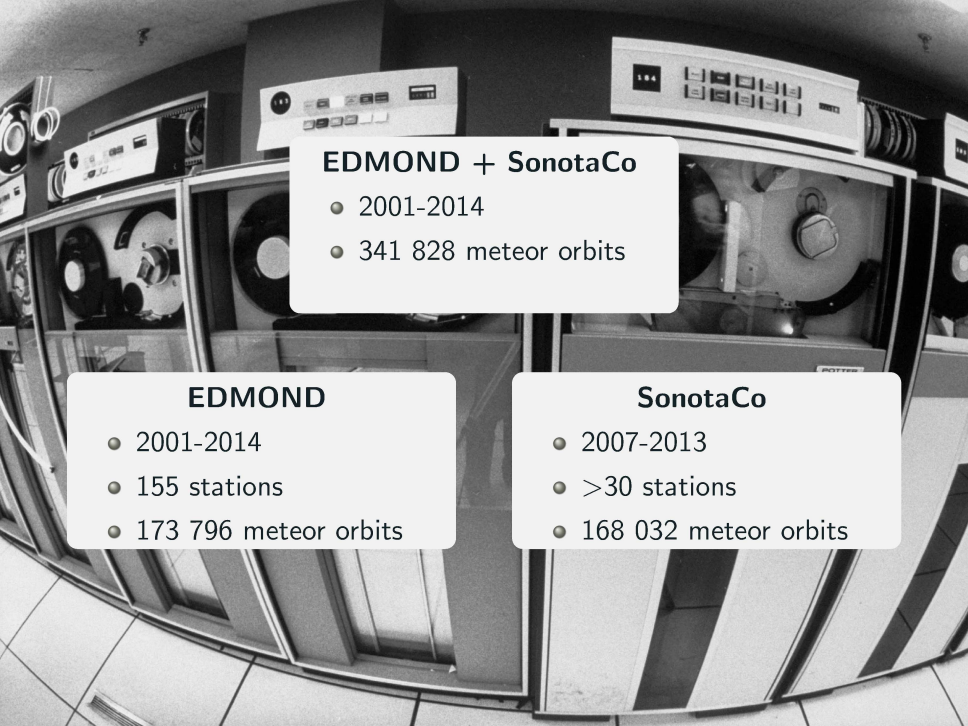


INDEPENDENT
IDENTIFICATION METHOD
APPLIED TO
EDMOND & SONOTACo
DATABASES

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Faculty of Mathematics, Physics and Informatics, Slovakia

August 2015



EDMOND + SonotaCo

- 2001-2014
- 341 828 meteor orbits

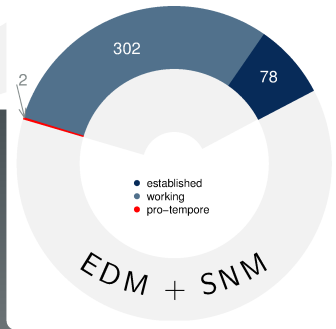
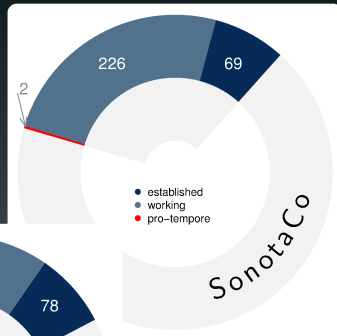
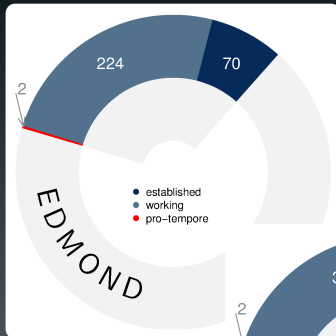
EDMOND

- 2001-2014
- 155 stations
- 173 796 meteor orbits

SonotaCo

- 2007-2013
- >30 stations
- 168 032 meteor orbits

SUMMARY



INDEPENDENT IDENTIFICATION METHOD



STEP 1

Scanning through the database

$$\mathbf{O} = \{\mathbf{q}, \mathbf{e}, \mathbf{i}, \omega, \Omega\}$$

+

$$\mathbf{D}(\mathbf{O}_A, \mathbf{O}_B)$$

+

$$\mathbf{D}_c$$

STEP 2

Merging groups into clusters

$$\mathbf{O} = \{\lambda_{\odot}, \alpha, \delta, V_G\}$$

+

$$D(\mathbf{O}_A, \mathbf{O}_B)$$

+

$$D'_c$$

STEP 3

Clusters identification

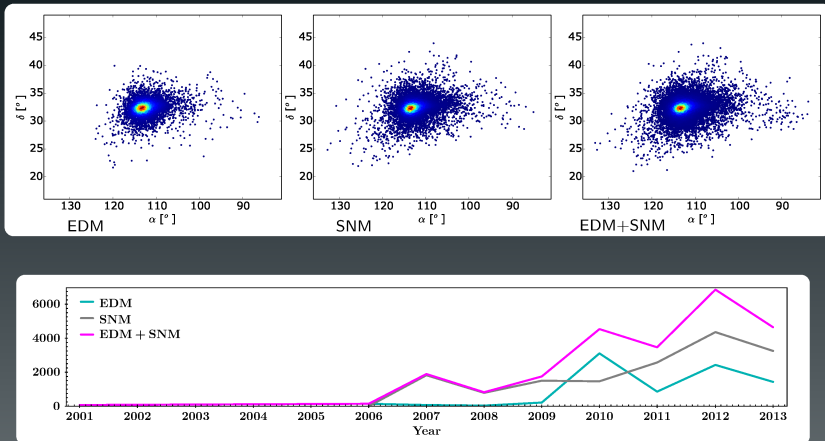
$$\begin{aligned} \mathbf{O} = \{\mathbf{q}, \mathbf{e}, \mathbf{i}, \omega, \Omega\} \quad \text{or} \quad \mathbf{O} = \{\lambda_{\odot}, \alpha, \delta, V_G\} \\ + \\ \mathbf{D}(\mathbf{O}, \mathbf{O}_{\text{IAUMDC}}) \\ + \\ \mathbf{D}_c \end{aligned}$$



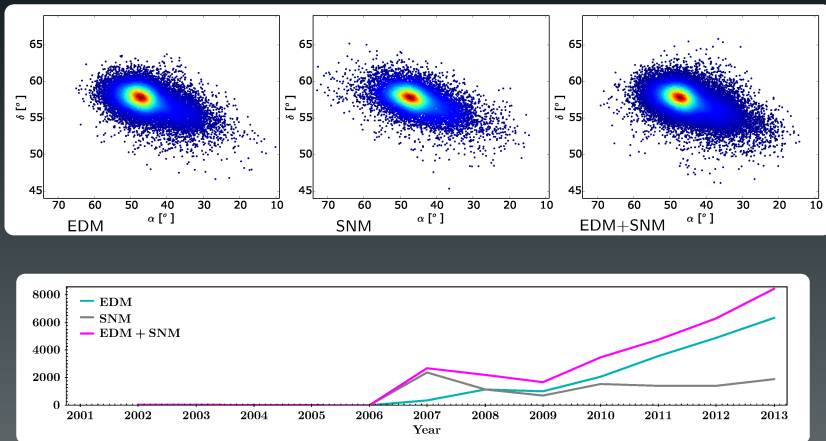
RESULTS

RESULTS

GEMINIDS

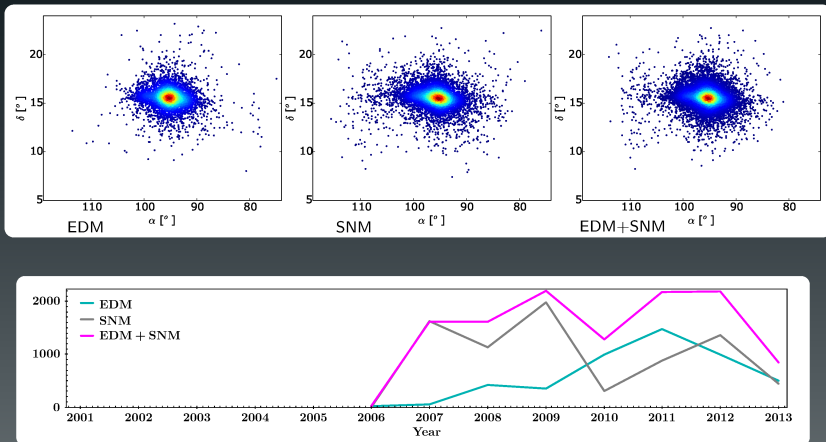


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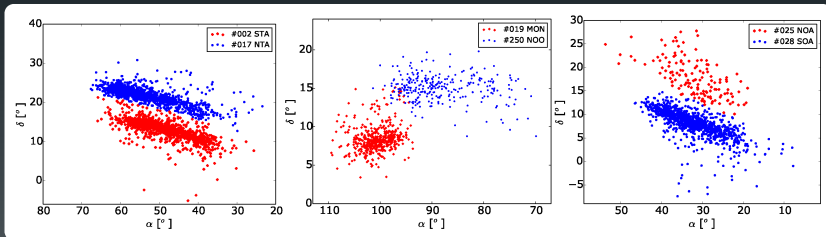


RESULTS

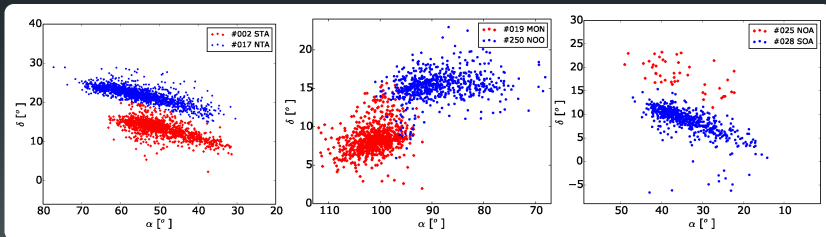
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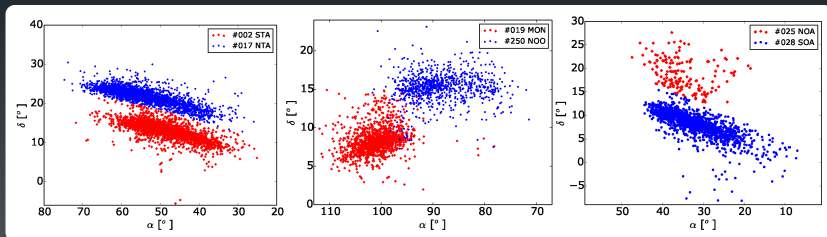
EDMOND



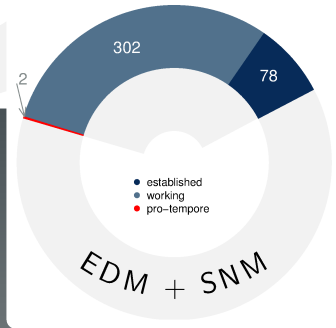
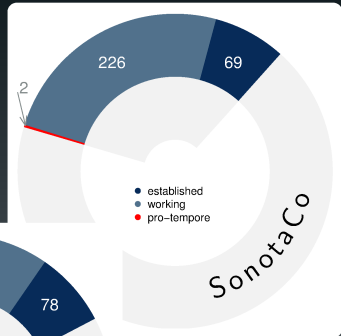
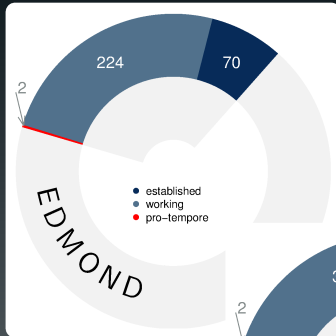
SonotaCo



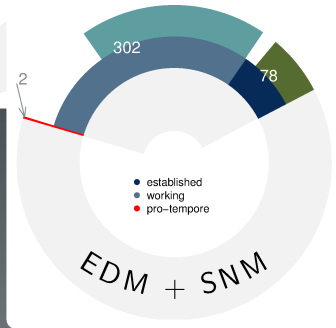
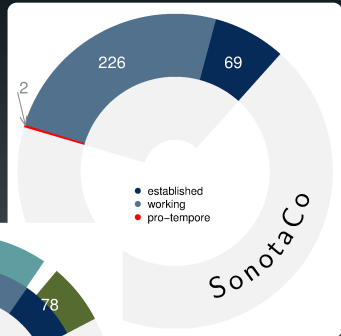
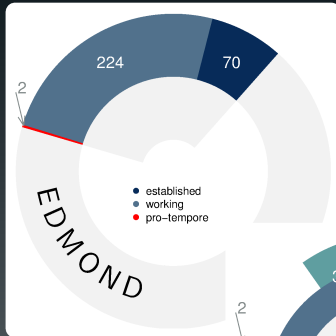
EDMOND + SonotaCo



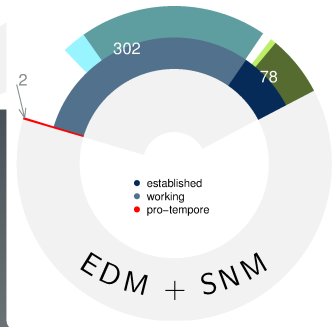
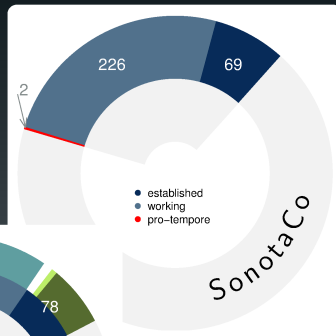
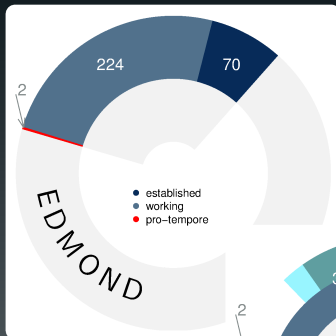
SUMMARY



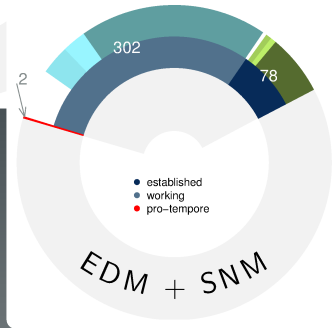
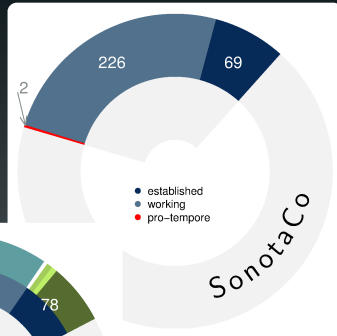
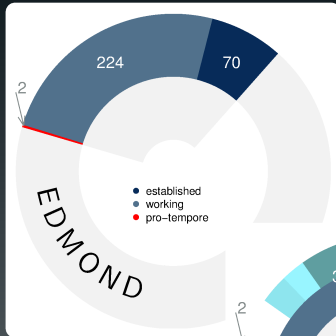
SUMMARY



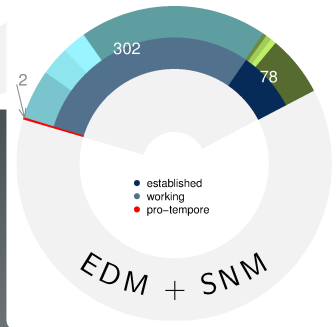
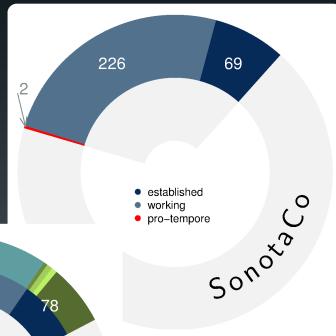
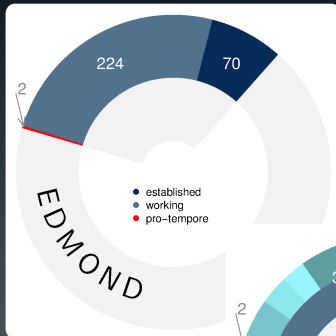
SUMMARY



SUMMARY



SUMMARY



A long-exposure photograph of a starry night sky, showing numerous curved light trails from stars. The trails are predominantly white and blue, with some yellow and orange hues. The background is dark, and the overall effect is a sense of motion and time passing.

Thank You
For **Your** Attention