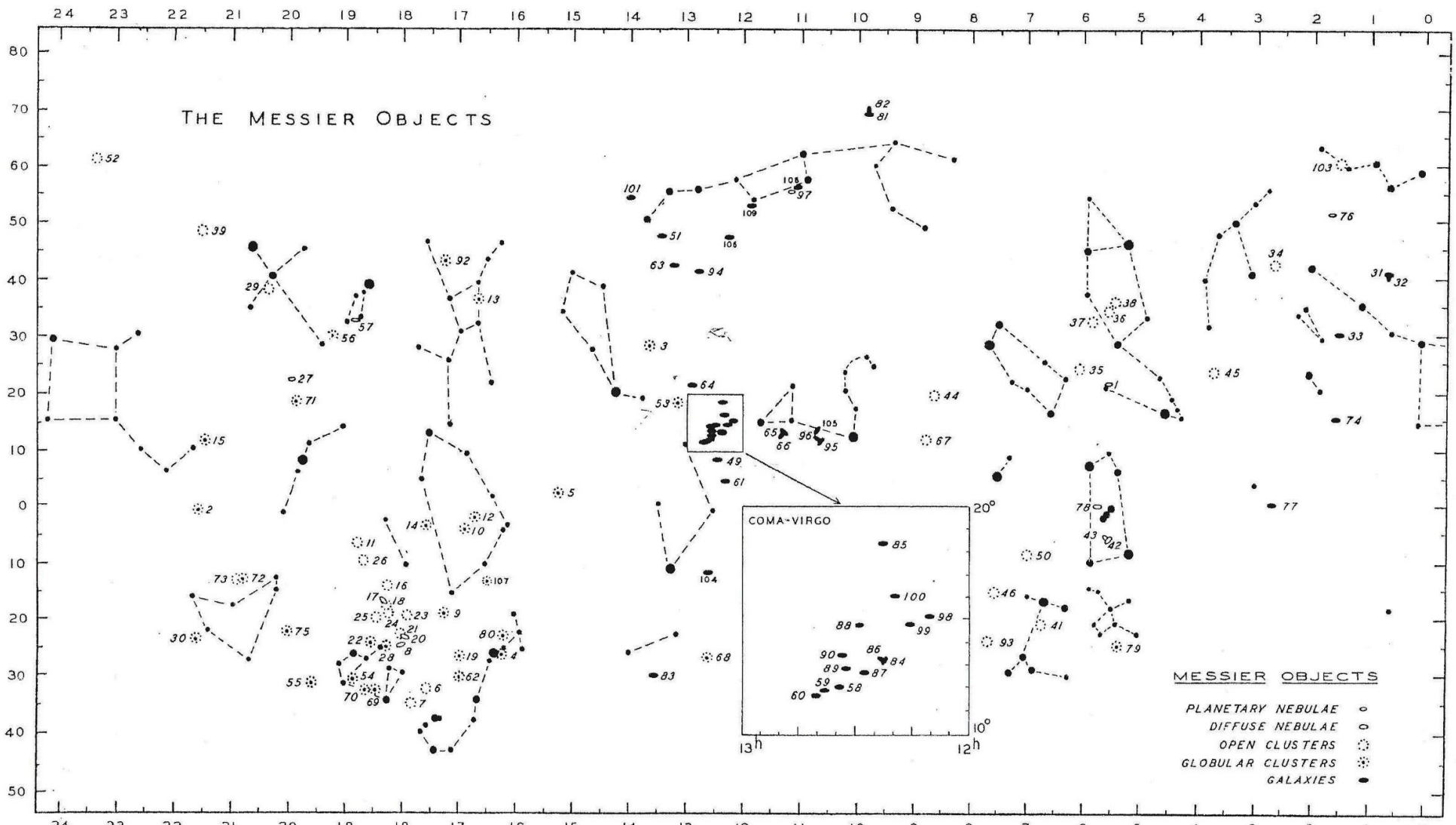

THE MESSIER OBJECTS: Constellation and star names have been omitted from this chart for simplicity. Messier objects range in declination from 70° north to 35° south. At least a score can be seen at any time of year. Galaxies are placed best in spring skies, globular clusters in the summer, and galactic clusters in the fall and winter skies of the Northern Hemisphere. Most of the galaxies are rather inconspicuous, and a dark night is needed to find them. Diffuse and planetary nebulae have details that can be seen in amateur telescopes. The five "missing" Messier objects are not plotted here.

ABOUT THIS CATALOGUE: On the reverse side of this card is Owen Gingerich's summary of the Messier catalogue. The right ascensions and declinations are for epoch 1950; constellations are according to boundaries adopted by the International Astronomical Union. Sizes have been rounded to the nearest minute of arc, and the visual magnitudes are approximate. Different authorities for sizes and magnitudes often disagree, and the numbers listed here are compromises.

The types of objects are abbreviated in the table by: *Cl*, open star cluster; *Di*, diffuse nebula; *El*, elliptical galaxy; *Gb*, globular star cluster; *Ir*, irregular galaxy; *Pl*, planetary nebula; *Sp*, spiral galaxy.

A star atlas is needed for locating the less conspicuous Messier objects. Norton's *Star Atlas* shows all of them, and stars to magnitude 6½. For use at the telescope, the Field Edition of the Skalnate Pleso *Atlas of the Heavens* is especially convenient, as it contains all stars brighter than magnitude 7½.

Similar information for many hundreds of somewhat fainter star clusters, nebulae, and galaxies can be found in the Skalnate Pleso *Atlas Catalogue*.