

Table 1: invariants of floppable curves C in 3-fold X.

$N_{dx}$ bidegree	$ext^1$	width [Reid]	Dynkin type	$N$ -seq
$(-1, -1)$	0	1	$A_1$	$(-1, -1)$
$(-2, 0)$	1	2		$(-2, 0) (-1, -1)$
		3		$(-2, 0)^2 (-1, -1)$
		⋮		⋮
$(-3, 1)$	2	$N/A$	$D_4$	$(-3, 1) (-2, -1) (-1, -1)$
			$E_6$	— $(-3, 0)$ —
			$E_7$	
			$E_8$	
			$E'_8$	— $(-3, 0)^2$ —

\*  $ext^1 = \dim Ext^1(E, E)$ , where  $E := \mathcal{O}_C(-1)$

Table 2: examples of tilting & contractio algebras

	$A$	contractio algebra $A_{con}$
<p>① Atiyah</p>		<p><math>\mathbb{C}</math></p>
<p>② Pagoda (3.10)</p>		
<p>③ Laufer (D4) (3.14) [Aspinwall-Morrison, Matrix fact]</p>		

Table 3

Dynkin type	$wid(c)$ lower bound
A	1
$D_4$	4
$E_6$	12
$E_7$	24
$E_8(5)$	40
$E_8(6)$	61