

# Errata corrige

## Errata p. 11

FIGURE 1.2. Schematic view of the magnetosphere of a pulsar. Polar cap, slot gap and outer gap acceleration regions are shown in red, blue and orange, respectively. (Image taken from [112]).

## Corrige

FIGURE 1.2. Schematic view of the magnetosphere of a pulsar. Polar cap, slot gap and outer gap acceleration regions are shown in red, blue and orange, respectively. (Image taken from Aliu et al. [112]. Reprinted with permission from American Association for the Advancement of Science (AAAS)).

## Errata p. 15

FIGURE 1.4. Simulated atmospheric showers for the 0.3 TeV gamma ray (on the left) and 1 TeV proton (on the right) as a primary particle. (Image adopted from [134]).

## Corrige

FIGURE 1.4. Simulated atmospheric showers for the 0.3 TeV gamma ray (on the left) and 1 TeV proton (on the right) as a primary particle. (Image adopted from Bernlöhr [134]. This article was published in Astroparticle Physics journal, Vol 30, Author K. Bernlöhr, Title of article “Simulation of imaging atmospheric Cherenkov telescopes with CORSIKA and sim\_telarray”, Page 149, Copyright Elsevier (2008)).

## Errata p. 16

FIGURE 1.6. (A) The schematic view of the stereoscopic IACTs observations (from <http://www.mpi-hd.mpg.de/hfm/HESS/>). (B) Images of four Cherenkov telescope cameras detected the same event and those projected into one camera plane (from [137]).

**Corrige**

FIGURE 1.6. (A) The schematic view of the stereoscopic IACTs observations (from <http://www.mpi-hd.mpg.de/hfm/HESS/>). (B) Images of four Cherenkov telescope cameras detected the same event and those projected into one camera plane (taken from Völk and Bernlöhr [137]).

**Errata p. 19**

FIGURE 1.7. Layouts of the southern (on the left) and northern (on the right) CTA installations. CTA-South consist of 4 Large Size telescopes (LSTs, filled red circles), 25 Medium Size Telescopes (MSTs, filled blue circles), 72 Small Size Telescopes (SSTs, green dots), whereas CTA-North corresponds to the array of 4 LSTs and 15 MSTs. Schwarzschild-Couder medium size Telescopes (SCTs) are also shown in the left figure as 24 opened purple circles.  $x$ -,  $y$ - axes are in meters. (Credits: The CTA Consortium).

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**Errata p. 43**

Several regions are being considered for the CTA Key Science observational program (KSP).

**Corrige**

Several regions are being considered for the CTA Key Science observational program (KSP, from CTA Consortium Science TDR, in preparation [222]).

**Errata p. 43**

According to the results of the simulations performed here, the total observing time of each KSP (as envisaged at present) would not be sufficient to detect the pulsars.

### Corrige

According to the results of the simulations performed here, the total observing time of each KSP (as envisaged at present, see Science TDR [222]) would not be sufficient to detect the pulsars.

### Errata p. 79

FIGURE 4.1. Vela X region at different wavelengths. (A) H.E.S.S. surface brightness map ( $\text{cm}^{-2} \text{s}^{-1} \text{deg}^{-2}$ ) at (0.75–70) TeV, smoothed at  $0.07^\circ$ . (B) Sky-map (Jy/Beam) obtained with the *Parkes* radio telescopes at 2.4 GHz with  $0.17^\circ$  of half-power beam width (HPBW). (C) ROSAT X-ray sky-map (kcounts  $\text{deg}^{-2}$ ) at energies  $>1.3$  keV, smoothed at  $0.07^\circ$ . (D) *Fermi*-LAT gamma-ray Test Statistic (TS) map at energies  $>800$  MeV with angular resolution of  $0.6^\circ$  (68% of PSF at 1 GeV). The white star marks the position of the Vela pulsar. White circles in Fig. 4.1A correspond to  $0.8^\circ$  and  $1.2^\circ$  radii, whereas white contours in Figs. 4.1B, 4.1C and 4.1D indicate VHE surface brightness levels of 0.3, 0.6, 1, 1.6 and  $1.9 \times 10^{-11} \text{cm}^{-2} \text{s}^{-1} \text{deg}^{-2}$ . (Images taken from [25]).

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FIGURE 4.1. Vela X region at different wavelengths. (A) H.E.S.S. surface brightness map ( $\text{cm}^{-2} \text{s}^{-1} \text{deg}^{-2}$ ) at (0.75–70) TeV, smoothed at  $0.07^\circ$ . (B) Sky-map (Jy/Beam) obtained with the *Parkes* radio telescopes at 2.4 GHz with  $0.17^\circ$  of half-power beam width (HPBW). (C) ROSAT X-ray sky-map (kcounts  $\text{deg}^{-2}$ ) at energies  $>1.3$  keV, smoothed at  $0.07^\circ$ . (D) *Fermi*-LAT gamma-ray Test Statistic (TS) map at energies  $>800$  MeV with angular resolution of  $0.6^\circ$  (68% of PSF at 1 GeV). The white star marks the position of the Vela pulsar. White circles in Fig. 4.1A correspond to  $0.8^\circ$  and  $1.2^\circ$  radii, whereas white contours in Figs. 4.1B, 4.1C and 4.1D indicate VHE surface brightness levels of 0.3, 0.6, 1, 1.6 and  $1.9 \times 10^{-11} \text{cm}^{-2} \text{s}^{-1} \text{deg}^{-2}$ . (Images taken from Abramowski et al. [25]).

### Errata p. 92

FIGURE 4.13. Comparison of *ctools* simulations with H.E.S.S. observations. (A) Sky-map of the H.E.S.S. observations taken from [25], smoothed with  $0.07^\circ$ . The color bar shows the surface brightness in  $\text{cm}^{-2} \text{s}^{-1} \text{deg}^{-2}$ . (B)/(C) Simulated count maps for the CTA-South/ASTRI mini-array (Conf. s9-4-257m, Mini-array) configurations. The exposure time is 53.1 hours.  $x$ -,  $y$ - axes are the right ascension (RA) and declination (DEC). The color bars represent the number of counts. All count maps are smoothed according to the size of the corresponding PSF (white circles). See text for details. Circles have radii of  $0.8^\circ$  and  $1.2^\circ$ , respectively. The

cross/star marks to the the Vela pulsar position.

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### Errata p. 121

Addition to the Bibliography:

### Corrige

[221] CTA Consortium. MAN-TDR/150315. 2016.

[222] CTA Consortium. Science TDR. *in preparation*, 2016.