Meeting: 1000, Albuquerque, New Mexico, SS 13A, Special Session on Analysis and Geometry in Carnot-Caratheodory Spaces

1000-43-39 **Magali Folch-Gabayet*** (folchgab@matem.unam.mx), Instituto de Matematicas, UNAM, Area de la Investigacion Cientifica, Circuito Exterior, Ciudad Universitaria, 04510 Mexico, DF, Mexico, and **James Wright**. *Singular Integral Operators Associated to Curves with Rational Components.*

We prove $L^p(\mathbb{R}^n), 1 < p < \infty$, bounds for

$$Hf(x) = p.v. \int_{-\infty}^{\infty} f(x_1 - R_1(t), \ldots, x_n - R_n(t))\, dt/t$$

and

$$Mf(x) = \sup_{h>0} \frac{1}{h} \int_0^h |f(x_1 - R_1(t), \ldots, x_n - R_n(t))|\, dt$$

where $R_j(t) = P_j(t)/Q_j(t), j = 1, 2, \ldots, n$, are rational functions. Our bounds depend only on the degrees of the polynomials P_j, Q_j and in particular, they do not depend on the coefficients of these polynomials. (Received August 03, 2004)