

The Quasi-Biennial-Oscillation (QBO) Wavelet Analysis

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Source: <http://www.geo.fu-berlin.de/met/ag/strat/produkte/qbo/singapore.dat?1401710125>

1987

hPa JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

10	-164	-167	-144	-35	116	82	45	116	140	144	116	145
12	-300	-336	-325	-125	74	69	79	153	162	155	130	141
15	-374	-356	-331	-350	-45	60	108	145	145	139	147	106
20	-326	-307	-311	-328	-295	-11	93	124	145	133	124	86
25	-289	-280	-309	-303	-289	-152	21	112	165	128	93	58
30	-260	-266	-271	-270	-268	-247	-63	92	138	117	77	57
35	-192	-209	-219	-244	-283	-367	-179	43	131	124	86	70
40	-86	-113	-171	-236	-266	-273	-281	-14	91	113	93	78
45	-18	-21	-72	-188	-248	-293	-311	-85	48	114	82	76
50	39	32	19	-74	-192	-231	-267	-224	-62	68	83	66
60	102	87	73	51	-12	-154	-204	-213	-209	-18	49	62
70	57	61	22	-04	-02	-74	-145	-148	-133	-115	-37	-02
80	11	46	-37	-63	-15	-52	-108	-100	-90	-110	-97	-27
90	-34	-29	03	-26	-29	-63	-61	-135	-114	-139	-87	-52

...

2014

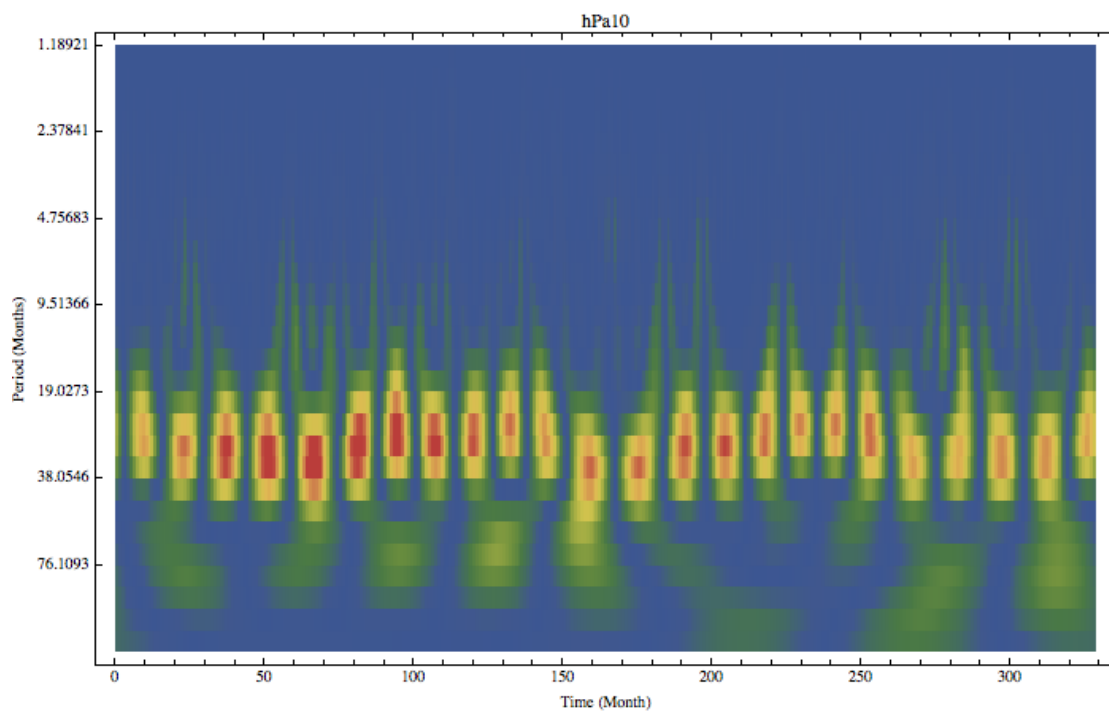
hPa JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

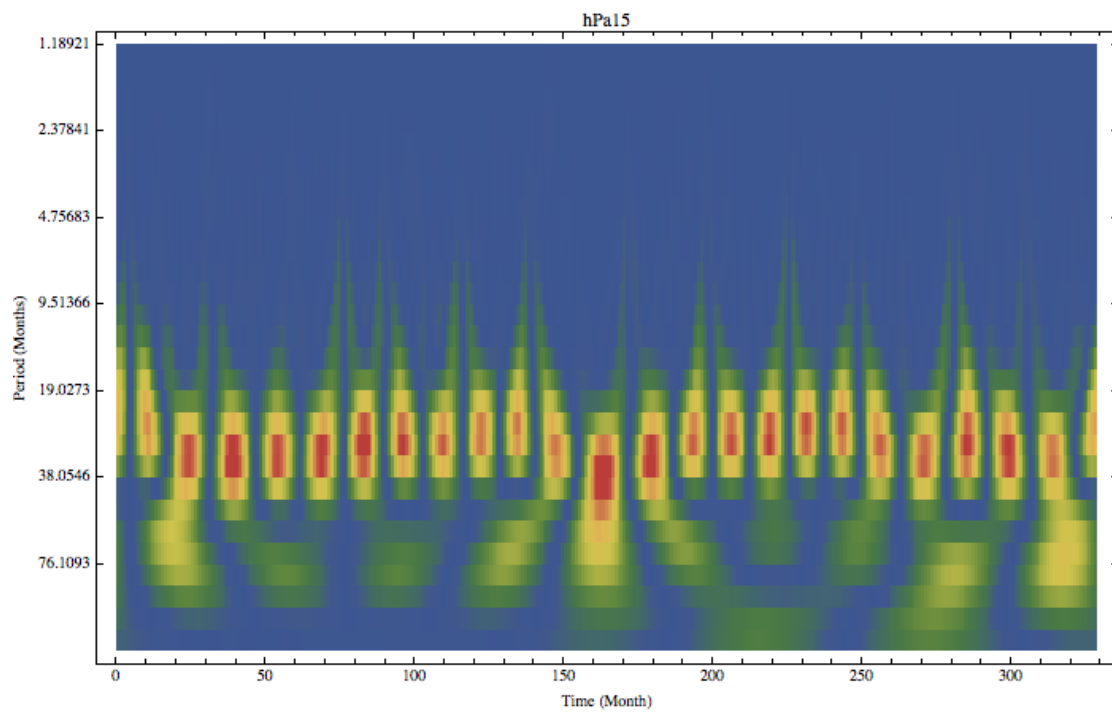
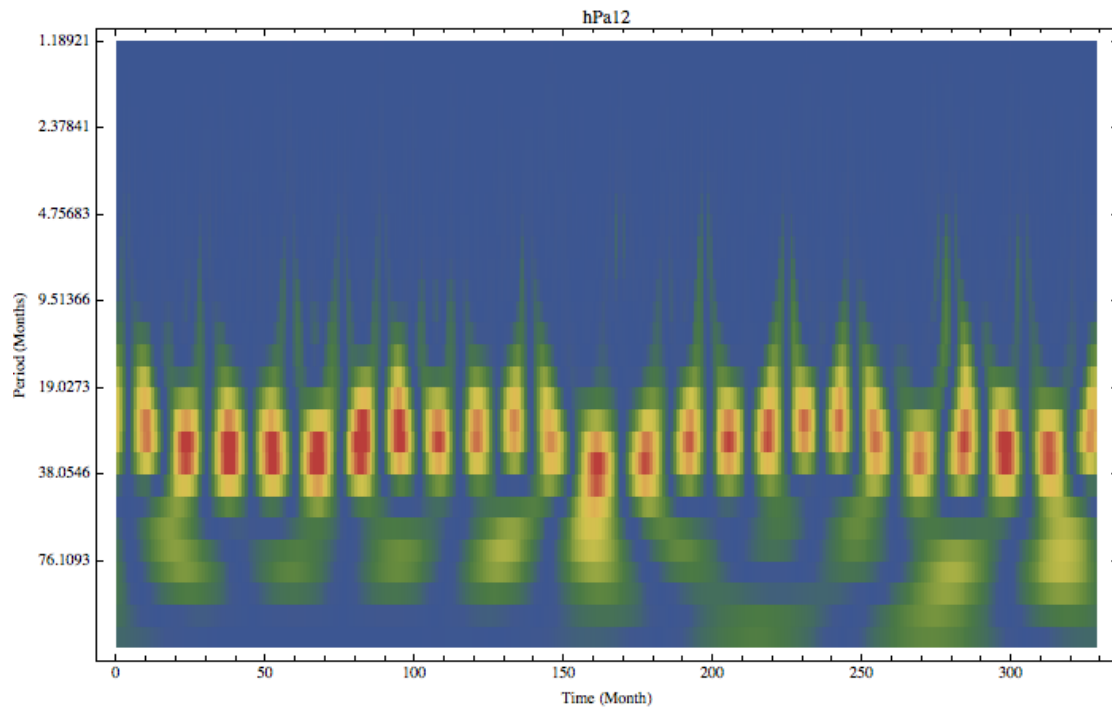
10	-251	-258	-280	-286	-285							
12	-199	-226	-245	-266	-287							
15	-75	-111	-167	-271	-288							
20	85	61	4	-169	-259							
25	130	118	100	-19	-225							
30	148	126	113	88	-131							
35	137	124	112	126	0							
40	127	127	105	144	94							
45	122	121	104	158	131							
50	112	114	92	147	141							
60	76	60	40	143	127							
70	62	49	25	82	97							
80	44	34	33	33	35							
90	22	2	8	4	-50							
100	-36	-33	-7	-9	-93							

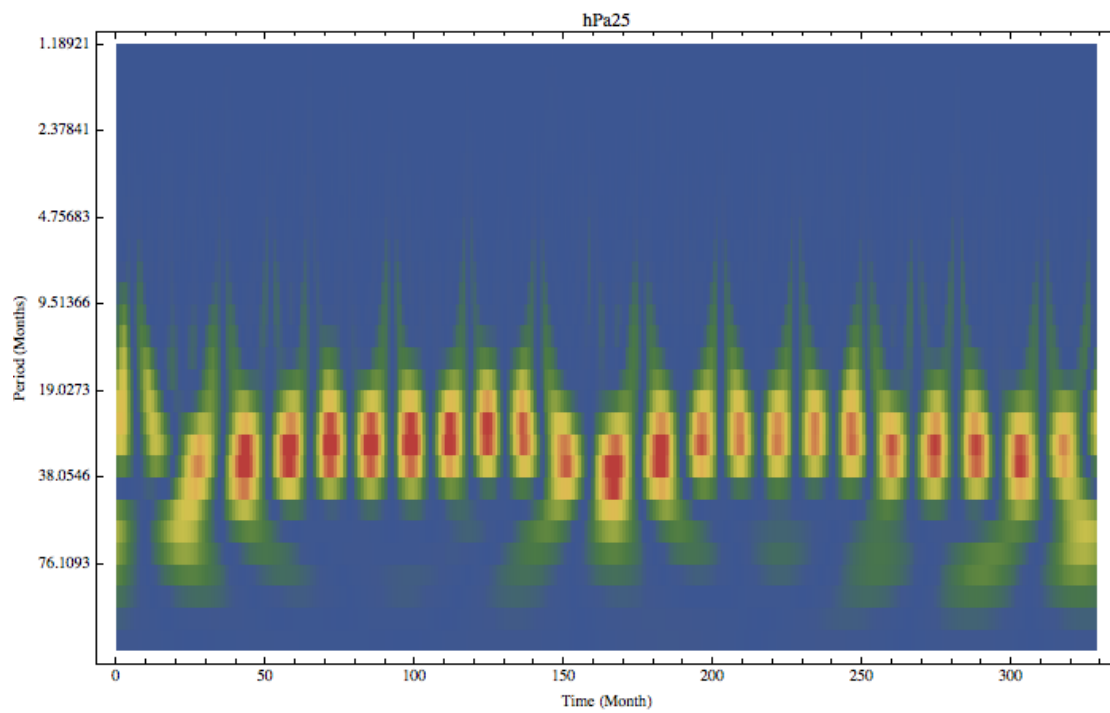
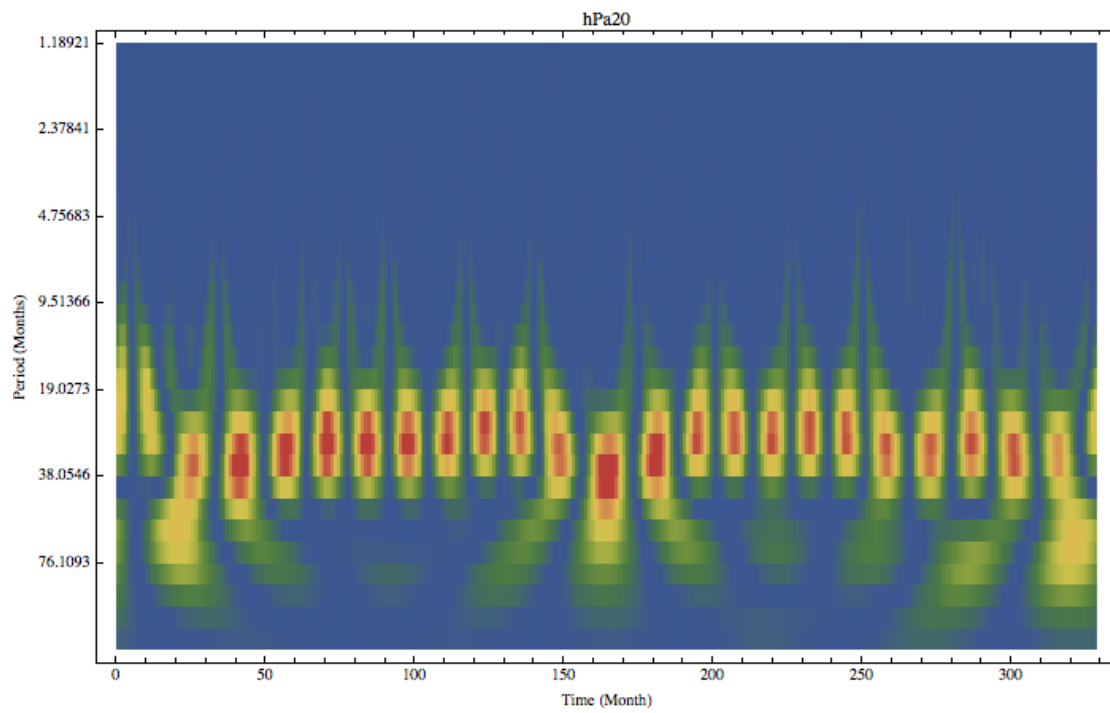
Scalograms

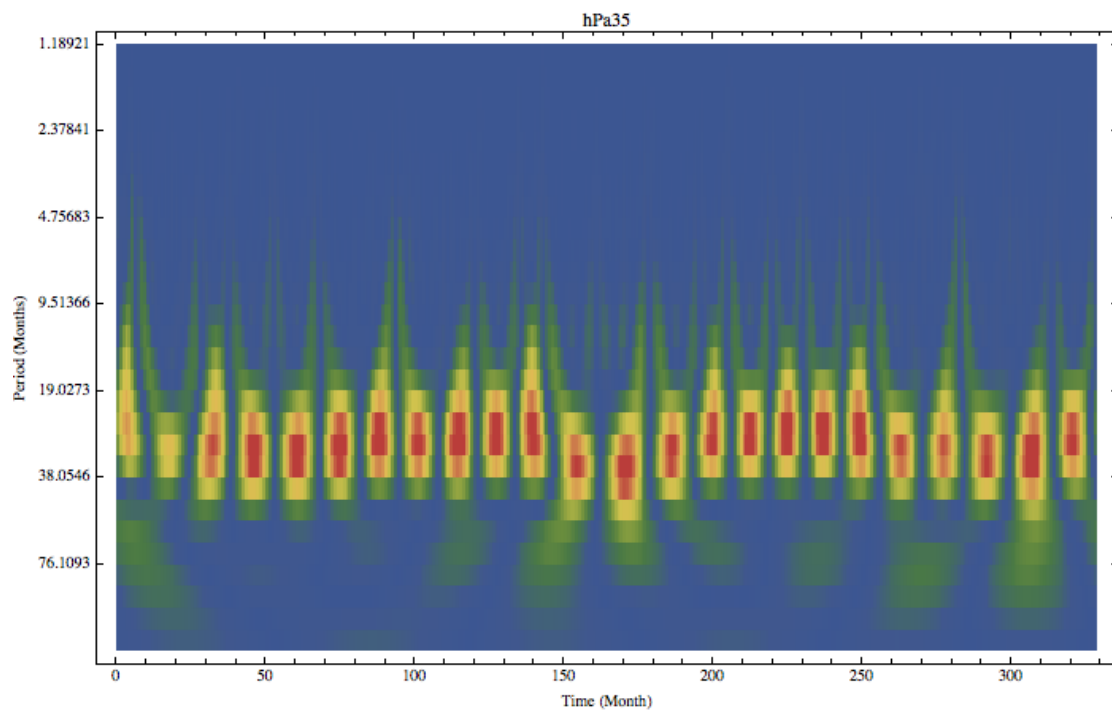
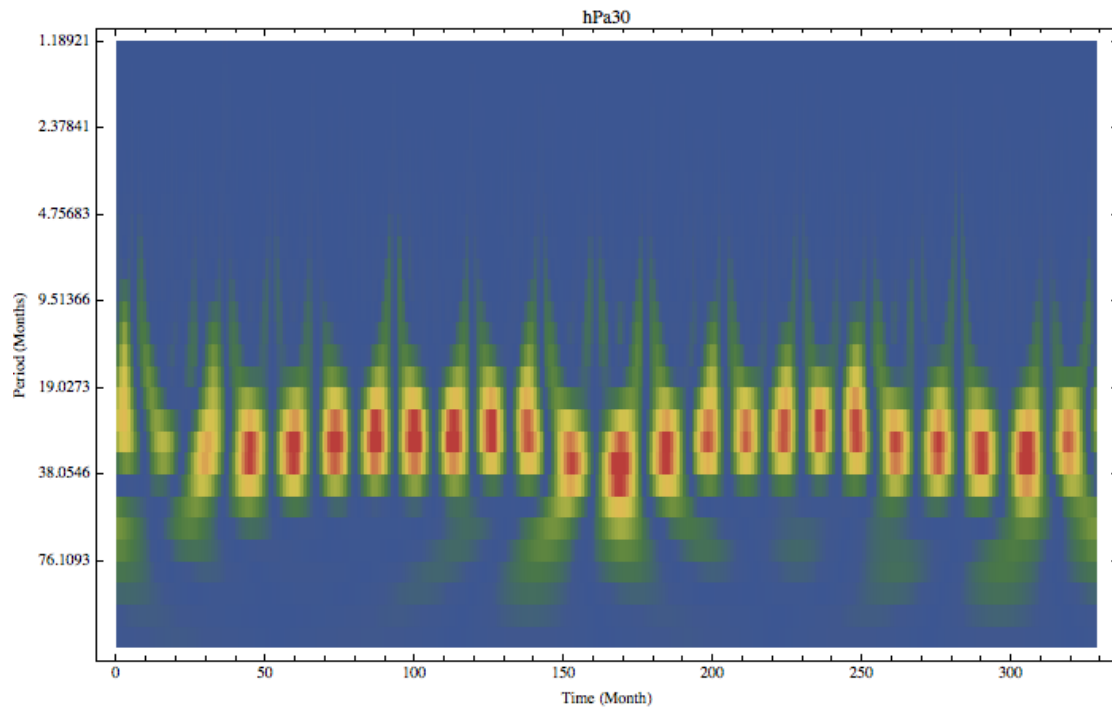
DGaussian Wavelet [4] , un-padded.

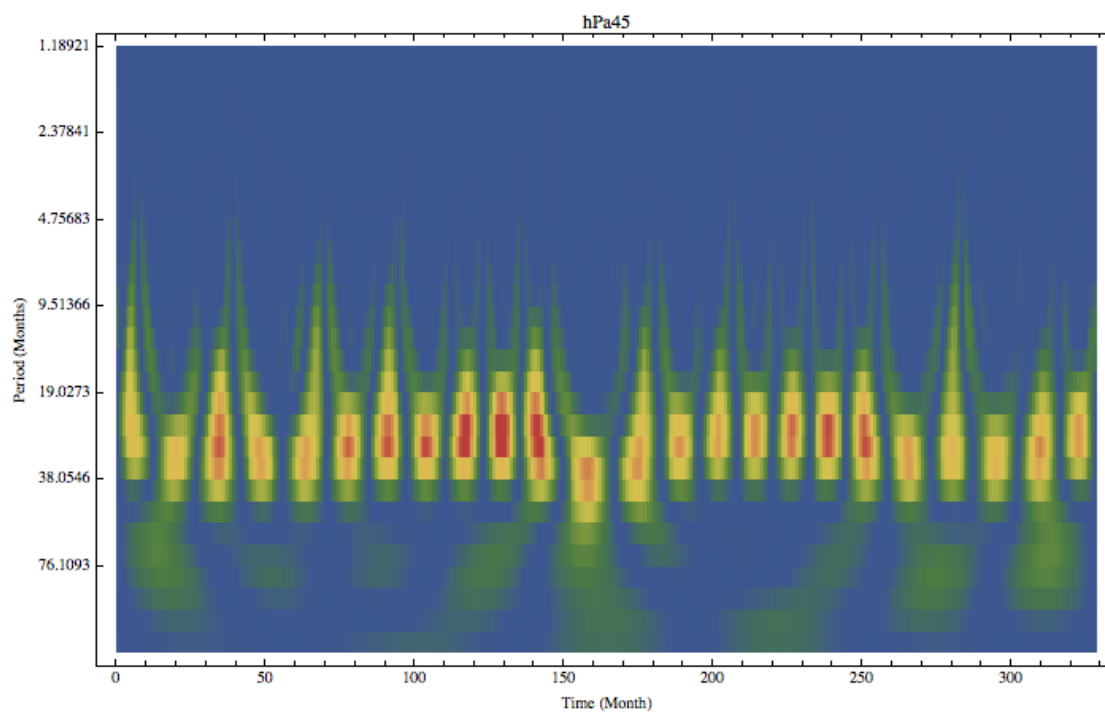
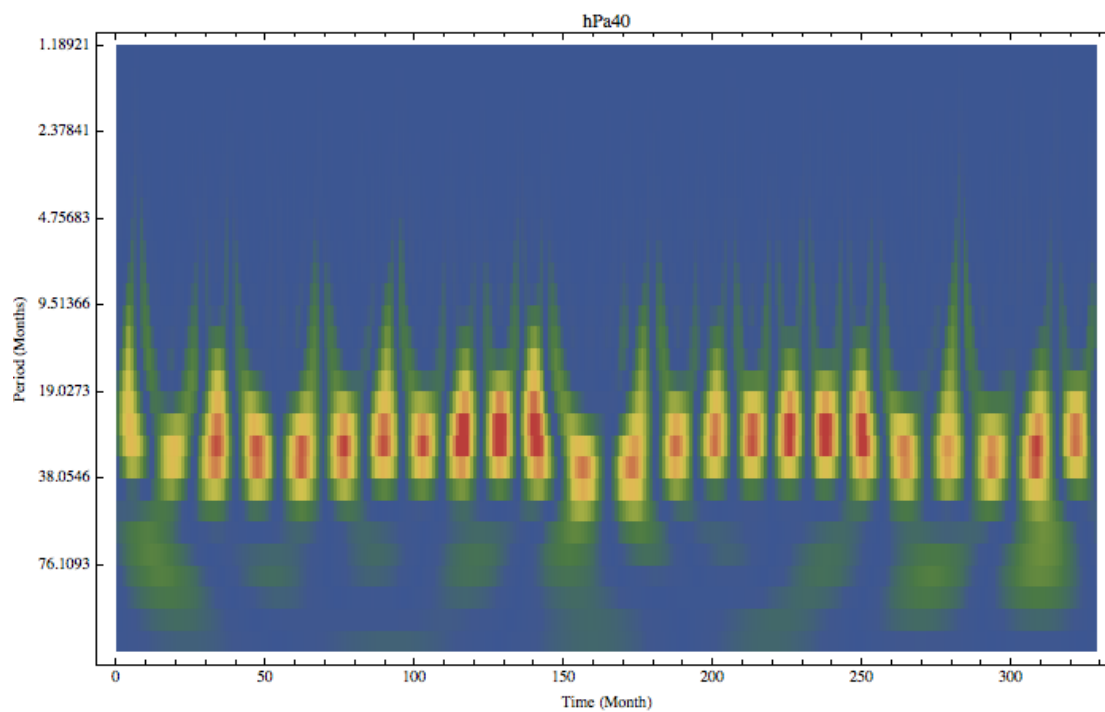
Color Scheme: Blue Min, Red Max

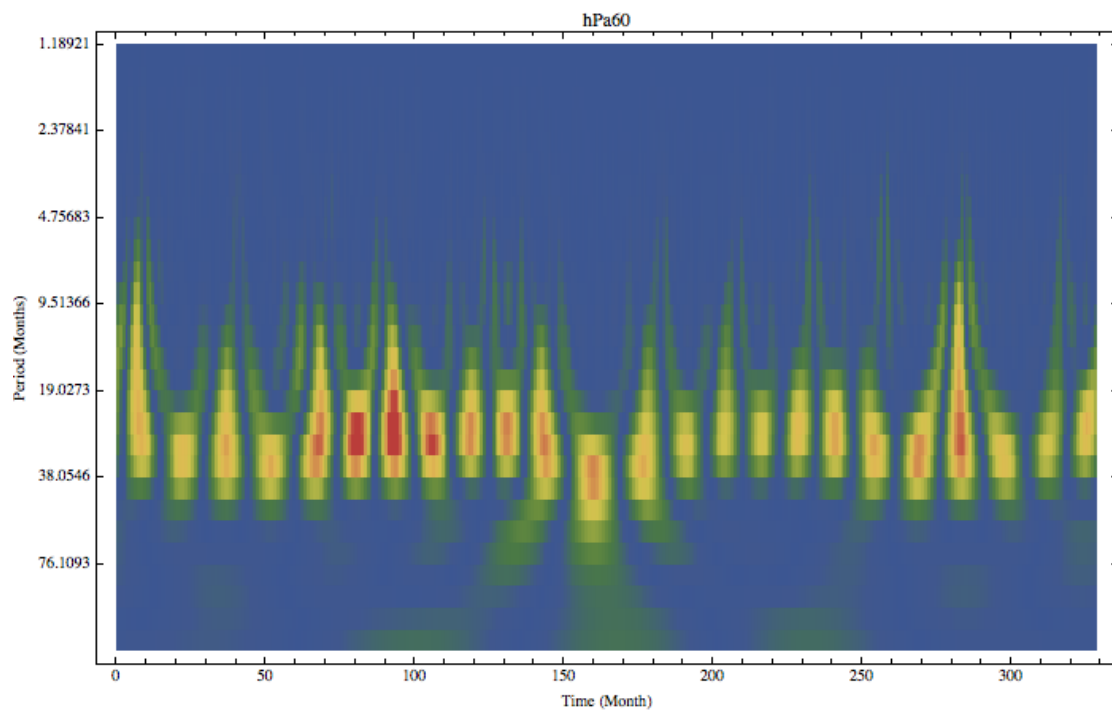
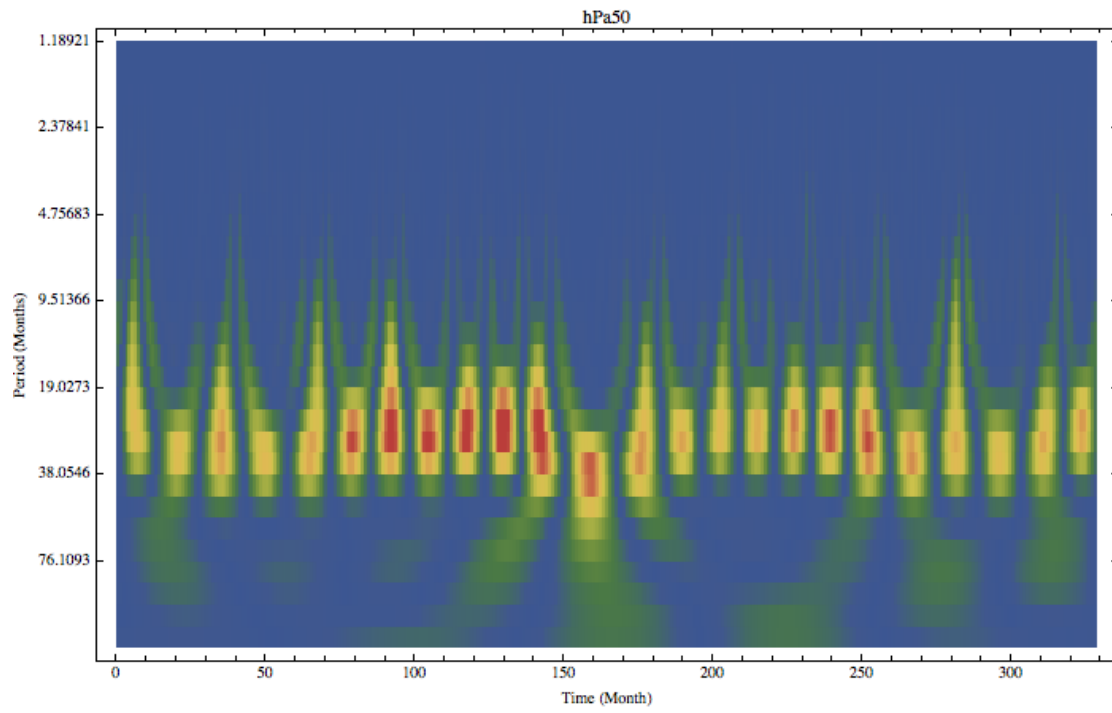


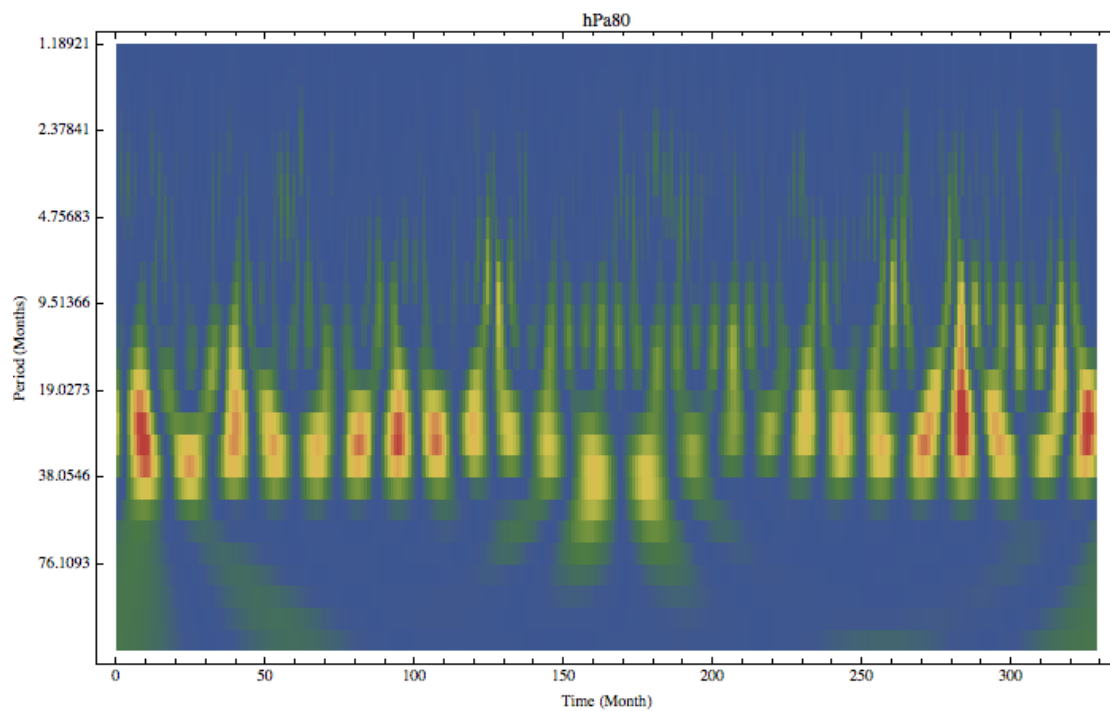
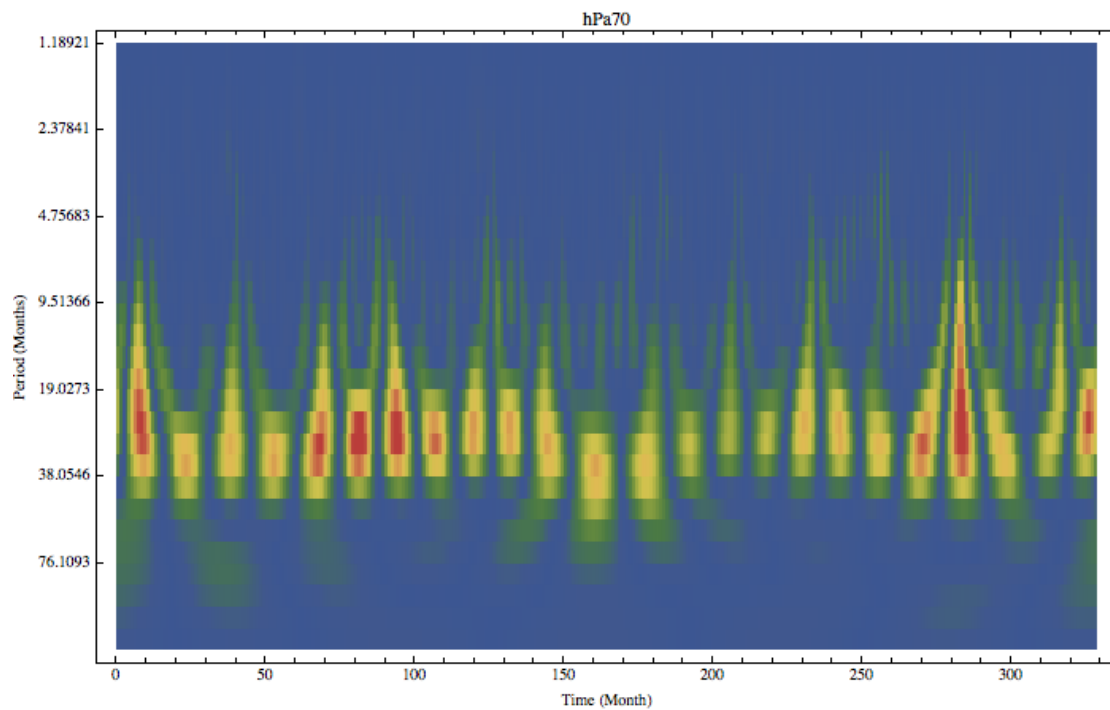


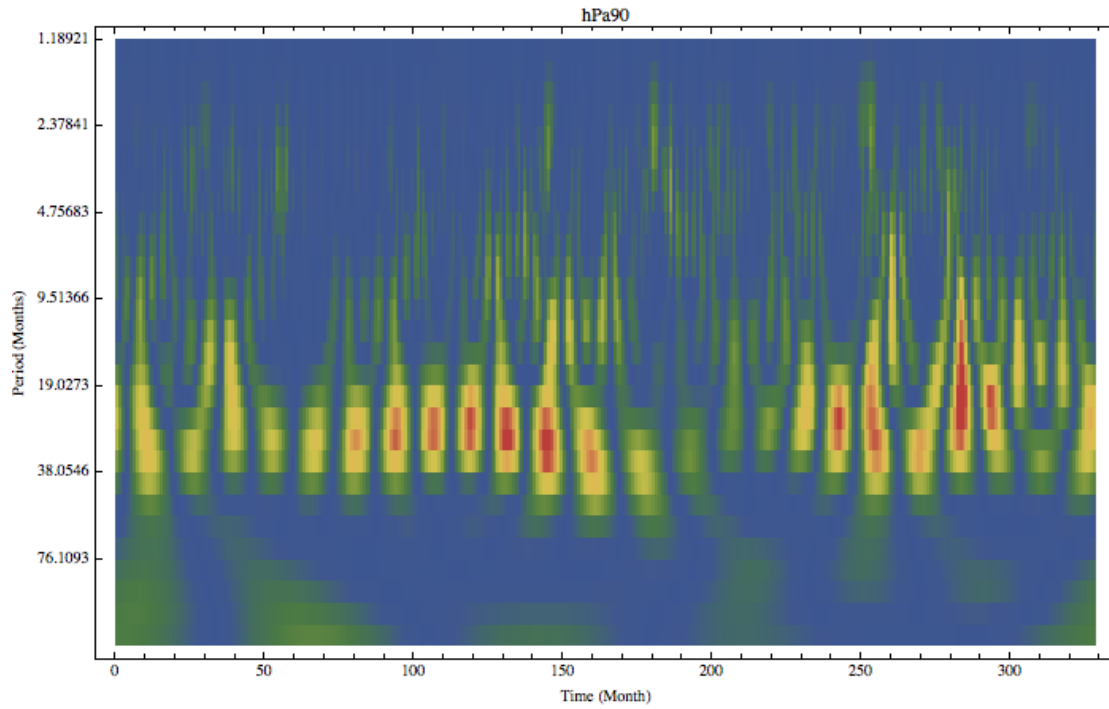










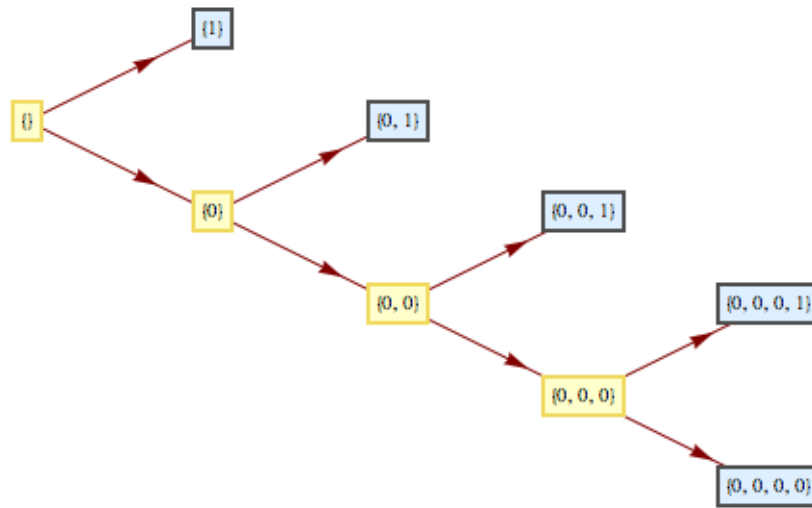


Multiple Trends

The data indicates multiple Trends, as opposed to the usual 1-Trend + Noise:

Daubechies Wavelet [4]

Refinement Index



Energy Function

$\{ \{1\} \rightarrow 0.0132191, \{0, 1\} \rightarrow 0.0248131, \{0, 0, 1\} \rightarrow 0.0911922,$
 $\{0, 0, 0, 1\} \rightarrow 0.371004, \{0, 0, 0, 0\} \rightarrow 0.499772 \}$

