The two torus admits a symmetry or $Z_2$ action by conjugating the co-ordinates $(z_1, z_2)$. This amounts to a rotation by $180^0$ as follows:

Taking a fundamental domain of a triangle and identifying edges results in a tetrahedron or sphere with four singular points:
Performing the analogous symmetry on a non-commutative two torus, thought of as a Kronecker flow through an angle theta, one obtains a singular flow on the sphere with four singular points.

The following slides illustrate these toroidal orbifolds for varying values of the rotation theta.
For more information about toroidal orbifolds or non-commutative spheres:


