

FIGURE 4: Colour-colour diagrams involving Gaia four passbands and SDSS passbands.

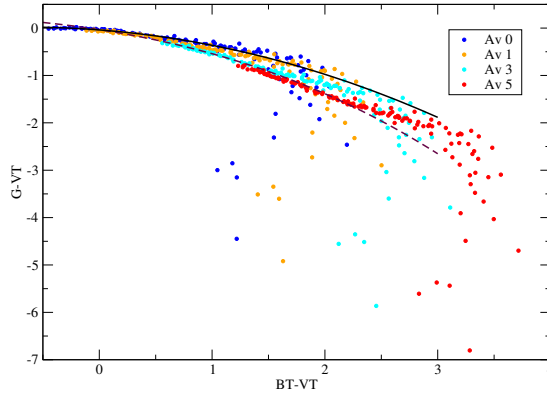


FIGURE 5: Colour-colour diagrams involving Gaia  $G$  passband and Tycho-2 passbands. The colour of symbols correspond to the different as in Fig.3. Solid line corresponds to the polynomial fit to unreddened stars with  $G - V_T > -1$  and dashed line to all stars.

TABLE 9: Coefficients of the colour-colour polynomial fittings using Johnson-Cousins passbands to the  $4 \times 131$  spectra, and using the transmissivity curves in Sec. 5.

		$(V - I)$	$(V - I)^2$	$(V - I)^3$	$\sigma$	Note
$G - G_{BP}$	0.0218	-0.4108	-0.0600	0.0005	0.05	
$G - G_{RP}$	-0.0122	0.7833	-0.1452	0.0100	0.02	
$V - G_{BP}$	0.0301	-0.3098	0.1038	-0.0081	0.04	
$V - G_{RP}$	-0.0040	0.8843	0.0186	0.0014	0.04	
$G_{BP} - G_{RP}$	-0.0341	1.1941	-0.0852	0.0095	0.07	
		$(V - R)$	$(V - R)^2$	$(V - R)^3$	$\sigma$	Note
$G - G_{BP}$	0.0114	-0.7913	-0.3338	0.0466	0.10	
$G - G_{RP}$	0.0102	1.5217	-0.5322	0.0653	0.04	
$V - G_{BP}$	0.0142	-0.5546	0.3556	-0.0508	0.04	
$V - G_{RP}$	0.0129	1.7585	0.1572	-0.0321	0.11	
$G_{BP} - G_{RP}$	-0.0012	2.3131	-0.1984	0.0188	0.13	
		$(R - I)$	$(R - I)^2$	$(R - I)^3$	$\sigma$	Note
$G - G_{BP}$	0.0529	-1.0693	0.1431	-0.1299	0.07	
$G - G_{RP}$	-0.0254	1.6115	-0.6502	0.1043	0.03	
$V - G_{BP}$	0.0422	-0.6808	0.4807	-0.0819	0.04	
$V - G_{RP}$	-0.0361	2.0000	-0.3126	0.1523	0.11	
$G_{BP} - G_{RP}$	-0.0783	2.6808	-0.7933	0.2342	0.09	
		$(BP - RP)$	$(BP - RP)^2$	$(BP - RP)^3$	$\sigma$	Note
$G - G_{RVS}$	0.0386	0.9457	-0.1149	0.0022	0.06	

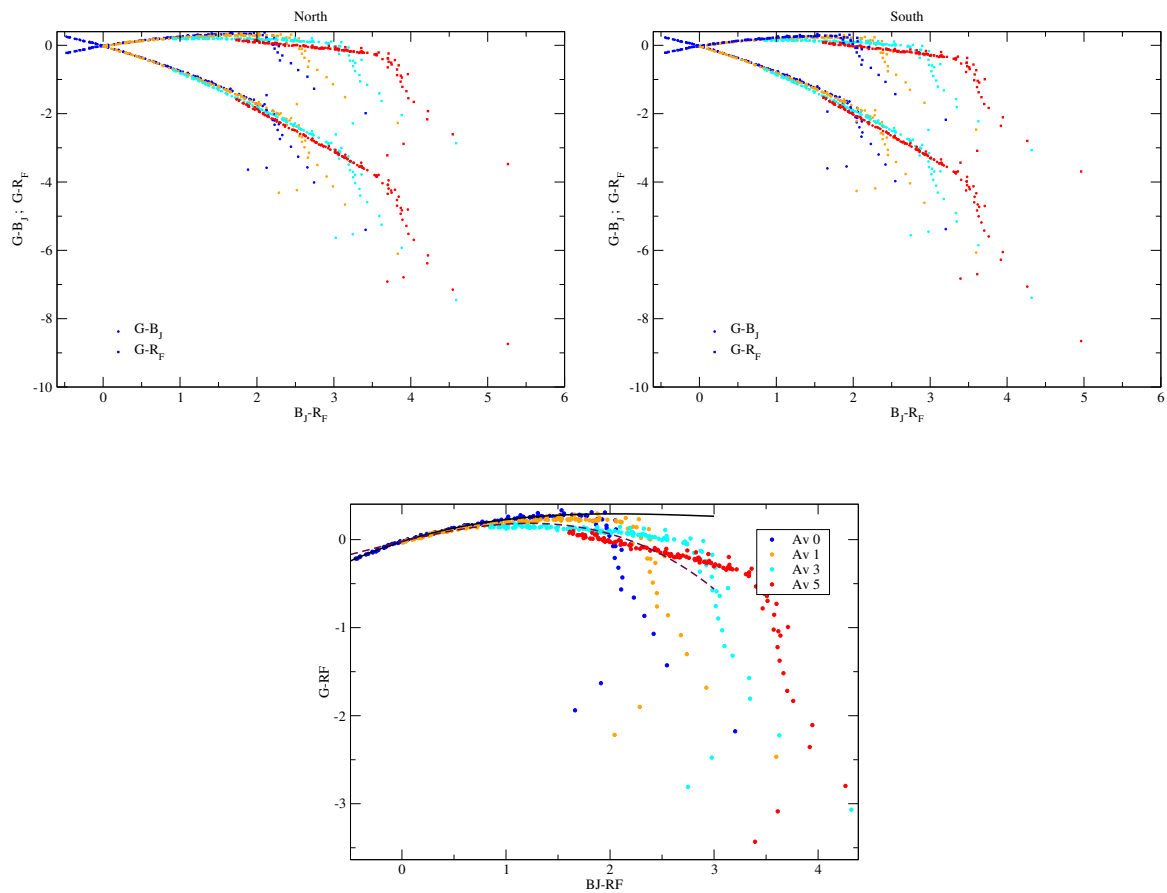


FIGURE 6: Colour-colour diagrams involving Gaia  $G$  passband and GSC-II passbands. Filled symbols correspond to  $B_J$  and open squares to  $R_F$ . The colour of symbols correspond to the different absorptions as in Fig.4. Solid line corresponds to the polynomial fit to unreddened stars with  $B_J - R_F < 2$ . and dashed line to all stars.



TABLE 10: Coefficients of the colour-colour polynomial fittings using one colour SDSS passbands to the  $4 \times 131$  spectra, and using the transmissivity curves in Sec. 5.

		$(g-r)$	$(g-r)^2$	$(g-r)^3$	$\sigma$	Note
$G-G_{BP}$	-0.1133	-0.5728	0.0268	-0.0614	0.41	
$G-G_{RP}$	0.2063	0.7922	-0.1662	0.0157	0.09	
$g-G_{BP}$	-0.0257	-0.7182	0.1546	-0.0143	0.01	
$g-G_{RP}$	0.2939	0.6468	-0.0384	0.0628	0.49	
$G_{BP}-G_{RP}$	0.3196	1.3651	-0.1930	0.0771	0.50	
		$(g-i)$	$(g-i)^2$	$(g-i)^3$	$\sigma$	
$G-G_{BP}$	-0.1190	-0.2824	-0.0524	-0.0013	0.18	
$G-G_{RP}$	0.2353	0.4927	-0.0667	0.0037	0.04	
$g-G_{BP}$	-0.0076	0.2439	0.0345	-0.0039	0.12	
$g-G_{RP}$	0.3467	1.0190	0.0202	0.0011	0.11	
$G_{BP}-G_{RP}$	0.3543	0.7751	-0.0143	0.0050	0.21	
		$(r-i)$	$(r-i)^2$	$(r-i)^3$	$\sigma$	
$G-G_{BP}$	-0.1724	-1.1207	0.0267	-0.0247	0.08	
$G-G_{RP}$	0.3027	1.3332	-0.5376	0.0770	0.03	
$g-G_{BP}$	0.0319	1.0406	-0.2295	0.0190	0.20	
$g-G_{RP}$	0.5070	3.4944	-0.7938	0.1207	0.26	
$G_{BP}-G_{RP}$	0.4751	2.4539	-0.5643	0.1017	0.09	
		$(g-z)$	$(g-z)^2$	$(g-z)^3$	$\sigma$	
$G-G_{BP}$	-0.1359	-0.2262	-0.0309	-0.0000	0.10	
$G-G_{RP}$	0.2590	0.3803	-0.0411	0.0018	0.02	
$g-G_{BP}$	0.0061	0.2095	0.0140	-0.0016	0.15	
$g-G_{RP}$	0.4010	0.8160	0.0038	0.0002	0.05	
$G_{BP}-G_{RP}$	0.3949	0.6065	-0.0103	0.0018	0.12	