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Shadows and photon rings of asymmetric thin-shell wormholes

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considering the asymmetric thin-shell wormhole (ATSW) model, we find that the impact parameter of the null geodesics is discontinuous through the wormhole in general and hence we identify novel shadows whose sizes are dependent of the photon sphere in the other side of the spacetime. Furthermore, we shoe evident additional photon rings from the ATSW spacetime. Moreover, a potential lensing band between two highly demagnified photon rings is found. Our analysis provides an optically observational signature to distinguish ATWs from black holes.

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