

PLANETARY NEBULAE NEAR THE GALACTIC CENTER I: METHOD OF DISCOVERY AND PRELIMINARY RESULTS

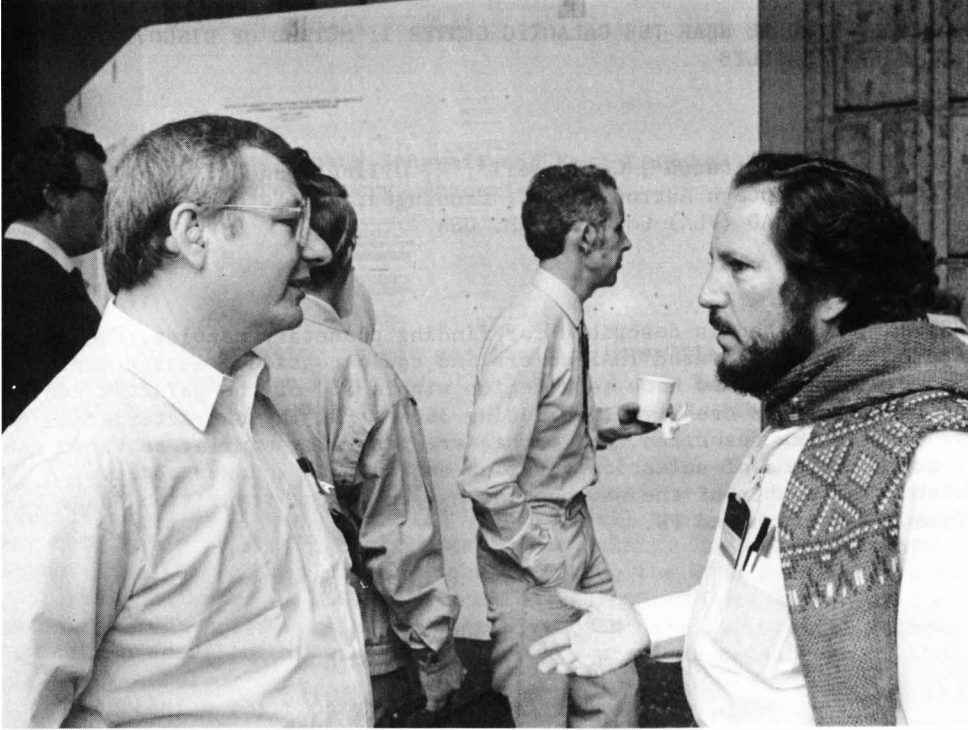
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ABSTRACT. A method is described for finding planetary nebulae. Use is made of the far infrared IRAS colors and radio continuum measurements. The method is applied here to a region within 15° of the galactic center. The first results are given, including 36 new PN. The characteristics of the nebulae are described. While they are generally similar to known nebulae, the method of selection gives an emphasis to younger objects. A substantial number of the new nebulae may be in the transition phase between OH/IR stars and PN.

AN INFRARED SEARCH FOR NEW PLANETARY NEBULAE

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ABSTRACT. We present the first results of a large scale infrared search for new planetary nebulae. More than 1000 unidentified sources were selected from the IRS PSC having infrared colours similar to those of known PN's. Subsequent near-infrared photometry and optical spectroscopy will be made to investigate their precise nature. We report here one to five microns photometry of 30 such sources obtained with the 1.5-m CSM telescope (Tenerife, Spain). The preliminary results indicate that many of the observed sources have near infrared colours of heavily reddened PN's (A_V greater than 30 magnitudes in some cases), while a smaller fraction could represent obscured normal stars or giants surrounded by circumstellar envelopes.



Foreground: Reginald Dufour and Rafael Costero. Background: Malcolm Smith.