

[Sign on](#)[SAO/NASA Astrophysics Data System \(ADS\)](#)

Bibcode: [1990RMxAA..21..169K](#) [Thumbnails](#) [Previous page](#) [Next page](#)

X-RAYS AND INFRARED SELECTED AGN

Sofia D. Kirhakos

and

João E. Steiner^(*)Departamento de Astrofísica
Instituto de Pesquisas Espaciais, Brazil

RESUMEN. En la búsqueda de núcleos activos galácticos (NAG) oscurecidos, seleccionamos una muestra de galaxias emisoras de rayos S infrarrojos, la mayoría de las cuales son vistas de perfil. La espectroscopia óptica de la región nuclear de las galaxias seleccionadas revelan que el 76% de ellas muestran líneas de emisión. La clasificación de los espectros de acuerdo a los anchos y a la intensidad de cocientes de líneas muestran que existen 34 NAG, 34 objetos de tipo de transición y 34 galaxias de la región con núcleos de tipo región H II. Entre los NAG, 3 son del tipo Seyfert I y las otras son del tipo 2. Sugerimos que los objetos identificados como NAG de líneas angostas son objetos tipo Seyfert I oscurecidos.

ABSTRACT. Looking for obscured active galactic nuclei (AGN), we selected a sample of infrared/X-rays emitting galaxies, most of which are seen as edge-on. Optical spectroscopy of the nuclear region of the selected galaxies revealed that 76 % of them show emission lines. Classification of the spectra according to the widths and line intensity ratios shows that there are 34 AGN, 34 transition type objects and 43 nuclear HII-like region galaxies. Among the AGN, three are Seyfert type 1 and the others are type 2 objects. We suggest that the objects identified as narrow line AGN are obscured Seyfert 1.

Key words: GALAXIES-ACTIVE — X-RAYS-GENERAL

I. INTRODUCTION

The majority of the known Seyfert Galaxies (SGs) were discovered through optical surveys. Keel (1980) showed that there is a paucity of edge-on galaxies among the Seyferts. A plausible explanation is that optical radiation coming from the active nucleus is absorbed in the galactic plane of a galaxy seen as edge-on. The distribution of axial ratio for a large sample of SGs shows that edge-on objects of both classes, Sy 1 and Sy2, are missing (Kirhakos and Steiner 1989a); that indicates that both BLR and NLR are affected by obscuration.

To find the missing edge-on SGs, we propose to search for hard X-rays and/or infrared emission, because photons from these wavelengths are not absorbed. We applied the following criteria: to select IRAS galaxies from "Cataloged Galaxies and QSOs observed with IRAS survey" (Lonsdale et al. 1985) that lie inside/close to the error boxes of hard X-rays sources not optically identified yet (HEAO-1; Wood et al. 1984). This way, 144 IRAS galaxies were selected.

We measured the axial ratio for the X-ray/infrared selected sample from the Palomar/ESO photographic plates. As a comparison sample, 260 infrared emitting galaxies were

(*) On leave from Instituto Astronômico e Geofísico - Universidade de São Paulo.

Other Retrieval Options

ADS abstract

Plot Data Extraction

Start [DEXTER](#) java applet

Printing Options

☒ Print whole paper

☐ Print Page(s) through

Return 600 dpi PDF to Acrobat/Browser. Different resolutions (200 or 600 dpi), formats (Postscript, PDF, etc), page sizes (US Letter, European A4, etc), and compression (gzip,compress,none) can be set through the [Printing Preferences](#)

[More Article Retrieval Options](#)

[SAO/NASA ADS Homepage](#) | [ADS Sitemap](#) | [Query Form](#) | [Basic Search](#) | [Preferences](#) | [HELP](#) | [FAQ](#)