

From

Eddy formation by dense flows on slopes

(a) Square tank 15.7° slope.

expt. label	rotation rate (s/rev)	reduced gravity g' (cm s ⁻²)	flow rate Q (cm ³ s ⁻¹)	fluid depth (above shelf) H (cm)	eddy speed (cm s ⁻¹)	eddy interval (s)
4	11.8	48.4	21	6.0	1.8	36
5	11.8	96.2	28	6.0	2.5	32
6	5.6	99.6	30	6.1	3.4	20
7	5.6	49.5	30	6.0	4	22
8	3.3	49.6	30	6.0		15
9	3.3	98.0	31	6.1	4.2	14
10	5.7	48.6	29	6.0	3.8	19.1
11	5.7	26.3	20	6.0	2.2	21
17	6.0	27.1	21	6.2	2	24
18	6.0	52.1	21	6.2	2.8	23
19	6.0	138.7	22	6.2		
20	6.0	25.9	22	33.4		
21	6.0	51.0	26	33.5		
22	6.0	50.0	27	13.7	1.5	29
23	6.0	49.0	28	8.7	2.8	24
26	6.0	28.0	27	8.5	2.9	26
27	6.0	26.0	27	13.6	2.8	31.4
28	6.0	26.6	27	18.6	2	34
29	6.0	101.8	28	13.6	2	30
30	6.0	97.2	27	19.0		34
31	6.0	98.9	28	8.6	2.9	23
32	12.2	49.2	25	13.7		106
33	12.2	50.5	24	23.6		

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34	12.2	26.2	26	3.4	2	29.6
35	6.0	49.4	25	3.5	3	15.8
36	6.0	50.1	25	18.7		42.5
37	8.0	98.4	27	3.7	2.7	21.5
39	12.2	96.1	24	28.6		

(b) Square tank 5.7° slope.

expt. label	rotation rate (s/rev)	reduced gravity g' (cm s^{-2})	flow rate Q ($\text{cm}^3 \text{s}^{-1}$)	fluid depth (above shelf) H (cm)	eddy speed (cm s^{-1})	eddy interval (s)
41	10.0	49.7	26	3.0	2.3	41
42	10.0	50.2	26	5.9	1.6	46
43	10.0	50.0	26	12.2	1.3	72
44	10.0	51.6	25	23.7		
45	20.0	50.9	26	2.9	0.8	78
46	20.0	49.3	26	5.9	1.3	14
47	20.0	51.8	25	12.0		
48	20.0	60.1	23	23.9		
49	20.0	96.4	26	3.0		
50	20.0	99.4	27	6.0		
51	9.9	25.1	26	2.9	2	39
52	10.0	99.6	27	2.8	1	36.5

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(c) Circular tank 13.8° slope.

expt. label	rotation rate (s/rev)	reduced gravity g' (cm s ⁻²)	flow rate Q (cm ³ s ⁻¹)	fluid depth (above shelf) H (cm)	eddy speed (cm s ⁻¹)	eddy interval (s)
C1	5.0	51.0	27	4.2	4	11
C2	9.9	49.8	23	4.9	1.1	
C3	10.0	48.4	24	4.9	1.3	35.8
C4	9.9	50.1	23	9.9	1.1	53.8
C5	9.9	53.2	25	19.9		
C6	5.0	51.5	27	4.3	2.6	13.5
C7	4.9	53.0	27	9.4	2.2	19.4
C8	4.9	51.7	26	19.3	1.7	28.5
C9	5.0	27.1	27	4.4	2.3	14.3
C10	5.0	26.5	26	9.4	2.1	20.3
C11	9.9	26.1	26	4.9	1.5	30
C12	9.9	27.9	26	9.9	1.5	44
C13	5.0	101.9	27	4.4	2.7	13.5
C14	5.0	99.3	27	9.4	2.7	18.5
C15	10.0	99.0	26	4.9	1.3	
C16	10.0	98.6	27	9.9	1.3	
C17	5.0	11.7	27	4.4	1.7	13.9
C18	5.0	11.7	27	9.4	1.5	21.6
C19	10.0	11.7	27	4.9	1.5	27.9
C20	10.0	11.7	27	9.4	1.3	41.2
C24	3.0	3.8	25	5.0	1.6	
C25	3.0	10.2	25	5.0	2	10.2
C26	6.0	5.8	25	5.0	1.1	18.7

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C27	6.1	10.7	25	5.0	1.4	18.6
C28	12.0	5.2	25	5.0	1	36.9
C29	12.0	10.0	25	5.0	1.1	38.5

(d) Circular tank 13.8° slope, injected source.

expt. label	rotation rate (s/rev)	reduced gravity g' (cm s ⁻²)	flow rate Q (cm ³ s ⁻¹)	fluid depth (above shelf) H (cm)	eddy speed (cm s ⁻¹)	eddy interval (s)
C40	6.0	52.0	33.3	3.4		18.7
C41	6.2	52.7	33.3	3.4		22.5
C42	6.0	51.7	33.3	11.4		
C43	6.0	51.9	33.3	7.5		24.4
C44	6.0	49.1	18.3	3.5		19.2
C45	6.0	49.7	18.3	7.5		
C46	6.0	49.1	18.3	11.5		
C47	12.0	52.6	33.3	11.8		
C48	12.0	52.6	33.3	3.9		
C49	12.0	50.8	33.3	7.9		
C50	4.0	50.0	37.5	10.7		17.8
C51	4.0	51.3	33.3	2.7	3.3	9.3
C52	4.0	50.9	33.3	6.7	2.9	13.1
C53	8.0	51.3	33.3	3.7		
C54	8.0	50.5	33.3	7.6		
C55	8.0	52.4	33.3	11.7		
C56	4.0	51.4	20.0	2.7	3.1	10
C57	4.0	51.2	20.0	6.6	2.6	14
C58	4.0	50.7	20.0	10.6	1.9	18.7

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C59	8.0	51.6	20.0	3.7		21.9
C60	8.0	49.8	20.0	7.7		
C61	8.0	51.5	20.0	11.7		