

CTA-CCF Publications:

- Status and Suggestions :
 - Overall,
 - Array Calibration,
 - Atmospheric Calibration.



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Overall and Array Calibration (2014-2017)

- (1) M. Gaug, et al., (2014). "Calibration strategies for the Cherenkov Telescope Array". In Proc. SPIE 9149, Observatory Operations: Strategies, Processes, and Systems V, 914919; doi:10.1117/12.2054536.
- (2) M. Gaug, et al., (2015). "Calibration of the Cherenkov Telescope Array", Proc. 34th ICRC, The Hague, The Netherlands, PoS(ICRC2015) 929.
- (3) S. Toscano, et al., (2015). "Using muon rings for the optical throughput calibration of the SST-1M prototype for the Cherenkov Telescope Array", Proc. 34th ICRC, The Hague, The Netherlands, PoS(ICRC2015), arXiv:1509.00266v1.
- (4) A. Brown, et al., (2015). "Flasher and muon-based calibration of the GCT telescopes proposed for the Cherenkov Telescope Array", Proc. 34th ICRC, The Hague, The Netherlands, PoS(ICRC2015), arXiv:1509.00185v1.
- (5) M.C. Maccarone et al., (2016). "Pre-selecting muon events in the camera server of the ASTRI telescopes for the Cherenkov Telescope Array", Proc. SPIE 9913, Software and Cyberinfrastructure for Astronomy IV, 99132E (8 August 2016); doi: 10.1117/12.2230835.
- (6) T. Mineo et al., (2016). "Using muon rings for the optical calibration of the ASTRI telescopes for the Cherenkov Telescope Array", Proc. SPIE 9913, Software and Cyberinfrastructure for Astronomy IV, 99132R (July 26, 2016); doi:10.1117/12.2232256.
- (7) A. Segreto, et al., (2016). "The absolute calibration strategy of the ASTRI SST-2M telescope proposed for the Cherenkov Telescope Array and its external ground-based illumination system", Proc. SPIE 9906, Ground-based and Airborne Telescopes VI, 99063S (27 July 2016); doi: 10.1117/12.2231922.
- (8) A. Brown, et al., (2016). "Feasibility study of airborne calibration of the Cherenkov Telescope Array", Proc. SPIE 9906, Ground-based and Airborne Telescopes VI, 99061W (27 July 2016); doi: 10.1117/12.2231409.
- (9) D. Parsons, et al., (2016). "Calibration of the Cherenkov telescope array using cosmic ray electrons", Astroparticle Physisc, 84 (2016) 23-28.**
- (10) A. Mitchell, et al., (2016). "Cross Calibration of Telescope Optical Throughput Efficiencies using Reconstructed Shower Energies for the Cherenkov Telescope Array", Astroparticle Physics, 75 (2016) 1-7.**
- (11) S. Stefanik, et al., (2017). "Atmospheric monitoring and array calibration in CTA using the Cherenkov Transparency Coefficient", ICRC-2017, Busan, South Korea.
- (12) M.C. Maccarone, et al., (2017). "Tools and Procedures for the CTA Array Calibration", ICRC-2017, Busan, South Korea.
- (13) A.M. Brown, (2017). "Cross-calibrating the Cherenkov Telescope Array with an airborne calibration platform", (submitted).**

* Journal papers in bold

Atmospheric Calibration (2014-2017)



... if something is omitted, please, forgive me ...

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- 1) M. Doro et al., "Strategy implementation for the CTA Atmospheric monitoring program", Proc. 2nd AtmoHEAD Conf., Padova, Italy, EPJ 89 (2015) 02005
- 2) P. Janecek et al., "FRAM for CTA", Proc. 2nd AtmoHEAD Conf., Padova, Italy, EPJ 89 (2015) 03006
- 3) D. Mandat et al., "All-Sky-Camera for the CTA Atmospheric Calibration work package", Proc. 2nd AtmoHEAD Conf., Padova, Italy, EPJ 89 (2015) 03007
- (4) J. Ebr et al., "Real-time atmospheric monitoring for the Cherenkov Telescope Array using a wide-field optical telescope", Proc. 34th ICRC, The Hague, Netherlands PoS(ICRC2015) 933
- (5) L. Valore "The ARCADE Raman LIDAR system for the Cherenkov Telescope Array", Proc. 34th ICRC, The Hague, Netherlands PoS(ICRC2015) 968
- (6) M. Gaug, "CTA Atmospheric Calibration", Proc. AtmoHEAD2016 conference, Olomouc, 2016.
- (7) C. Fruck, et al., "Instrumentation for comparing night sky quality and atmospheric conditions of CTA site candidates", Journal of Instrumentation, 10, 2015.**
- (8) P. Janecek et al., "CTA FRAM Update", Proc. AtmoHEAD2016 conference, Olomouc, 2016.
- (9) J. Marín et al., "Density profile characterization and modelling at Paranal and Armazones 2k sites", Proc. AtmoHEAD2016 conference, Olomouc, 2016.
- (10) M. Vrástil et al., "Overview of simulation efforts in CTA", Proc. AtmoHEAD2016 conference, Olomouc, 2016.
- (11) D. Mandát et al., "All-Sky-Camera for site characterization", Proc. AtmoHEAD2016 conference, Olomouc, 2016.
- (12) M. Gaug et al., "Site characterization of CTA-North", Proc. AtmoHEAD2016 conference, Olomouc, 2016.
- (13) S. Stefanik, et al., (2017). "Atmospheric monitoring and array calibration in CTA using the Cherenkov Transparency Coefficient", ICRC-2017, Busan, South Korea.
- (14) J. Ebr, et al., (2017). "Atmospheric calibration of the Cherenkov Telescope Array", ICRC-2017, Busan, South Korea.
- (15) J. Jurysek, et al., (2017). "Sun/Moon photometer for the Cherenkov Telescope Array - first results", ICRC-2017, Busan, South Korea.
- (16) L. Valore, et al., (2017). "The ARCADE Raman Lidar and atmospheric simulations for the Cherenkov Telescope Array", ICRC-2017, Busan, South Korea.
- (17) G. Vasileiadis, et al., (2017). "Raman LIDARs and atmospheric calibration for the Cherenkov Telescope Array", ICRC-2017, Busan, South Korea.
- * Journal papers in bold**

Publications (2014-2017)

Conf. Proceedings	Ref. Journal Papers	Main item
2	--	Overall CCF
7	2 (+1)	Array Calibration
15	1	Atmospheric Calibration
2	--	Camera and Pointing
26	3 (+1)	<i>Total</i>



Proceedings
of Conferences

AtmoHEAD (2015 , 2016)
ICRC (2015, 2017)
SPIE (2014, 2016)



Astroparticle Physics (2016)
JINST (2015)
??? (2017?)

***It's time to publish
more in refereed
Journals ...***

e.g. Astroparticle Physics

2.1 Publications in refereed journals

... **Publications in refereed journals** are subdivided according to their content and scope, and have different requirements regarding their ... **authorship rules**... During the pre-operation phase we consider the following journal paper categories:

- CTA Consortium publications
- Non-Consortium publications
- **Technical publications**

Publication Categories

Ref. CB-GOV/131220, vers. 3.2

- CTA Consortium publications
- Non-Consortium publications
- **Technical publications:** journal papers concerning **technical aspects of CTA (e.g. hardware, software, analysis methods, etc.)** at a level below one of the CTA subproject, WP, or WG. This includes, e.g.:
 - ...
 - Technical articles containing the **description and/or characterization of a calibration method** for CTA.
 - Technical articles containing the **atmospheric characterization** of a CTA site.
 - ...



CCF publications == Technical publications

Publication Authorship

Ref. CB-GOV/131220, vers. 3.2

Inclusion as an author of CTA publications is a key factor in recognizing the contributions individuals have made to the CTA project. The guiding principle is that **individuals should receive appropriate recognition for their contributions** to the project.

Technical publications: The author list and the order of authors shall be **decided by the main authors of the paper** in consultation with the relevant CTA subproject, WP, or WG leader and SAPO.

Any CTA member who believes that he/she has made a contribution to the paper and requests to be on the author list would be included without prejudice.

Technical publications pass through CTA-SAPO-CPS ... and then they must contain the sentence “This paper has gone through internal review by the CTA Consortium”

CTA CCF Array Calibration: Status of Technical Publications



Published:

- A. Mitchell, D. Parsons, W. Hofmann, K. Bernlohr, (2016). “Cross Calibration of Telescope Optical Throughput Efficiencies using Reconstructed Shower Energies for the Cherenkov Telescope Array”, *Astroparticle Physics*, 75 (2016) 1–7.
- D. Parsons, J. Hinton, H. Schoorlemmer, (2016). “Calibration of the Cherenkov Telescope Array using cosmic ray electrons”, *Astroparticle Physics*, 84 (2016) 23-28.

Submitted:

- A. Brown, (2017). “Cross-calibrating the Cherenkov Telescope Array with an airborne calibration platform”.

In preparation:

- M. Gaug, M.C. Maccarone, ... et al., ... (2017 ?), “... *Muons as calibrators for CTA...*”
Preliminary draft, August 2017, in CTA-Redmine: CTA-COM-Repository-Muons
https://forge.in2p3.fr/projects/cta_com/repository/show/CCF/Muons
M. Gaug, Editor-in-Chief

CCF Array Calibration: Suggestions for Technical Publications



Strongly suggested:

- A. Segreto, “.. *The Illuminator* ..”
- S. Stefanik, ... , “.. *The Cherenkov Transparency Coefficient , CTC* ..”

... other suggestions?

... deadline?

... Astroparticle Physics?

CCF Atmospheric Calibration: Suggestions for Technical Publications

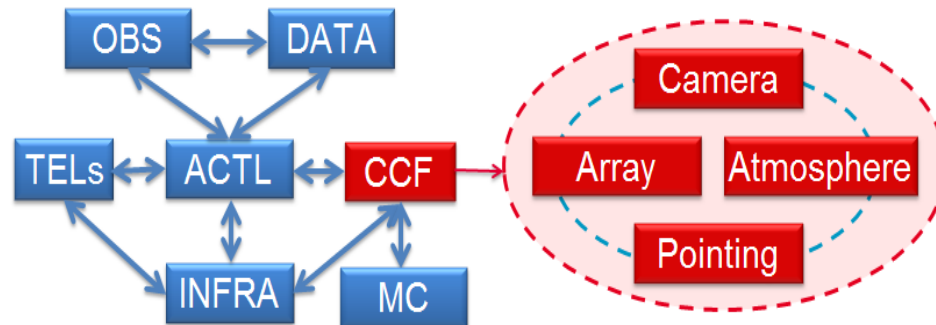


... suggestions?

CTA Calibration as a whole (*or almost*)

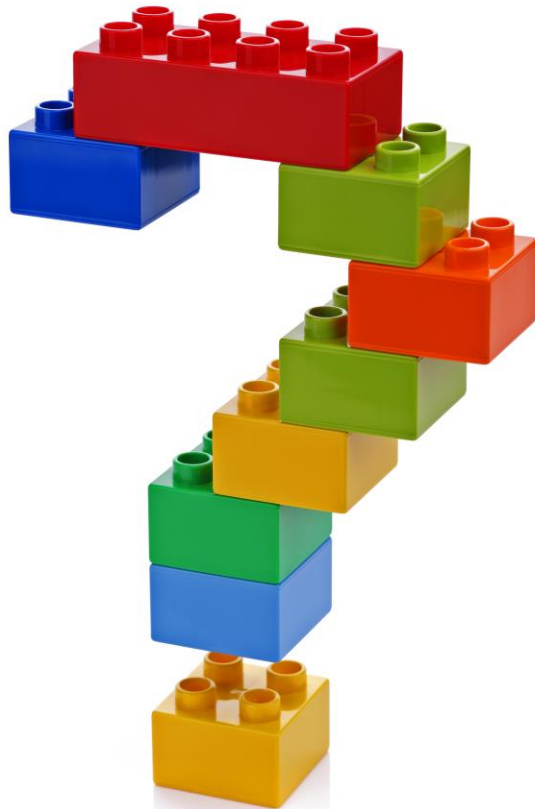
Possible Technical Publications ?

CCF Items	Last ref.
Array Calibration	ICRC-2017
Atmospheric Calibration	ICRC-2017
Camera Calibration	ICRC-2015
Pointing Calibration	ICRC-2015
Global Calibration Strategy	ICRC-2015



CCF Interfaces with other WPs/WGs

CTA Calibration as a whole (or almost) Possible Technical Publications



Are we ready for one or more
'almost-whole' CCF technical
publications?

... let's discuss ...

