

Kalman Filter, Exercise 1

Microsoft Excel - Reanalysis_DataAssimilation_Exercise1

	A	B	C	D	E	F
1	t (s)	x_b	σ_b^2	y	σ_y^2	x
2	0	1000	1000	1000	4	1000
3	1	forecast	920.465	598	4	analysis
4	2	$x_b = x_{t-1} e^{-\lambda \Delta T}$	485.640	370	4	$x = x_b + \frac{\sigma_b^2}{(\sigma_b^2 + \sigma_y^2)} (y - x_b)$
5	3		154.461	228	4	
6	4		38.564	139	4	
7	5		8.299	83	4	
8	6		1.599	51	4	
9	7		0.299	34	4	
10	8		0.054	20	4	
11	9		0.009	13	4	
12	10		0.002	10	4	
13	11		0.000	6	4	
14	12		0.000	1	4	
15	13		0.000	4	4	
16	14		0.000	3	4	
17	15		0.000	3	4	
18	16		0.000	1	4	
19	17		0.000	0	4	
20	18		0.000	2	4	
21	19		0.000	3	4	
22	20		0.000	1	4	