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Detection of TeV Rapid Variability Component Related to Prompt Emissions in GRB 221009A by LHAASO-WCDA

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LHAASO first detected the onset phase of the TeV afterglow from GRB221009A and observed its temporal overlap with the prompt emission phase, thereby offering an opportunity to detect or constrain radiation associated with rapid variability components resembling the TeV prompt emission in the afterglow background. The detection of TeV prompt emission could open a new window for theoretical research on GRBs. Using data from LHAASO-WCDA, we detected potential rapid variability components associated with the prompt emission in the afterglow of GRB221009A at a significance level of approximately 4σ .

Collaboration(s)

LHAASO

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