TABLE 1

Object (Terzan No.)	(1950.0)		POSS		
	α	δ	Charts	X_{mm}	Y_{mm}
25	$17^h03^m08^s.5$	−24°46′44″.6	−24° 16^h54^m	117.6	139.4
26	$17^h04^m41^s.4$	−24°59′47″.4	−24° 16^h54^m	99.0	127.5
27	$17^h04^m52^s.6$	−24°48′30″.1	−24° 16^h54^m	96.5	137.6
28	$17^h05^m04^s.1$	−25°15′03″.0	−24° 16^h54^m	94.5	113.7
29	$17^h05^m15^s.4$	−25°09′51″.3	−24° 16^h54^m	92.2	118.2
30	$17^h06^m09^s.6$	−24°55′21″.1	−24° 16^h54^m	81.0	131.2
31	$17^h08^m20^s.2$	−24°52′10″.5	−24° 16^h54^m	54.2	135.7
32	$17^h09^m27^s.2$	−25°08′34″.7	−24° 16^h54^m	41.4	118.8
33	$17^h09^m31^s.9$	−25°03′10″.8	−24° 16^h54^m	40.5	123.4
34	$17^h10^m11^s.2$	−24°58′58″.0	−24° 16^h54^m	32.3	127.0
35	$17^h10^m57^s.6$	−24°45′30″.2	−24° 16^h54^m	23.0	138.8
36	$17^h12^m31^s.1$	−24°55′40″.7	−24° 17^h20^m	316.0	126.3
37	$17^h12^m35^s.5$	−25°15′55″.9	−24° 17^h20^m	315.0	108.5
38	$17^h13^m03^s.9$	−24°55′53″.3	−24° 17^h20^m	309.5	126.3
39	$17^h13^m13^s.9$	−24°55′42″.4	−24° 17^h20^m	307.8	126.5
40	$17^h13^m42^s.5$	−24°55′55″.9	−24° 17^h20^m	302.0	126.5
41	$17^h17^m17^s.9$	−24°48′53″.8	−24° 17^h20^m	258.8	134.0

It is highly probable that some of our 17 diffuse objects are galaxies belonging to this cluster.

At any rate, none of the descriptions or hypotheses (globular cluster, planetary nebula, galaxy, star surrounded by nebulosity) given under "Description of Objects" should be regarded as definite. They can only help toward future talks based on deeper studies (photometry, spectrophotometry) which we propose to undertake later on with a large telescope.

Addenda: After writing the above paper (May 1985) we have found other diffuse objects, quite close to this Ophiuchus Cluster. This fact leads us to believe that:

1. The total number of galaxies belonging to this cluster must be clearly in excess of 108;
2. The entire cluster must actually extend far beyond a 2°.1 × 2°.6 field.

Description of Objects

Terzan 25 – nebulosity, surrounding a center, well defined on the R plates
Terzan 26 – planetary nebula?
Terzan 27 – nucleus of galaxy or a star surrounded by nebulosity
Terzan 28 – nebulosity
Terzan 29 – planetary nebula or a red star surrounded by nebulosity
Terzan 30 – galaxy?
Terzan 31 – galaxy?
Terzan 32 – probably a spiral galaxy judging from B plates
Terzan 33 – center of a globular cluster? nebulosity is evenly distributed on R plates
Terzan 34 – probably a globular cluster with a strong central concentration on R plates
Terzan 35 – globular cluster or planetary nebula?
Terzan 36 – nucleus of galaxy?
Terzan 37 – nebulosity
Terzan 38 – nucleus of galaxy or a star surrounded by an elongated nebulosity
Terzan 39 – galaxy?
Terzan 40 – planetary nebula?
Terzan 41 – nebulosity of an almost spherical form

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A Catalogue of Dwarf Galaxies South of δ = −17°.5

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The first systematic search for dwarf galaxies was undertaken by van den Bergh (1959) and resulted in a catalogue which contained 222 objects north of δ = −23° (in 1966 the list was expanded to 243 dwarfs north of −33°). Nilson (1973) noted in his "Uppsala General Catalogue of Galaxies" 687 dwarf systems north of −2°.5. Both catalogues were produced with the aid of the "Palomar Observatory Sky Survey". The publication of two photographic surveys of the southern hemisphere (δ < −17°.5), namely the ESO(B) and the SRC(J) Atlas, available in Bochum as plate and film copy respectively, permitted a systematic search for dwarf galaxies in that region.

As a basis for the present survey served the "ESO/Uppsala Catalogue" (Lauberts 1982), from which we chose as possible "dwarf candidates":

- all spiral galaxies which were classified as Sc and later or as S . . .,
- all elliptical galaxies,
- all irregular galaxies,
- all dwarf galaxies,
- all peculiar objects,

as far as their major axis had a minimum of 1′.

It was necessary to reexamine the Lauberts sample, restricted by the dwarf galaxy criteria, since the coarse Lauberts classification based on ESO(B) plates does not record adequately the dwarf galaxy population. But the Lauberts catalogue is still well suited for the purpose of object identification. It is homogeneous and almost complete with respect to objects larger than 1.′0.

We started with a total of 7,002 systems. A final threefold examination led to a catalogue containig 584 systems, from which 20 did not appear in the ESO/Uppsala Catalogue. The catalogue is published in *Astronomy & Astrophysics Supplement Series,* **61,** 503, 1985.

Figure 1 presents the distribution of the 584 dwarf galaxies in Aitoff projection. The belt of the Milky Way is clearly seen, the SMC and LMC are also marked and four pronounced empty regions.

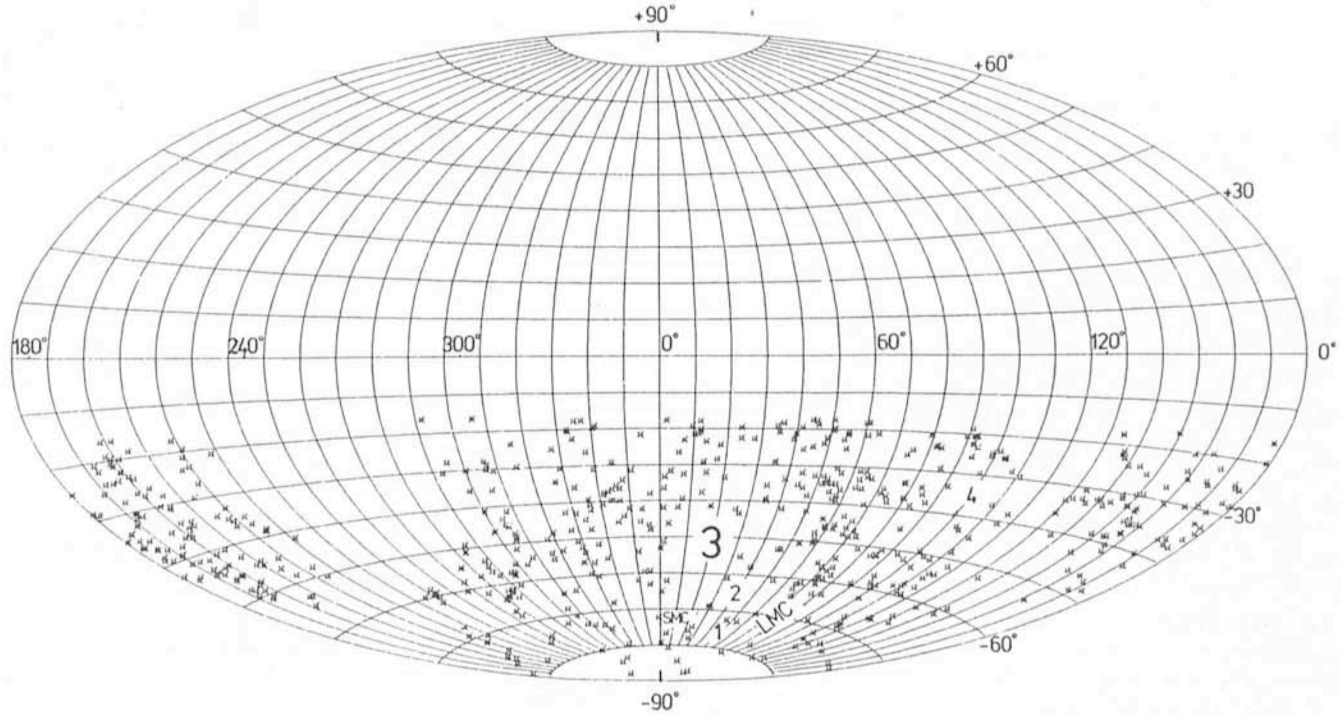

Figure 1: *Distribution of the dwarf galaxies on the sphere in an Aitoff projection. The Milky Way and the Magellanic Clouds as well as four other pronounced empty regions are indicated. The regions (1, 2, 3) coincide with the Magellanic stream, region 4 coincides with a dark cloud complex (No. 445, 446, 447, 450, 453 in the catalogue of Feitzinger and Stüwe, 1984).*

THE EXTRINSIC ABSORPTION SYSTEM IN THE QSO PKS 2128-12:

A Galaxy Halo with a Radius of 65 kpc

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1. The Different Types of Extrinsic Absorption Systems

A large number of absorption lines are detected in the spectra of QSOs. Most of them are identified with lines from ions of abundant elements at a redshift z_α smaller than the QSO emission redshift z_Q and their velocity dispersion is small, typically $5 \leq \sigma_v \leq 50$ km s^{-1}. These absorption systems at $z_\alpha < z_Q$ are now commonly believed to be of intervening origin, but their exact nature remains still an open question. Indeed, these systems are only known by their absorptions. Most of them are too faint to be accessible to direct observations with present-day techniques, except, may be, those at small redshift.

Before describing our attempt to detect directly one of the low z absorption systems, let us quickly present the two main classes of extrinsic absorbers, that is those at $z_\alpha < z_Q$. First there are metal-rich systems in which hydrogen and the most abundant heavy elements are present. These absorbers could be associated with galaxies, but then all spiral galaxies must have gaseous halos about four times larger than the luminous parts of the galaxies. This population has been detected within a large redshift range from about 0.2 to 3.7. The high redshift absorption systems, detected mainly by their C IV absorption, have some properties which differ from those of the lower redshift ($z \leq 1$) absorbers, detected up to now by their Mg II or Fe II absorptions (a survey of their C IV absorption would require a large space-based UV telescope). They are much more numerous than the low z systems, even after removing the effect due to the expansion of the universe, and they have a higher degree of ionization. In the assumption of absorption by intervening galaxies, this may suggest that either the degree of ionization of gaseous halos increases outwards, or that these halos were larger and more ionized in the past.

The second population of absorption systems has primordial or very metal-poor gas, with only lines of the H Lyman series present. These absorbers, called the Lyα forest, are known only at $z \geq 1.7$ and their study at smaller z will be done