

SEARCHING FOR EVIDENCE OF JET-CLOUDS INTERACTION IN RADIOGALAXIES. RESULTS FOR 3C 381 & 3C 284

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We present results of *Hubble Space Telescope (HST)* and *long-slit GMOS-Gemini* observations of the radiogalaxies 3C 381 and 3C 284. HST images show extended regions of ionized gas located away from the galaxy, they are the Extended Narrow-Line Regions (ENLR, or Extended Emission Line Regions, EELR), as is postulated by the unified schemes.

We are working on the identification of the main ionization mechanism that is taking place in the emitting-gas. The three most accepted theories are being studied. The ionization by the AGN itself, described by the *ionization parameter* U which accounts for the geometrical dilution of the radiation field as the distance from the nucleus increases. The *mixed-medium* ionization, introduced by Binette et al. (1996) in order to explain some discrepancies with the observations, in particular, the high values for the HeII/H β line ratio. And finally, shock-ionization triggered by the radio jet (Dopita and Sutherland, 1995, 1996, Allen et al., 2008).

The line-ratio diagnostics show that the ionization state of these regions could be explained by the interaction between the radio jet and ENLR's material. This is in agreement with the velocity fields found in both galaxies.