

THE X-RAY EMITTING GALAXY GROUP SHKH 360

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Shkh 360 has the characteristic signature of a strongly interacting group. Seven galaxies are embedded in a common extended halo and the isophotes indicate clear signs of alignment in B,V, and R. The parameters of the group as the redshift, z , the distance, d , the projected diameter, D , (basing on $H = 55$ km/s/Mpc), the virial radius, R_{vir} , the velocity dispersion, σ_v , the virial mass, \mathcal{M}_{vir} , the crossing time, τ , and the space density of galaxies, n , are given in the Table.

z	d	σ_v	D	R_{vir}	\mathcal{M}_{vir}	\mathcal{M}/\mathcal{L}	τ
	[Mpc]	[km/s]	[kpc]	[kpc]	[$10^{12}\mathcal{M}_\odot$]	[$\mathcal{M}_\odot/\mathcal{L}_\odot$]	[Gyr]
0.1082	590	258	250	77	5.6	10	0.122

The space density of the galaxies in Shkh 360 is $2 \cdot 10^3$ galaxies/Mpc³, much higher than in galaxy clusters. The interaction between the galaxies results in a hot X-ray emitting intracluster medium which was investigated from the ROSAT PSPC all sky survey. The gas distribution is roughly symmetric. The center of the X-ray emitting region is located about 15 arcsec north-east of the most luminous galaxy. The X-ray luminosity, L_x , of Shkh 360 amounts to $8.3 \cdot 10^{43}$ erg/s. The values of L_x and σ_v , found for this and other Shakhbazian groups (Tiersch et al. 1994 in: H.T. MacGillivray et al.: Astronomy from Wide-Field Imaging, Kluwer, p. 623), confirm the finding that the correlation $L_x \sim \sigma_v^4$, established for galaxy clusters (Quintana & Melnick 1982, Astron.J. 87, 972), is also valid for galaxy groups, representing the lower end of the scale.