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A kinetic approach to non resonant modes and growth rates of streaming instability: consequences for shock acceleration

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Abstract content

We present the results of a kinetic calculation of the growth rates of non resonant modes excited by streaming cosmic rays in non-relativistic shock waves. We show how different assumptions for the compensating current lead to the appearance of different modes with different growth rates. We discuss the conditions under which the modes are non resonant (a la Bell) and lead to large growth rates and large amplified magnetic fields in the shock vicinity.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 2 (OG part 1), pages 235-238

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