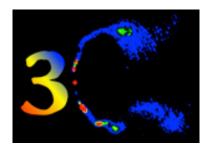
The 3C Extragalactic Radio Sky: Legacy of the Third Cambridge Catalogue



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UNVEILING THE PARTICLE ACCELERATION REGIONS IN 3C HOT SPOTS

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The discovery of diffuse optical and X-ray synchrotron emission in a number of low-power radio hotspot requires a revision of the standard scenario of particles accelerated by a single strong shock generated at the jet termination. High energy electrons like those responsible for the X-ray emission should arise from very small regions because their short lifetime should limit their emission to a narrow emitting disk. We present the results of our multi-wavelength campaign on a small sample of hot spots of the 3C catalogue. The high-sensitivity JVLA, near-infrared and optical observations allowed us to probe the small-scale structure of the hot spots, unveiling the presence of compact (<hundreds pc) features, and to resolve the distribution of the magnetic field across the hot spot. We discuss these finding in the framework of the mechanisms accelerating particles and producing the broadband radio-to-X-ray hot spot emission.

Primary author: MIGLIORI, Giulia (DIFA-INAF/IRA)

Presenter: MIGLIORI, Giulia (DIFA-INAF/IRA)

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