

## Executive Summary

Title: Cross-calibration and combined analysis of the CTA-LST prototype and the MAGIC telescopes

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### What is this contribution about?

In this work we present the results of the inter-telescope cross-calibration, and the combined analysis of air shower events with different systems of Cherenkov telescopes, CTA-LST prototype (LST-1) and the MAGIC telescopes.

### Why is it relevant / interesting?

LST-1 is in its commissioning phase, and the cross-calibration with MAGIC that have been operating more than 15 years is very useful method for calibrating the LST-1. Also, the combined analysis of the LST-1 and MAGIC observation data will improve the sensitivity for gamma rays coming from astronomical sources.

### What have we done?

We performed joint observations of established gamma-ray sources with LST-1 and MAGIC as a part of the LST-1 commissioning. We analyzed the Crab Nebula data taken during the joint observations with a pipeline and Monte Carlo simulations developed for the cross-calibration and the combined analysis.

### What is the result?

We compared the LST-1 estimated energies of gamma-ray samples with MAGIC ones, and confirmed that the LST-1 energy estimation is comparable to that of the MAGIC estimation. In addition, we present the first detection of the Crab Nebula with the combined analysis of LST-1 and MAGIC data.