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# A novel characterisation of gravitational radiation in asymptotically flat space-times.

Francisco Fernández-Álvarez

(Work in collaboration and under supervision of José M. M. Senovilla)

*Departamento de Física Teórica e Historia de la Ciencia,  
Universidad del País Vasco UPV/EHU  
Apartado 644, 48080 Bilbao, Spain  
[francisco.fernandez@ehu.eus](mailto:francisco.fernandez@ehu.eus)*

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## Abstract

This communication deals with the study of gravitational radiation at null infinity. We find a novel criterion which determines the presence of such radiation arriving to the boundary of a conformal extension of any weakly asymptotically simple space-time with zero cosmological constant. The quantities involved are geometric and naturally well defined at null infinity. The relationship with the classical characterisation using the Bondi News function is analysed in detail.