To : to whom it may concern
From : Jan Mooiman
Subject : Wavy sloped bedlevel, convergence tables
Date : 2025-03-16 21:04:57

Table 1: *Wiggle on discharge when a stationary simulation is performed($\Delta t = 0\,[\mathrm{s}]$)*

	Δx [m]	$\mathbf{q}_{\max}$	$\mathbf{q}_{\min}$	$\mathbf{q}_{\max} - \mathbf{q}_{\min}$	Order
1	0.625	4.000000056	3.999999831	2.2500×10^{-7}	—
2	1.25	4.000000386	3.999998843	1.5430×10^{-6}	6.8578
3	2.5	4.000002111	3.999993667	8.4440×10^{-6}	5.4725
4	5.0	4.000008004	3.999975988	3.2016×10^{-5}	3.7916
5	10.0	4.000012326	3.999963021	4.9305×10^{-5}	1.5400
1	0.625	4.000000056	3.999999831	2.2500×10^{-7}	—
2	1.25	4.000000386	3.999998843	1.5430×10^{-6}	2.6187
3	2.5	4.000002111	3.999993667	8.4440×10^{-6}	2.3393
4	5.0	4.000008004	3.999975988	3.2016×10^{-5}	1.9472
5	10.0	4.000012326	3.999963021	4.9305×10^{-5}	1.2410

Table 2: *Wiggle on discharge when a temporal simulation is performed($\Delta t = 5\,[\mathrm{s}]$). Same results as for the stationary simulation (little difference for $\Delta x = 10\,\mathrm{m}$)*

	Δx [m]	$\mathbf{q}_{\max}$	$\mathbf{q}_{\min}$	$\mathbf{q}_{\max} - \mathbf{q}_{\min}$	Order
1	0.625	4.000000056	3.999999831	2.2500×10^{-7}	—
2	1.25	4.000000386	3.999998843	1.5430×10^{-6}	2.6187
3	2.5	4.000002111	3.999993667	8.4440×10^{-6}	2.3393
4	5.0	4.000008004	3.999975988	3.2016×10^{-5}	1.9472
5	10.0	4.000012327	3.999963021	4.9306×10^{-5}	1.2410

Computation of order:

$$\frac{(q_{\max} - q_{\min})_{coarse}}{(q_{\max} - q_{\min})_{fine}} \tag{1}$$

$$\sqrt{\frac{(q_{\max} - q_{\min})_{coarse}}{(q_{\max} - q_{\min})_{fine}}} \tag{2}$$

and perhaps

$$\frac{(q_{\max} - q_{\min})_{a} - (q_{\max} - q_{\min})_{b}}{(q_{\max} - q_{\min})_{b} - (q_{\max} - q_{\min})_{c}} \tag{3}$$