We present a new possibility of measuring the solar diameter change using multiple bounce time-distance analysis. We show that the 2D cross-correlation function can be used to investigate travel time and path length changes to separate the effects of sound speed and travel distance perturbations. We can interpret the travel distance perturbation as the results of solar radius change. This method can be used to search for solar radius changes associated with solar activity or for comparison between observed solar radius and that used in solar models. We also present an estimate of the accuracy of the method and some preliminary results obtained with GONG low-resolution images for the period 1996-1997 which corresponds to the minimum of solar activity.

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