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

A. Ritacco^{1,8} , J. F. Macías-Pérez¹, N. Ponthieu¹⁰, R. Adam^{1,2,16}, P. Ade⁵, P. André⁴, J. Aumont¹³, A. Beelen⁶, A. Benoît⁷, A. Bideaud⁷, N. Billot⁸, O. Bourrion¹, A. Bracco^{4,19}, M. Calvo⁷, A. Catalano¹, G. Coiffard³, B. Comis¹, A. D'Addabbo^{7,9}, M. De Petris⁹, F.-X. Désert¹⁰, S. Doyle⁵, J. Goupy⁷, C. Kramer⁸, G. Lagache¹¹, S. Leclercq³, J.-F. Lestrade¹⁵, P. Mauskopf^{5,12}, F. Mayet¹, A. Maury⁴, A. Monfardini⁷, F. Pajot¹³, E. Pascale⁵, L. Perotto¹, G. Pisano⁵, M. Rebolo-Iglesias¹, V. Revéret⁴, L. Rodríguez⁴, C. Romero³, H. Roussel¹⁴, F. Ruppin¹, K. Schuster³, A. Sievers⁸, G. Siringo¹⁷, C. Thum⁸, S. Triqueneaux⁷, C. Tucker⁵, H. Wiesemeyer¹⁸, and R. Zylka³

¹ Laboratoire de Physique Subatomique et de Cosmologie, Université Grenoble Alpes, CNRS/IN2P3, 53 avenue des Martyrs, Grenoble, France

² Laboratoire Lagrange, Université Côte d'Azur, Observatoire de la Côte d'Azur, CNRS, Blvd de l'Observatoire, CS 34229, 06304 Nice cedex 4, France

³ Institut de RadioAstronomie Millimétrique (IRAM), Grenoble, France

⁴ Laboratoire AIM, CEA/IRFU, CNRS/INSU, Université Paris Diderot, CEA-Saclay, 91191 Gif-Sur-Yvette, France

⁵ Astronomy Instrumentation Group, University of Cardiff, UK

⁶ Institut d'Astrophysique Spatiale (IAS), CNRS et Université Paris Sud, Orsay, France

⁷ Institut Néel, CNRS and Université Grenoble Alpes, France

⁸ Institut de RadioAstronomie Millimétrique (IRAM), Granada, Spain
e-mail: ritaccoa@iram.es

⁹ Dipartimento di Fisica, Sapienza Università di Roma, Piazzale Aldo Moro 5, 00185 Roma, Italy

¹⁰ Univ. Grenoble Alpes, CNRS, IPAG, 38000 Grenoble, France

¹¹ Aix Marseille Université, CNRS, LAM (Laboratoire d'Astrophysique de Marseille) UMR 7326, 13388 Marseille, France

¹² School of Earth and Space Exploration and Department of Physics, Arizona State University, Tempe, AZ 85287, USA

¹³ CNRS, IRAP, 9 Av. colonel Roche, BP 44346, 31028 Toulouse cedex 4, France

¹⁴ Institut d'Astrophysique de Paris, Sorbonne Universités, UPMC Univ. Paris 06, CNRS UMR 7095, 75014 Paris, France

¹⁵ LERMA, CNRS, Observatoire de Paris, 61 avenue de l'Observatoire, Paris, France

¹⁶ Centro de Estudios de Física del Cosmos de Aragón (CEFCA), Plaza San Juan, 1, planta 2, 44001 Teruel, Spain

¹⁷ Joint ALMA Observatory & European Southern Observatory, Alonso de Córdova 3107, Vitacura, Santiago, Chile

¹⁸ Max Planck Institute for Radio Astronomy, 53111 Bonn, Germany

¹⁹ Nordita, KTH Royal Institute of Technology and Stockholm University, Roslagstullsbacken 23, 10691 Stockholm, Sweden

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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.

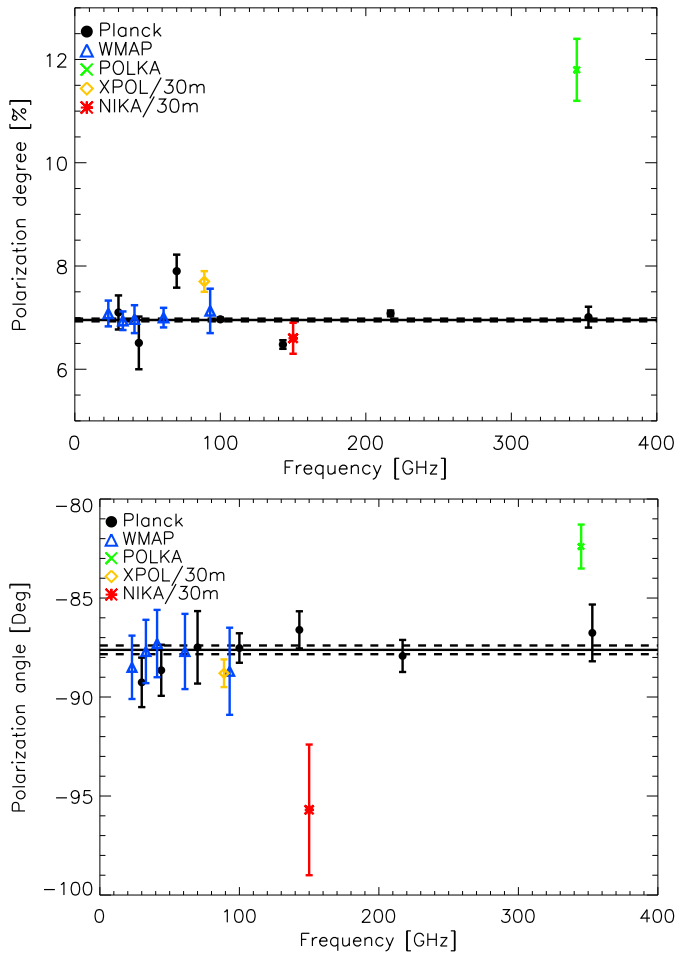


Fig. 1. *Top:* polarization degree as a function of frequency as measured by *Planck* (black dots), *WMAP* (blue triangles), *XPOL* (yellow diamond), *POLKA* (green cross), and *NIKA* (red crosses). The *NIKA* and *POLKA* values have been estimated by aperture photometry considering the source extension 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.