ANTARES offline study of three alerts after Baikal-GVD follow-up found coincident cascade neutrino events

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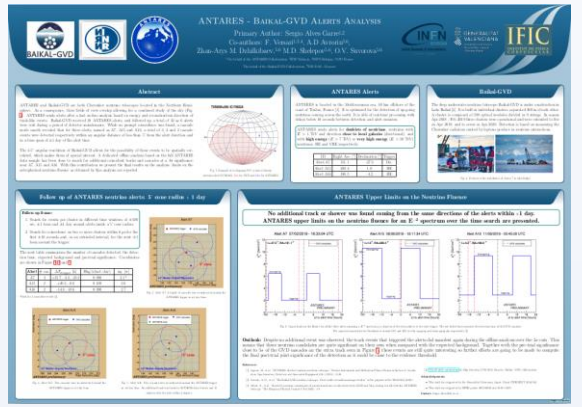


Poster flash-talk

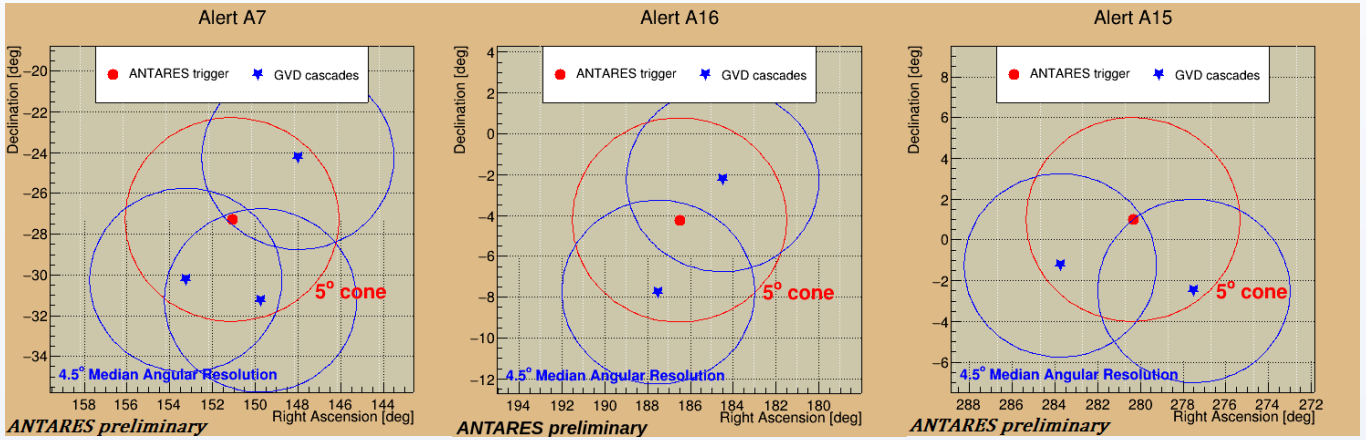
Introduction

ANTARES distributes external alerts

Dec18 – Dec19 Baikal received 38 alerts, and followed 32

Found **coincident cascades** for **three alerts**

- Skymap of the three ANTARES alerts with coincident Baikal-GVD cascades



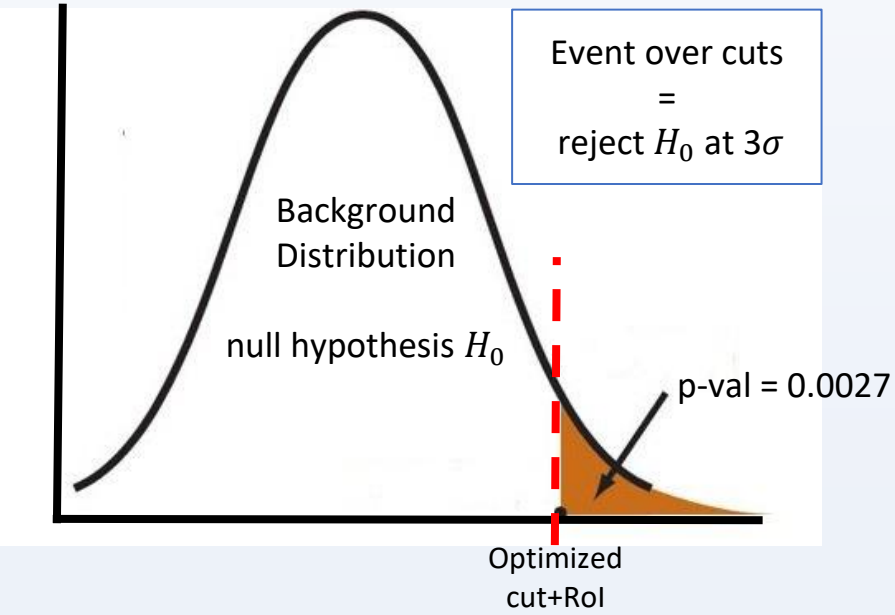
- Details on the Baikal-GVD cascades as reported by Baikal GVD

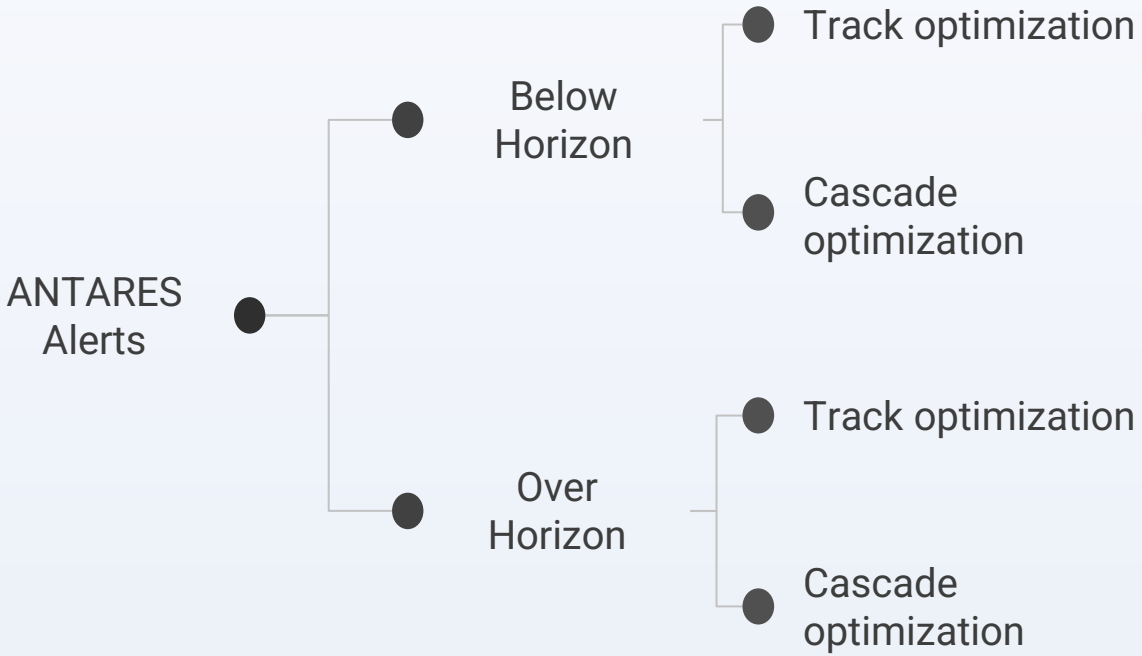
Alert ID	# cas.	$\Delta T_{trigger}$ [h]	Bkg/(clust.·day)	$p_{value}^{pre-trial}$	sig. [σ]
A7	3	+21.7, -3.2, -23.2	0.090	$8.46 \cdot 10^{-4}$	3.1
A15	2	+20.3, -0.6	0.108	$5.2 \cdot 10^{-3}$	2.6
A16	2	-14.8, -18.6	0.090	$3.6 \cdot 10^{-3}$	2.7

For the case of A7, the significance is computed only for 2 cascades, not three.

Analysis Method

ANTARES performed an analysis on the complete data set using a binned method





Results

The ANTARES data was unblinded with the optimized cut but no additional events were found.
Upper limits on the neutrino fluence were computed for a E^{-2} spectrum.