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Sur la transformation d'Abel-Radon des courants localement résiduels

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Abstract. After recalling the definitions of the Abel-Radon transformation of currents and of locally residual currents, we show that the Abel-Radon transform $\mathcal{R}(\alpha)$ of a locally residual current α remains locally residual. Then a theorem of P. Griffiths, G. Henkin and M. Passare (cf. [7], [9] and [10]) can be formulated as follows : *Let U be a domain of the Grassmannian variety $G(p, N)$ of complex p-planes in $\mathbb{P}^N$, $U^* := \cup_{t \in U} H_t$ be the corresponding linearly p-concave domain of $\mathbb{P}^N$, and α be a locally residual current of bidegree (N, p). Suppose that the meromorphic n-form $\mathcal{R}(\alpha)$ extends meromorphically to a greater domain $\tilde{U}$ of $G(p, N)$. If α is of type $\omega \wedge [T]$, with T an analytic subvariety of pure codimension p in U^*, and ω a meromorphic (resp. regular) q-form ($q > 0$) on T, then α extends in a unique way as a locally residual current to the domain $\tilde{U}^* := \cup_{t \in \tilde{U}} H_t$. In particular, if $\mathcal{R}(\alpha) = 0$, then α extends as a $\overline{\partial}$-closed residual current on $\mathbb{P}^N$.* We show in this note that this theorem remains valid for an arbitrary residual current of bidegree (N, p), in the particular case where $p = 1$.

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