

TABLE OF LATTICES

ICHIRO SHIMADA AND DAVIDE CESARE VENIANI

This is the table of lattices $M_{10,3}^{144}, \dots, N_{10,2048}^{0,274}$ that appear in Table 3.1 of the paper

“Enriques involutions on singular K3 surfaces of small discriminants”.

TABLE 0.1. Lattices appearing in Table 3.1.

Name	Gram matrix
$M_{10,3}^{144}$	$[2, 1, 2, 1, 0, 2, 0, 0, 1, 3, 1, 0, 0, 0, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,3}^{246}$	$[2, 1, 2] \oplus E_8$
$N_{10,4}^{244}$	$[2] \oplus [2] \oplus E_8$
$M_{10,5}^{92}$	$[2, 1, 2, 0, 1, 2, 0, 0, 1, 2, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 0, 0, 0, 3]$
$M_{10,5}^{132}$	$[2, 1, 2, 1, 0, 2, 0, 0, 1, 2, 1, 0, 0, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 3, 0, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 2]$
$M_{10,5}^{242}$	$[2, 1, 3] \oplus E_8$
$M_{10,5}^{60,5}$	$[2, 1, 2, 0, 1, 2, 0, 0, 1, 2, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 3, 1, 0, 0, 0, 0, 2, 0, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 1, 2]$
$M_{10,6}^{242}$	$[2] \oplus [3] \oplus E_8$
$M_{10,6}^{112}$	$[2, 1, 2, 1, 0, 2, 0, 0, 1, 3, 1, 0, 0, 0, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 3]$
$N_{10,7}^{144}$	$[2, 1, 2, 1, 0, 2, 0, 0, 1, 4, 1, 0, 0, 0, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,7}^{247}$	$[2, 1, 4] \oplus E_8$
$M_{10,8}^{84,7}$	$[2, 1, 2, 0, 1, 2, 1, 0, 0, 2, 0, 0, 1, 2, 0, 0, 0, 1, 3, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 2]$
$M_{10,8}^{112}$	$[2, 1, 2, 0, 1, 2, 0, 0, 1, 2, 0, 0, 0, 1, 2, 1, 0, 0, 0, 2, 1, 0, 0, 0, 0, 2, 0, 0, 0, 0, 1, 3, 0, 0, 0, 0, 0, 1, 3]$
$N_{10,8}^{138}$	$A_3 \oplus E_7$
$M_{10,8}^{10,8}$	$[2, 1, 2, 1, 0, 2, 1, 0, 0, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 1, 3]$
$N_{10,8}^{146}$	$[2] \oplus D_9$
$M_{10,8}^{240}$	$[3, 1, 3] \oplus E_8$
$N_{10,8}^{242}$	$[2] \oplus [4] \oplus E_8$
$M_{10,9}^{60,9}$	$[2, 1, 2, 1, 0, 3, 0, 0, 1, 2, 0, 0, 0, 1, 2, 0, 0, 0, 1, 0, 0, 2, 0, 0, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 0, 0, 2, 0, 0, 0, 0, 0, 1, 2]$
$M_{10,9}^{70,9}$	$[2, 1, 3, 0, 1, 2, 1, 0, 0, 2, 0, 0, 0, 1, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 0, 2, 0, 0, 0, 0, 1, 2]$
$M_{10,9}^{80,9}$	$[3, 1, 2, 1, 0, 2, 0, 0, 1, 2, 0, 0, 0, 1, 2, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 1, 0, 0, 0, 2]$
$M_{10,9}^{90,9}$	$[2, 1, 2, 0, 1, 2, 1, 0, 0, 2, 0, 0, 1, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 0, 3]$
$M_{10,9}^{128}$	$[2, 1, 2, 0, 1, 2, 0, 0, 1, 3, 0, 0, 0, 1, 2, 0, 0, 0, 1, 3, 1, 0, 0, 0, 0, 2, 0, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 0, 0, 2]$
$M_{10,9}^{139}$	$[2, 1, 2] \oplus [2, 1, 2, 0, 1, 2, 0, 0, 0, 1, 3, 1, 0, 0, 0, 0, 2, 0, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 0, 2]$
$M_{10,9}^{240}$	$[3] \oplus [3] \oplus E_8$
$M_{10,9}^{242}$	$[2, 1, 5] \oplus E_8$
$N_{10,15}^{90}$	$[2, 1, 4, 1, 0, 2, 0, 0, 1, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 2, 0, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,15}^{92}$	$A_4 \oplus E_6$

Continued on next page

Table 0.1 – continued from previous page

Name	Gram matrix
$N_{10,15}^{112}$	$[2, 1, 2, 0, 1, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 0, 4, -1, 0, 0, 0, 0, 0, 1, 0, 2, 1, 0, 0, 0, 0, 0, 0, 0, 4]$
$N_{10,15}^{132}$	$[2, 1, 2] \oplus [2, 1, 2, 1, 0, 2, 0, 0, 1, 2, 1, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 4]$
$N_{10,15}^{140}$	$[2, 1, 2, 1, 0, 2, 0, 0, 1, 6, 1, 0, 0, 0, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,15}^{240}$	$[4, 1, 4] \oplus E_8$
$N_{10,15}^{242}$	$[2, 1, 8] \oplus E_8$
$N_{10,23}^{74}$	$[2, 1, 2, 0, 1, 2, 0, 0, 0, 1, 2, 0, 0, 0, 2, 0, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 0, 0, 4, 0, 0, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,23}^{84}$	$[2, 1, 2, 0, 1, 2, 1, 0, 0, 2, 1, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 4, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,23}^{102}$	$[2, 1, 2, 1, 0, 2, 0, 0, 1, 4, 1, 0, 0, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 4]$
$N_{10,23}^{132}$	$[2, 1, 2, 1, 0, 2, 0, 0, 1, 2, 1, 0, 0, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 6, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,23}^{144}$	$[2, 1, 2, 1, 0, 2, 0, 0, 1, 8, 1, 0, 0, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,23}^{240}$	$[4, 1, 6] \oplus E_8$
$N_{10,23}^{242}$	$[2, 1, 12] \oplus E_8$
$N_{10,31}^{60}$	$[2, 1, 2, 1, 0, 2, 0, 0, 1, 2, 1, 0, 0, 4, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,31}^{72}$	$[2, 1, 4, 0, 2, 4, 0, 0, 1, 2, 0, 0, 0, 1, 2, 1, 0, 0, 0, 2, 0, 0, 0, 1, 2, -1, 0, 0, 0, 0, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 1, 0, 0, 1, 2]$
$N_{10,31}^{86}$	$[2, 1, 2, 0, 1, 2, 0, 0, 1, 2, 0, 0, 0, 1, 2, 1, 0, 0, 0, 2, 1, 0, 0, 0, 0, 2, 0, 0, 0, 0, 1, 4, 0, 0, 0, 0, 0, 2, 4, 0, 0, 0, 0, 1, 2]$
$N_{10,31}^{100}$	$[2, 1, 2, 0, 1, 2, 0, 0, 1, 2, 0, 0, 0, 1, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,31}^{112}$	$[2, 1, 2, 0, 1, 2, 1, 0, 0, 4, 0, 0, 1, 2, 0, 0, 0, 1, 2, -1, 0, 0, 0, 0, 2, 0, 0, 0, 1, 0, 1, 2, 0, 0, 0, 1, 0, 0, 0, 6]$
$N_{10,31}^{128}$	$[2, 1, 2, 0, 1, 2, 1, 0, 0, 2, 0, 0, 1, 2, 1, 0, 0, 0, 2, 0, 0, 0, 1, 0, 4, 0, 0, 0, 0, 1, 4, 0, 0, 0, 0, 0, 1, 2]$
$N_{10,31}^{144}$	$[2, 1, 2, 0, 1, 2, 0, 0, 1, 2, 0, 0, 0, 1, 2, 0, 0, 0, 0, 1, 2, 1, 0, 0, 0, 0, 2, 0, 0, 0, 1, 0, 4, 0, 0, 0, 0, 0, 1, 10]$
$N_{10,31}^{240}$	$[4, 1, 8] \oplus E_8$
$N_{10,31}^{242}$	$[2, 1, 16] \oplus E_8$
$N_{10,1024}^{0,308}$	$[4, 2, 4, 0, 2, 4, 0, 0, 1, 4, 0, 0, 2, 4, 2, 0, 0, 0, 4, 2, 0, 0, 0, 0, 4, 2, 0, 0, 0, 0, 2, 4, 0, 0, 0, 0, 0, 0, 2, 4]$
$N_{10,1792}^{0,274}$	$[4, 2, 4, 0, 2, 4, 0, 0, 1, 4, 0, 0, 1, 4, 2, 0, 0, 0, 4, 0, 0, 0, 2, 4, 0, 0, 0, 0, 2, 4, 0, 0, 0, 0, 0, 2, 4, 2, 0, 0, 0, 0, 0, 4]$
$N_{10,2048}^{0,210}$	$[4, 2, 4, 2, 0, 4, 2, 0, 0, 4, 0, 0, 2, 4, 0, 0, 0, 2, 4, 0, 0, 0, 2, 4, 0, 0, 0, 0, 2, 4, 0, 0, 0, 0, 2, 4, 0, 0, 1, 0, 0, 0, 0, 4]$
$N_{10,2048}^{0,250}$	$[4, 2, 4, 1, 0, 4, 0, 0, 1, 4, 0, 0, 2, 4, 0, 0, 0, 2, 4, 0, 0, 0, 2, 4, 2, 0, 0, 0, 4, 0, 0, 0, 2, 0, 2, 4, 0, 0, 0, 0, 0, 4]$
$N_{10,2048}^{0,274}$	$[4] \oplus [4, 2, 4, 0, 2, 4, 0, 0, 4, 0, 0, 0, 2, 4, 0, 0, 0, 2, 4, 1, 0, 0, 0, -2, 0, 0, 4, 0, 0, 0, 0, 0, 2, 4]$

(I. Shimada) DEPARTMENT OF MATHEMATICS, GRADUATE SCHOOL OF SCIENCE, HIROSHIMA UNIVERSITY, 1-3-1 KAGAMIYAMA, HIGASHI-HIROSHIMA, 739-8526 (JAPAN)

Email address: `ichiro-shimada@hiroshima-u.ac.jp`

(D. C. Veniani) INSTITUT FÜR MATHEMATIK, FB 08 - PHYSIK, MATHEMATIK UND INFORMATIK, JOHANNES GUTENBERG-UNIVERSITÄT, STAUDINGERWEG 9, 4. OG, 55128 MAINZ (GERMANY)

Email address: `veniani@uni-mainz.de`