HIGH AND LOW RESOLUTION SPECTRA OF SELECTED PLANETARY NEBULAE*

S. Cristiani[1], F. Sabbadin[2], and S. Ortolani[2]
1. European Southern Observatory, La Silla, Chile
2. Asiago Astrophysical Observatory, 36012 Asiago (VI), Italy

ABSTRACT. High (CES spectrograph + RETICON at the CAT telescope) and low (B&C spectrograph + CCD at the 2.2-m telescope) resolution spectra of selected, southern planetary nebulae allowed to obtain the Hα and [N II] emission line profiles and the nebular emission line intensities in the spectral range λλ3650-9400 A. The Hα and [N II] emission line parameters were derived following the procedure used by Sabbadin (*Monthly Not. Roy. Astron. Soc.*,209, 889, 1984) and Ortolani and Sabbadin (*Astron. Astrophys. Suppl. Series*, 62, 17, 1985). Table 1 contains the relevant data for eight nebulae of the sample.

TABLE 1

P&K	Name	V_{exp} Hα (km s^{-1})	V_{exp} [N II] (km s^{-1})
0+12°1	II 4634	13.6	...
37-34°1	NGC 7009	16.2	...
206-40°1	NGC 1535	19.1	...
215-24°1	I 418	6.0	12.1
309- 4°2	NGC 5315	10.7 (35.9)	37.6 (17.8-21.1)
315-13°1	He 2-131	10.6	12.0
345- 8°1	Tc 1	6.1	15.4
358-21°1	I 1297	31.0:	34.6:

Up to now the analysis of the low resolution spectra is complete only for IC 1297 (358-21°1). Main results obtained for this object are presented in Table 2.

TABLE 2. OBSERVATIONAL RESULTS FOR IC 1297

		Ionic Abundances
$He^+/H^+ = 0.093$	$O^+/H^+ = 8.7\times10^{-5}$	$N^+/H^+ = 1.1\times10^{-5}$
$He^{++}/H^+ = 0.024$	$O^{++}/H^+ = 4.5\times10^{-4}$	$Ne^{++}/H^+ = 1.2\times10^{-4}$
	$S^+/H^+ = 1.6\times10^{-6}$	

Total Abundances

$He/H=0.117$ $O/H=6.7\times10^{-4}$ $N/H=8.0\times10^{-5}$ $Ne/H=1.7\times10^{-4}$ $S/H=1.2\times10^{-5}$

*Based on observations obtained at the European Southern Observatory.

S. Torres-Peimbert (ed.), Planetary Nebulae, 191.