Abstract Submitted
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Andrzej Trautman, Ivor Robinson, and the foundations of gravitational radiation theory DONALD SALISBURY, Austin College — It is especially pertinent following the momentous detection of gravitational waves by LIGO and the death of Ivor Robinson in 2016 that we investigate the central role played by the Polish physicist Andrzej Trautman and his dear collaborator Robinson in helping to establish the foundations of gravitational wave research. Trautman was a student of Leopold Infeld who had famously rejected the reality of gravitational waves. Yet Trautman's intuition, informed in part by his training as a radio engineer, led him to be the first to correctly pose asymptotic boundary conditions that described the mass loss of an isolated system through emitted gravitational radiation. His series of papers announcing these results were published in a then obscure Polish journal. Fortunately, though, Felix Pirani visited Warsaw in 1957 and he was so impressed with Trautman that he arranged for him to visit his group at King's College in London. Trautman's lectures in London won him wide admiration, and significantly affected the subsequent work on gravitational wave solutions of Einstein's equations in the group led by Hermann Bondi. This was also the occasion in which Trautman and Robinson discovered a deep and abiding mathematical affinity, resulting in the discovery of exact solutions of Einstein's equations that could be interpreted as representing gravitational radiation. This talk is based in part on an interview with Trautman conducted in Warsaw in June, 2016.

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