Gyration Point 3.21

I. Tables and chairs

"Even quite ungainly objects, like chairs and tables, will become almost spherical if you wrap them in enough newspaper."

Martin Q Larsson

play each repetition
4-40 times, until you
find a good groove

Allegro leggiero molto

on cue

A

B

Flute
Clarinet in B♭
Trombone
Vibraphone
Piano
Violin
Violoncello

bucket mute

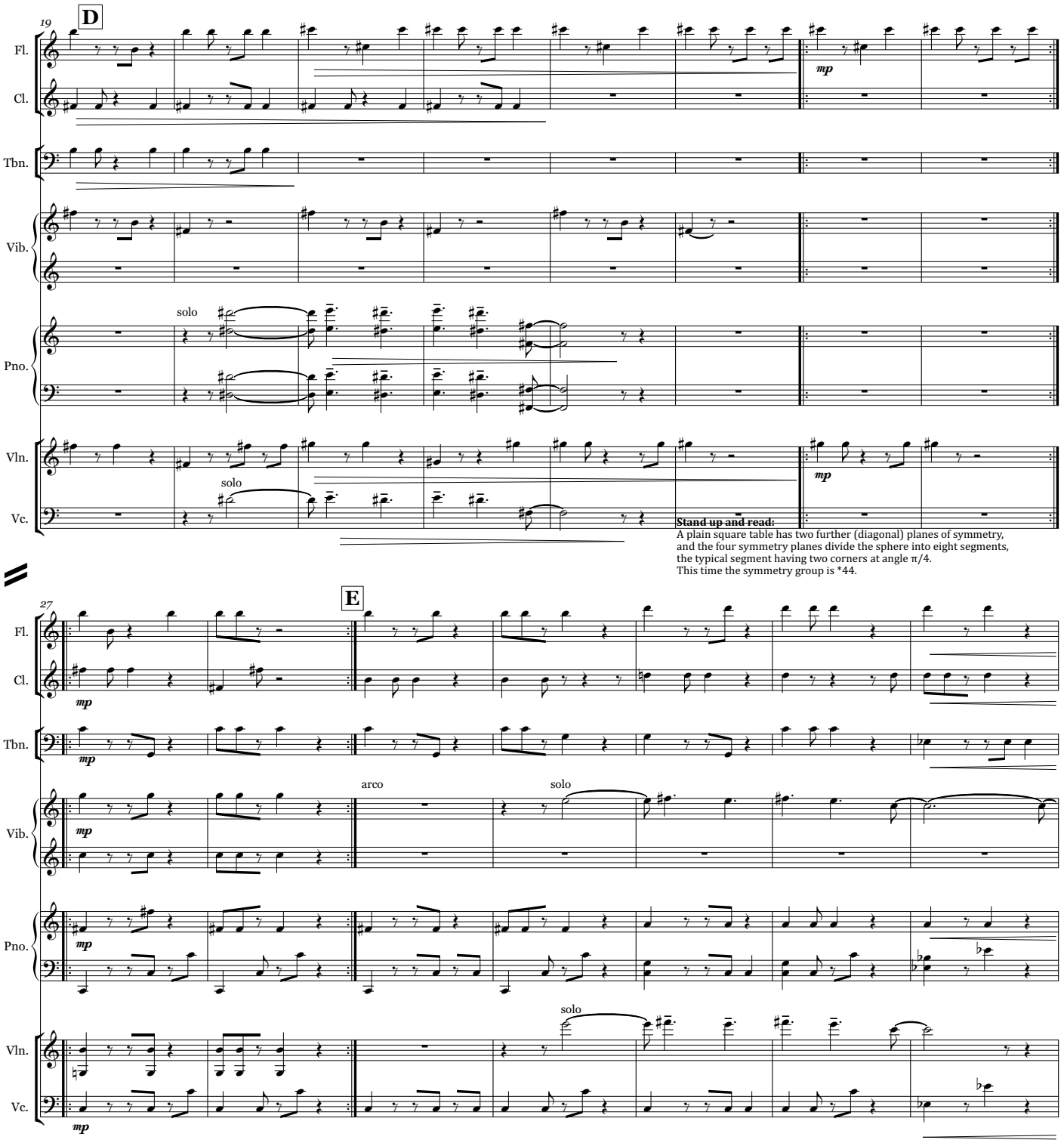
slight vibrato, medium clubs

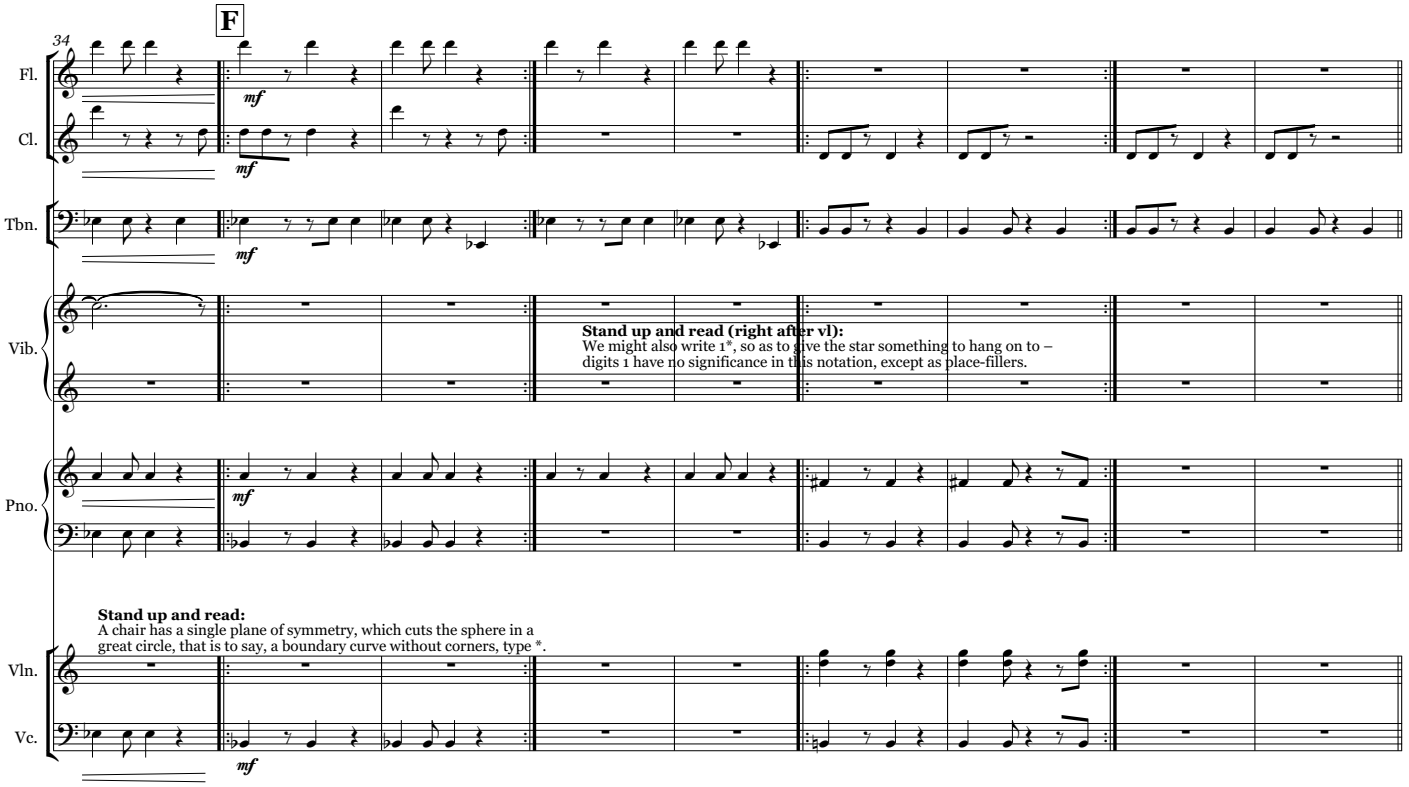
on cue

Stand up and read:
A plain rectangular table has two planes of symmetry, which divide the sphere into four segments. We can consider any one of these segments as the orbifold – its boundary consists of two semicircles that intersect each other at the zenith and at the nadir, at angle π/2. So this boundary curve has type *22, and indeed *22 is the orbifold notation for the symmetry group of the table.

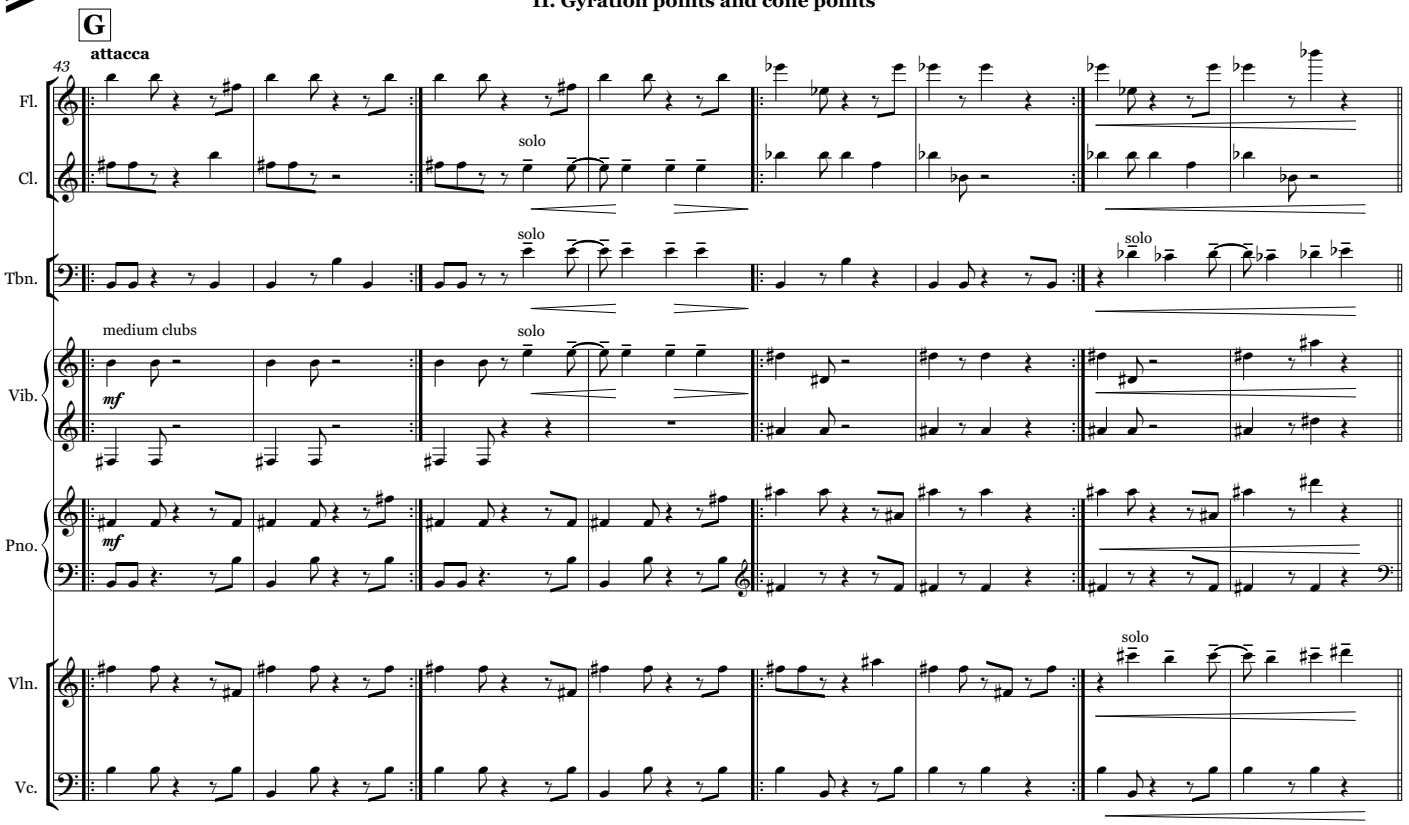
C

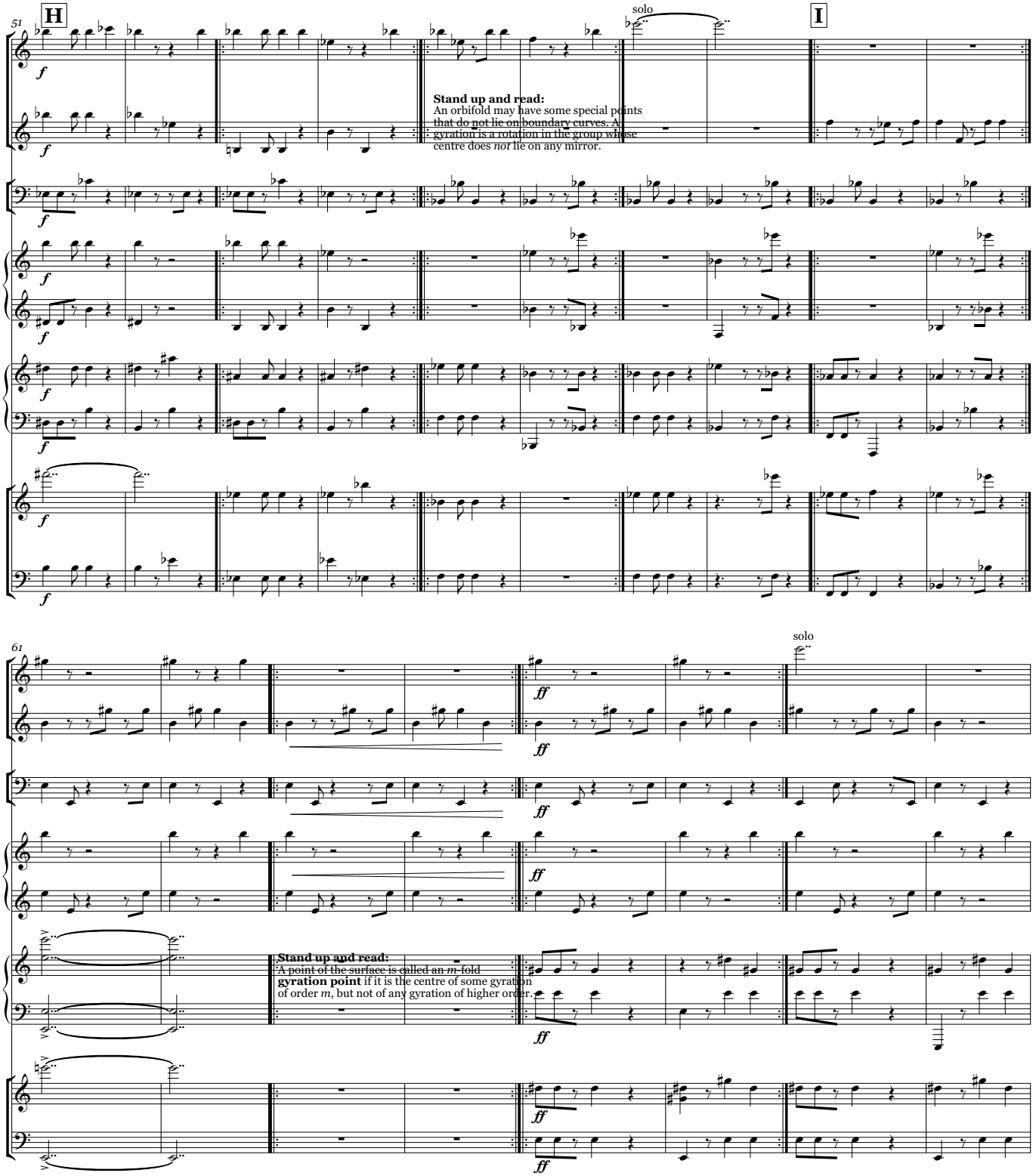
Fl.
Cl.
Tbn.
Vib.
Pno.
Vln.
Vc.

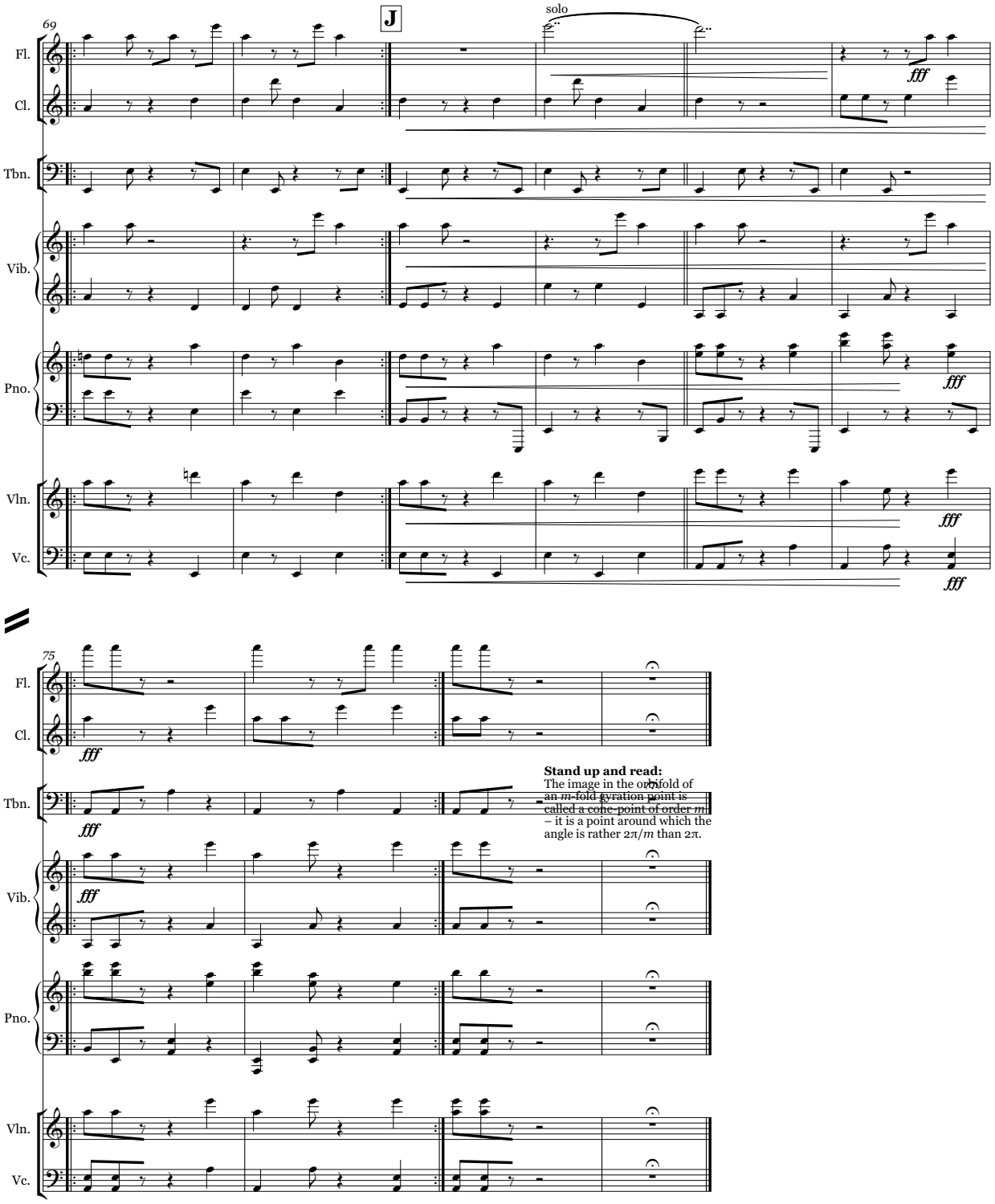

19
D
Fl.
Cl.
Tbn.
Vib.
Pno.
Vln.
Vc.
mp
solo
Stand up and read:
A plain square table has two further (diagonal) planes of symmetry,
and the four symmetry planes divide the sphere into eight segments,
the typical segment having two corners at angle π/4.
This time the symmetry group is *44.
27
E
arco
solo



II. Gyration points and cone points




51
H
I
solo
Fl.
Cl.
Tbn.
Vib.
Pno.
Vln.
Vc.
Stand up and read:
An orbifold may have some special points that do not lie on boundary curves. A gyration is a rotation in the group whose centre does *not* lie on any mirror.
61
solo
Stand up and read:
~~A point of the surface is called an *m*-fold~~
gyration point if it is the centre of some gyration of order *m*, but not of any gyration of higher order.


69
J
solo
Fl.
Cl.
Tbn.
Vib.
Pno.
Vln.
Vc.
fff
75
Stand up and read:
The image in the orbifold of an m-fold gyration point is called a cone-point of order m – it is a point around which the angle is rather 2π/m than 2π.