

Kapitel A

Appendix: Vandstand

Tabel A.1: Kvalitetskontrol af vandstandsdata: Gennemsnit (gns.) og standardafvigelse (std.). En streg betyder, at tjekket ikke er gennemført, da vi ikke har fundet det nødvendigt.

	Observationer			Min/max-filter			Dummy nul			Konstant værdi			Store spring		
	antal	gns.	std.	antal	gns.	std.	antal	gns.	std.	antal	gns.	std.	antal	gns.	std.
Århus	61062	1.2	21.9	0	-	-	0	-	-	0	1.2	21.9	0	1.2	21.9
Ballen	47322	8.6	20.2	0	-	-	0	-	-	0	8.6	20.2	0	8.6	20.2
Drogden	65073	8.5	19.4	0	-	-	0	-	-	0	8.5	19.4	0	8.5	19.4
Esbjerg	60632	8.1	66.2	0	-	-	0	-	-	27	8.2	66.0	0	8.2	66.0
Gdansk	8701	9.7	34.9	29	11.4	18.7	0	-	-	0	11.4	18.7	0	11.4	18.7
Gedser	46654	15.3	23.6	0	-	-	0	-	-	0	15.3	23.6	2	15.3	23.6
Gøteborg	55377	1.3	22.6	4	1.4	20.2	1060	1.4	20.4	0	1.4	20.4	0	1.4	20.4
Grenå	48745	3.8	24.9	0	-	-	0	-	-	0	3.8	24.9	19	3.9	24.8
Hanstholm	54929	-2.3	30.2	48	-2.1	29.0	0	-	-	0	-2.1	29.0	3	-2.1	29.0
Helsinki	35565	3.8	34.3	24	4.5	22.3	2	4.5	22.3	0	4.5	22.3	0	4.5	22.3
Hesnæs	47123	13.8	22.8	0	-	-	0	-	-	0	13.8	22.8	11	13.8	22.7
Hornbæk	60734	3.1	21.7	0	-	-	0	-	-	0	3.1	21.7	0	3.1	21.7
Juelsminde	48631	4.2	23.2	3	4.2	23.1	0	-	-	0	4.2	23.1	0	4.2	23.1
Kalix	54498	0.7	27.4	0	-	-	1958	0.8	27.9	411	0.7	28.0	0	0.7	28.0
Kiel	28486	-0.5	22.0	0	-	-	0	-	-	0	-0.5	22.0	0	-0.5	22.0
Korsør	54948	11.2	21.4	56	11.2	19.0	0	-	-	16	11.1	19.0	0	11.1	19.0
Lowestoft	38602	10.3	59.4	4	10.3	58.9	0	-	-	0	10.3	58.9	42	10.4	58.7
Malmø	19858	19.5	17.9	0	-	-	0	-	-	0	19.5	17.9	0	19.5	17.9
Marviken	54916	-3.4	20.1	0	-	-	599	-3.5	20.5	162	-3.5	20.5	0	-3.5	20.5
Rauma	35848	5.0	31.6	24	5.6	20.2	0	-	-	0	5.6	20.2	0	5.6	20.2
Rødvig	42523	9.5	21.6	0	-	-	0	-	-	0	9.5	21.6	0	9.5	21.6
Rønne	52065	1.7	19.7	0	-	-	0	-	-	0	1.7	19.7	1	1.7	19.7
Sj. Odde	43452	7.2	19.0	0	-	-	0	-	-	0	7.2	19.0	0	7.2	19.0
Skagen	50941	-7.2	22.5	0	-	-	0	-	-	0	-7.2	22.5	0	-7.2	22.5
Skovshoved	20781	14.5	17.7	0	-	-	0	-	-	0	14.5	17.7	0	14.5	17.7
Spikarna	55344	-1.6	21.9	0	-	-	601	-1.6	22.0	0	-1.6	22.0	0	-1.6	22.0
Spodsbjerg	49638	-0.8	19.5	0	-	-	0	-	-	0	-0.8	19.5	2	-0.8	19.4
Vidå	60758	26.2	62.5	0	-	-	0	-	-	19	26.1	62.3	0	26.1	62.3
Wick	35876	24.9	83.8	13	24.7	83.2	0	-	-	0	24.7	83.2	9	24.8	83.1

Tabel A.2: Manglende vandstandsdata. Alle tal er givet i antal dage. Antal dage er beregnet for hele perioden hvor vi har data. U. hul > 2 d. betyder største periode uden huller på 2 dage eller mere.

Stationer	Største hul	Huller ialt	Huller i %	U. hul > 2 d.	Obs. længde
Århus	2.8	11.8	0.5	2337.3	2556.0
Ballen	38.8	239.7	10.8	768.0	2211.5
Drogden	34.0	82.0	2.9	1609.0	2793.3
Esbjerg	6.0	30.8	1.2	1191.7	2556.0
Gdansk	9.1	1116.5	75.6	889.9	1477.9
Gedser	8.0	277.7	12.5	438.3	2221.4
Gøteborg	44.2	132.2	5.5	926.5	2395.3
Grenå	38.8	351.0	14.7	506.4	2381.3
Hanstholm	14.0	108.7	4.5	1464.8	2395.3
Helsinki	30.1	81.8	5.2	844.5	1562.6
Hesnæs	38.8	243.3	11.0	671.0	2206.3
Hornbæk	6.0	25.5	1.0	1645.8	2556.0
Juelsminde	260.8	532.7	20.8	435.1	2557.0
Kalix	24.8	223.3	9.3	926.5	2395.3
Kiel	182.0	182.1	13.3	730.0	1369.0
Korsør	13.2	108.8	4.5	504.4	2395.3
Lowestoft	280.0	774.8	32.5	595.9	2381.3
Malmø	10.3	141.6	15.5	540.1	912.6
Marviken	34.9	190.6	8.0	863.0	2395.3
Rauma	19.0	49.0	3.2	844.5	1541.7
Rødvig	11.9	169.3	8.7	487.0	1940.6
Rønne	38.8	212.0	8.9	1004.4	2381.4
Sj. Odde	69.0	310.8	14.7	415.7	2120.4
Skagen	38.8	258.8	10.9	768.0	2381.4
Skovshoved	9.9	48.5	5.3	413.0	914.4
Spikarna	14.3	114.4	4.8	926.5	2395.4
Spodsbjerg	49.0	311.0	13.1	874.2	2379.2
Vidå	7.6	25.2	1.0	1980.4	2556.0
Wick	277.5	887.5	37.3	299.8	2381.4

Tabel A.3: Statistiske parametre for vandstandsdata: antal observationer (obs.), gennemsnit (gns.), median (med.) og standardafvigelse (std.). Dato er givet fo hvornår minimum (min.) og maximum (max.) har forekommet.

Station	obs.	gns.	med.	std.	min.	dato	max.	dato
Århus	61062	1.2	0	21.9	-98	17/02/97	133	04/12/99
Ballen	47322	8.6	8	20.2	-77	11/02/01, 22/02/02	105	05/02/99
Drogden	65073	8.5	8	19.4	-169	04/12/99	133	11/04/97
Esbjerg	60605	8.2	13	66.0	-250	17/12/97	347	03/12/99
Gdansk	8672	11.4	10	18.7	-54	24/01/01	105	21/01/00
Gedser	46652	15.3	15	23.6	-135	21/12/01	158	21/02/02
Gøteborg	54313	1.4	0	20.4	-65	03/11/02	124	29/01/00
Grenå	48726	3.9	2	24.8	-101	11/02/03	118	01/12/99
Hanstholm	54878	-2.1	-3	29.0	-122	03/11/02	138	30/10/00
Helsinki	35539	4.5	3	22.3	-76	12/04/98	126	15/11/01
Hesnæs	47112	13.8	13	22.7	-146	15/11/01	150	02/01/02
Hornbæk	60734	3.1	2	21.7	-107	24/12/02	141	30/01/00
Juelsminde	48628	4.2	3	23.1	-101	04/12/99, 22/02/02	117	30/01/00
Kalix	52129	0.7	-1	28.0	-129	31/01/98	144	23/02/02
Kiel	28486	-0.5	0	22.0	-185	04/12/99	115	31/01/98
Korsør	54876	11.1	11	19.0	-66	22/02/02	118	06/12/03
Lowestoft	38556	10.4	16	58.7	-179	11/02/01	212	15/12/03
Malmø	19858	19.5	18	17.9	-46	23/12/99	110	30/01/00
Marviken	52914	-3.5	-4	20.5	-64	11/12/02	78	27/02/02
Rauma	35824	5.6	5	20.2	-64	31/01/98	99	18/12/99
Rødvig	42523	9.5	9	21.6	-144	15/11/01	137	02/01/02
Rønne	52064	1.7	0	19.7	-83	21/12/01	109	16/11/01
Sj. Odde	43452	7.2	6	19.0	-91	24/12/02	106	05/02/99
Skagen	50941	-7.2	-8	22.5	-87	03/11/02	117	29/01/00
Skovshoved	20781	14.5	13	17.7	-54	23/12/99	130	30/01/00
Spikarna	54743	-1.6	-3	22.0	-86	31/01/98	126	23/02/02
Spodsbjerg	49636	-0.8	-1	19.4	-101	17/12/99	185	06/12/03
Vidå	60739	26.1	24	62.3	-117	20/08/97	360	05/02/99
Wick	35854	24.8	24	83.1	-202	06/10/98	289	09/02/02

Tabel A.4: Hyppighedsfordeling af vandstandsdata givet i procent.

m	Århus	Ballen	Drogden	Esbjerg	Gdansk	Gedser	Gøteborg	Grenå
< -2.6								
-2.6 - -2.4								
-2.4 - -2.2								
-2.2 - -2.0								
-2.0 - -1.8				0.1				
-1.8 - -1.6				0.1				
-1.6 - -1.4				0.4				
-1.4 - -1.2				1.2				
-1.2 - -1.0				3.3				
-1.0 - -0.8	0.1		0.1	5.6		0.1		
-0.8 - -0.6	0.2	0.1	0.2	7.0		0.4		0.3
-0.6 - -0.4	1.9	0.6	0.8	7.5	0.1	1.3	0.8	2.5
-0.4 - -0.2	12.9	5.7	4.3	8.7	3.0	4.0	11.9	12.2
-0.2 - -0	34.7	26.9	25.2	9.3	24.3	15.8	36.4	29.5
0 - 0.2	31.5	38.5	43.9	9.9	41.2	35.9	34.4	30.9
0.2 - 0.4	14.3	21.9	19.9	10.7	24.0	29.9	11.9	16.5
0.4 - 0.6	3.6	4.9	4.8	12.4	6.4	9.7	3.6	5.9
0.6 - 0.8	0.9	1.1	0.7	11.0	1.0	2.2	0.8	1.5
0.8 - 1.0	0.1	0.2	0.1	6.4	0.1	0.5	0.1	0.4
1.0 - 1.2				3.2		0.2		0.1
1.2 - 1.4				1.6				
1.4 - 1.6				0.7				
1.6 - 1.8				0.4				
1.8 - 2.0				0.2				
2.0 - 2.2				0.1				
2.2 - 2.4				0.1				
2.4 - 2.6								
> 2.6								

Tabel A.5: Hyppighedsfordeling af vandstandsdata givet i procent.

m	Hanstholm	Helsinki	Hesnæs	Hornbæk	Juelsminde	Kalix	Kiel	Korsør
< -2.6								
-2.6 - -2.4								
-2.4 - -2.2								
-2.2 - -2.0								
-2.0 - -1.8								
-1.8 - -1.6								
-1.6 - -1.4								
-1.4 - -1.2								
-1.2 - -1.0	0.1						0.1	
-1.0 - -0.8	0.4		0.1		0.1	0.2	0.2	
-0.8 - -0.6	1.6	0.1	0.3	0.3	0.2	0.9	0.7	
-0.6 - -0.4	6.0	0.7	1.1	1.3	1.7	4.4	2.8	0.3
-0.4 - -0.2	18.0	12.1	3.8	9.3	11.6	15.4	9.5	4.2
-0.2 - -0	27.7	30.6	17.8	34.0	29.7	30.2	35.5	21.9
0 - 0.2	24.5	32.6	39.0	36.3	31.9	26.0	37.1	41.3
0.2 - 0.4	13.8	17.0	26.7	13.4	18.5	14.4	10.6	26.1
0.4 - 0.6	6.0	5.6	8.4	3.7	4.8	5.8	2.8	5.2
0.6 - 0.8	1.6	1.0	2.1	1.2	1.1	1.7	0.4	0.9
0.8 - 1.0	0.3	0.2	0.4	0.3	0.2	0.6	0.1	0.1
1.0 - 1.2	0.1		0.1	0.1		0.2	0.1	
1.2 - 1.4								
1.4 - 1.6								
1.6 - 1.8								
1.8 - 2.0								
2.0 - 2.2								
2.2 - 2.4								
2.4 - 2.6								
> 2.6								

Tabel A.6: Hyppighedsfordeling af vandstandsdata givet i procent.

m	Lowestoft	Malmø	Marviken	Rauma	Rødvig	Rønne	Sj. Odde	Skagen
< -2.6								
-2.6 - -2.4								
-2.4 - -2.2								
-2.2 - -2.0								
-2.0 - -1.8								
-1.8 - -1.6								
-1.6 - -1.4	0.1							
-1.4 - -1.2	0.6							
-1.2 - -1.0	1.9				0.1			
-1.0 - -0.8	4.5				0.1			
-0.8 - -0.6	7.0				0.3	0.1	0.1	0.4
-0.6 - -0.4	8.6		2.8	0.1	1.0	1.4	0.6	5.7
-0.4 - -0.2	9.0	0.6	18.0	9.4	4.6	8.7	5.0	22.3
-0.2 - -0	9.7	10.1	35.4	31.1	24.1	37.7	27.0	35.2
0 - 0.2	10.5	44.0	30.8	35.4	41.5	35.5	44.8	25.0
0.2 - 0.4	11.8	32.5	10.6	18.4	20.7	12.4	17.3	8.7
0.4 - 0.6	13.2	10.4	2.4	5.0	6.1	3.6	3.9	2.2
0.6 - 0.8	11.5	2.0	0.1	0.6	1.3	0.5	0.9	0.5
0.8 - 1.0	7.0	0.4			0.2	0.1	0.2	0.1
1.0 - 1.2	2.9	0.1			0.1			
1.2 - 1.4	1.1							
1.4 - 1.6	0.3							
1.6 - 1.8	0.1							
1.8 - 2.0								
2.0 - 2.2								
2.2 - 2.4								
2.4 - 2.6								
> 2.6								

Tabel A.7: Hyppighedsfordeling af vandstandsdata givet i procent.

m	Skovshoved	Spikarna	Spodsbjerg	Vidå	Wick
< -2.6					
-2.6 - -2.4					
-2.4 - -2.2					
-2.2 - -2.0					
-2.0 - -1.8					
-1.8 - -1.6					0.3
-1.6 - -1.4					0.8
-1.4 - -1.2					1.8
-1.2 - -1.0				0.1	3.3
-1.0 - -0.8				1.0	4.9
-0.8 - -0.6		0.1	0.3	5.2	6.6
-0.6 - -0.4	0.1	2.7	1.6	10.5	7.8
-0.4 - -0.2	1.2	16.4	10.9	12.0	7.9
-0.2 - -0	16.7	34.8	39.5	10.2	7.7
0 - 0.2	48.4	30.8	36.0	9.0	7.2
0.2 - 0.4	25.8	10.9	8.8	9.3	7.0
0.4 - 0.6	6.0	3.6	2.1	9.9	7.0
0.6 - 0.8	1.4	0.6	0.6	10.6	7.5
0.8 - 1.0	0.3	0.1	0.1	9.7	7.9
1.0 - 1.2	0.1		0.1	6.2	7.3
1.2 - 1.4				3.2	6.1
1.4 - 1.6				1.5	4.4
1.6 - 1.8				0.7	2.7
1.8 - 2.0				0.4	1.2
2.0 - 2.2				0.2	0.4
2.2 - 2.4				0.1	0.1
2.4 - 2.6				0.1	
> 2.6				0.1	

Tabel A.8: Hyppighedsfordeling af residualet givet i procent.

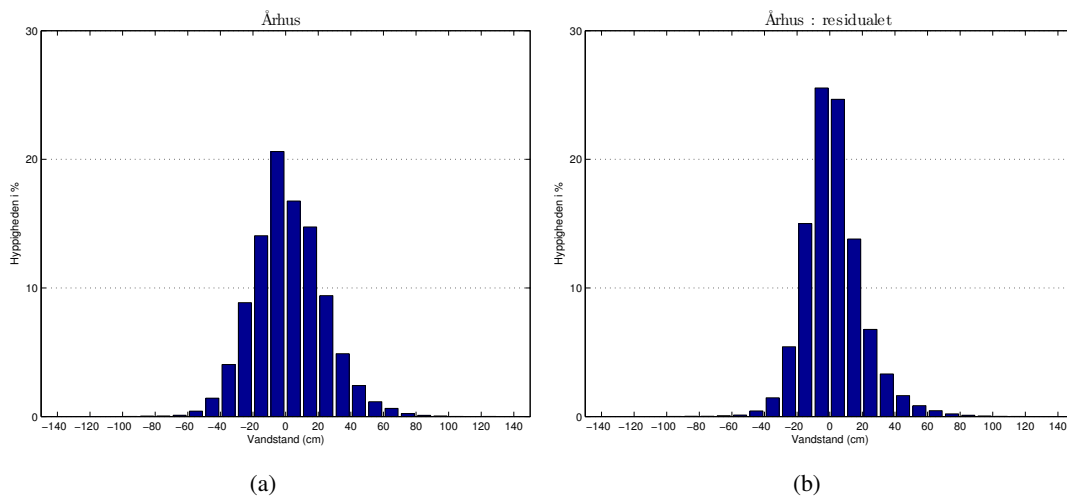
m	Århus	Ballen	Drogden	Esbjerg	Gedser	Gøteborg	Grenå	Hanstholm
< -2.6								
-2.6 - -2.4								
-2.4 - -2.2								
-2.2 - -2.0								
-2.0 - -1.8								
-1.8 - -1.6								
-1.6 - -1.4				0.1				
-1.4 - -1.2				0.1				
-1.2 - -1.0				0.4				0.1
-1.0 - -0.8			0.1	0.7	0.1			0.6
-0.8 - -0.6	0.1	0.1	0.2	1.5	0.5		0.2	1.6
-0.6 - -0.4	0.5	0.6	1.0	4.6	1.4	0.5	1.8	7.1
-0.4 - -0.2	6.9	5.6	5.3	14.3	5.1	11.4	11.6	22.1
-0.2 - 0	40.4	33.0	30.7	27.0	19.4	35.6	30.8	29.8
0 - 0.2	38.3	37.6	40.7	24.3	33.5	32.4	26.1	19.7
0.2 - 0.4	10.0	9.5	15.1	13.0	20.3	10.6	10.2	10.1
0.4 - 0.6	2.5	2.1	3.5	6.6	5.5	3.1	3.3	3.4
0.6 - 0.8	0.7	0.5	0.4	3.2	1.2	0.7	0.8	0.9
0.8 - 1.0	0.1	0.1	0.1	1.4	0.3	0.1	0.3	0.1
1.0 - 1.2				0.7	0.1		0.1	
1.2 - 1.4				0.4				
1.4 - 1.6				0.2				
1.6 - 1.8				0.1				
1.8 - 2.0				0.1				
2.0 - 2.2								
2.2 - 2.4								
2.4 - 2.6								
> 2.6								

Tabel A.9: Hyppighedsfordeling af residualt givet i procent.

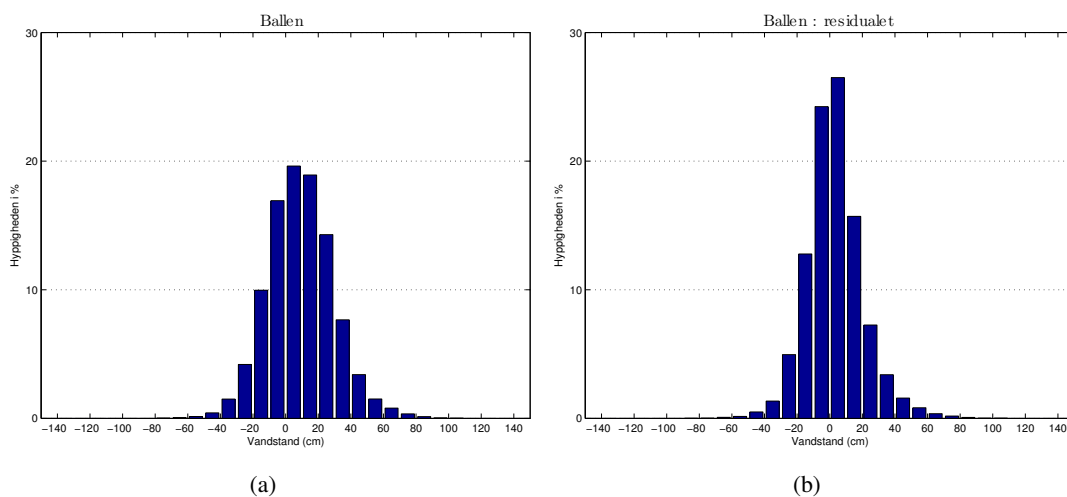
m	Hesnæs	Hornbæk	Juelsminde	Kiel	Korsør	Lowestoft	Malmø	Rødvig
< -2.6								
-2.6 - -2.4								
-2.4 - -2.2								
-2.2 - -2.0								
-2.0 - -1.8								
-1.8 - -1.6								
-1.6 - -1.4								
-1.4 - -1.2								
-1.2 - -1.0				0.1				
-1.0 - -0.8	0.1	0.1		0.2				0.1
-0.8 - -0.6	0.4	0.2	0.1	0.6		0.1		0.3
-0.6 - -0.4	1.2	1.1	0.7	2.4	0.3	0.5		1.2
-0.4 - -0.2	4.4	8.3	6.1	8.0	3.3	3.2	0.3	5.6
-0.2 - 0	21.0	36.1	27.1	32.9	24.6	17.7	7.8	27.6
0 - 0.2	35.4	36.3	30.8	31.7	46.9	25.8	40.2	35.8
0.2 - 0.4	18.9	12.2	10.6	8.1	16.7	13.0	26.6	15.1
0.4 - 0.6	5.8	3.3	2.7	2.2	2.9	4.8	7.7	4.4
0.6 - 0.8	1.3	1.0	0.8	0.2	0.6	1.6	1.5	0.9
0.8 - 1.0	0.3	0.3	0.2	0.1	0.1	0.5	0.3	0.2
1.0 - 1.2	0.1	0.1		0.1		0.2	0.1	
1.2 - 1.4						0.1		
1.4 - 1.6								
1.6 - 1.8								
1.8 - 2.0								
2.0 - 2.2								
2.2 - 2.4								
2.4 - 2.6								
> 2.6								

Tabel A.10: Hyppighedsfordeling af residualt givet i procent.

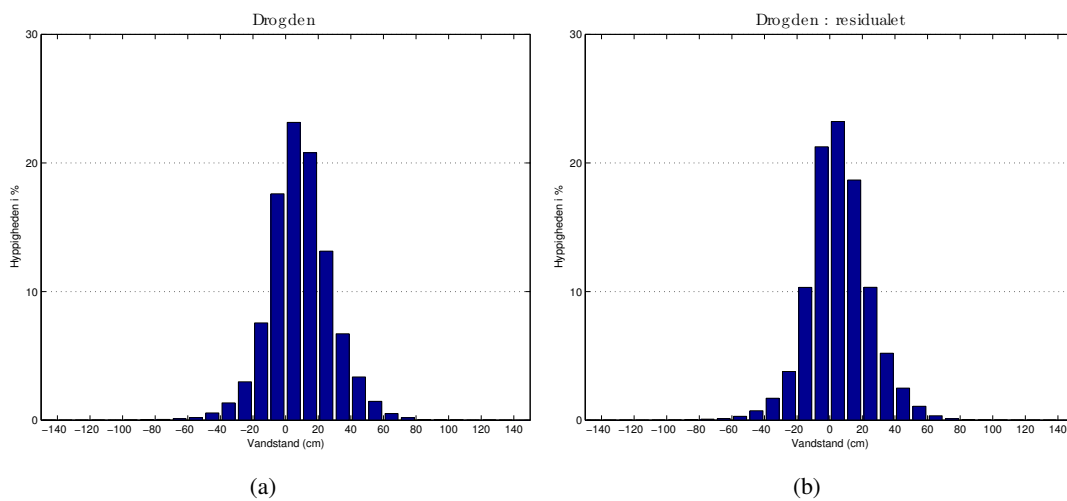
m	Sj. Odde	Skagen	Skovshoved	Spodsbjerg	Vidå	Wick
< -2.6						
-2.6 - -2.4						
-2.4 - -2.2						
-2.2 - -2.0						
-2.0 - -1.8						
-1.8 - -1.6						
-1.6 - -1.4						
-1.4 - -1.2					0.1	
-1.2 - -1.0					0.3	
-1.0 - -0.8					0.5	
-0.8 - -0.6	0.1			0.1	1.4	
-0.6 - -0.4	0.3	0.5		0.8	4.6	
-0.4 - -0.2	2.7	9.7	0.7	4.5	14.9	1.7
-0.2 - -0	17.4	33.6	15.2	27.5	28.5	10.5
0 - 0.2	42.9	30.2	49.1	39.8	25.7	14.5
0.2 - 0.4	17.0	11.2	23.0	10.8	12.6	18.5
0.4 - 0.6	3.9	3.0	5.1	2.4	5.2	12.0
0.6 - 0.8	0.9	0.7	1.1	0.6	2.5	4.4
0.8 - 1.0	0.2	0.1	0.3	0.2	1.2	0.9
1.0 - 1.2			0.1	0.1	0.6	0.1
1.2 - 1.4					0.3	
1.4 - 1.6					0.2	
1.6 - 1.8					0.1	
1.8 - 2.0						
2.0 - 2.2						
2.2 - 2.4						
2.4 - 2.6						
> 2.6						



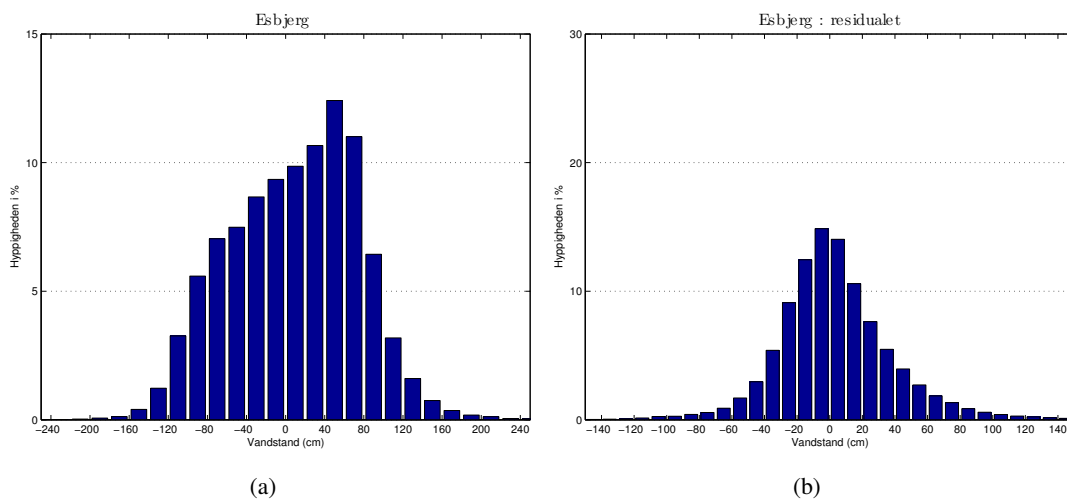
Figur A.1: Hyppighedsfordeling af vandstandsdata for station Århus . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



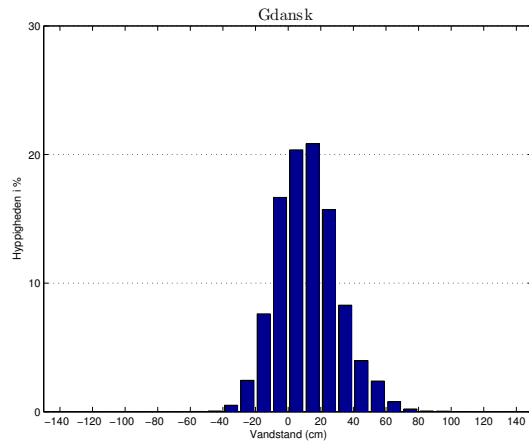
Figur A.2: Hyppighedsfordeling af vandstandsdata for station Ballen . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



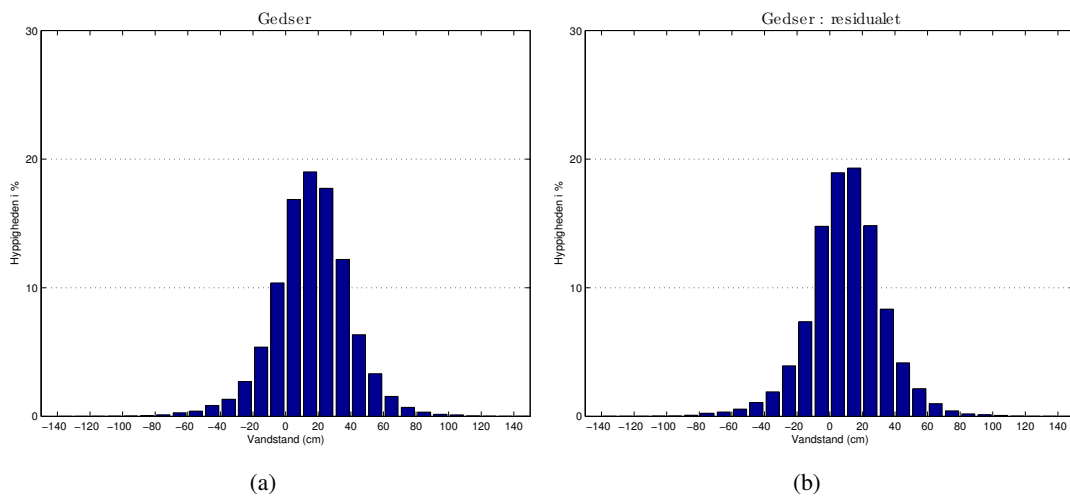
Figur A.3: Hyppighedsfordeling af vandstandsdata for station Drogden . a) Hele signalet. b) Residalet når tidevandsprediktionen er trukket fra. Interval 10 cm.



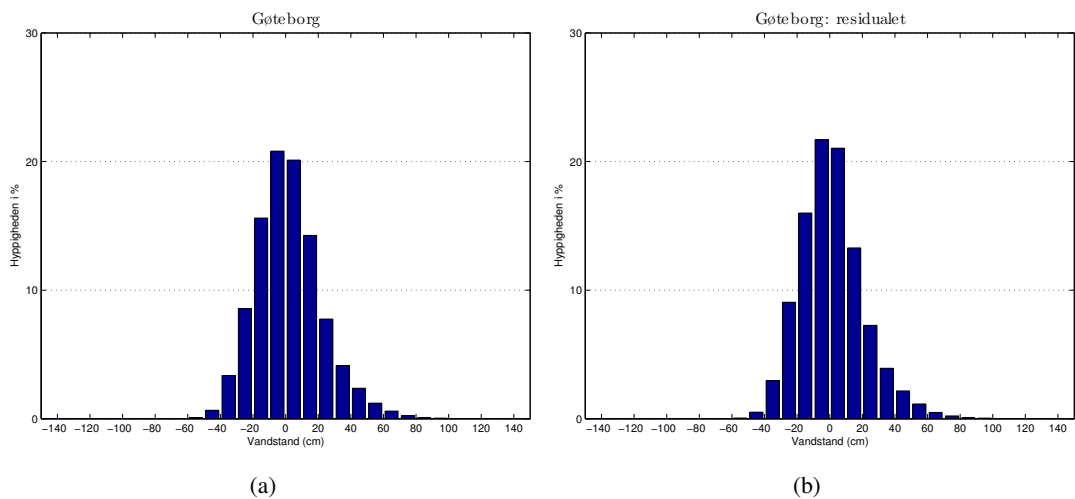
Figur A.4: Hyppighedsfordeling af vandstandsdata for station Esbjerg . a) Hele signalet. b) Residalet når tidevandsprediktionen er trukket fra. Akserne og intervallerne er ikke ens i de to figure. I a) er intervallet 20 cm og i b) er det 10 cm.



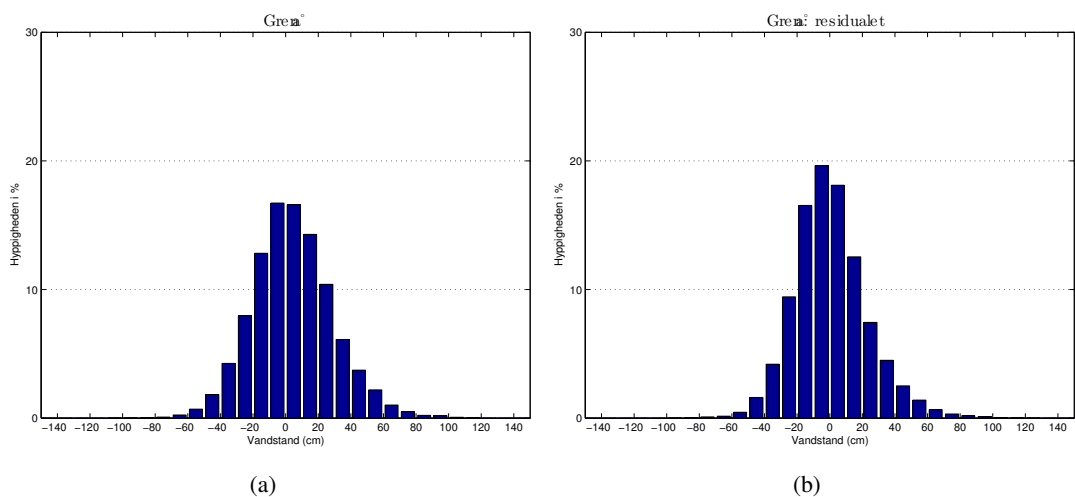
Figur A.5: Hyppighedsfordeling af vandstandsdata for station Gdansk . Hele signalet. Interval 10 cm. Der er ikke noget tidevand.



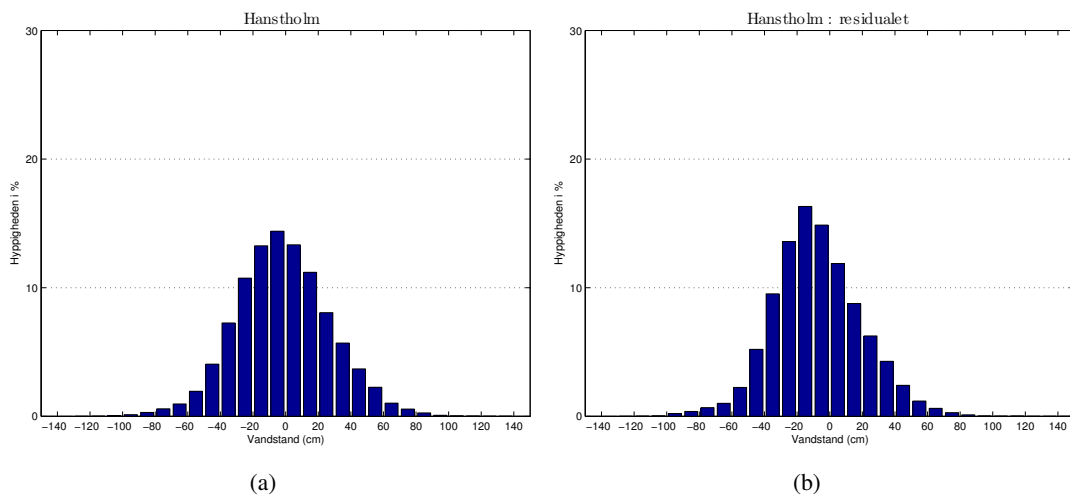
Figur A.6: Hyppighedsfordeling af vandstandsdata for station Gedser . a) Hele signalet. b) Residalet når tidevandsprediktionen er trukket fra. Interval 10 cm.



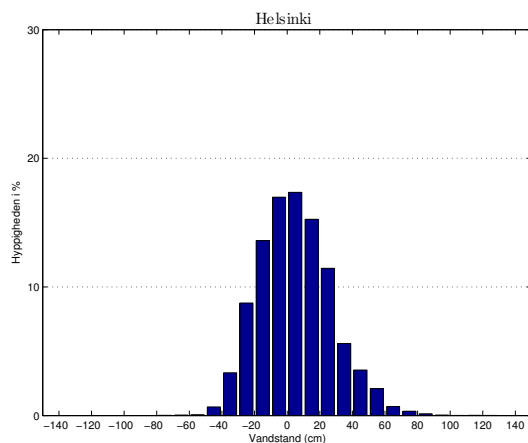
Figur A.7: Hyppighedsfordeling af vandstandsdata for station Gøteborg . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



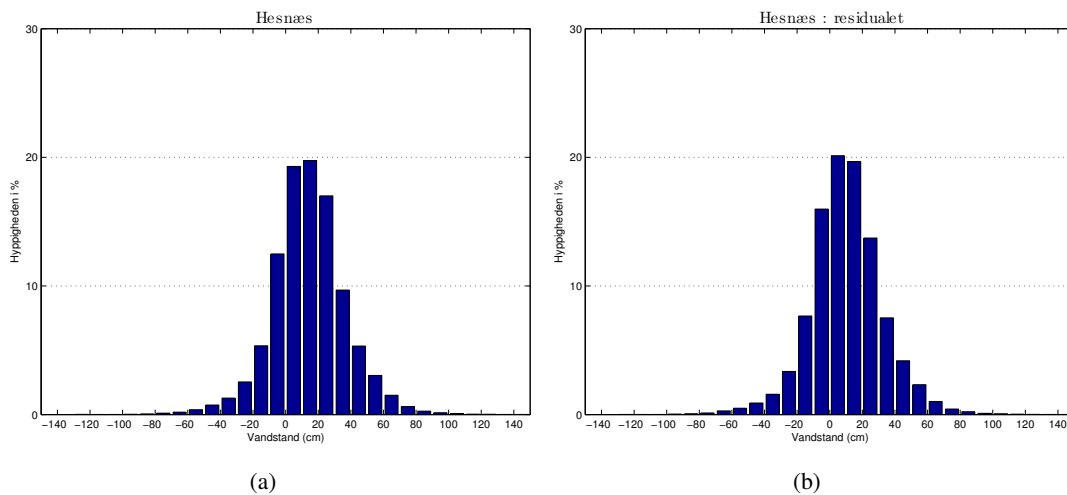
Figur A.8: Hyppighedsfordeling af vandstandsdata for station Grenå. a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



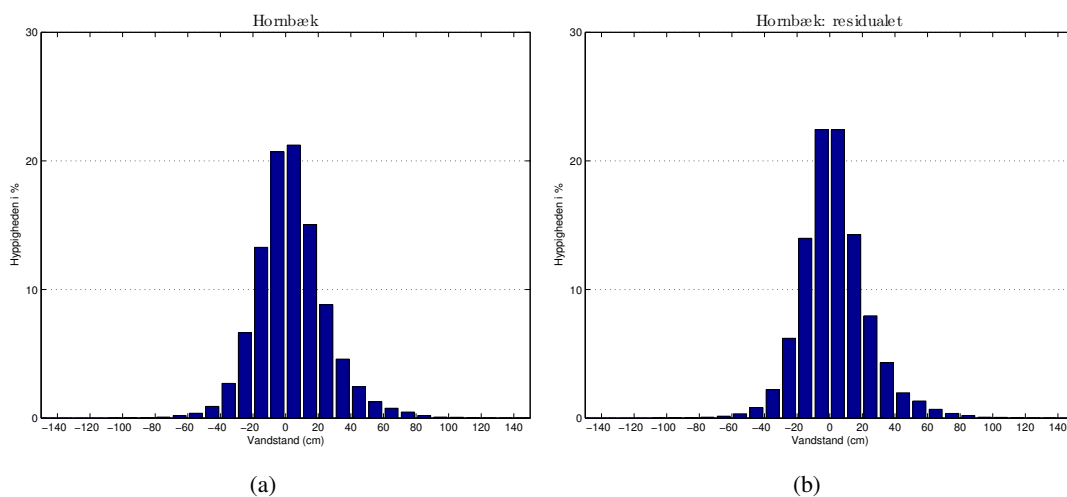
Figur A.9: Hyppighedsfordeling af vandstandsdata for station Hanstholm . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



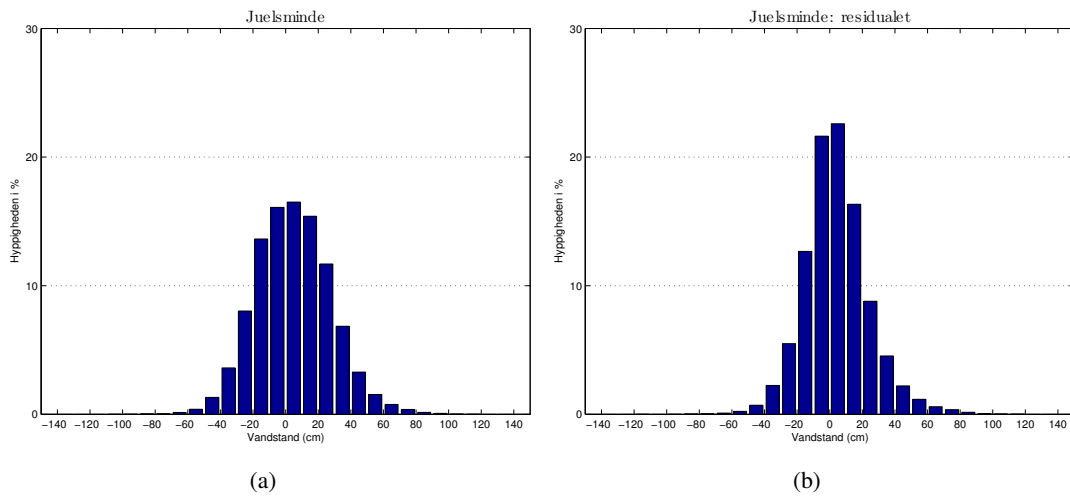
Figur A.10: Hyppighedsfordeling af vandstandsdata for station Helsinki . Hele signalet. Interval 10 cm. Der er ikke noget tidevand.



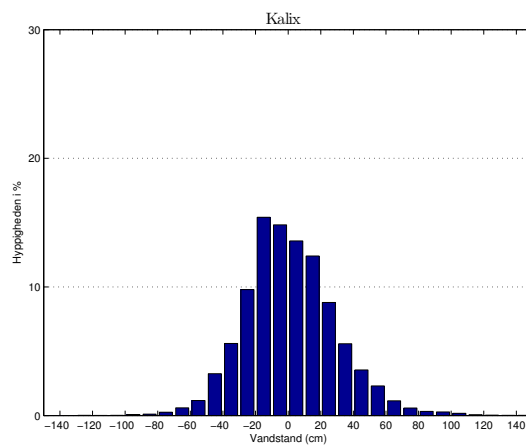
Figur A.11: Hyppighedsfordeling af vandstandsdata for station Hesnæs . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



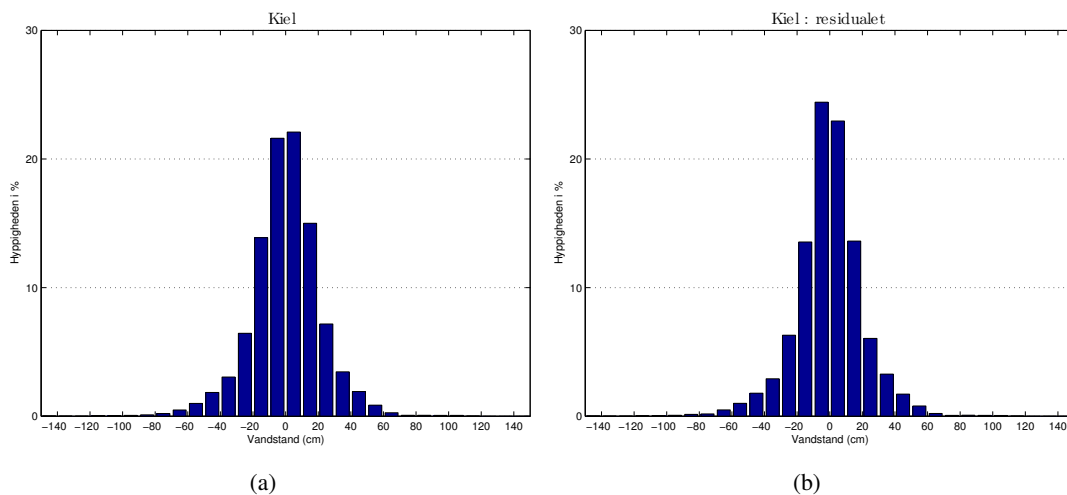
Figur A.12: Hyppighedsfordeling af vandstandsdata for station Hornbæk . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



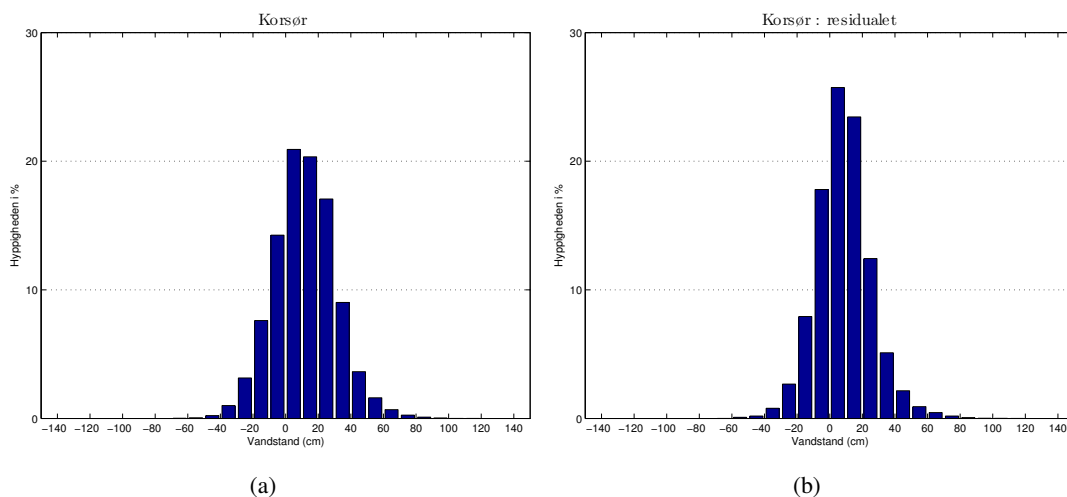
Figur A.13: Hyppighedsfordeling af vandstandsdata for station Juelsminde . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



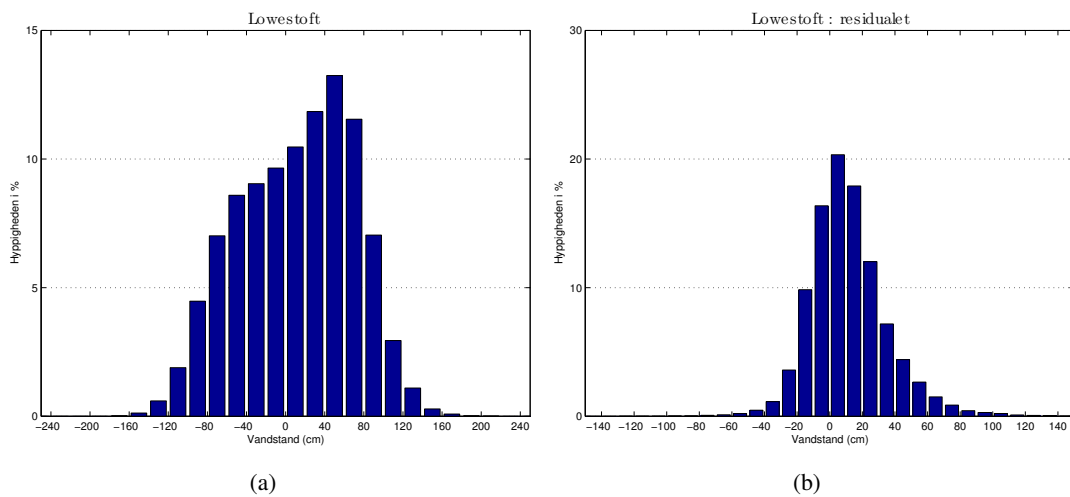
Figur A.14: Hyppighedsfordeling af vandstandsdata for station Kalix . Hele signalet. Interval 10 cm. Der er ikke noget tidevand.



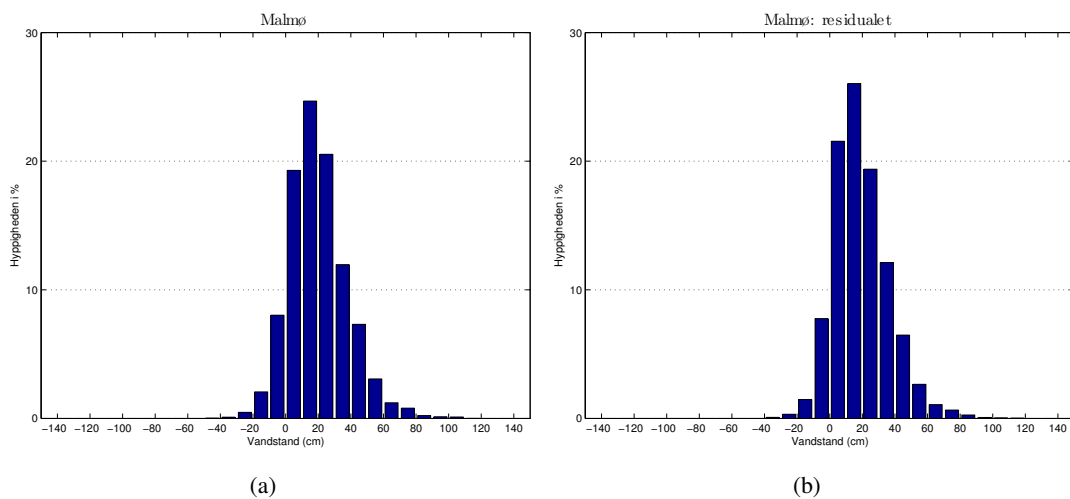
Figur A.15: Hyppighedsfordeling af vandstandsdata for station Kiel . a) Hele signalet. b) Residalet når tidevandsprediktionen er trukket fra. Interval 10 cm.



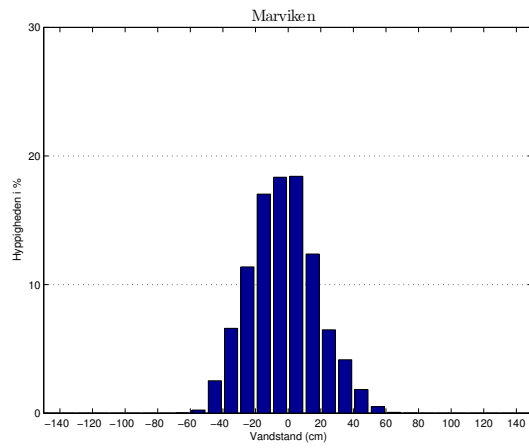
Figur A.16: Hyppighedsfordeling af vandstandsdata for station Korsør . a) Hele signalet. b) Residalet når tidevandsprediktionen er trukket fra. Interval 10 cm.



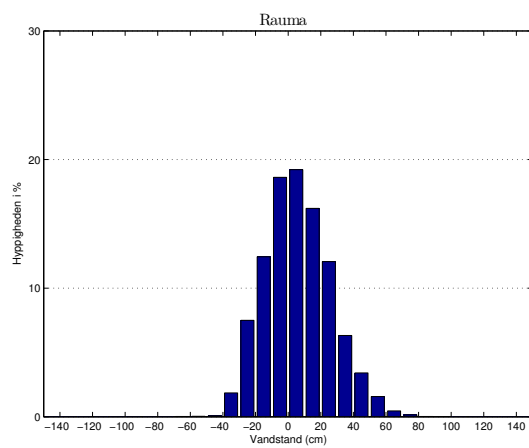
Figur A.17: Hyppighedsfordeling af vandstandsdata for station Lowestoft . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Akserne og intervallerne er ikke ens i de to figure. I a) er intervallet 20 cm og i b) er det 10 cm.



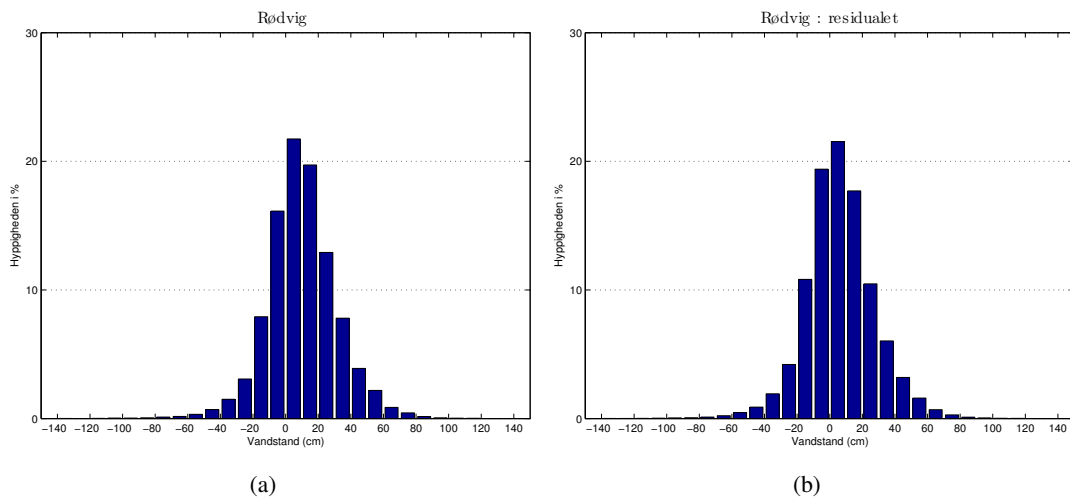
Figur A.18: Hyppighedsfordeling af vandstandsdata for station Malmø. a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



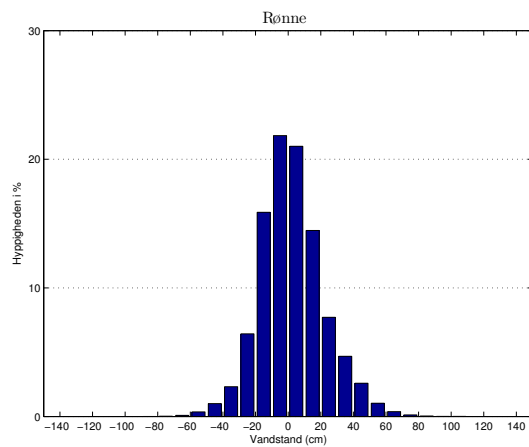
Figur A.19: Hyppighedsfordeling af vandstandsdata for station Marviken . Hele signalet. Interval 10 cm. Der er ikke noget tidevand.



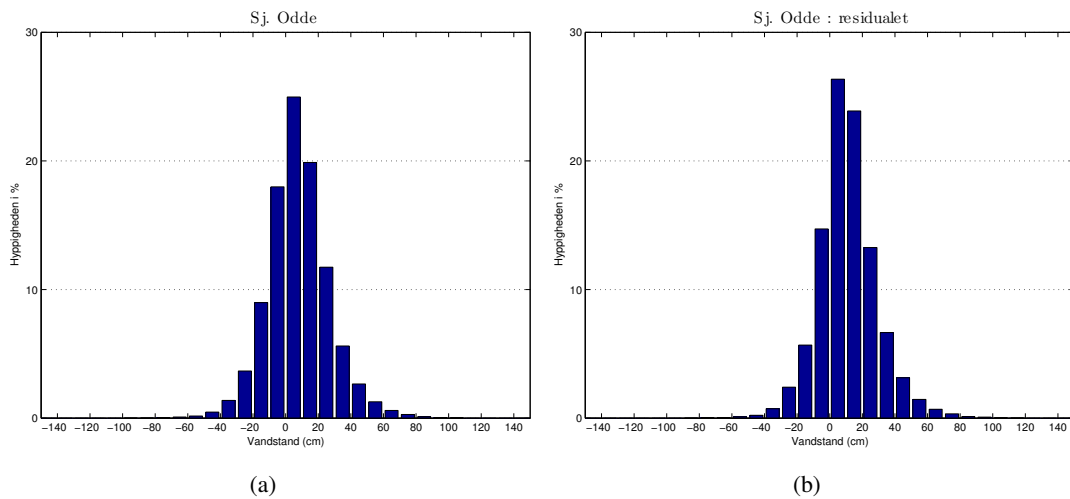
Figur A.20: Hyppighedsfordeling af vandstandsdata for station Rauma . Hele signalet. Interval 10 cm. Der er ikke noget tidevand.



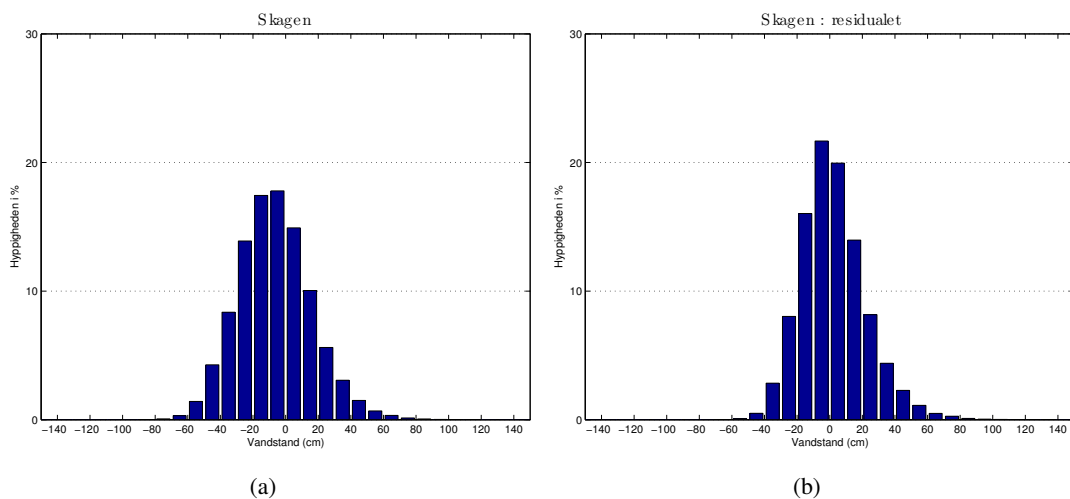
Figur A.21: Hyppighedsfordeling af vandstandsdata for station Rødvig . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



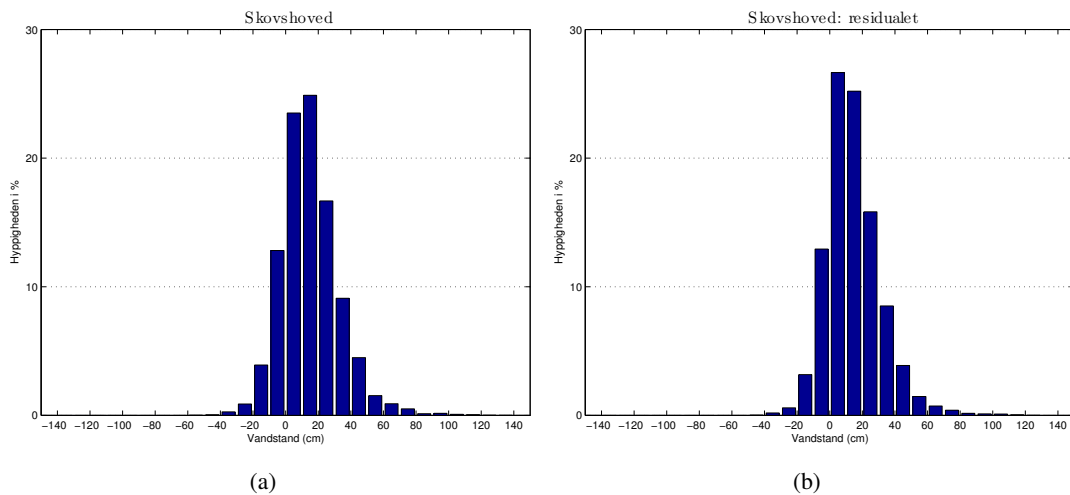
Figur A.22: Hyppighedsfordeling af vandstandsdata for station Rønne . Hele signalet. Interval 10 cm. Der er ikke noget tidevand.



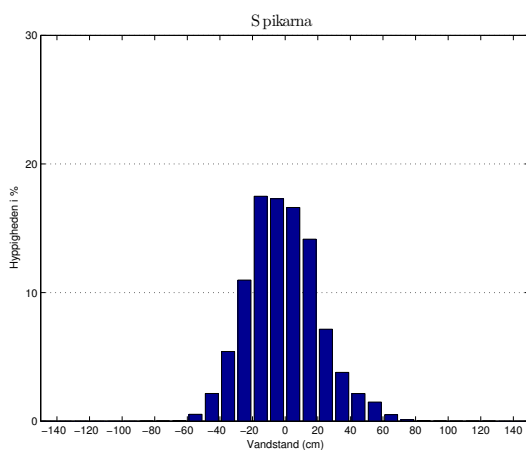
Figur A.23: Hyppighedsfordeling af vandstandsdata for station Sjællands Odde. a) Hele signalet. b) Residalet når tidevandsprediktionen er trukket fra. Interval 10 cm.



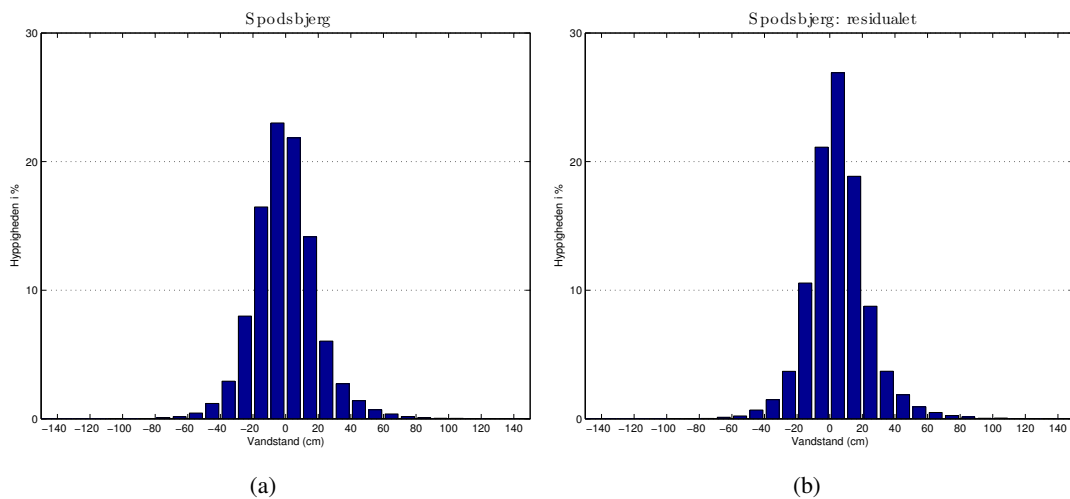
Figur A.24: Hyppighedsfordeling af vandstandsdata for station Skagen . a) Hele signalet. b) Residalet når tidevandsprediktionen er trukket fra. Interval 10 cm.



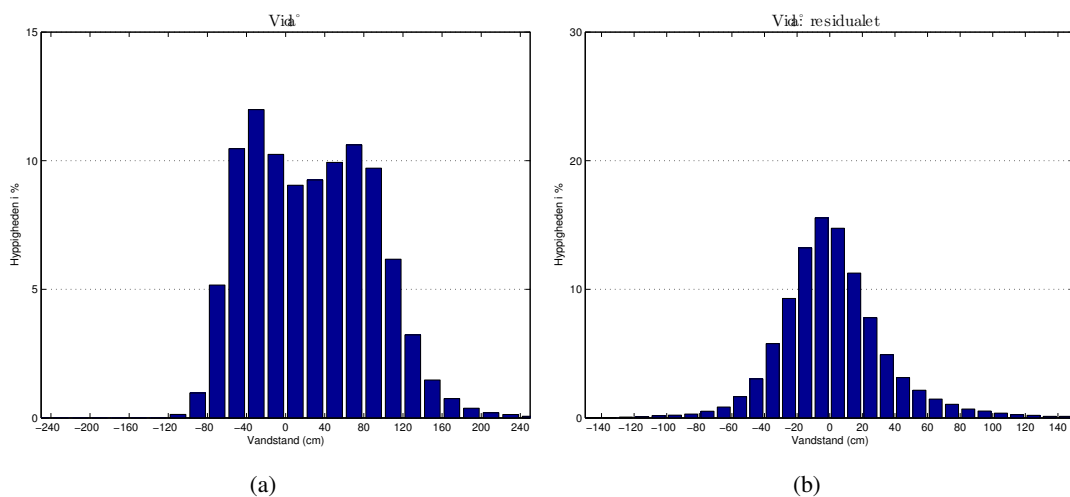
Figur A.25: Hyppighedsfordeling af vandstandsdata for station Skovshoved . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



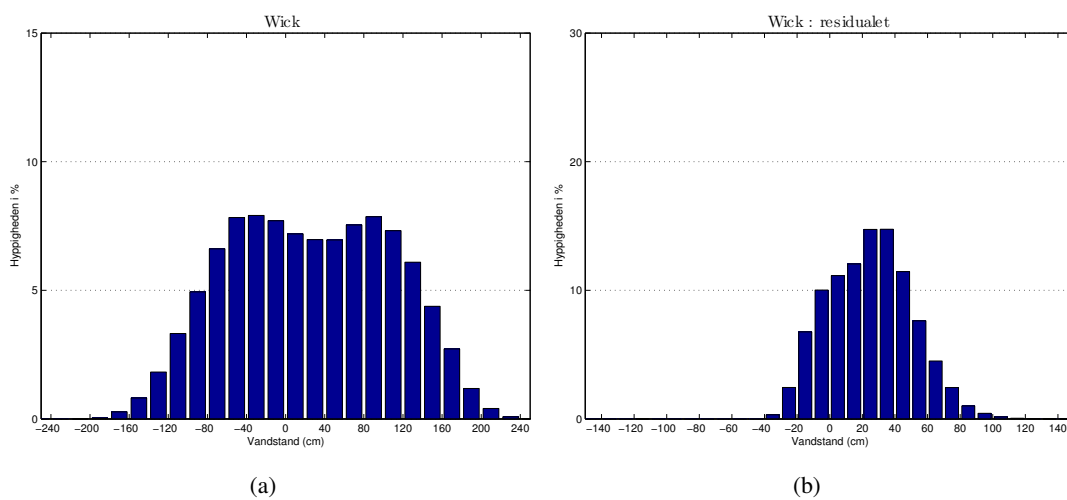
Figur A.26: Hyppighedsfordeling af vandstandsdata for station Spikarna . Hele signalet. Interval 10 cm. Der er ikke noget tidevand.



Figur A.27: Hyppighedsfordeling af vandstandsdata for station Spodsbjerg . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Interval 10 cm.



Figur A.28: Hyppighedsfordeling af vandstandsdata for station Vidå. a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Akserne og intervallerne er ikke ens i de to figure. I a) er intervallet 20 cm og i b) er det 10 cm.



Figur A.29: Hyppighedsfordeling af vandstandsdata for station Wick . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Bemærk, at akserne og intervallerne ikke er ens i de to figurer. I a) er intervallet 20 cm og i b) er det 10 cm.

Tabel A.11: Statistiske parametre for tidevandsprediktionen og residuallet af vandstandsobservationerne. Std., min. og max. for det totale signal er gengivet for sammenligning.

Station	Tidevand	Residuallet			Totalt		
	std.	std.	min.	max.	std.	min.	max.
Århus	12.4	18.0	-96.9	125.6	21.9	-98	133
Ballen	10.3	17.4	-80.0	114.1	20.2	-77	105
Drogden	2.9	19.2	-170.1	136.4	19.4	-169	133
Esbjerg	55.1	36.7	-200.3	411.1	66.0	-250	347
Gedser	3.6	23.3	-134.7	157.6	23.6	-135	158
Gøteborg	5.3	19.8	-56.8	123.8	20.4	-65	124
Grenå	11.0	22.6	-95.3	126.5	24.8	-101	118
Hanstholm	9.9	27.2	-114.5	149.9	29.0	-122	138
Hesnæs	2.7	22.6	-147.7	148.4	22.7	-146	150
Hornbæk	6.1	20.8	-102.6	135.7	21.7	-107	141
Juelsminde	12.3	20.0	-119.6	115.9	23.1	-101	117
Kiel	4.6	21.4	-177.4	111.6	22.0	-185	115
Korsør	8.3	16.8	-60.9	113.9	19.0	-66	118
Lowestoft	54.3	24.0	-126.4	185.2	58.7	-179	212
Malmø	5.0	17.0	-38.3	114.9	17.9	-46	110
Rødvig	2.3	21.5	-144.8	134.4	21.6	-144	137
Sj. Odde	6.9	18.0	-85.8	110.1	19.0	-91	106
Skagen	10.6	20.0	-71.9	122.3	22.5	-87	117
Skovshoved	5.6	16.8	-45.0	120.3	17.7	-54	130
Spodsbjerg	6.5	18.5	-96.2	190.1	19.4	-101	185
Vidå	54.6	34.7	-167.6	390.6	62.3	-117	360
Wick	79.0	25.9	-220.7	215.8	83.1	-202	289

Tabel A.12: Tidevandskonstituentsættet for station Århus . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	-1.0	0.0
O_1	2.8	337.2
μ_2	3.4	89.9
N_2	4.2	233.5
ν_2	1.5	286.9
M_2	15.7	290.5
S_2	3.7	239.8
M_4	0.5	264.7
$2MN_6$	0.5	41.0
M_6	0.9	79.0
$2MS_6$	1.0	156.4

Tabel A.13: Tidevandskonstituentsættet for station Ballen . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	5.5	0.0
O_1	2.5	340.3
μ_2	2.7	101.2
N_2	3.5	245.7
ν_2	1.1	298.4
H_1	1.7	296.3
M_2	12.9	301.2
H_2	1.4	114.0
L_2	1.6	36.0
S_2	2.7	250.6

Tabel A.14: Tidevandskonstituentsættet for station Drogden . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	2.9	0.0
K_1	1.6	140.2
N_2	0.9	183.5
M_2	3.3	208.7
L_2	0.4	337.4
S_2	1.6	194.0
M_4	0.2	326.2

Tabel A.15: Tidevandskonstituentsættet for station Esbjerg . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	4.6	0.0
S_a	18.6	300.4
Q_1	2.5	209.6
O_1	8.1	272.3
P_1	2.3	70.1
K_1	5.1	68.9
μ_2	7.1	130.5
N_2	11.6	7.7
ν_2	4.3	358.2
M_2	69.7	35.1
λ_2	2.7	51.1
L_2	5.8	58.3
S_2	17.1	100.5
K_2	4.9	97.9
MO_3	0.6	179.4
MK_3	0.4	358.8
MN_4	2.5	193.8
M_4	6.8	228.3
MS_4	3.1	300.6
MK_4	0.9	292.6
$2MN_6$	1.1	64.1
M_6	2.1	93.1
$2MS_6$	1.9	159.4
$2MK_6$	0.5	153.4
M_8	0.4	325.9

Tabel A.16: Tidevandskonstituentsættet for station Gedser . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	5.2	0.0
O_1	1.7	136.7
K_1	2.0	177.5
μ_2	0.8	296.5
N_2	0.8	97.9
M_2	4.2	162.7
S_2	0.7	180.7

Tabel A.17: Tidevandskonstituentsættet for station Gøteborg . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
O_1	1.9	296.9
μ_2	1.4	297.0
N_2	1.7	82.5
M_2	6.6	130.1
S_2	1.4	70.7
M_4	1.0	305.4

Tabel A.18: Tidevandskonstituentsættet for station Grenå. Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	3.2	0.0
O_1	3.0	318.0
S_1	1.4	159.0
μ_2	2.7	41.6
N_2	3.7	182.3
ν_2	1.3	228.6
H_1	1.6	240.1
M_2	13.7	235.8
H_2	1.2	57.3
L_2	1.6	153.2
S_2	3.6	185.6
K_2	0.9	175.6
MN_4	0.3	85.4
M_4	0.8	144.3
MS_4	0.3	235.7
$2MN_6$	0.3	226.9
M_6	0.5	267.9
$2MS_6$	0.5	344.9

Tabel A.19: Tidevandskonstituentsættet for station Hanstholm . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	5.6	0.0
O_1	2.5	332.1
K_1	1.4	181.3
μ_2	2.3	257.2
N_2	3.1	44.5
ν_2	1.2	82.0
M_2	12.6	93.2
S_2	2.4	40.5
MN_4	0.4	137.9
M_4	1.0	179.1
$2MN_6$	0.4	109.3
M_6	0.8	145.1
$2MS_6$	0.8	220.7

Tabel A.20: Tidevandskonstituentsættet for station Hesnæs . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	3.6	0.0
O_1	1.9	118.7
K_1	1.8	157.9
μ_2	0.4	265.1
M_2	2.6	153.9
S_2	0.9	190.7

Tabel A.21: Tidevandskonstituentsættet for station Hornbæk . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	0.0	0.0
O_1	2.5	334.9
μ_2	1.4	52.5
N_2	1.9	193.7
ν_2	0.7	236.0
H_1	0.8	266.1
M_2	7.4	241.9
S_2	2.0	191.5
K_2	0.6	168.9
M_4	0.3	222.5
$2MN_6$	0.2	182.6
M_6	0.3	221.1
$2MS_6$	0.3	297.6

Tabel A.22: Tidevandskonstituentsættet for station Juelsminde . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
S_1	1.1	198.8
ϵ_2	1.1	73.6
μ_2	3.4	127.8
N_2	4.6	268.1
M_2	15.7	321.5
S_2	3.4	272.1

Tabel A.23: Tidevandskonstituentsættet for station Kiel . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
S_{sa}	4.0	297.4
K_1	2.3	246.6
μ_2	1.0	306.4
N_2	1.3	86.8
M_2	4.2	140.5
S_2	1.1	85.4

Tabel A.24: Tidevandskonstituentsættet for station Korsør . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	2.6	0.0
μ_2	2.1	159.6
N_2	2.8	308.2
M_2	10.8	3.0
S_2	2.6	329.3

Tabel A.25: Tidevandskonstituentsættet for station Lowestoft . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
S_a	7.7	214.2
Q_1	4.6	106.4
O_1	13.8	160.7
P_1	4.3	321.2
S_1	1.1	265.4
K_1	12.2	330.6
μ_2	2.4	96.4
N_2	13.0	231.5
ν_2	3.0	247.3
M_2	68.2	259.5
λ_2	1.3	282.7
L_2	3.1	110.3
S_2	20.5	298.8
K_2	5.5	299.5
MO_3	1.2	350.0
MK_3	1.0	166.6
MN_4	1.7	321.7
M_4	4.8	335.5
MS_4	3.8	27.1
MK_4	1.1	26.2
$2MN_6$	2.3	87.4
M_6	4.2	117.0
MSN_6	1.0	141.5
$2MS_6$	4.2	164.1
$2MK_6$	1.1	173.5
$2SM_6$	1.1	215.4

Tabel A.26: Tidevandskonstituentsættet for station Malmø. Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
O_1	1.5	7.1
μ_2	1.3	73.3
N_2	1.6	212.5
M_2	6.0	257.0
S_2	2.3	212.7

Tabel A.27: Tidevandskonstituentsættet for station Rødvig . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	3.2	0.0
O_1	1.7	114.4
K_1	1.7	131.8
M_2	2.0	174.0
S_2	1.0	179.2

Tabel A.28: Tidevandskonstituentsættet for station Sjællands Odde. Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	-3.8	0.0
O_1	2.6	325.9
S_1	0.8	172.7
μ_2	1.7	61.4
N_2	2.2	200.4
ν_2	0.9	245.9
H_1	1.0	266.1
M_2	8.5	253.2
H_2	0.7	84.2
L_2	1.0	170.4
S_2	2.0	199.6
M_3	0.1	215.7
M_4	0.5	172.6
$2MN_6$	0.3	227.4
M_6	0.4	267.1
$2MS_6$	0.4	338.2

Tabel A.29: Tidevandskonstituentsættet for station Skagen . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	-9.4	0.0
Q_1	0.7	230.5
O_1	2.3	274.2
S_1	0.6	178.9
μ_2	2.7	288.2
N_2	3.5	68.3
ν_2	1.1	113.9
H_1	1.5	123.7
M_2	13.3	119.3
H_2	1.3	303.9
L_2	1.7	210.1
S_2	3.1	66.5
K_2	0.8	47.3
M_3	0.3	20.7
MN_4	0.5	251.6
M_4	1.4	297.5
MS_4	0.5	10.4
$2MN_6$	0.3	317.0
M_6	0.5	352.0
$2MS_6$	0.5	63.4

Tabel A.30: Tidevandskonstituentsættet for station Skovshoved . Konstituentnavn, amplitude og fase.

Konstituentnavn	Amplitude (cm)	Fase (grader)
O_1	1.9	2.8
μ_2	1.5	67.0
N_2	1.7	210.7
M_2	6.7	256.6
S_2	2.5	213.0

Tabel A.31: Tidevandskonstituentsættet for station Spodsbjerg . Konstituentnavn, amplitude og fase.

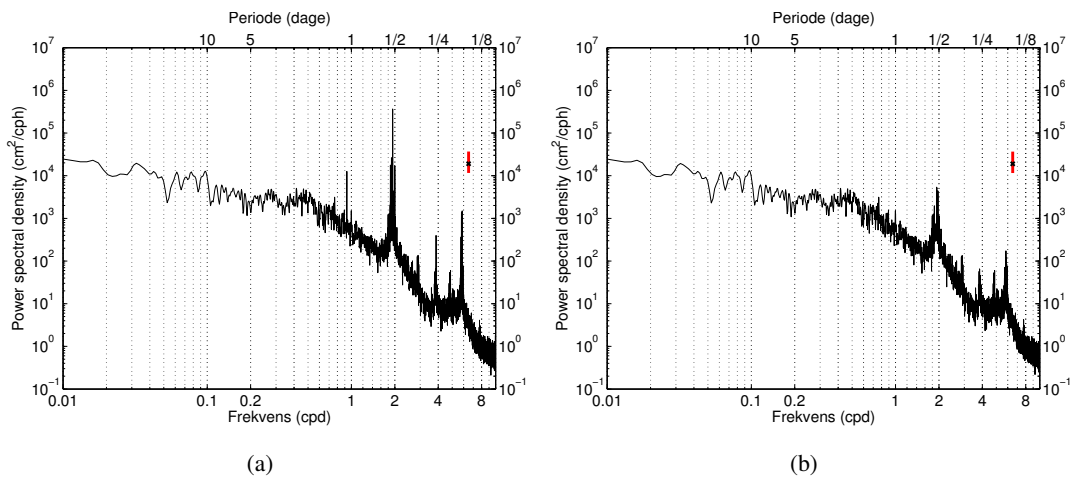
Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	-6.0	0.0
S_1	1.7	208.9
K_1	1.8	220.5
μ_2	1.5	178.7
N_2	2.1	323.4
H_1	0.6	24.9
M_2	8.0	16.0
L_2	0.9	299.2
S_2	2.4	330.4
K_2	0.5	301.7
$2SM_2$	0.3	66.0

Tabel A.32: Tidevandskonstituentsættet for station Vidå. Konstituentnavn, amplitude og fase.

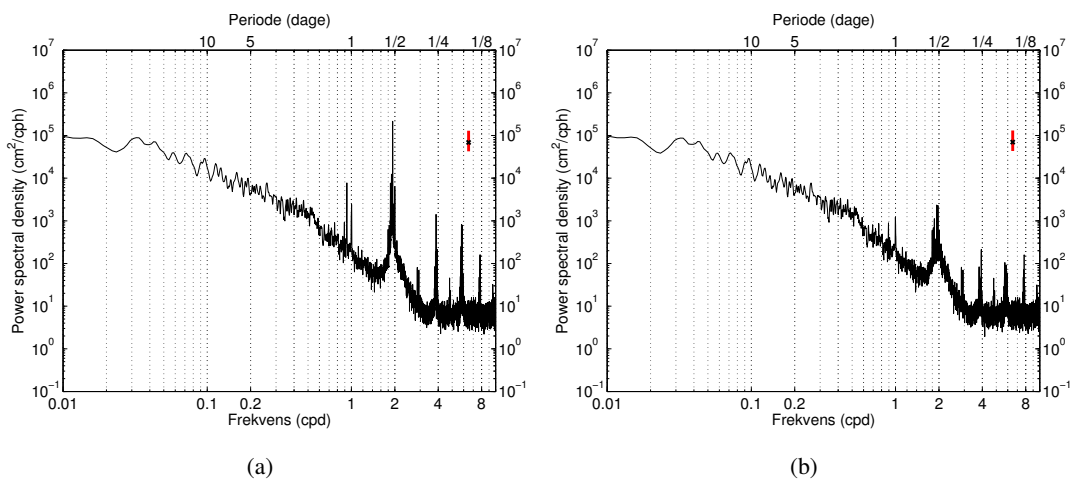
Konstituentnavn	Amplitude (cm)	Fase (grader)
Z_0	23.9	0.0
S_a	12.7	358.9
O_1	7.3	284.5
P_1	2.5	75.0
S_1	1.1	48.6
K_1	5.9	81.7
ϵ_2	1.9	109.7
μ_2	8.1	130.7
N_2	10.9	17.4
ν_2	4.0	360.0
H_1	3.1	313.6
M_2	70.2	42.1
H_2	3.5	161.4
λ_2	3.0	47.4
L_2	6.7	64.3
S_2	17.1	114.2
K_2	4.9	114.3
$2SM_2$	1.8	338.0
MO_3	1.7	254.8
MK_3	1.3	36.5
M_4	4.7	348.2
MS_4	2.9	65.3
M_6	1.3	203.0
$2MS_6$	1.3	282.4

Tabel A.33: Tidevandskonstituentsættet for station Wick . Konstituentnavn, amplitude og fase.

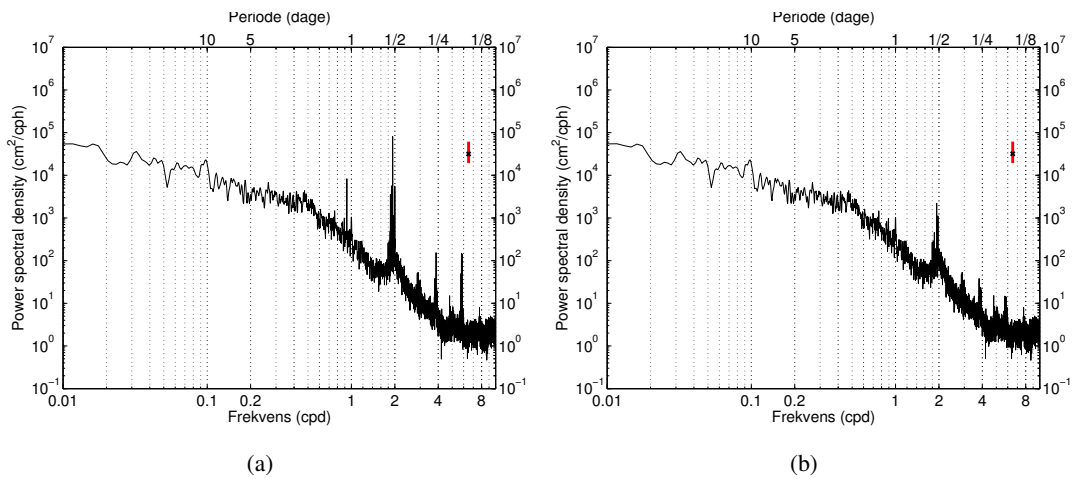
Konstituentnavn	Amplitude (cm)	Fase (grader)
Q_1	4.0	338.2
O_1	11.7	26.6
P_1	3.6	166.7
K_1	10.9	174.9
$2N_2$	2.8	274.9
μ_2	2.0	301.8
N_2	20.4	302.2
ν_2	4.1	302.9
M_2	101.7	322.2
λ_2	1.2	304.2
L_2	3.2	148.3
T_2	1.6	4.8
S_2	32.8	0.6
K_2	10.0	357.9
M_3	1.2	228.3
MN_4	1.0	269.2
M_4	3.6	317.2
MS_4	2.0	55.4



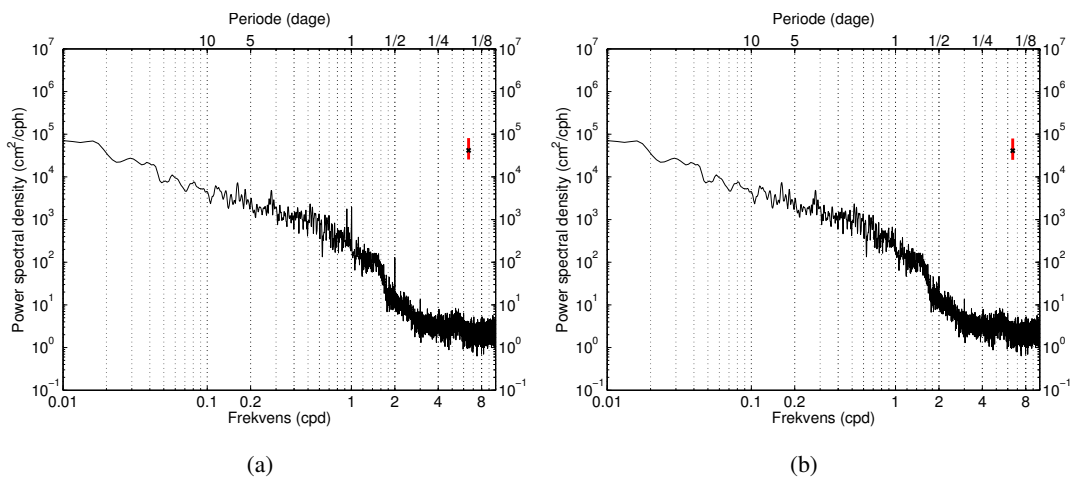
Figur A.30: Power spectrum density af vandstandsdata for station Århus . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Den røde streg i højreside viser signifikans på 95% niveauet.



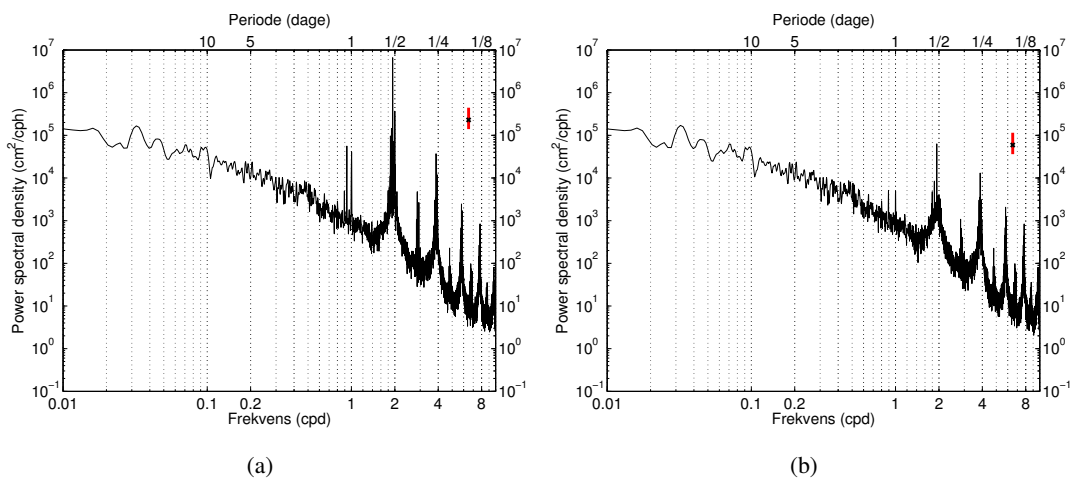
Figur A.31: Power spectrum density af vandstandsdata for station Hanstholm . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Den røde streg i højreside viser signifikans på 95% niveauet.



Figur A.32: Power spectrum density af vandstandsdata for station Hornbæk . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Den røde streg i højreside viser signifikans på 95% niveauet.



Figur A.33: Power spectrum density af vandstandsdata for station Rønne . a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Den røde streg i højreside viser signifikans på 95% niveauet.



Figur A.34: Power spectrum density af vandstandsdata for station Vidå. a) Hele signalet. b) Residualet når tidevandsprediktionen er trukket fra. Den røde streg i højreside viser signifikans på 95% niveauet.