

In addition to addressing the reviewer’s comments below, we removed one panel from Figure 2, showing the highest mass model. We also removed reference to that model in Section 2.3, the final paragraph of Section 3, and the first paragraph of Section 3.1. Given the results of the work we think the focus should be on the lower mass models shown in Figure 2 and discussed in the text.

Reviewer’s Comments:

The authors show that 2 terrestrial mass planets can explain the gaps observed in the inner disc regions of TW Hya from dust thermal emission, and at the same time a Saturn mass planet can explain the gap observed in the outer disc region from scattered light and CO observations. The work has improved considerably after having ran extra simulations with 1 mm dust grains. The main points raised in the previous referee report have been addressed. I recommend publication on MNRAS after minor revision. Here is a list of points that should be explained more thoroughly:

- Sec. 1 end of 4th paragraph: “Grains with St 1 experience...” This phrase is misleading. It seems like grains with St 1 are forming rings. It should be specified that this happens only when a pressure gradient is present, caused by one of the mechanisms specified in the following paragraph.

Done. Sentence amended accordingly.

- Sec. 2.2 first paragraph: 59.5 pc, not au

Done.

- Sec. 2.2 second paragraph: it is better not to state $R_{\text{in}} = 1$ au, in order not to confuse the value of R_{in} in the definition of the Surface density given later. I would just state: “Extrapolating to 1 au implies

Amended, as suggested.

- Sec. 2.2 last paragraph: what is the point of discussing the dust/gas mass ratio for the PHANTOM simulations where there is no back reaction?

Done. We added a sentence to Sec 2.1 clarifying that we do include back reaction but only from individually modelled grain sizes.

- Sec. 2.3: the first planet is placed in the region of the gas surface density profile where it is smoothed, so the density is decreasing. Isn’t this affecting the gap profile?

We agree. We added a caveat in the first paragraph of the results section.

- Sec. 2.3: it is not correct to refer at the 7:2 resonance as a MMR, since this is the case only when, in a $m:n$ resonance, $m=n+1$. It should be changed to only resonance.

Done. We changed the sentence to simply give the period ratio and point out that it is close to the peak in the distribution of period ratios of Kepler planet pairs. We also moved this sentence to the introduction (in the final paragraph).

- Sec. 2.4 second-last paragraph: We then we add...(one “we” too much)

Fixed.

- Sec. 4 first paragraph: I would refer to Fig. 2 when discussing the dust thermal emission

Done.

- Sec. 4 6th paragraph: The viscosity is constrained from observations but the authors nevertheless choose the lower limit of the derived range.

Done. The viscosity constraint is a range of upper limits. We are below the upper limit. We added text to make this clearer.