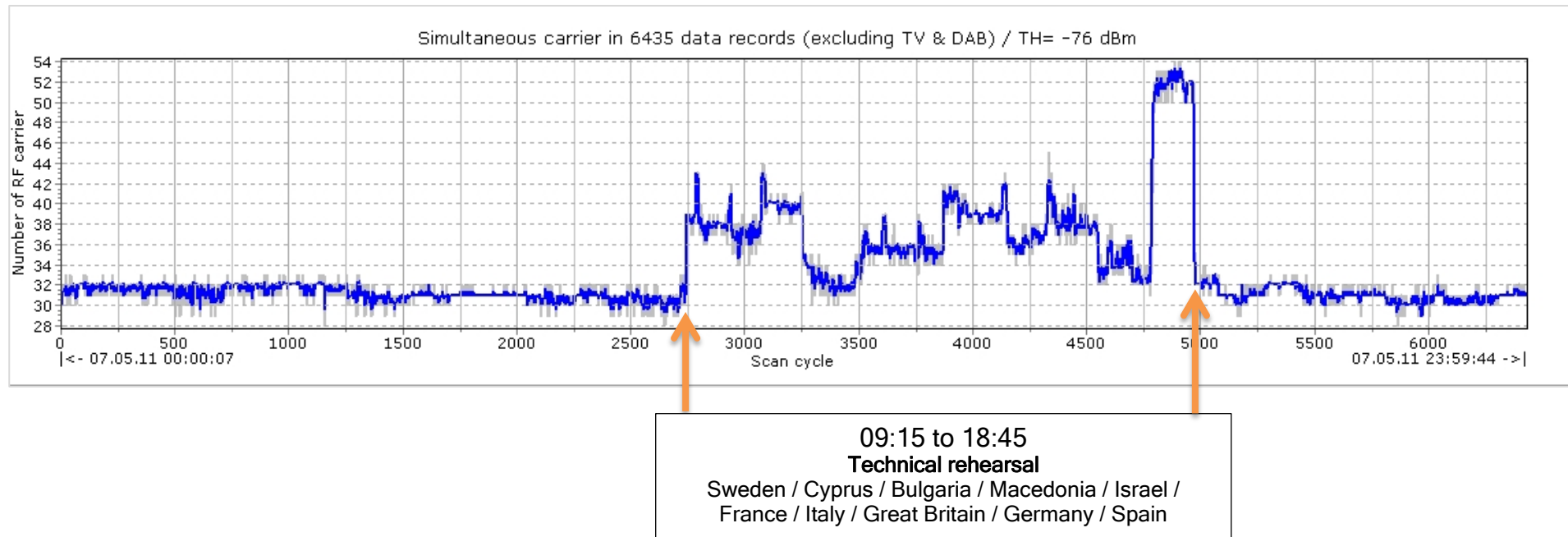


Illustration of simultaneously recorded signals:

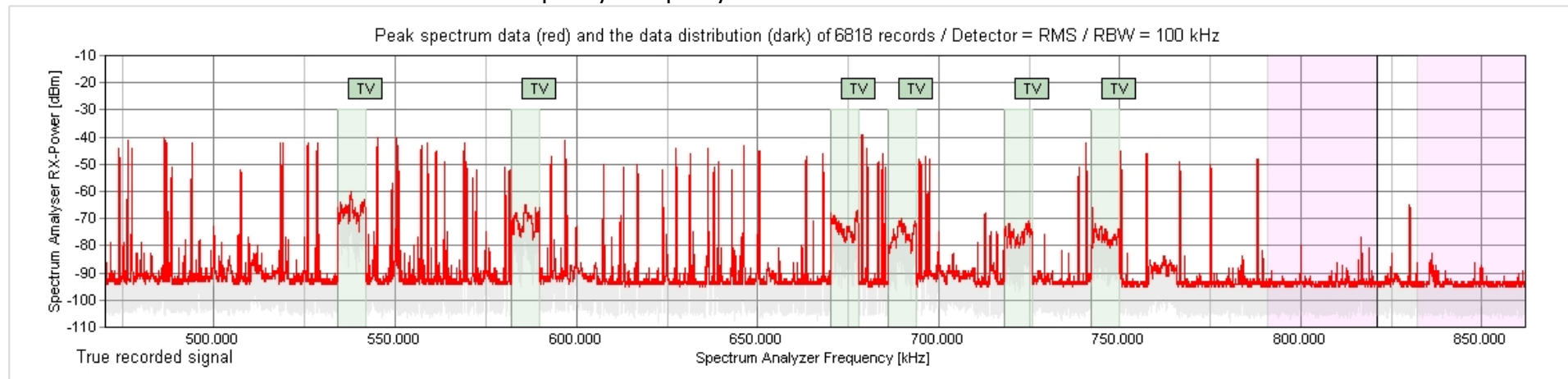


Tabular summary of the spectrum occupancy in the 470-862 MHz range:

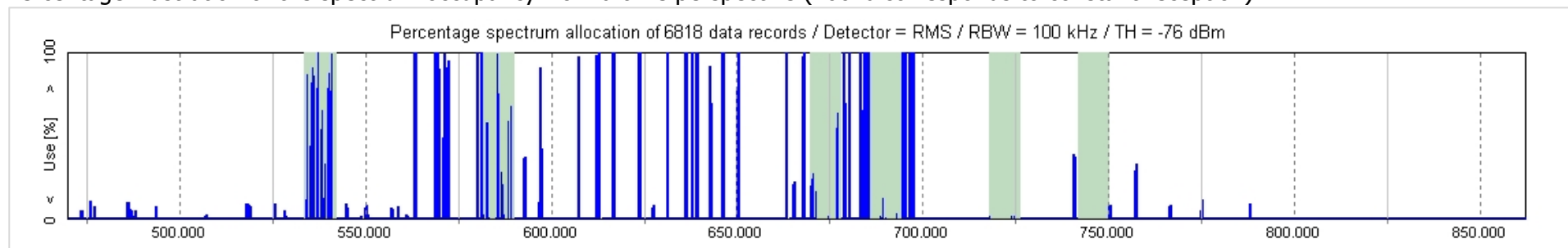
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	94	Bandwidth < 500 kHz	17
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	19
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	41
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	19
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	5

**Evaluation of the 8<sup>th</sup> day of the DKE spectrum recording: 08.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

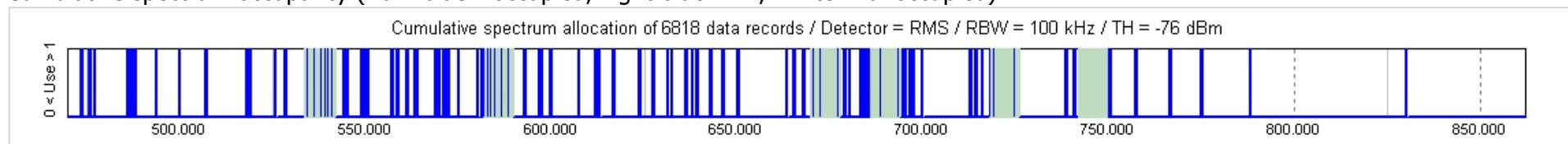
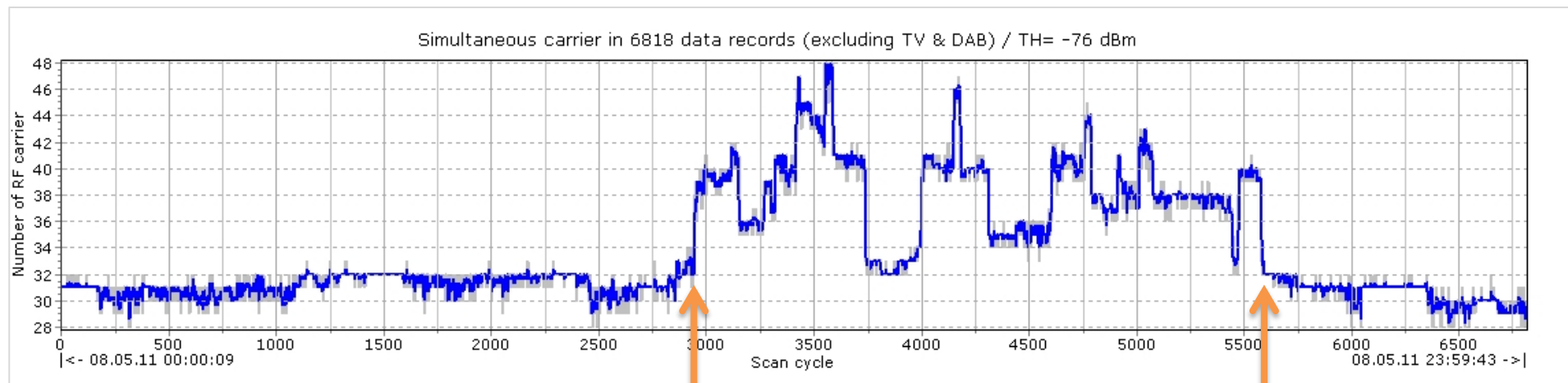


Illustration of simultaneously recorded signals:



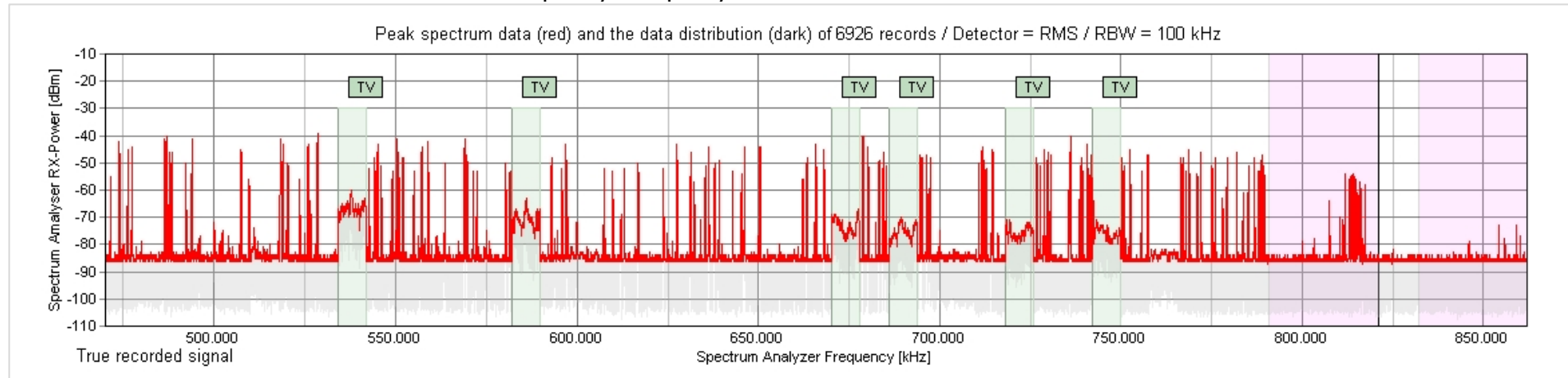
10:20 to 19:40  
 2<sup>nd</sup> Semi-final  
 Technical rehearsal  
 e.g. Slovenia / Romania / Estonia / Belarus /  
 Latvia / Denmark / Ireland

Tabular summary of the spectrum occupancy in the 470-862 MHz range:

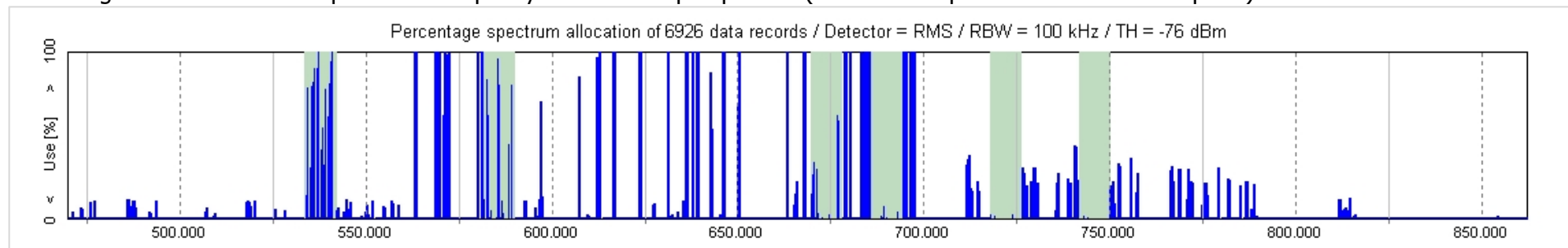
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	64	Bandwidth < 500 kHz	7
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	8
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	35
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	14
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	7

**Evaluation of the 9<sup>th</sup> day of the DKE spectrum recording: 09.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

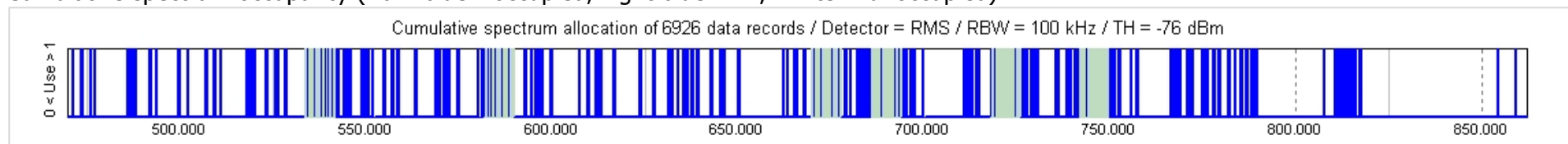
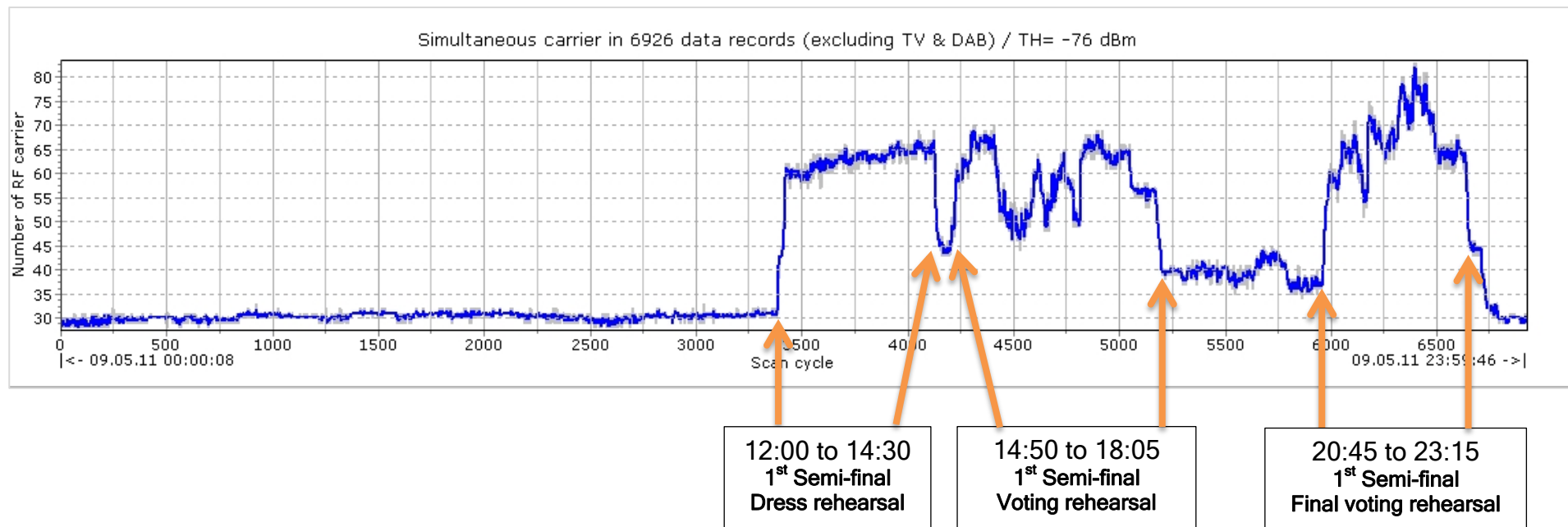




Illustration of simultaneously recorded signals:

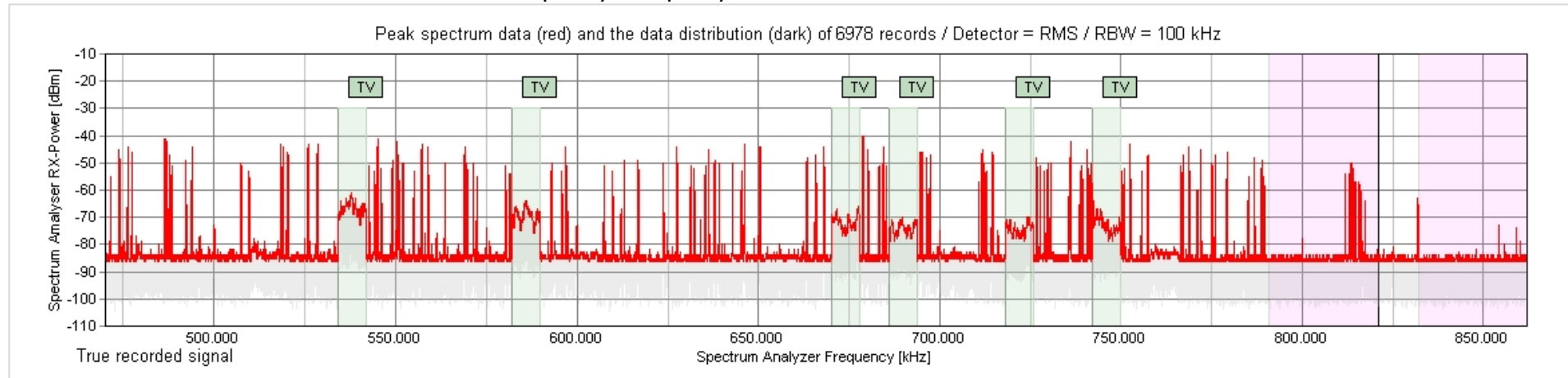


Tabular summary of the spectrum occupancy in the 470-862 MHz range:

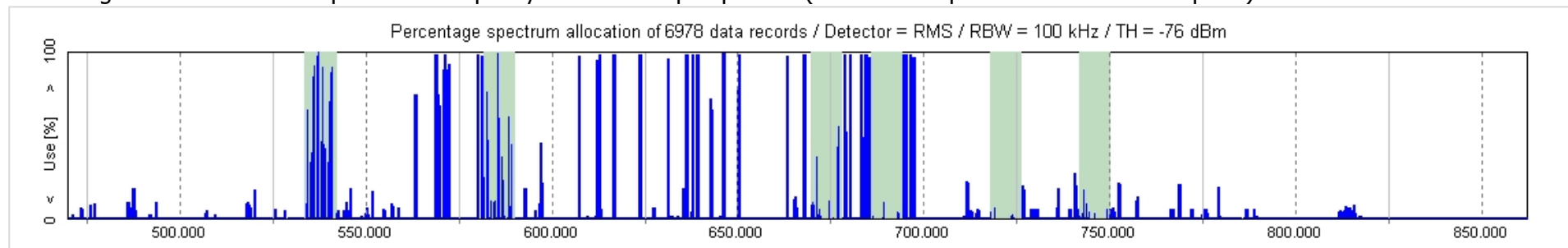
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	126	Bandwidth < 500 kHz	25
Bandwidth 200 to 500 kHz	3	Bandwidth 500 to 1000 kHz	35
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	60
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	12
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	4

**Evaluation of the 10<sup>th</sup> day of the DKE spectrum recording: 10.5.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

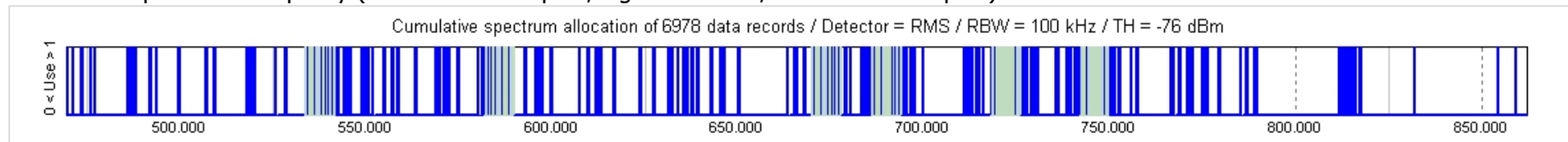
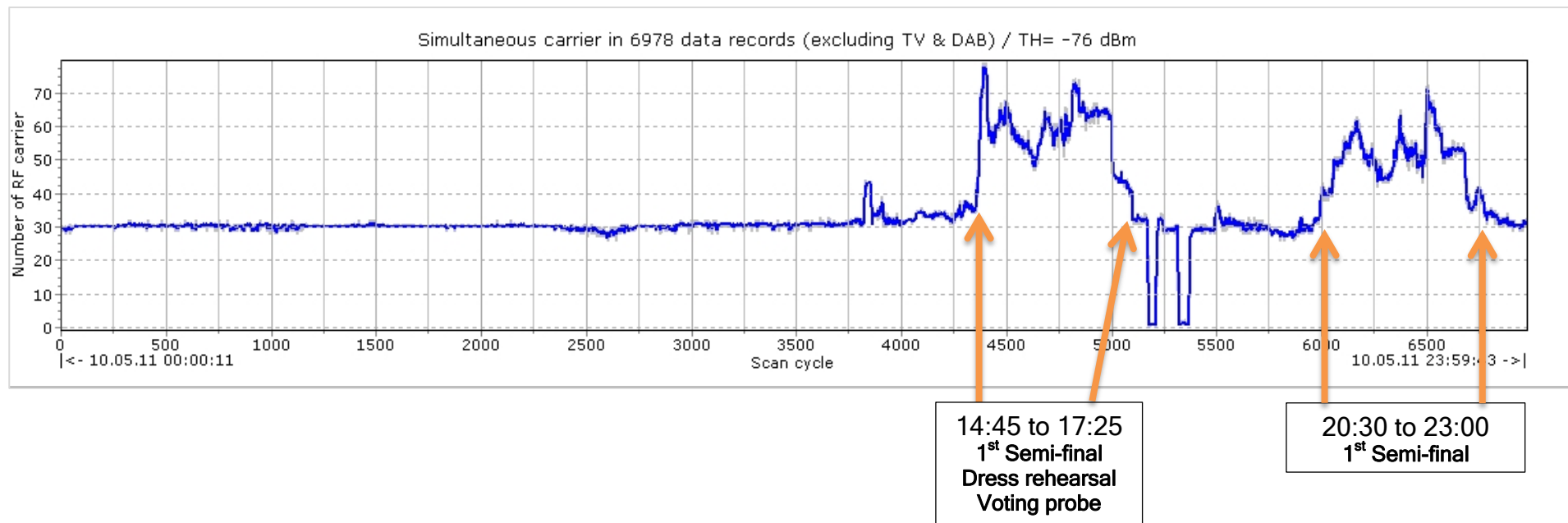


Illustration of simultaneously recorded signals:



Tabular summary of the spectrum occupancy in the 470-862 MHz range:

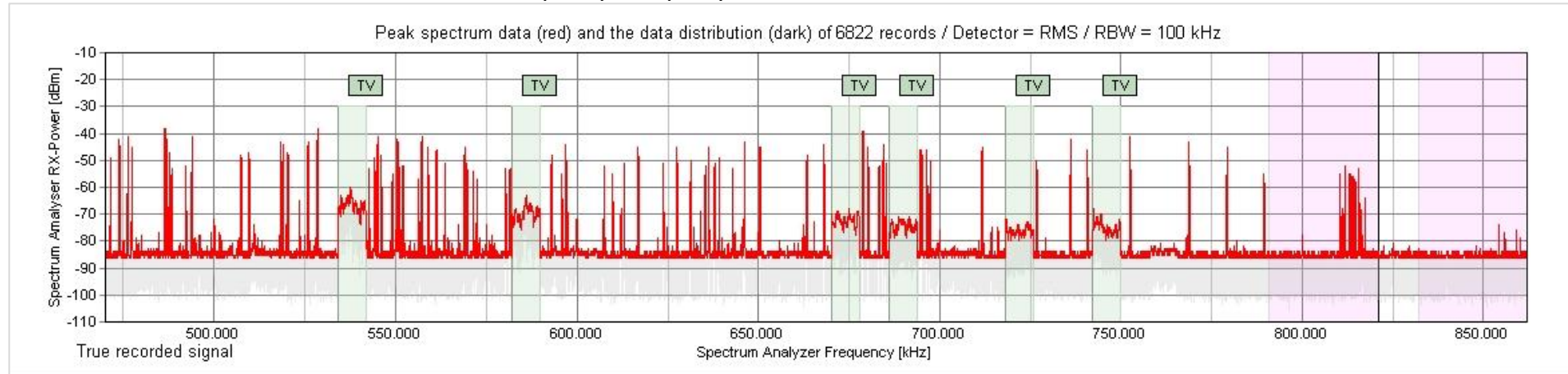
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	120	Bandwidth < 500 kHz	22
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	31
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	55
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	14
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	5

Note:

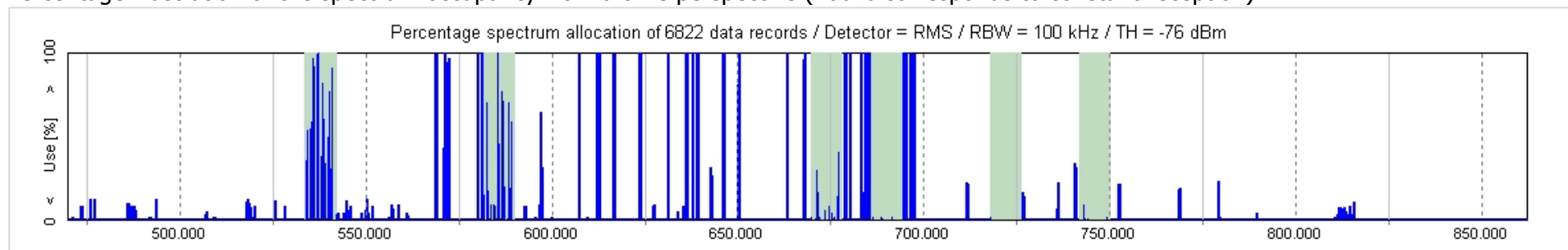
Between 17:41 and 18:20 the stage installation was switched off completely twice. This was fortunate from our point of view. In combination with the observed number of IEM lines, it was possible to check the evaluation algorithm for the automatic signal recognition.

**Evaluation of the 11<sup>th</sup> day of the DKE spectrum recording: 11.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

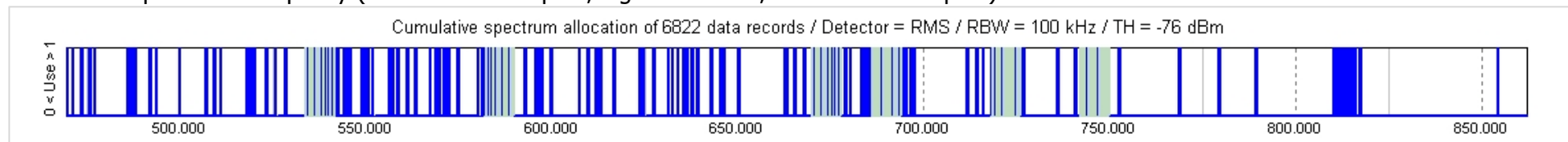
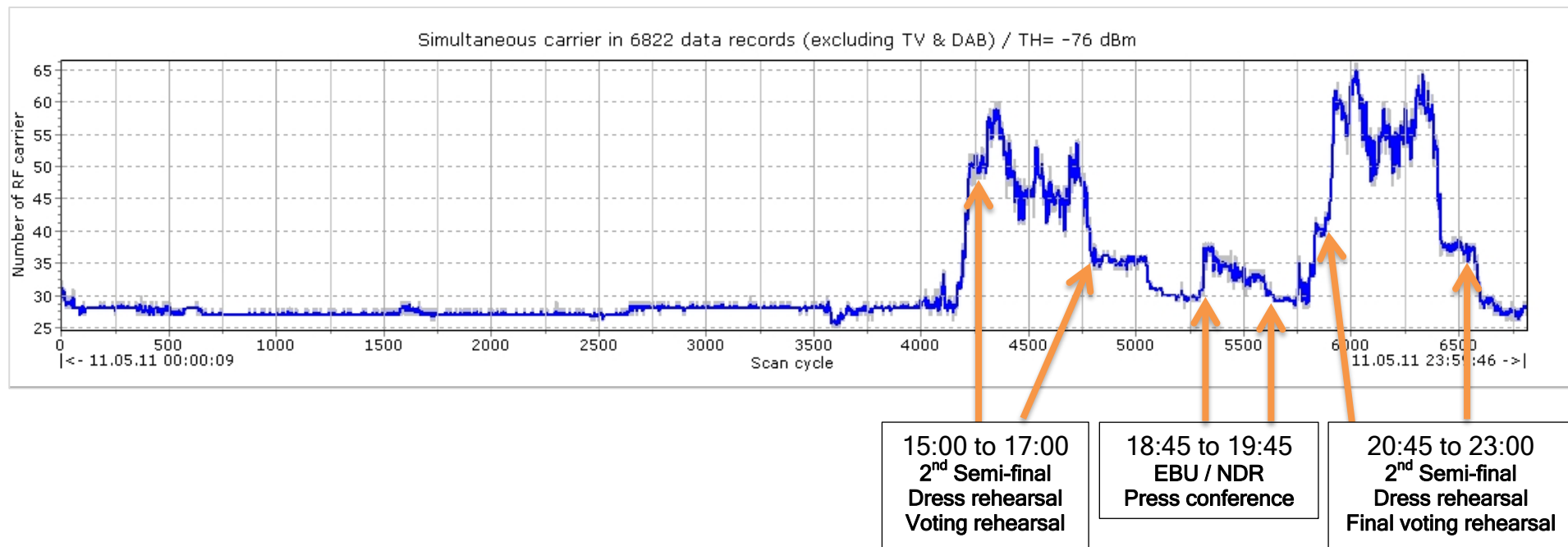


Illustration of simultaneously recorded signals:



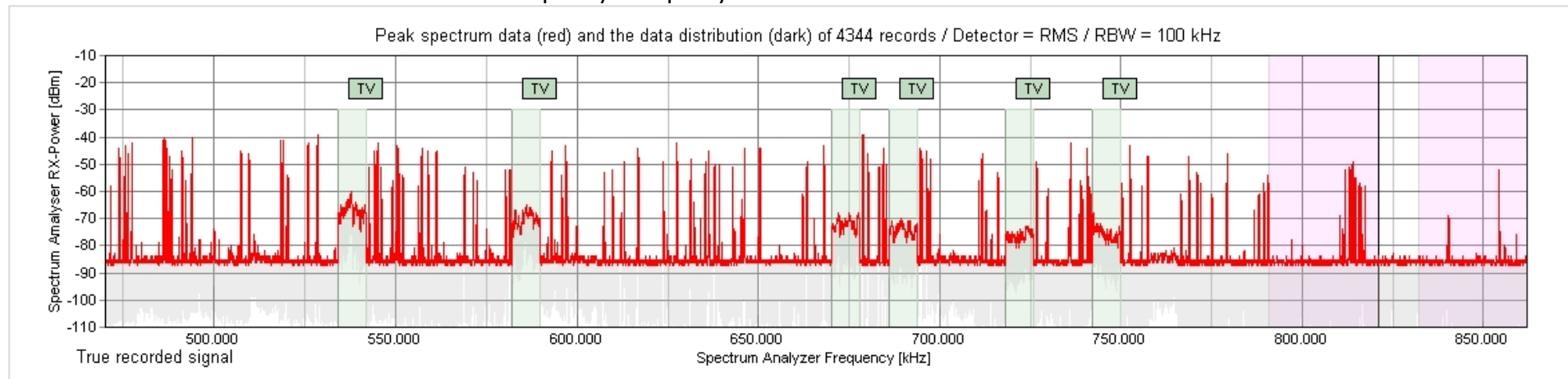
Tabular summary of the spectrum occupancy in the 470-862 MHz range:

Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	90	Bandwidth < 500 kHz	12
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	20
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	45
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	13
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	7

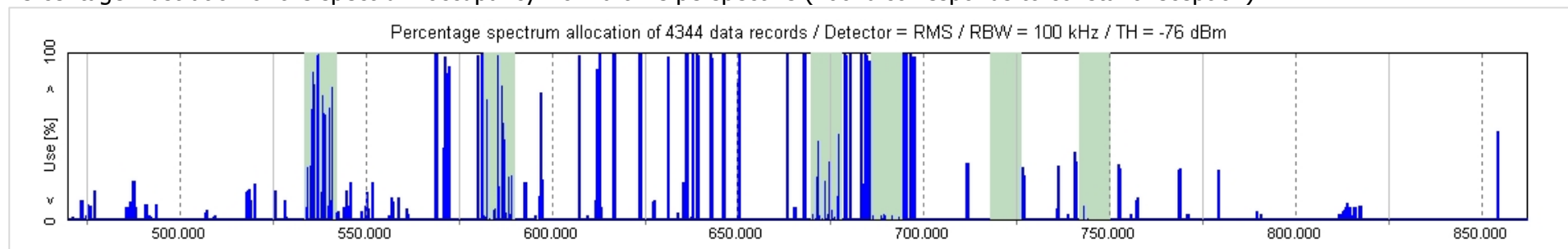


**Evaluation of the 12<sup>th</sup> day of the DKE spectrum recording: 12.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

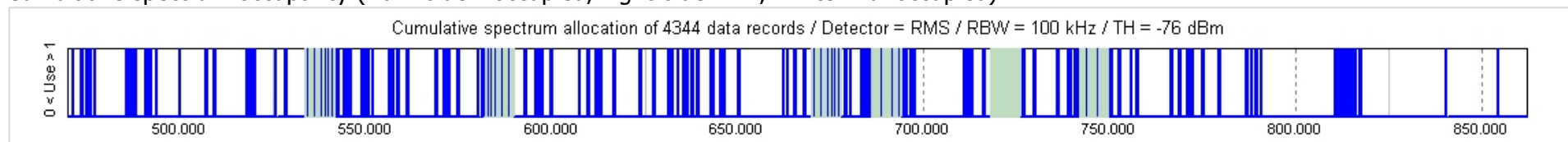
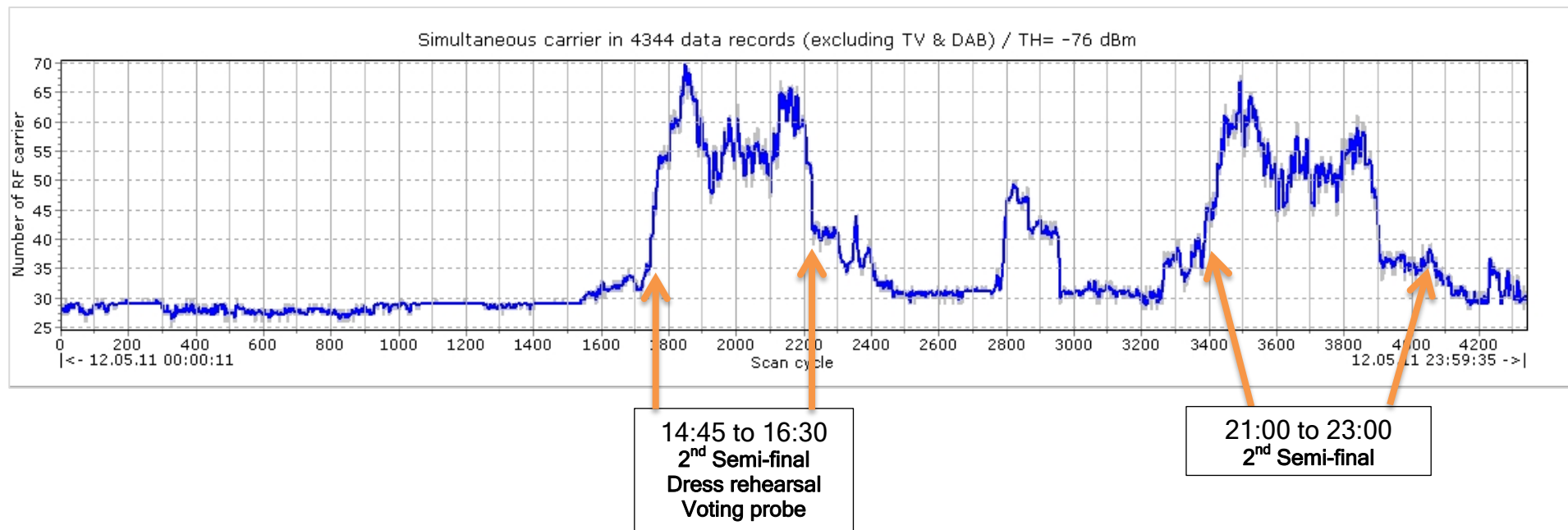


Illustration of simultaneously recorded signals:



Tabular summary of the spectrum occupancy in the 470-862 MHz range:

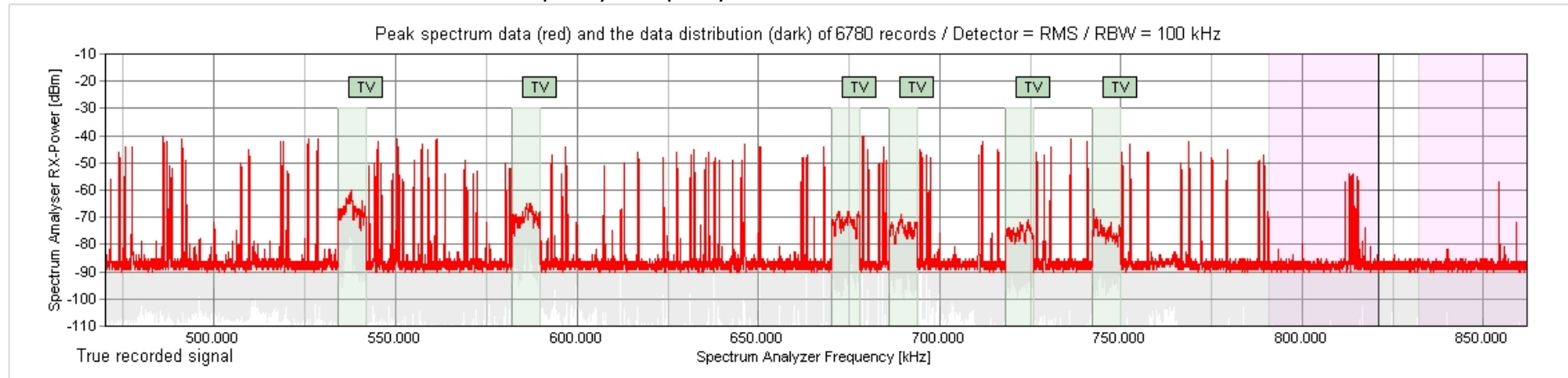
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	110	Bandwidth < 500 kHz	17
Bandwidth 200 to 500 kHz	1	Bandwidth 500 to 1000 kHz	24
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	57
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	15
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	5

Note:

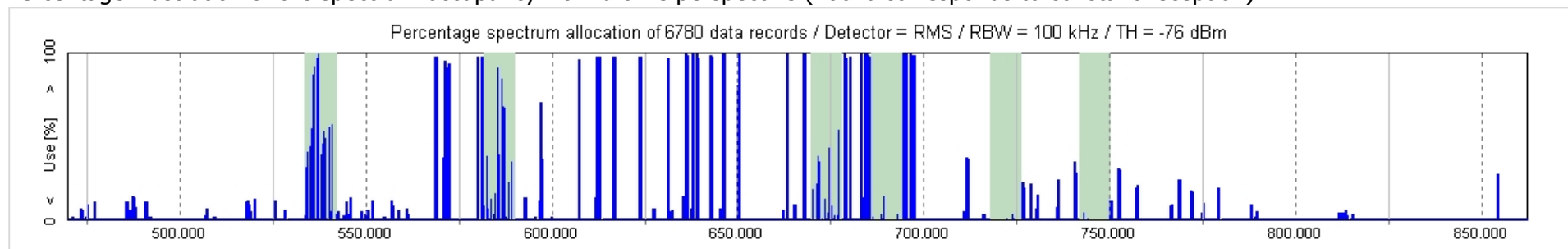
In the morning temporary failure in the spectrum recording.

**Evaluation of the 13<sup>th</sup> day of the DKE spectrum recording: 13.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

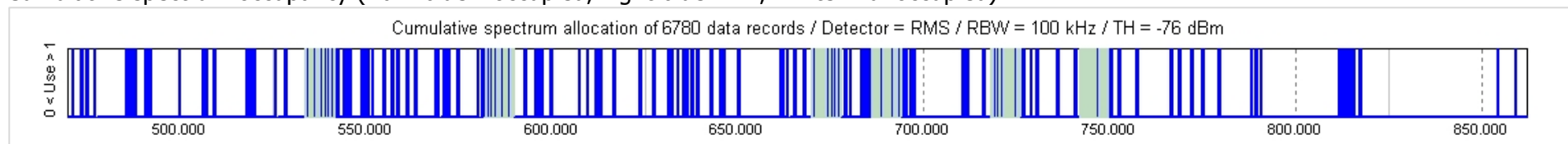
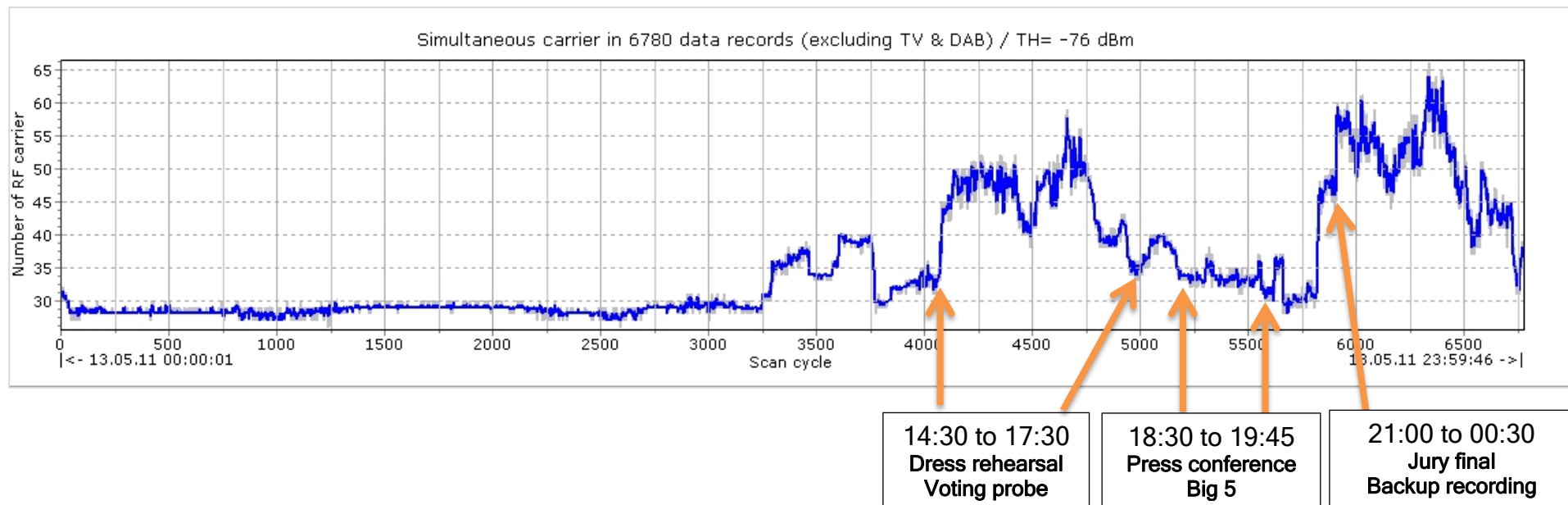


Illustration of simultaneously recorded signals:

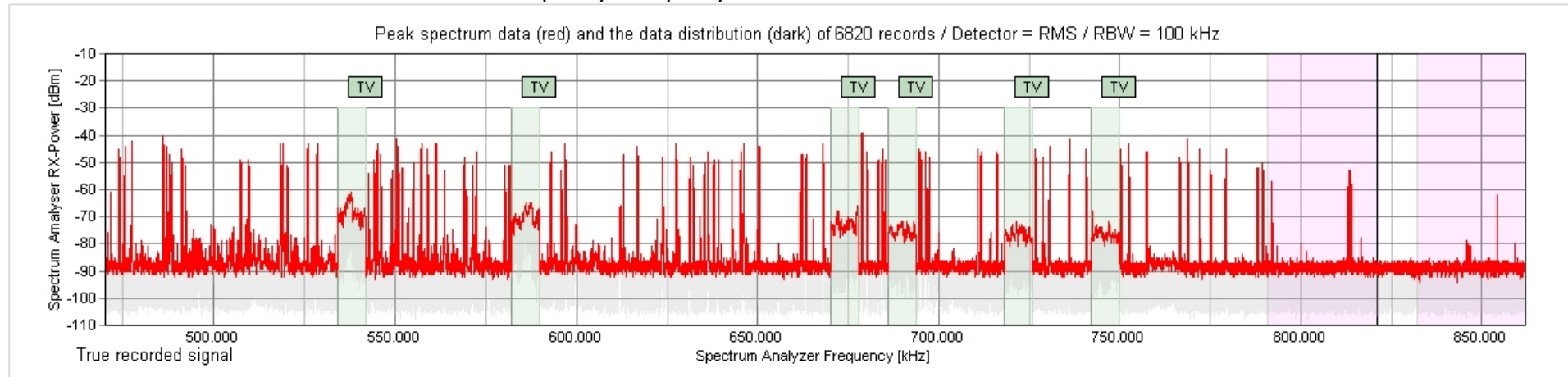


Tabular summary of the spectrum occupancy in the 470-862 MHz range:

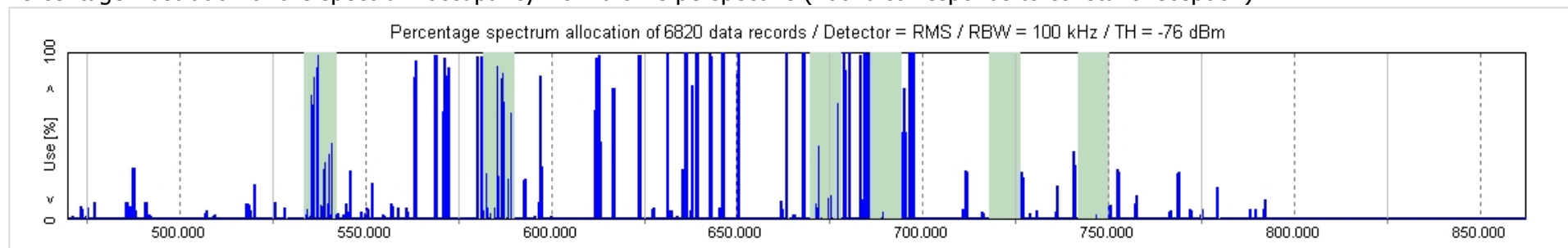
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	100	Bandwidth < 500 kHz	12
Bandwidth 200 to 500 kHz	2	Bandwidth 500 to 1000 kHz	23
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	57
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	13
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	4

**Evaluation of the 14<sup>th</sup> day of the DKE spectrum recording: 14.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

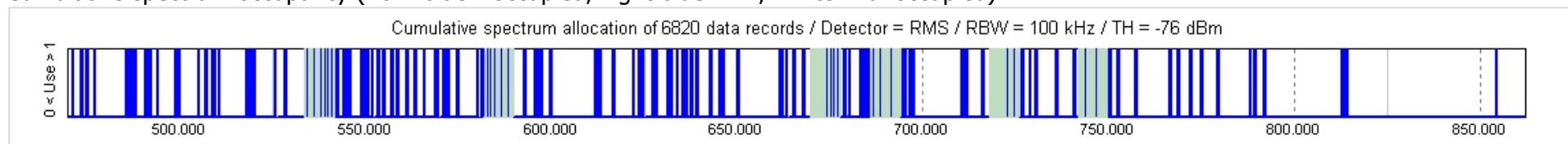
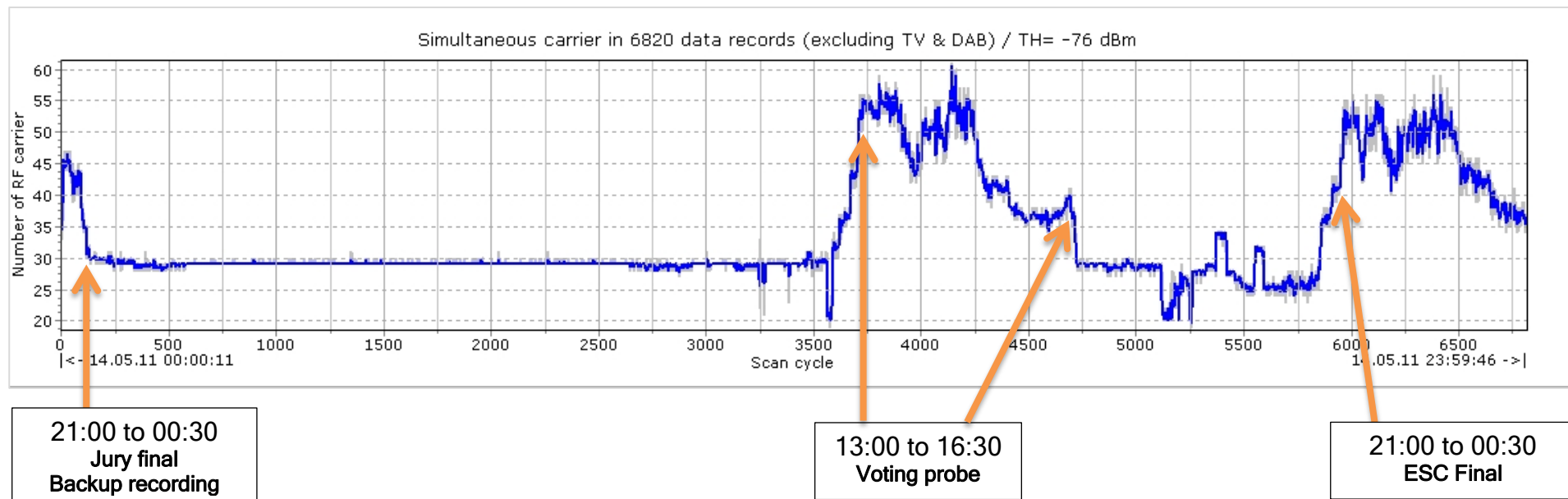




Illustration of simultaneously recorded signals:

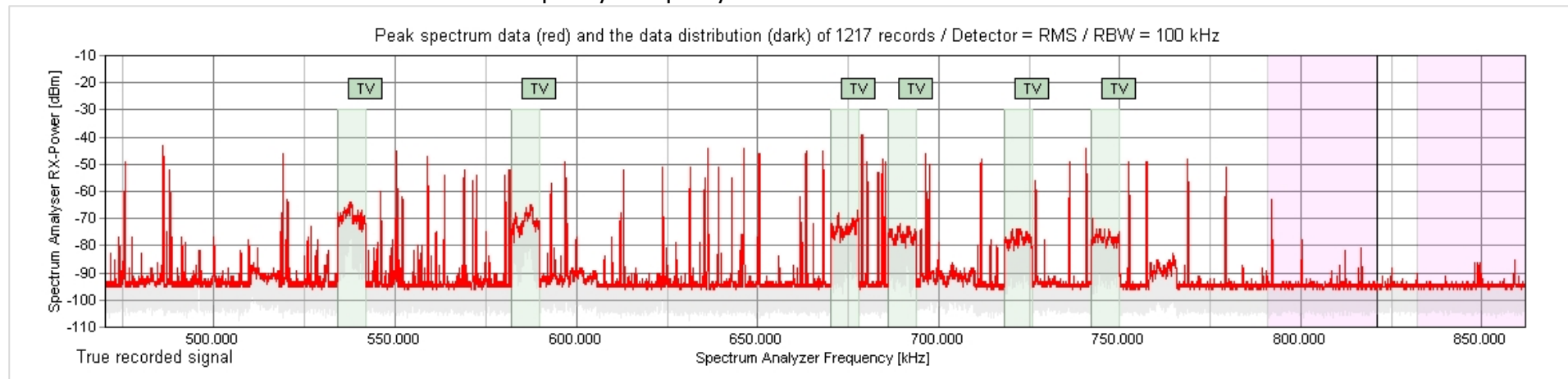


Tabular summary of the spectrum occupancy in the 470-862 MHz range:

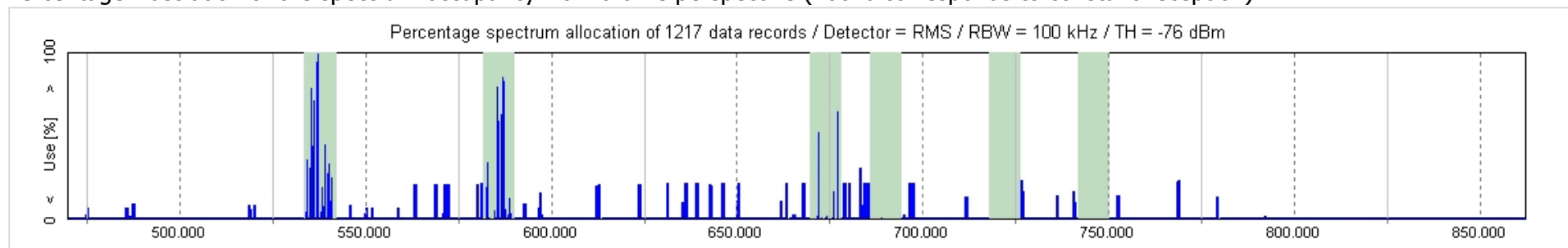
Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	102	Bandwidth < 500 kHz	13
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	21
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	57
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	13
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	5

**Evaluation of the 15<sup>th</sup> day of the DKE spectrum recording: 15.05.2011**

Maximum values of the recorded data for UHF frequency occupancy:



Percentage illustration of the spectrum occupancy from a time perspective (100% corresponds to constant reception):



Cumulative spectrum occupancy (Dark blue= occupied, Light blue =TV, White = unoccupied):

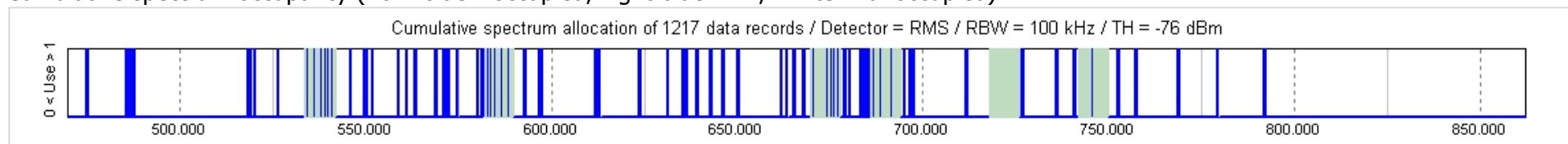
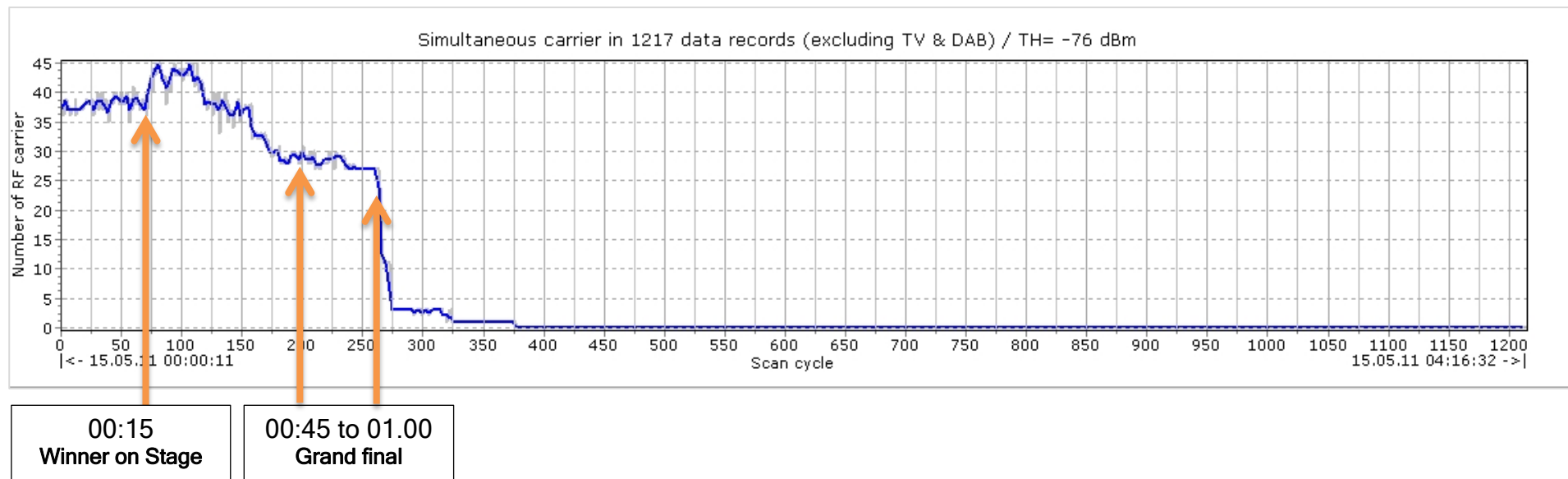


Illustration of simultaneously recorded signals:



Tabular summary of the spectrum occupancy in the 470-862 MHz range:

Recorded number of carrier		Spectrum blocks below threshold	
Bandwidth < 200 kHz	51	Bandwidth < 500 kHz	4
Bandwidth 200 to 500 kHz	0	Bandwidth 500 to 1000 kHz	8
Bandwidth 500 to 1000 kHz	0	Bandwidth 1000 to 5000 kHz	28
Bandwidth 1000 to 5000 kHz	0	Bandwidth 5000 to 10000 kHz	9
Bandwidth 5000 to 10000 kHz (e.g. TV)	6	Bandwidth > 10000 kHz	9

## The Eurovision Song Contest can take place anywhere

London 1960 1963 1968 1977 / Edinburgh 1972 / Brighton 1974 / Harrogate 1982 / Birmingham 1998 / Dublin 1971 1981 1988 1994 1995 1997 / Millstreet 1993 / Hilversum 1958 / Amsterdam 1970 / The Hague 1976 1980 / Luxembourg City 1962 1966 1973 1984 / Stockholm 1975 2000 / Gothenburg 1985 / Malmö 1992 / Cannes 1959 1961 / Paris 1978 / Bergen 1986 / Oslo 1996 / Bærum 2010 / Frankfurt am Main 1957 / Munich 1983 / Düsseldorf 2011 / Lugano 1956 / Lausanne 1989 / Naples 1965 / Rome 1991 / Jerusalem 1979 1999 / Copenhagen 1964 2001 / Vienna 1967 / Madrid 1969 / Brussels 1987 / Zagreb 1990 / Tallinn 2002 / Riga 2003 / Istanbul 2004 / Kiev 2005 / Athens 2006 / Helsinki 2007 / Belgrade 2008 / Moscow 2009 / Baku 2012