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**George A. J. Sparling\*** (gnilraps@gmail.com). *On the structure of the null geodesics of space-time.*

Null geodesics in space-time are the trajectories along which information about the past history of the universe is brought to us, the observers. In the last three years the author and Jonathan Holland have used an osculation method to produce a general cosmological theory, suitable to describe the beginning of the universe. Now we have applied similar techniques to the null geodesics that can connect us to the big bang. I will describe what we know about the space of null geodesics and what we hope to learn in the future. The overall philosophy is somewhat contrary to the prevailing view of space-time as a given tapestry: for us space-time is continually under development. (Received September 22, 2015)