

# Searches for point-like sources of cosmic neutrinos with 13 years of ANTARES data

# Data set:

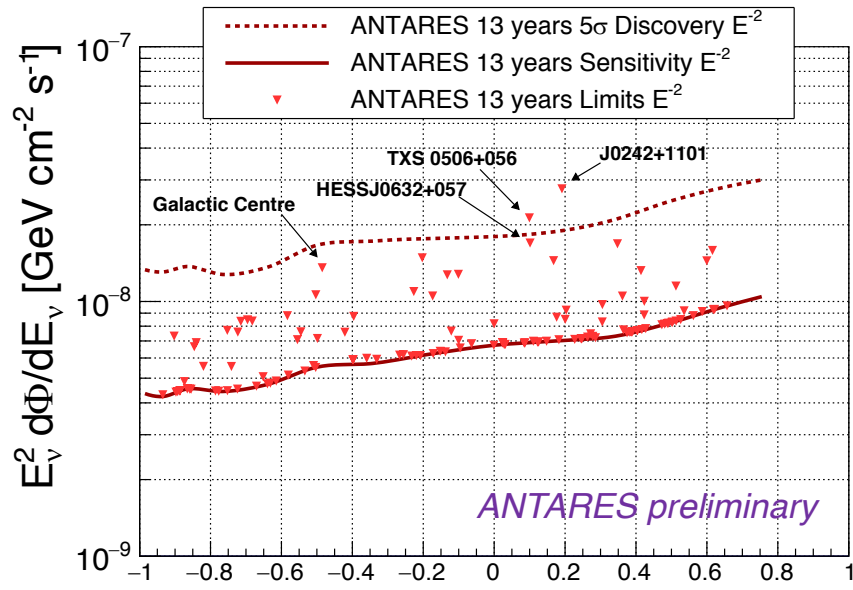
Period: from Jan 2007 to Feb 2020

Livetime: 3845 days

Events: 10162 tracks and 225 showers

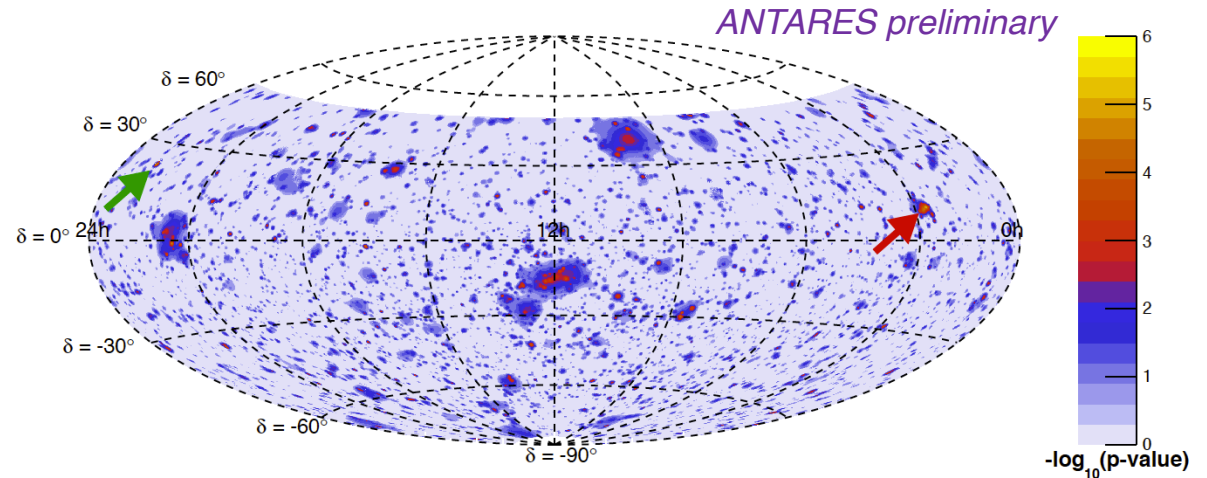
# Candidate-list search:

121 investigated sources



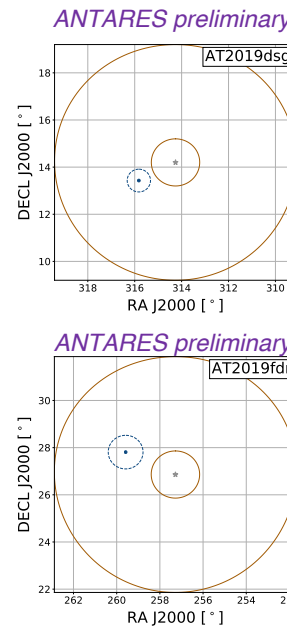
Most significant source: **J0242+1101**  $\sin\delta$   
 pre-trial significance: **3.8 $\sigma$**   
 post-trial significance: **2.4 $\sigma$**

# Full-sky search



Full-sky hotspot  
 pre-trial p-value: of  **$6.8 \times 10^{-6}$  (4.3 $\sigma$ )**  
 post-trial p-value: of **48%**

# Search at the tidal disruption events AT2019dsg and AT2019fdr



Source		Results						
Name	$\gamma$	$\hat{\mu}_{sig}$	p-value	$\Phi_0^{90\%C.L.}$ sensitivity	$\Phi_0^{90\%C.L.}$ limit	$\mathcal{F}^{90\%C.L.}$ sensitivity	$\mathcal{F}^{90\%C.L.}$ limit	$\log(\frac{E_{min}}{GeV}) - \log(\frac{E_{max}}{GeV})$
AT2019dsg	2.0	< 0.1	12.4%	$7.3 \times 10^{-8}$	$1.0 \times 10^{-7}$	14	19	3.6 - 6.6
	2.5	0.2	10.2%	$1.5 \times 10^{-5}$	$2.2 \times 10^{-5}$	29	43	2.8 - 5.5
	3.0	0.7	8.9%	$1.2 \times 10^{-3}$	$2.0 \times 10^{-3}$	230	380	2.1 - 4.7
AT2019fdr	2.0	0.5	6.7%	$8.5 \times 10^{-8}$	$1.3 \times 10^{-7}$	15	23	3.6 - 6.6
	2.5	0.5	7.9%	$2.1 \times 10^{-5}$	$3.0 \times 10^{-5}$	39	55	2.8 - 5.5
	3.0	0.6	9.1%	$2.0 \times 10^{-3}$	$3.0 \times 10^{-3}$	360	540	2.1 - 4.7