Asympotics with a positive cosmological constant I ARUNA KESA-VAN, ABHAY ASHTEKAR, BEATRICE BONGA, The Pennsylvania State University — Since observations to date imply that our universe has a positive cosmological constant, one needs an extension of the theory of isolated systems and gravitational radiation in full general relativity from asymptotically flat to asymptotically de Sitter space-times. If one mimics the boundary conditions used in asymptotically anti-de Sitter context, then one concludes that the asymptotic symmetry group is the de Sitter group. However, these conditions severely restrict radiation and in fact rule out non-zero flux of energy, momentum and angular momentum carried by gravitational waves. Therefore, such a definition of asymptotically de Sitter space-times is uninteresting beyond non-radiative space-times. A new proposal is expounded to remedy the situation for non-stationary space-times.

Aruna Kesavan
The Pennsylvania State University