

Figure 1:  $[\text{OIII}] \lambda 5007 \text{ \AA}$  integrated profile along the slit at P.A.  $23^\circ$ . The prominent individual components producing the observed red asymmetry are indicated as well as the obtained fit for the overall profile.

associated with a system of giant clouds confined to the inner six arcsec from the nucleus. Considering the  $[\text{OIII}]$  luminosity,  $L([\text{OIII}]) = 1.6 \cdot 10^{40} \text{ erg} \cdot \text{s}^{-1}$ , this gives a total mass  $M_T = 5,000 M_\odot$  and energy  $E_T = E_k$  (kinetic) +  $E_t$  (turbulent) =  $3 \cdot 10^{51} \text{ erg}$  for the system of

clouds. This situation is similar to those observed in NGC 1068 ( $M_T = 186 M_\odot$ ,  $E_T = 3.7 \cdot 10^{50} \text{ erg}$ ; Pelat and Alloin, 1980) and in NGC 4151 ( $M_T = 1,100 M_\odot$ ,  $E_T = 4.7 \cdot 10^{50} \text{ erg}$ ; Pelat and Alloin, 1982) where a direct association between the nuclear radio emission and the clouds has been suggested (Wilson, 1983).

The  $[\text{OIII}]$  emission towards the NE of the nucleus at P.A.  $23^\circ$  is intriguing. In this region, Hummel et al., (1983) noted the presence of a radio elongation. A broader  $[\text{OIII}] \lambda 5007 \text{ \AA}$  line,  $\text{FWHM} \approx 300 \text{ km} \cdot \text{s}^{-1}$  and  $\text{FWQM}$  (full width at quarter maximum)  $\approx 500 \text{ km} \cdot \text{s}^{-1}$ , is observed. This line is broader at FWHM than the same line in the SW region by a factor two to three (see Fig. 2). The existence of such a relation between the

TABLE 1: Emission line components in P.A.  $23^\circ$ . Derived parameters.

Component	$V([\text{OIII}])$ $\text{km} \cdot \text{s}^{-1}$	$\text{FWHM}$ $\text{km} \cdot \text{s}^{-1}$	I/I (tot.)
$C_1$	2352	140	0.06
$C_2$	2468	109	0.55
$C_3$	2604	110	0.23
$C_4$	2734	175	0.12
$C_5$	2942	175	0.04

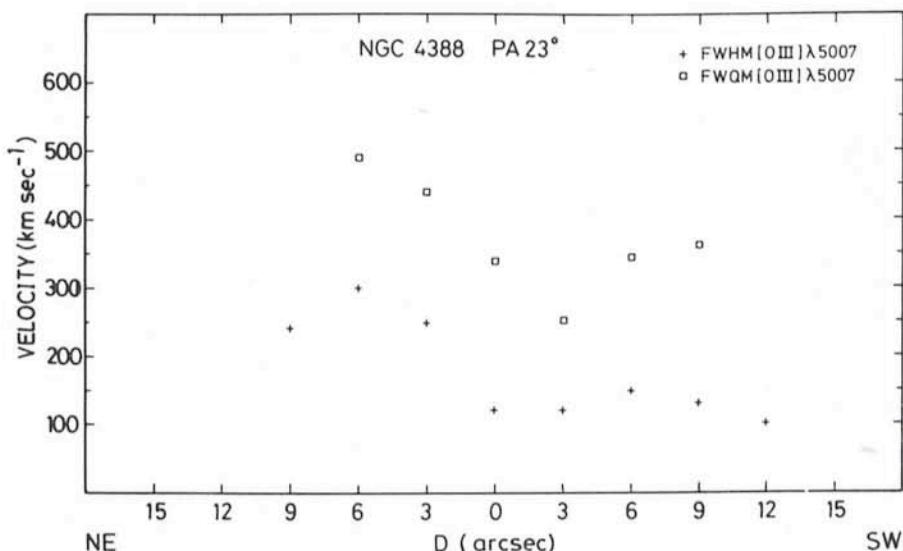


Figure 2: The FWHM and FWQM (full width quarter maximum) of the  $[\text{OIII}] \lambda 5007 \text{ \AA}$  profile as a function of distance from the optical nucleus for position angle P.A.  $23^\circ$ .

radio emission and the emission line for large samples of Seyfert galaxies has been pointed out by different authors (Wilson and Heckman, 1985 and references therein) in terms of a  $[\text{OIII}]$  luminosity and FWHM ( $[\text{OIII}]$ ) vs. 21 cm radio luminosity correlations. Also in 3 C 305 (Heckman et al., 1982), the same phenomena have been reported in the sense that the  $[\text{OIII}]$  lines appear to be broader in the regions coincident with radio emission. This suggests a direct connection between the presence of anomalous motions, radial motions, turbulence, and the existence of radio synchrotron radiation, which needs further detailed studies.

A detailed study of the extended emission line region in NGC 4388 is contained in a forthcoming paper (Colina, L., Fricke, K.J., Kollatschny, W., Perryman, M.A.C., 1987, *Astron. Astrophys. in press*). A similar study, by the same authors, of NGC 2992 was published in *Astron. Astrophys.*, **178**, 51 (May (II), 1987).

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