Matched feed horns aim to cancel cross polarization generated in offset reflector systems. An analytical method for predicting the mode spectrum generated by inclusions in such horns, e.g. stubs and pins, is presented. The theory is based on the reciprocity theorem with the inclusions represented by current sources. The model is supported by Method of Moments calculations in GRASP and very good agreement is seen. The model gives rise to many interesting observations and ideas for new or improved mode launchers for matched feeds.

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