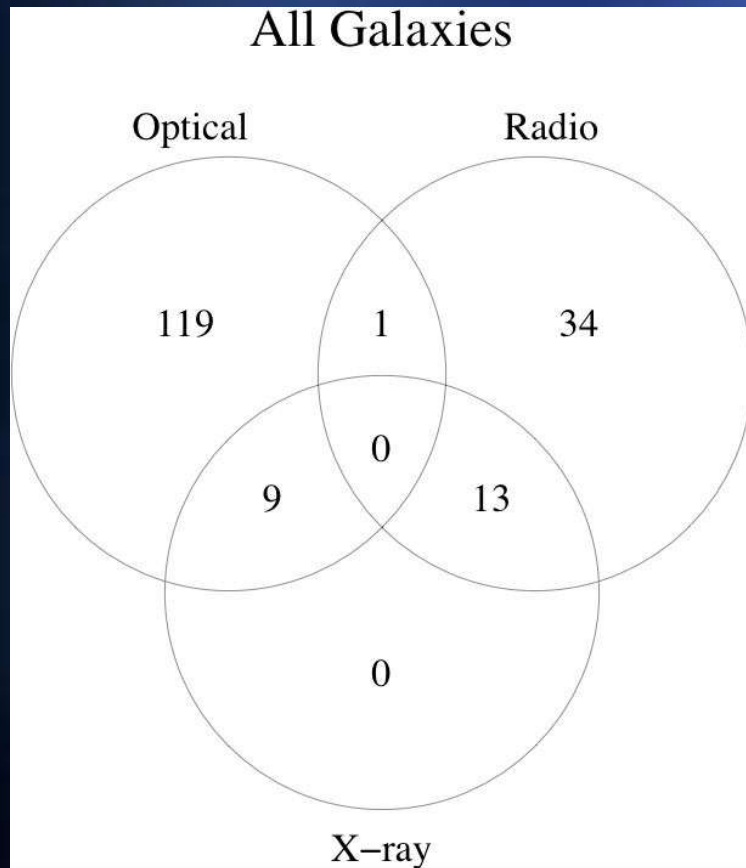


Wavelength-Dependent Selection Effects in Searches for SNRs in Nearby Galaxies



Pannuti, Schlegel and Lacey, 2004, *AJ*, submitted

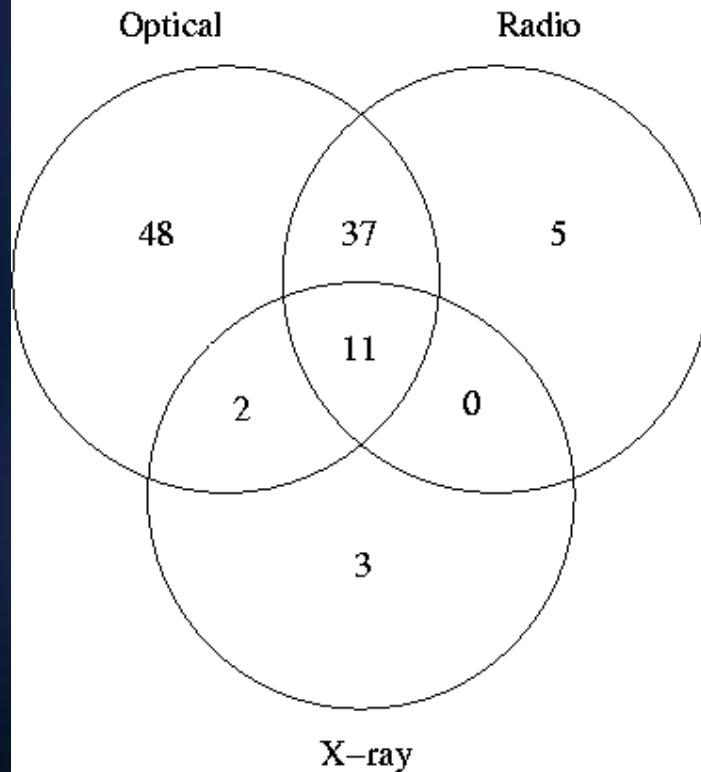
Venn diagram depicts optical, radio and X-ray (*Chandra*) detections of SNRs in five nearby spiral galaxies (M81, M101, NGC 2403, NGC 4736 and NGC 6946) (Limiting L_x ? $2-4 \times 10^{36}$ ergs/sec)

Little radio/optical overlap, more X-ray/radio overlap than X-ray/optical overlap (27% vs. 8%)

Effects of ambient density and confusion? Other biases and selection effects?

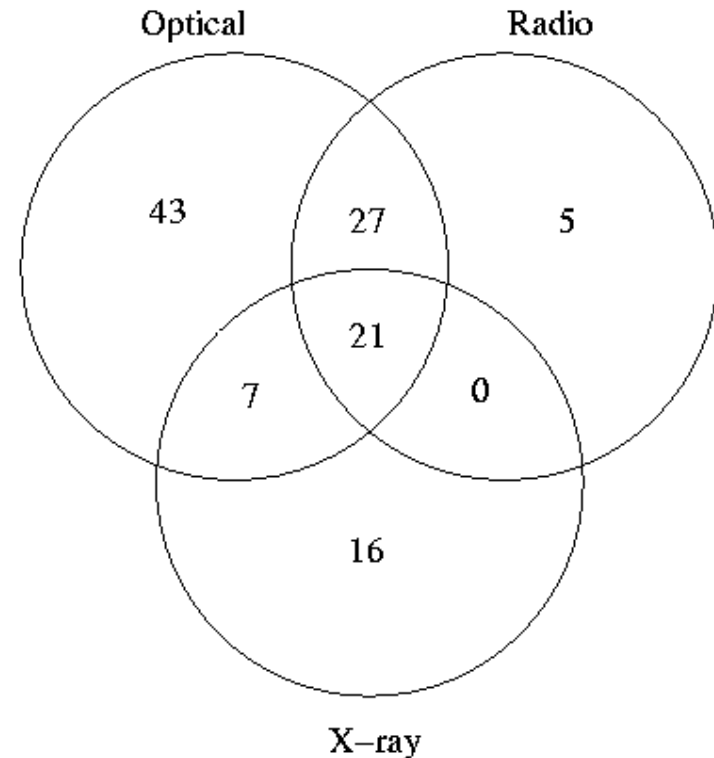
Venn Diagrams of Detected SNRs in M33

Multiwavelength Detections of SNRs in M33 (ROSAT PSPC)



(Haberl & Pietsch 2001;
Pannuti et al. 2005, in prep.)

Multiwavelength Detections of SNRs in M33 (XMM-Newton)



(Pietsch et al. 2004;
Pannuti et al. 2005, in prep.)

Etc. ...

XRB/SNR Associations (e.g., MF16 in NGC 6946, MF22 in M81); also, X-ray counterparts to radio and optical SNRs with “discordant” X-ray colors

IR (Spitzer) and Radio (Single Dish+VLA) complementary data?

Pulsar wind nebulae (X-ray sources coincident with discrete radio sources with thermal spectra)? E.g., 7 such associations found in NGC 6946 (Holt et al.)