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NIKA 150 GHz polarization observations of the Crab nebula and its spectral energy distribution (Corrigendum)

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A computational error has been found in the formula used to convert polarization angle values from equatorial to Galactic coordinates as reported in Table 2 of our original article. This concerns only ψ_{gal} values in parenthesis, regarding the NIKA camera observations. An updated version of Table 2 is given in Table 1 with new values having been recomputed. The bottom panel of Fig. 6 of the original article has been updated accordingly (see Fig. 1). This correction, however, does not

significantly affect the result of the weighted-average polarization angle, which is now equal to -87.8° instead of -87.7° , which is consistent within the uncertainty previously given. It is important to notice that the uncertainties associated with the polarization angle values are not affected by the coordinate change correction.

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Table 1. NIKA Crab nebula total flux I , Q , and U are presented here and were estimated by using aperture photometry methods.

	I [Jy]	Q [Jy]	U [Jy]	I_{pol} [Jy]	p [%]	$\psi_{\text{eq}} (\psi_{\text{gal}})$ [°]
5'	191.4 ± 26.8	2.97 ± 0.3	-16.0 ± 1.5	16.3 ± 1.7	8.5 ± 0.4	$140.3 (-97.4) \pm 0.1 \pm 0.5 \pm 1.8^{(*)}$
7'	226.5 ± 25.0	3.5 ± 0.4	-14.9 ± 1.2	15.3 ± 1.8	6.7 ± 0.1	$141.7 (-95.9) \pm 0.2 \pm 0.5 \pm 1.8^{(*)}$
9'	222.7 ± 24.6	3.5 ± 0.4	-14.3 ± 1.2	14.8 ± 1.6	6.6 ± 0.3	$142.0 (-95.7) \pm 0.7 \pm 0.5 \pm 1.8^{(*)}$

Notes. A colour correction factor of 1.05 has been taken into account. Polarized intensity flux I_{pol} , polarization degree p , and angles ψ_{eq} (equatorial coordinates) and ψ_{gal} (Galactic coordinates in brackets), are also presented. The values have been calculated within 5', 7', and 9' by aperture photometry. A total calibration error of 10% has been accounted for. The statistical uncertainty also accounts for Monte Carlo simulations of the noise in Q and U and the differences between two sets of seven jack-knife maps. ^(*)A systematic angle uncertainty of 1.8° must be considered in the polarization angle error budget. We also consider a 0.5° of uncertainty due to the intensity to polarization leakage correction.

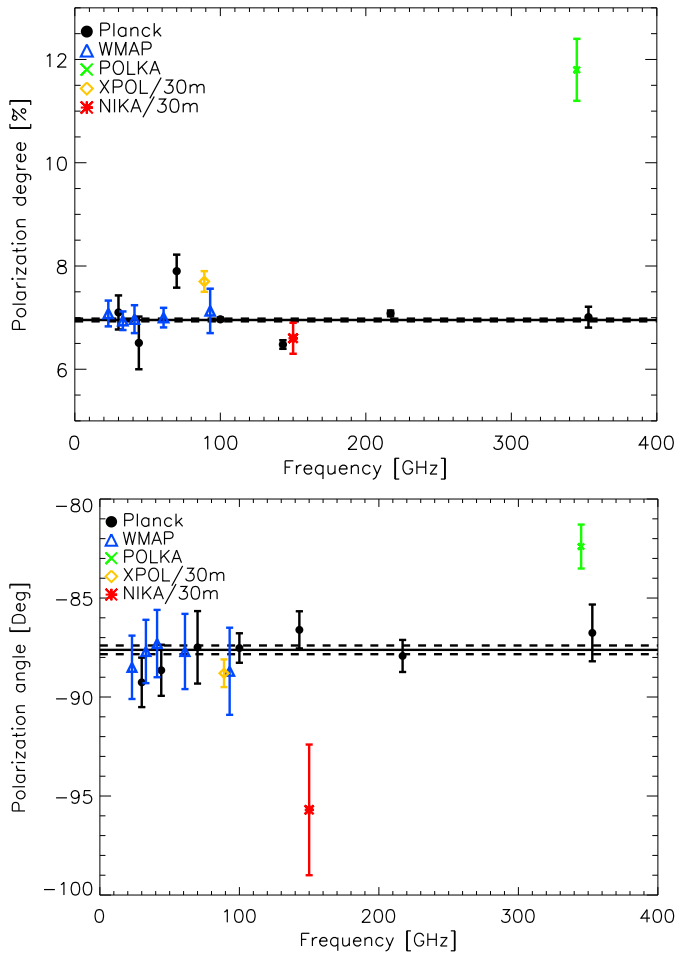


Fig. 1. *Top:* polarization degree as a function of frequency as measured by *Planck* (black dots), *WMAP* (blue triangles), *XPOL* (yellow diamond), *POLKA* (green cross), and *NIKA* (red crosses). The *NIKA* and *POLKA* values have been estimated by aperture photometry considering the source extension up to 9'. *Planck* and *WMAP* values are shown at their native resolution. *XPOL*, *NIKA*, and *POLKA* values have been integrated over the source. The solid line represents the weighted-average degree for all experiments but *POLKA*. Dashed lines represent 1σ uncertainties. *Bottom:* polarization angles in Galactic coordinates for the same five experiments. The solid line represents the weighted-average polarization angle computed using all the values.