

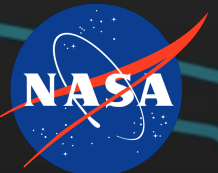


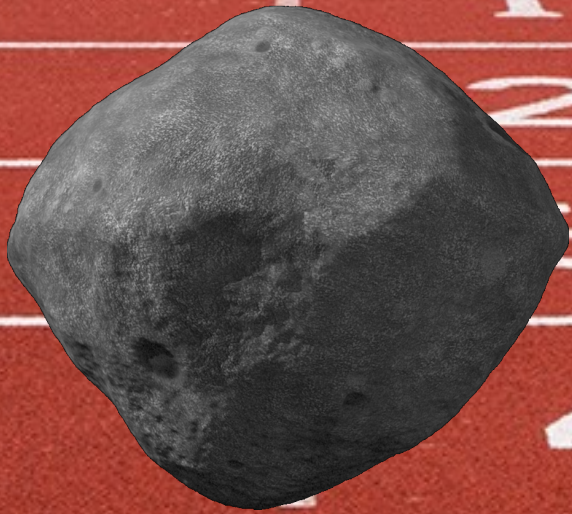
The two timing campaigns of the International Asteroid Warning Network

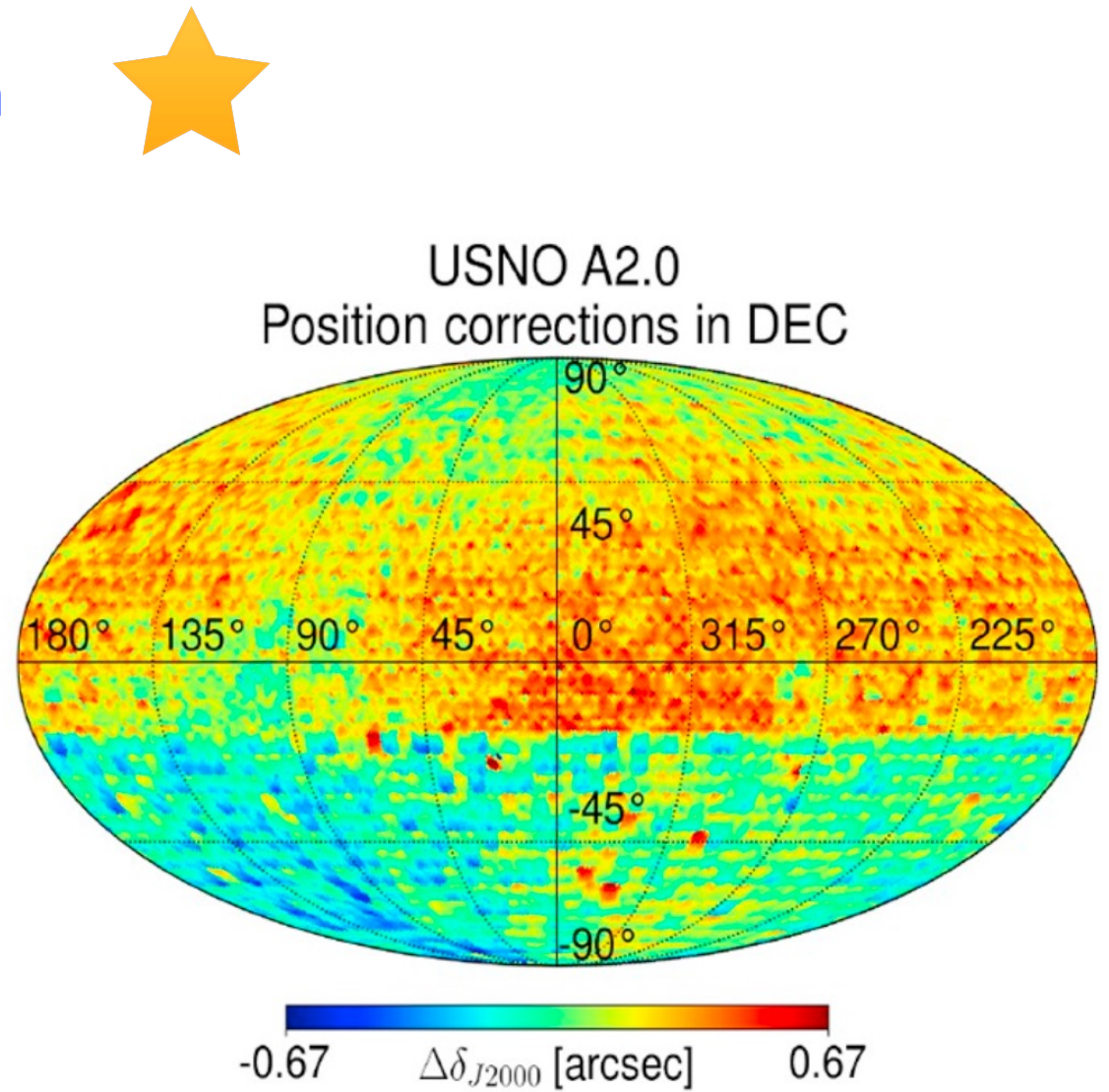
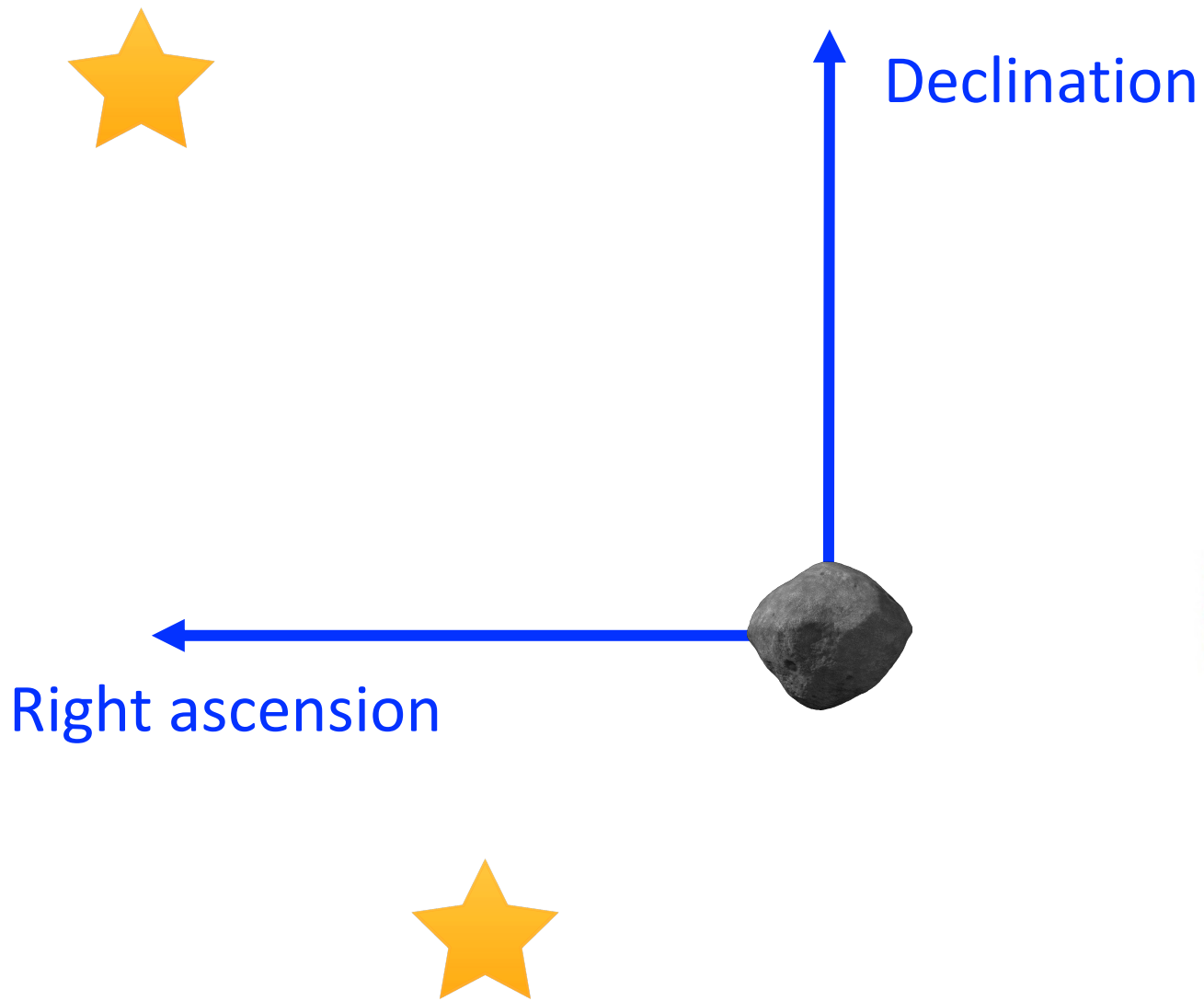
Davide Farnocchia, Vishnu Reddy, James M. Bauer,
Elizabeth M. Warner, Marco Micheli, Matthew J.
Payne, Tony Farnham, Michael S. Kelley

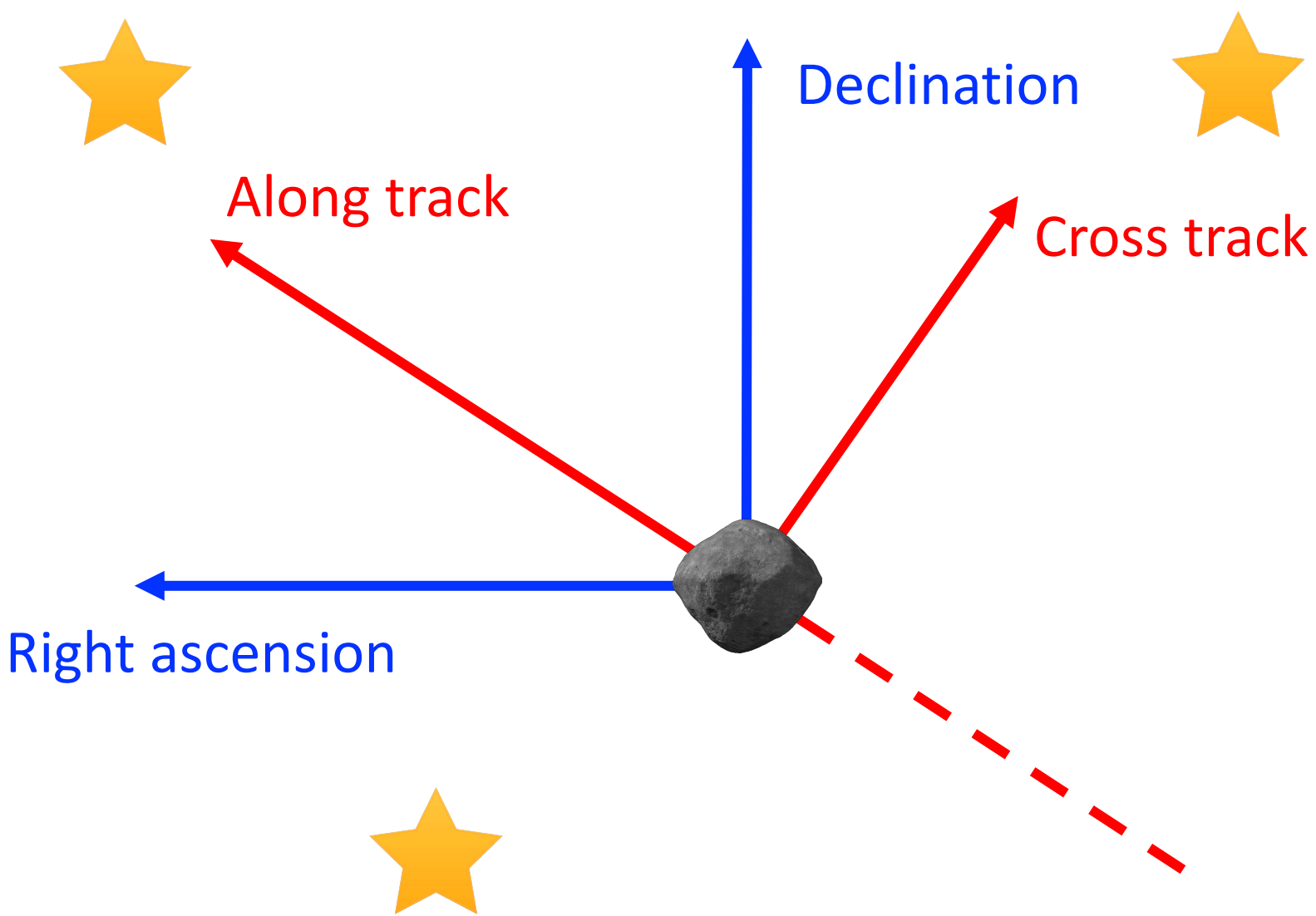


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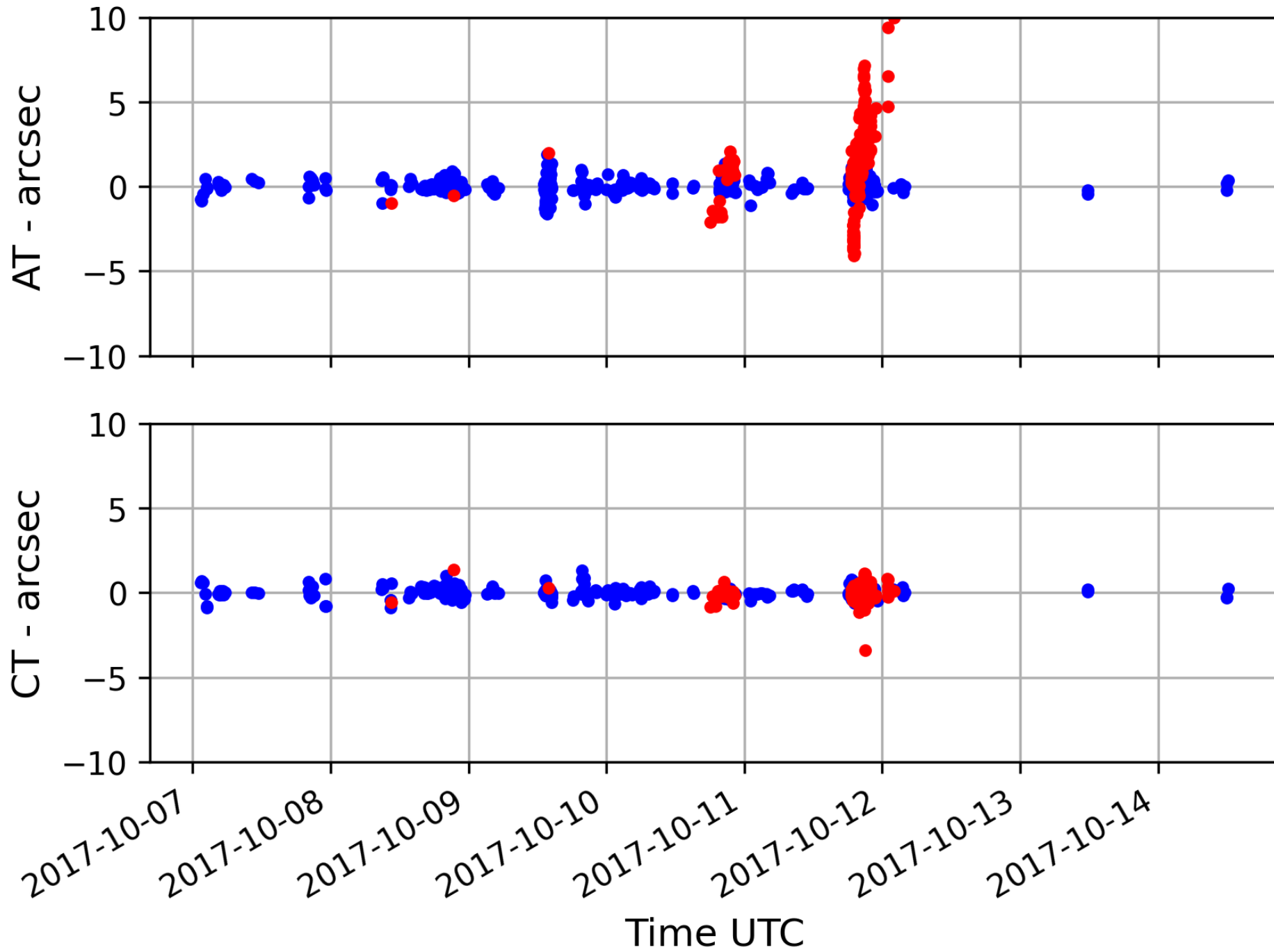








- Mechanical delay between command and shutter opening
- Shutter travel time
- Software, numerics, precision



2005 LW3

$a = 1.4 \text{ au}$

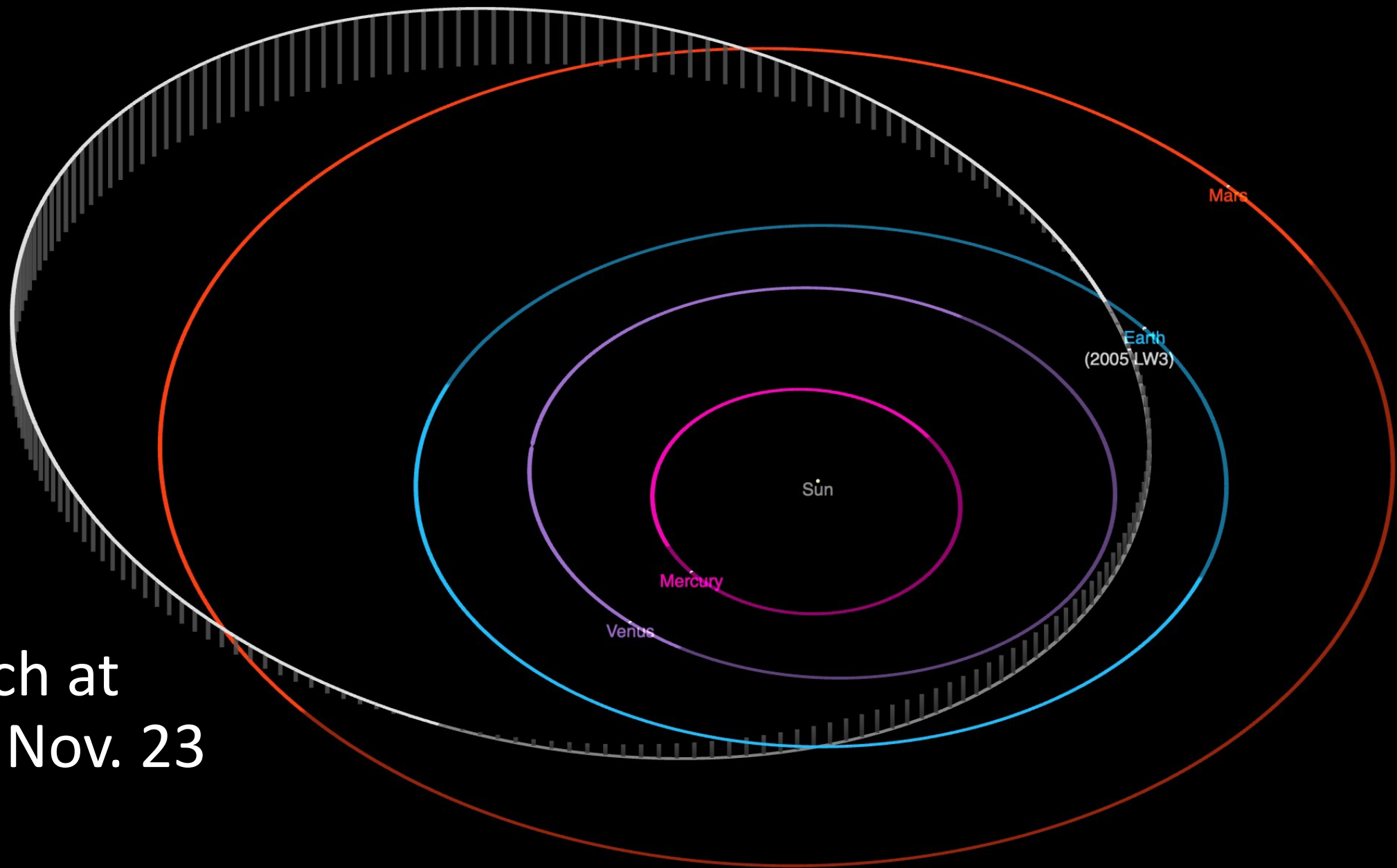
$e = 0.5$

$i = 6 \text{ deg}$

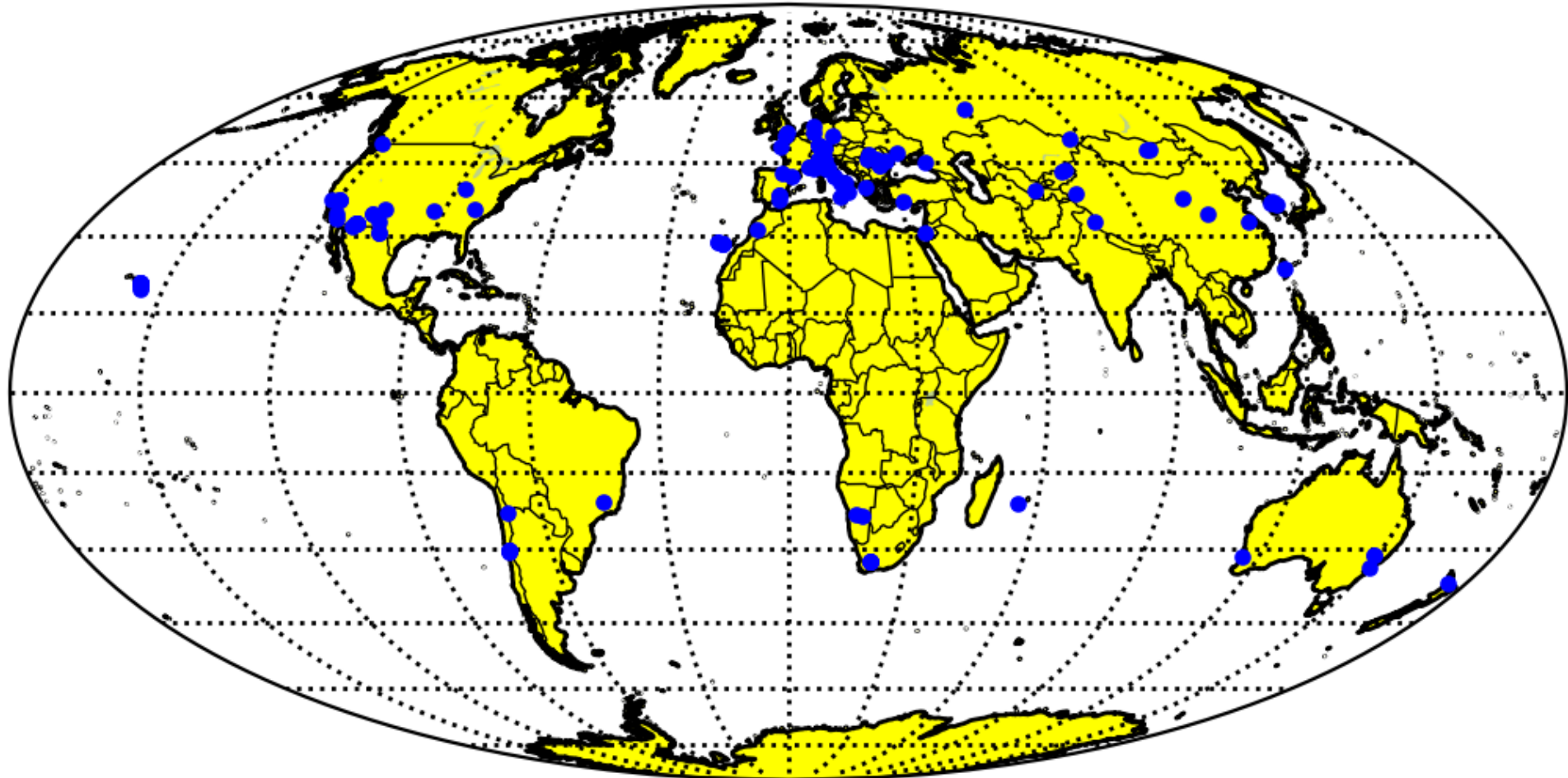
$H = 21.6$

Close approach at
3 LD on 2022 Nov. 23

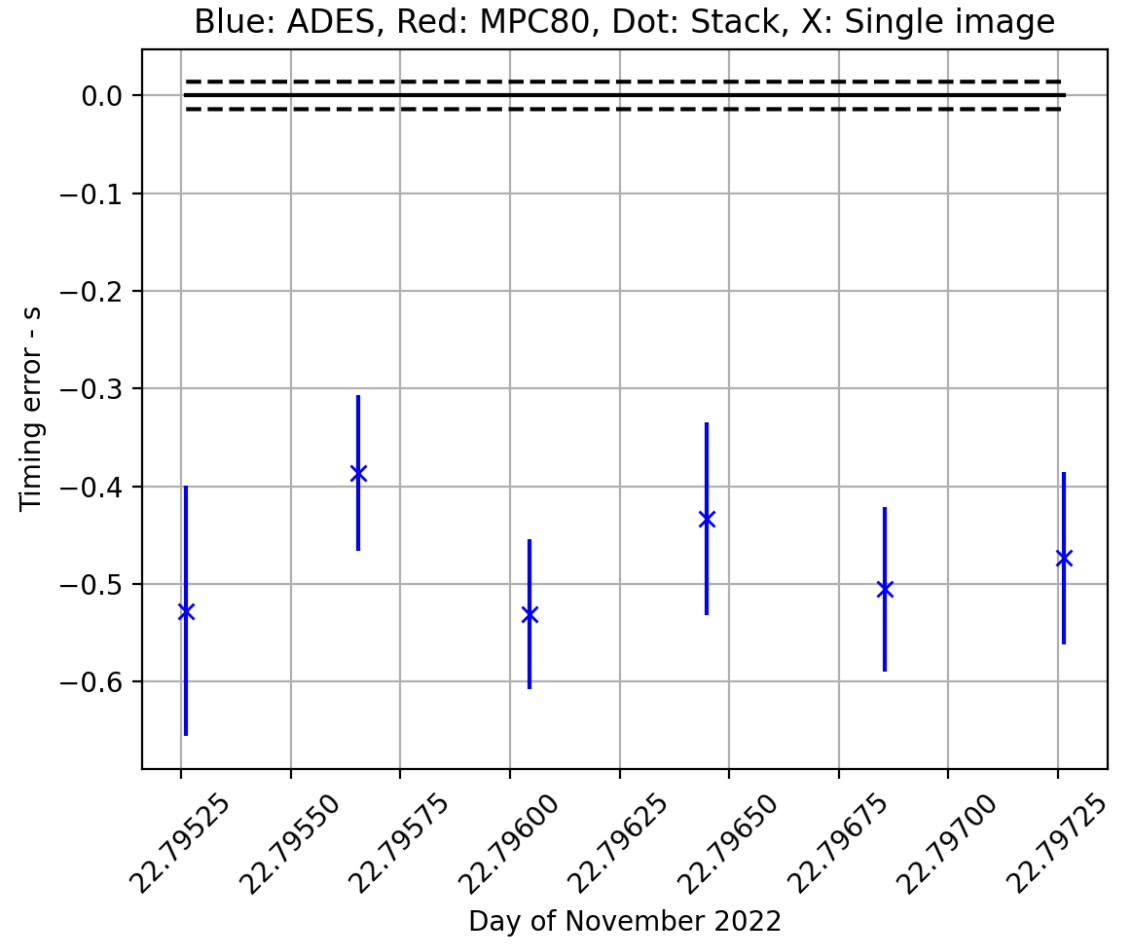
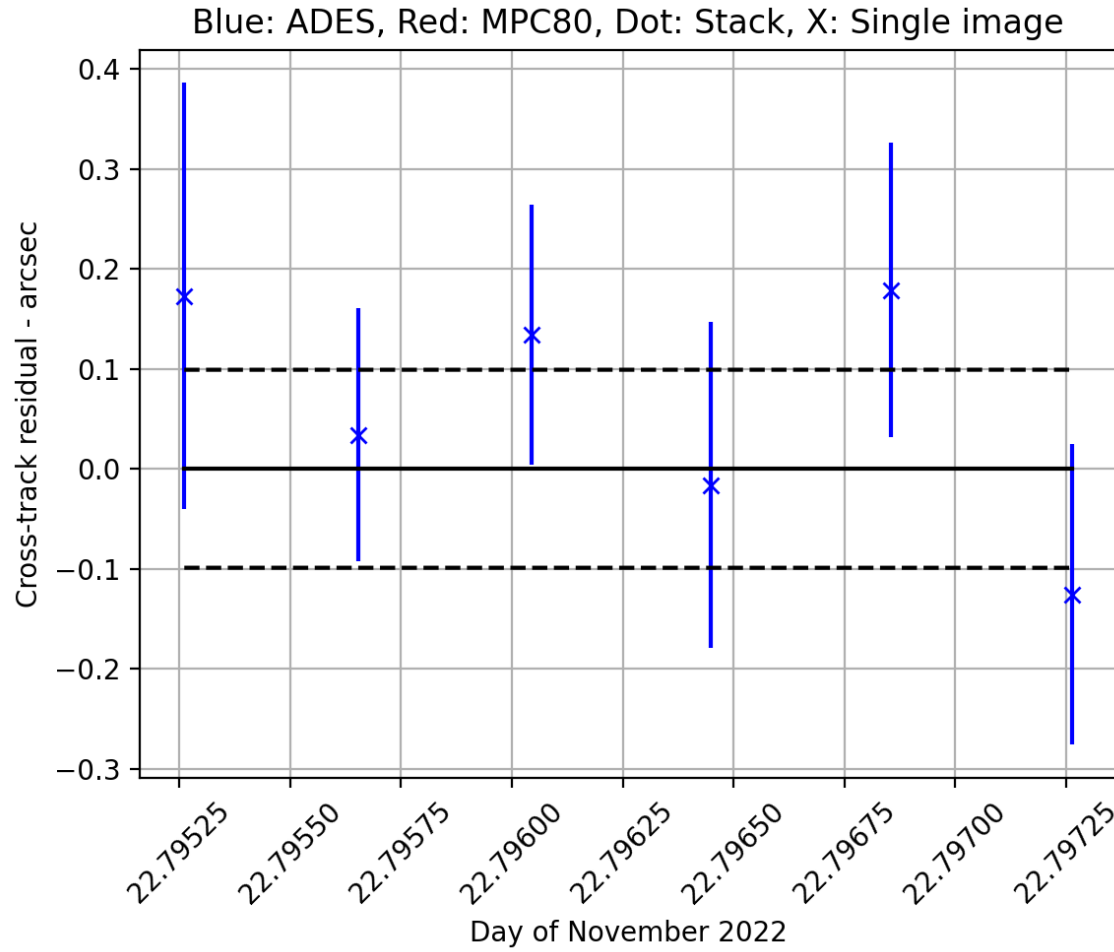
$2.5''/\text{s}$



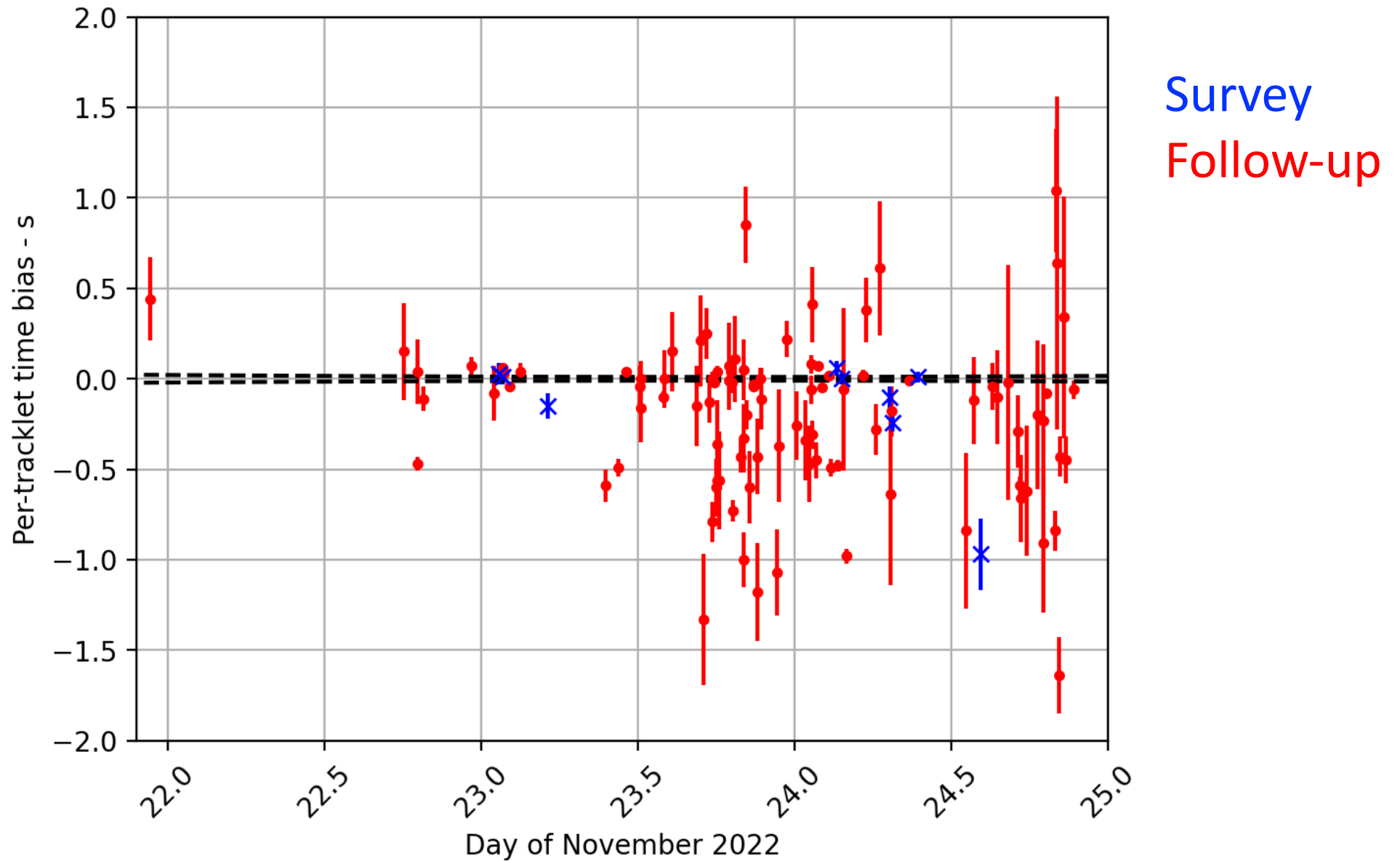
1046 observations from 82 participating stations



Individual reports

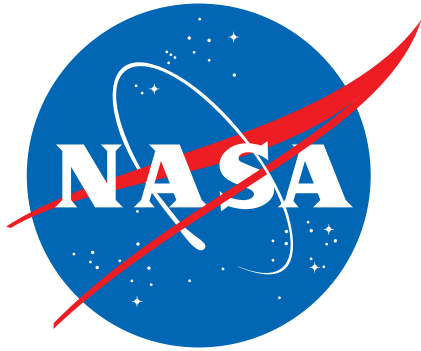


Timing error



Summary

- 2/3 of participants used the ADES format
- Reported uncertainties can be optimistic, especially when $<0.2''$
- Timing errors generally within 1 s, but overall biased toward early values
- No systematic improvement between 2019 XS campaign and 2005 LW3
- Continued interaction with observers and possible tutorials on how to calibrate time (e.g., using ProjectPluto's GNSS tool)



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