of Seyfert 2 show extended circumnuclear emission which is not associated to H II regions. The percentage decreases according to the Hubble type, from S0 to Sc. More Seyfert 2 than Seyfert 1 show disk emission associated to recent star formation. The percentage increases with Hubble type, from S0 to Sc. One third of the sample shows circumnuclear H II regions (a region is circumnuclear if located closer than $0.1 \times R_{25}$ from the nucleus), but only 9% of these are Seyfert 1. The number surface density of H II regions and the location of the brightest H II region, indicates that in Seyfert 2 the star formation is more important in the inner disk. However, in Seyfert 1 the distribution of H II regions is more extended, and the brightest H II regions are more distant from the nucleus than in Seyfert 2. The luminosity function, size distribution, the relationship between the Hα flux and the size, the emission measure, and the radial distribution of the H II regions in 27 out of the 55 galaxies of the sample are studied. This represents a statistical analysis of more than 2000 H II regions.

[1] Space Telescope Science Institute, Baltimore, MD 21218, USA.
[2] Instituto de Astrofísica de Andalucía (CSIC), 18080 Granada, Spain.

TRACING EXTRAGALACTIC SNRs VIA ADVANCED IR FABRY–PEROT IMAGING

M. A. Greenhouse[1], S. Satyapal[1], C. E. Woodward[2], J. Fischer[3], K. L. Thompson[4], W. J. Forrest[5], J. Pipher[5], H. A. Smith[1], and D. M. Watson[5]

Advanced technology camera and Fabry-Perot systems have opened new windows for exploration of near-by galaxies via high spatial resolution near-infrared emission line imaging. We display high spatial and spectral resolution [Fe II] 1.644 μm Fabry-Perot imaging observations of M82. We present extinction corrected [Fe II] images and discuss the nature of compact [Fe II] emission regions revealed by these new data. We conclude that these [Fe II] sources trace a population of supernova remnants in M82 that are substantially older than those revealed previously on 6 cm radiographs. In addition, we find that M82 contains a distributed [Fe II] emission component that is extended along the southern minor axis and accounts for 90% of the galaxy's [Fe II] luminosity. We find that this extended emission traces a region where the gas phase abundance of iron is at least 16% of solar. We interpret this extended emission as tracing disk material entrained in a super wind which has broken out of the galactic disk to the south. We find that the [Fe II]/Brγ line ratio throughout M82 correlates with the age of the starburst as reflected by the color of photospheric emission from the galaxy's stars. This correlation suggests that the [Fe II] emission regions in M82 are co-located with a post main sequence stellar population rather than H II regions.

[1] National Air and Space Museum, Smithsonian Institution, Washington, DC, USA.
[2] Department of Physics and Astronomy, University of Wyoming, Laramie, WY, USA.
[3] Remote Sensing Division, Naval Research Laboratory, Washington, DC, USA.
[4] Department of Astronomy, University of Texas, Austin, TX, USA.
[5] Department of Physics and Astronomy, University of Rochester, Rochester, NY, USA.

BVR–PHOTOMETRY OF THE COMPACT OBJECTS INTERACTING WITH THE NUCLEI OF ACTIVE GALAXIES

I. Pronik[1], L. Sharipova[1], and V. Prokoféva[1]

The observational data evidencing the interaction of active galaxies (NGC 1275, NGC 7469, Markarian 290, Markarian 298, 3C 120 and 3C 390.3) with compact objects have been collected. There are signs of disturbances in the regular structure of the host galaxies. To investigate the nature of the compact objets, *BVR* magnitudes were observed on the TV-complex of the 0.5-m telescope of the Crimean Observatory: $16\overset{m}{.}00 \leq V \leq 19\overset{m}{.}86$; $-0\overset{m}{.} \leq (B-V) \leq 1\overset{m}{.}085$; $0\overset{m}{.}95 \leq (V-R) \leq 1\overset{m}{.}65$. The position of the objects on the two-colour diagram, $(B-V)$ - $(V-R)$, indicates that 5 of them contain stellar population similar to those of the central regions of the host galaxies. Absolute magnitudes of these objects are about $M_v = -18\overset{m}{.}5$, but compact object of 3C 390.3 is one magnitude weaker. The full text will be published in the Bulletin of the Crimean Observatory.

[1] Crimean Astrophysical Observatory, Ukraine.
