

List of Figures

1.1	Image of NGC 1068	2
1.2	Optical spectra of different Seyfert galaxies	4
1.3	A schematic representation of AGN	9
1.4	Spectral energy distribution of AGN	11
1.5	X-ray generation in AGN	12
1.6	X-ray spectrum and its components	13
1.7	The Horsehead Nebula	20
1.8	H II region NGC 604	22
1.9	<i>FUSE</i> spectra of Sk-67D211 & Sk-71D45	29
2.1	The configuration of the <i>XMM-Newton</i> satellite	31
2.2	EPIC-CCDs	33
2.3	Optical design of <i>FUSE</i>	39
3.1	Unfolded spectra of Mrk 335	52
3.2	Unfolded spectra of Ark 564 (ID0006810101)	54
3.3	EPIC PN light curve (in 400 s bins) of Mrk 335	66
3.4	EPIC PN light curve (in 400 s bins) of Ark 564	67
3.5	Photon index vs Eddington ratio for Mrk 335 in (0.3–10.0)keV range	70
3.6	Photon index vs Eddington ratio for Mrk 335 in (3.0–10.0)keV range	71
3.7	Photon index vs Eddington ratio for Ark 564 in (0.3–10.0)keV . . .	72
3.8	Photon index vs Eddington ratio for Mrk 335 & Ark 564	73
4.1	Continuum fitting complexity	82
4.2	O VI absorption profiles for 70 lines of sight	84
4.3	O VI & Fe II absorption profiles	97

4.4	O VI column density vs Doppler parameter	104
4.5	Doppler parameter distribution of O VI	105
4.6	O VI column density vs angular separation	108