Table 1 presents some relevant observational data for the sample of HgMn stars, HR 3273, HR 8118, HR 8567 and HR 8937.

2. OBSERVATIONAL MATERIAL AND LINE IDENTIFICATIONS

The stellar spectra of the stars were obtained at Complejo Astrónomico El Leoncito (CASLEO) between April 21 and 23, 2004. We used the *Jorge Sahade* 2.15 m telescope that fed the EBASIM echelle spectrograph through an optical fiber. The spectra were recorded on a TEK1024 (1024 × 1024 pixels) CCD detector. The EBASIM spectrograph uses gratings as cross dispersers. We have used one grating with 226 lines mm^{-1} centered at ∼5000 Å. Three spectra of each star were obtained, covering the visual range ∼λλ3800–5900 Å. The S/N ratio of the spectra is around 250 and the resolving power of the spectrograph is approximately 40000. Table 2 gives the spectral coverage of the 55 orders of the EBASIM spectrograph[1]. It contain echelle orders overlapping in ∼λλ3762–5644 Å and increasing gaps of 1–4 Å for $\lambda \gtrsim 5645$ Å.

The spectra were reduced using IRAF[2] standard procedures for echelle spectra. We applied bias and flat corrections and then normalized order by order with the *continuum* task, using 7–9 order Chebyshev polynomials. We also corrected the scattered light in the spectrograph (*apscatter* task). We fitted the background with a linear function on both sides of the echelle apertures, using the task *apall*. Extensive description of the characteristics of the reduction technique and some results obtained with the observational material, have been previously published (e.g., Saffe & Levato 2009). The equivalent widths were measured by integrating the profiles across the stellar metallic lines using the *splot* task. There are no differences among the equivalent width measurements of the same lines in different spectra.

We used Gaussian profiles to fit the stellar lines. This is an interactive process in which the IRAF user marks two continuum points in the spectra and then the program fits a single line profile (splot task). IRAF uses a fixed linear continuum through the stellar line. The fitting uses an interactive algorithm based on the Levenberg-Marquardt method. The successive iterations tend to improve the fit by varying the parameters along the gradient of improvement in the χ^2 function. The final fit is overplotted on the spectrum of the star and the user decides if the fit is satisfactory or not. The center, continuum at the center, core intensity, integrated flux, equivalent width and FWHMs are printed and saved in a log file. All the parameters except the continuum are based on the fitted analytic profiles.

Pintado & Adelman (2003) compared EBASIM and DAO (Dominion Astrophysical Observatory) equivalent widths corresponding to echelle and coudé spectra, respectively. The scattered light is usually easier to measure in the latter case. They used Gaussian profiles for the EBASIM spectra and rotational profiles for the DAO spectra, due to the lower res-

TABLE 2

SPECTRAL COVERAGE FOR THE EBASIM ECHELLE SPECTROGRAPH USING THE GRATING OF 226 LINES mm^{-1}

Order	Range [Å]	Order	Range [Å]
1	3762–3798	29	4625–4670
2	3787–3823	30	4663–4708
3	3813–3849	31	4702–4748
4	3839–3875	32	4741–4788
5	3865–3902	33	4781–4828
6	3891–3929	34	4822–4869
7	3918–3956	35	4864–4911
8	3946–3984	36	4906–4954
9	3973–4012	37	4949–4998
10	4002–4041	38	4993–5042
11	4030–4070	39	5037–5087
12	4059–4099	40	5083–5133
13	4088–4129	41	5129–5180
14	4118–4159	42	5176–5227
15	4149–4190	43	5224–5276
16	4179–4221	44	5273–5325
17	4210–4252	45	5323–5375
18	4242–4284	46	5374–5426
19	4274–4317	47	5425–5478
20	4307–4350	48	5478–5533
21	4340–4383	49	5533–5588
22	4373–4417	50	5588–5644
23	4407–4451	51	5645–5701
24	4442–4486	52	5703–5760
25	4478–4522	53	5762–5820
26	4514–4558	54	5822–5881
27	4550–4594	55	5884–5943
28	4587–4632		

[1]Due to modifications in the configuration of the EBASIM spectrograph, the spectral coverage could slightly vary in different observing runs.

[2]IRAF is distributed by the National Optical Astronomical Observatories which is operated by the Association of Universities for Research in Astronomy, Inc., under a cooperative agreement with the National Science Foundation.