THERMAL RADIOCONTINUUM FROM BLOWOUTS AND MAGNETIC PARKER LOOPS

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Blow-outs and inflating magnetic Parker loops initiated by SNe explosions in galactic discs are believed to be responsible for the transport of gas, dust, and magnetic fields from galactic discs into the halos. Dynamically the two scenarios - blow-outs and Parker loops - differ qualitatively: the flow from a blow-out represents shocked gas restricted by two expanding discontinuities while in the magnetic Parker loop the flow is restricted from one side by the underlying hot bubble and inflating progressively outwards. The behaviour of cosmic rays (in particular, of relativistic electrons) is quite different in these two cases: in blow-outs the CRs are concentrated (and likely accelerated) between the two discontinuities, while in Parker loops they expand freely (and probably only weakly trapped by secondary shocks possible in inflating Parker outflows). We discuss these differences with a particular emphasize on their observational manifestations. Within a simple prescription of the two outflows we estimate expected radio-fluxes from relativistic electrons and show that in the outflows associated with magnetic Parker loops the radiocontinuum emission shows a deficit in comparison to blow-outs. We discuss also possibilities for the observational discrimination of these ouflow scenarios.