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P5.3018 Voids in plasmas containing interacting variable charge dust grains

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See full abstract here http://ocs.ciemat.es/EPS2019ABS/pdf/P5.3018.pdf

A nonlinear model of void formation is proposed that includes the dust grain charge variation along with the grain-grain interaction and the effect of neutral density. It is found that the extension of the void decreases if the dust particulate charge is taken into account. Moreover, for bigger dust grains, it is seen that the wave-like structure recedes when charge variation is dealt with. Furthermore, as the grain-grain distance is inversely proportional to density, the grain-grain interaction gets more important for a denser dust population and is to be included in momentum equation. Grain-grain interaction affects the depth of the void as well as the secondary depletion rings. Finally, increasing neutral density leads to widening of depletion rings and to the appearance of new ones.

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