Abstract Submitted
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Effects of Magnetic Reconnection Processes in the Near Magnetosphere* B. COPPI, MIT, A. FLETCHER, B.U. — Magnetic reconnection processes in collisionless plasmas on the Earths dayside and nightside are shown to be capable of producing high energy populations of both ions and electrons. These particles can interact with the Radiation Belts and reach the regions close to the Earth where auroral substorms can be produced [1]. The main theoretical issues faced in identifying plasma modes with realistic characteristics, given the scale distances and time scales, that can be responsible for the needed reconnection processes are pointed out. Solution of relevant equations obtained by a combined analytical and numerical approach. *Sponsored in part by the U.S. D.O.E. and the N.S.F.
[1] B. Coppi, G. Laval, R. Pellat, *Phys.Rev.Lett.* **16**, 1207 (1966).

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