## Tomographic Study of Buckled Bar Models

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We perform the tomographic study of the bars from three N-body simulations with different buckling strengths. The spatial distributions of the number density, average velocity and velocity dispersion of different slices in the Y-Z, X-Z and X-Y planes within the bar are extracted and analyzed. For the models with buckled bar, the velocity dispersions are larger in the inner boxy/peanut-shaped region than the outer thin part of the bar. On the other hand, the surface densities of the three bars can all be well described by a Sersic function, with the stronger buckled bar a larger Sersic index. Therefore the buckling process not only produces a more centrally concentrated boxy/peanut-shaped structure, but also increases the corresponding central velocity dispersion. In addition, we found a positive correlation between  $V_X$  and  $V_Z$  of particles in the X-shaped over-densities. This is in good agreement with theoretical works on the orbital analyses.