The large cosmic abundance of Ne suggests that a large fraction of all terrestrial neon could be of interstellar origin, and the accretion model predicts that the amount of Ne added to the Martian atmosphere during encounters with interstellar clouds over the lifetime of the solar system exceeds 15 times the amount found in the contemporary atmosphere. Continuous loss of a species as massive as Ne is difficult to achieve; the indication is either that accretion has not been as vigorous as our conservative estimates suggest, that the cosmic abundance of Ne is smaller than currently believed, or that Mars has suffered major, perhaps catastrophic atmospheric loss. If the expectation of about 12 accretion encounters distributed more or less evenly over the lifetime of the solar system is correct, a major loss has likely occurred in the last 500 million years.

REFERENCES

SPECTRA OF ADDITIONAL ARAKELIAN GALAXIES
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Spectral scans have been obtained of four additional emission-line galaxies described by Arakelian (Astronomical Circular and private communication) as possible Seyfert galaxies, beyond the seven previously published by Phillips and myself (1977, Pub. A.S.P. 89, 251). All four of these galaxies are confirmed to be Seyfert galaxies by the Lick scans, and their classifications are as follows:

Akn 202  Seyfert 1
Akn 347  Seyfert 2
Akn 374  Seyfert 1
Akn 564  Seyfert 1

Akn 374 has particularly strong Fe II emission, and Akn 564 has relatively narrow H I and He II lines for a Seyfert 1 galaxy. I am greatly indebted to Dr. Arakelian for sending me his list of suspected Seyfert galaxies in advance of publication.

FAINT DWARF GALAXIES
IN THE VIRGO CLUSTER

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These are some preliminary results of a study of about six hundred faint dwarf members of the Virgo cluster of galaxies. The study is based on eleven long-exposure IIIa-J plates taken by Sandage with the 48-inch (1.22-m) Schmidt. All objects with a low surface brightness and central concentration of light, an apparent magnitude roughly in the range $17 < B < 20$, and with a major axis greater than about 0.5 were noted. At the distance of the Virgo cluster, these correspond to absolute magnitudes $-15 < M_B < -12$, and diameters greater than about 3 kpc. Membership in the Virgo cluster is assured, statistically, by considering further only those kinds of objects whose surface distribution matches that of the normally bright cluster members.

1. Some of these dwarfs have a structure different from any of those in the Local Group (Reaves 1977).

2. The gross character of the areal (projected) distribution of these dwarfs appears to be different for the different kinds of dwarfs. In particular, it appears that no type of dwarf has as broad a distribution as the normal spirals; this suggests that the selective association of dwarfs with spirals rather than with ellipticals that has been found for field galaxies (Homberg 1969; Bothun and Sullivan 1977) does not apply in the Virgo cluster.

3. A more detailed study of the distribution suggests that outside the core of the cluster, some of the dwarfs are associated with individual spirals: examples of such spirals are NGC 4207, NGC 4293, and NGC 4772. This result is of questionable physical significance, and may be a consequence simply of the confusion due to crowding near the center of the cluster, together with the preponderance of spirals in its outer regions. A similar comment may be made of the dwarfs in the field of NGC 4321 (M100).

In their recent study of gravitational encounters in the Local Group, Innanen and Valtonen (1977) suggested that dwarfs "survive virtually only in the (tidally permissible) neighborhoods of the . . . [large galaxies]. Encounters apparently do not provide the necessary gravitational catapults to eject them, but rather just exchange them." This might also apply to the dwarfs in Virgo.