USAGE EXAMPLES

CELESTIAL NAVIGATION WITH EZALMANACONE

Usage Examples

Follow along as we go through 3 examples of finding a fix using ezAlmanacOne.

When entering an altitude observation for a celestial fix, ezAlmanacOne calculates a very accurate Hs value using all settings and corrections. This value can be used to preset your sextant before taking a sight. These examples will use the calculated Hs value for the observed altitude, which will result in a fix which is very close to the starting DR position.

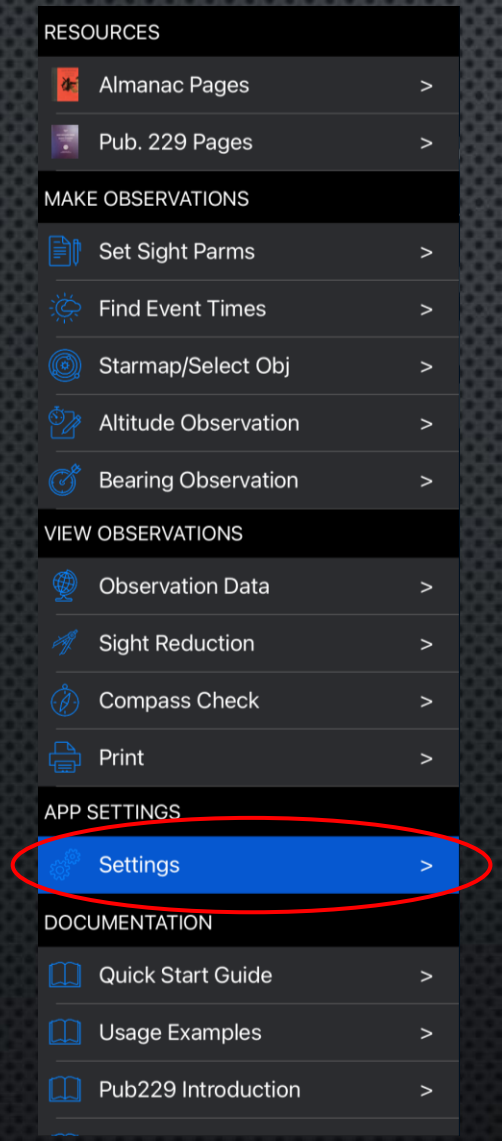
The first example, for Feb 10 2019, finds a fix from 2 stars, Canopus and Sirius, at evening twilight. Running fix is not active for this this example.

The second example, for Feb 11 2019, finds a running fix using the sun as it crosses the meridian. The fix found is offset from the starting DR position by the distance traveled between the 2 observations.

The third example finds the user at their current position on the current date.

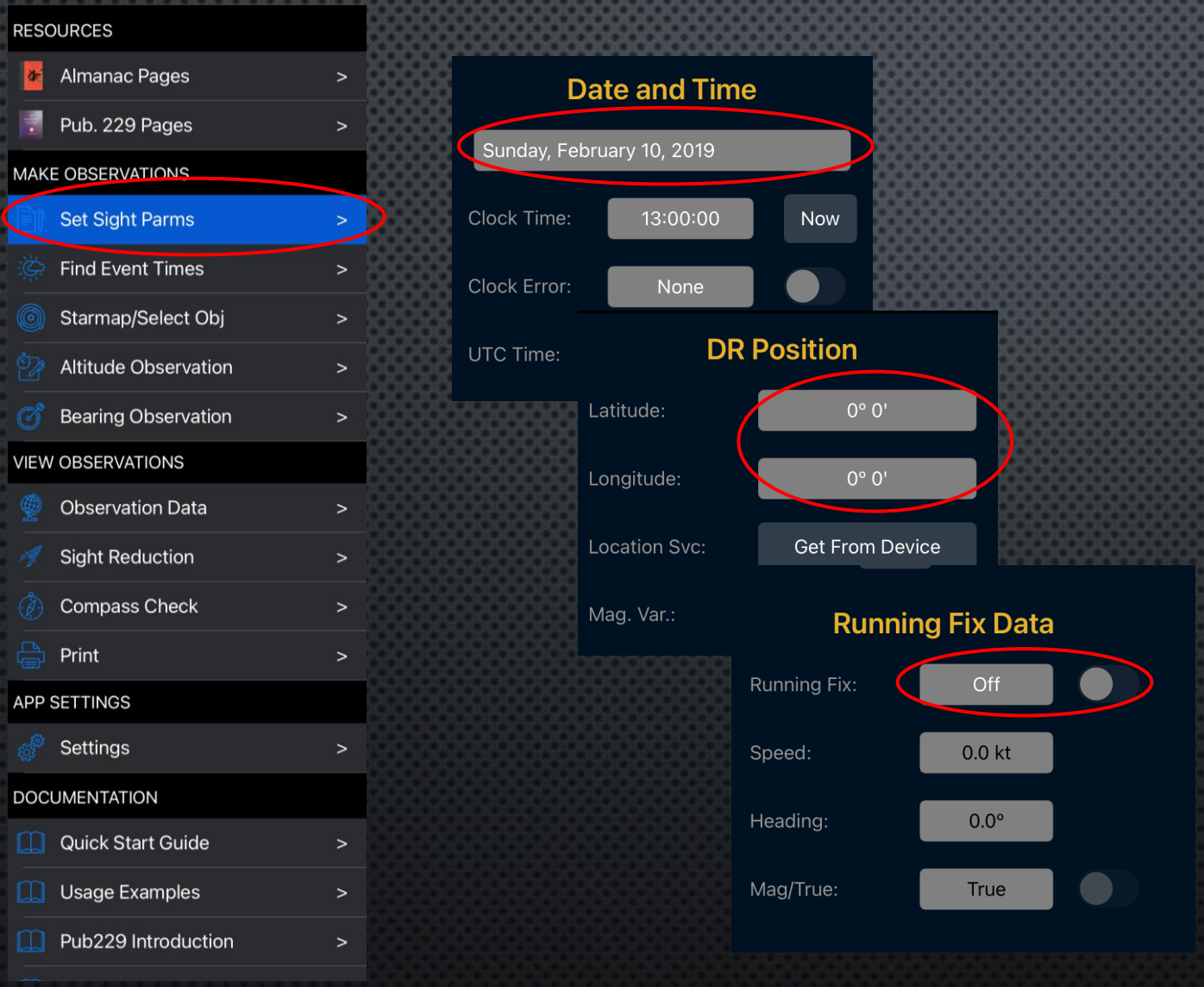
These steps can be printed or saved to a file from the "Print" function of EzAlmanacOne to make it easier to follow along.

1. SET THE TIME ZONE



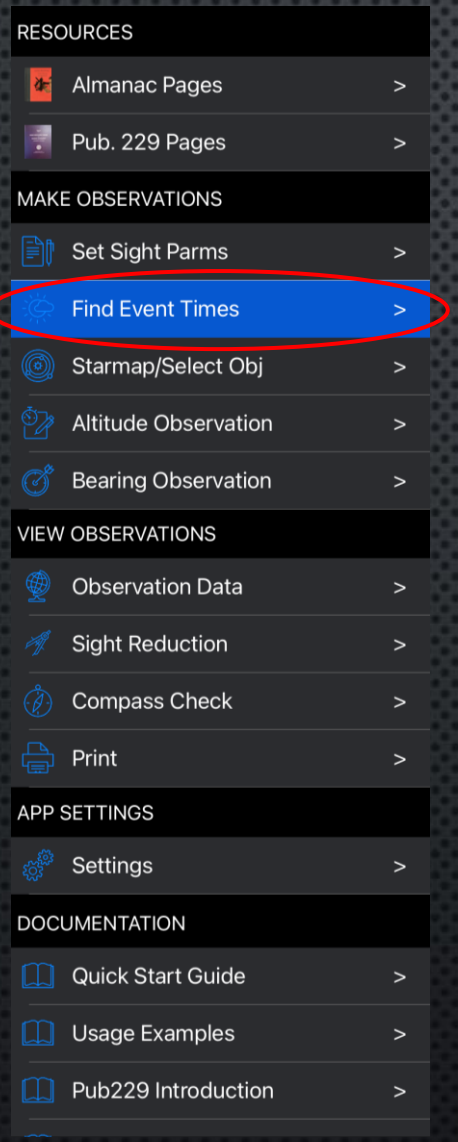
- GO TO THE "SETTINGS" SCREEN.
- SINCE THESE EXAMPLES WILL USE A DR POSITION OF LATITUDE 0, LONGITUDE 0, SET THE TIME ZONE FIELD TO 0.

2. SET THE DATE AND DR POSITION



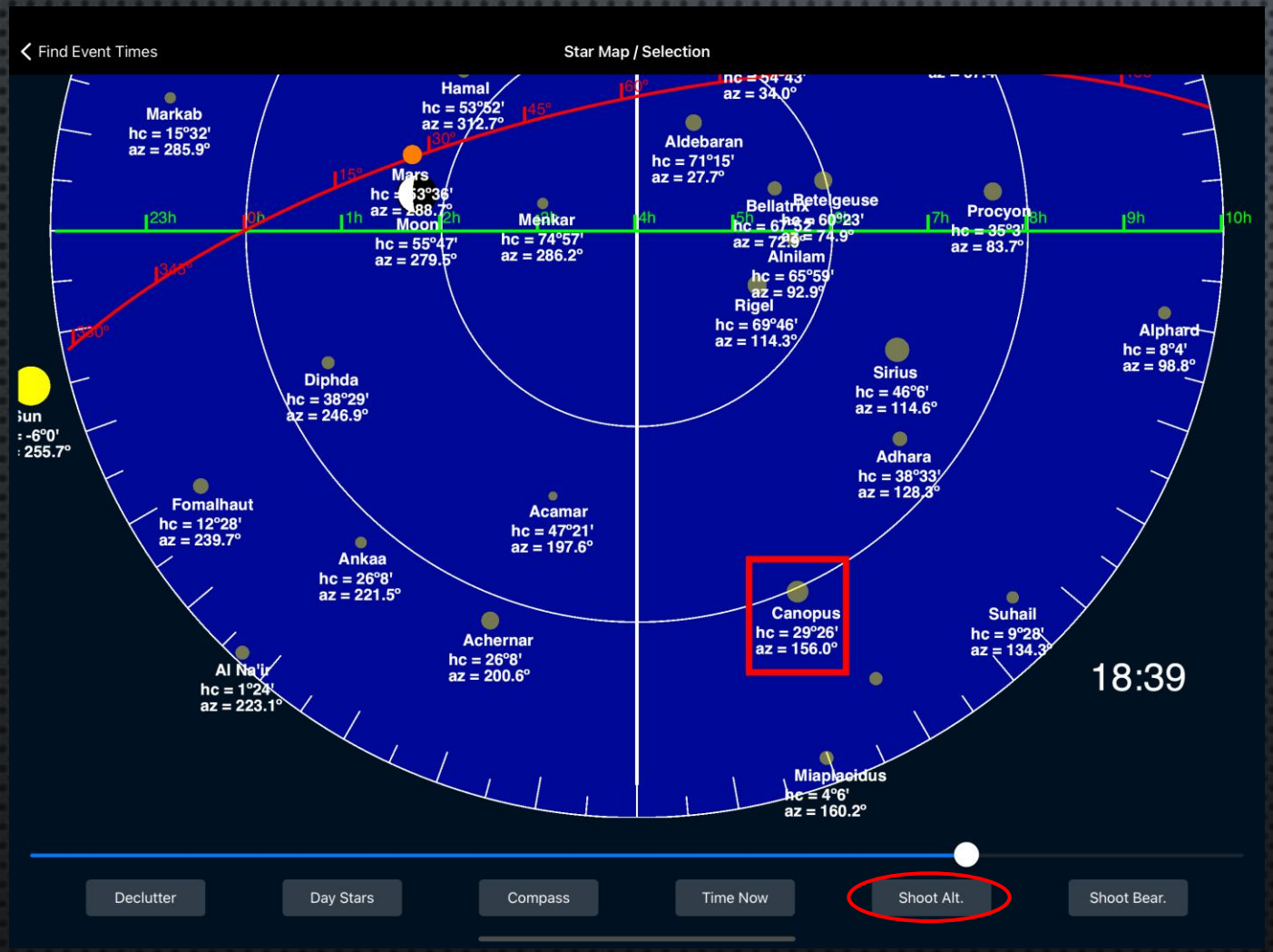
- GO TO THE "SET SIGHT PARMS" SCREEN.
- SET THE DATE FOR THE FIRST EXAMPLE TO 10 FEB 2019.
- SET THE DR POSITION TO LATITUDE 0, LONGITUDE 0.
- TURN RUNNING FIX OFF FOR THIS EXAMPLE.
- NO NEED TO SET OR CHANGE OTHER SIGHT PARAMETERS ON THIS PAGE FOR THIS EXAMPLE.
- THE CLOCK TIME WILL BE SET LATER WHEN WE ENTER THE OBSERVATION.

3. DETERMINE EVENING TWILIGHT



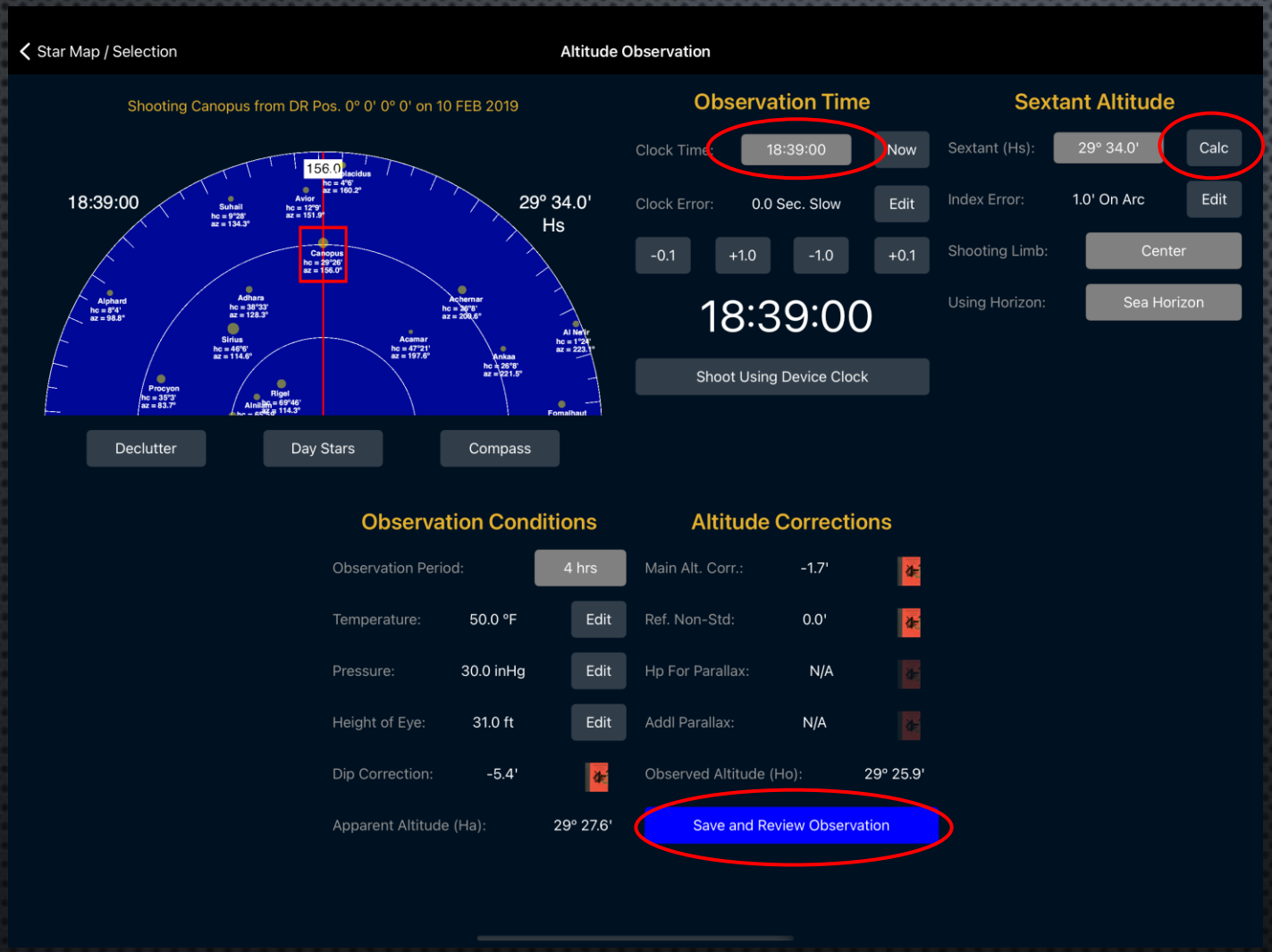
- Go to the "Find Event Times" screen.
- Set the object to Sun and the event to PM civil twilight.
- Press the "Select Objects at Event Times" button.
- After pressing the button you will transition to the star map screen.

4. SELECT CANOPUS FOR OBSERVATION



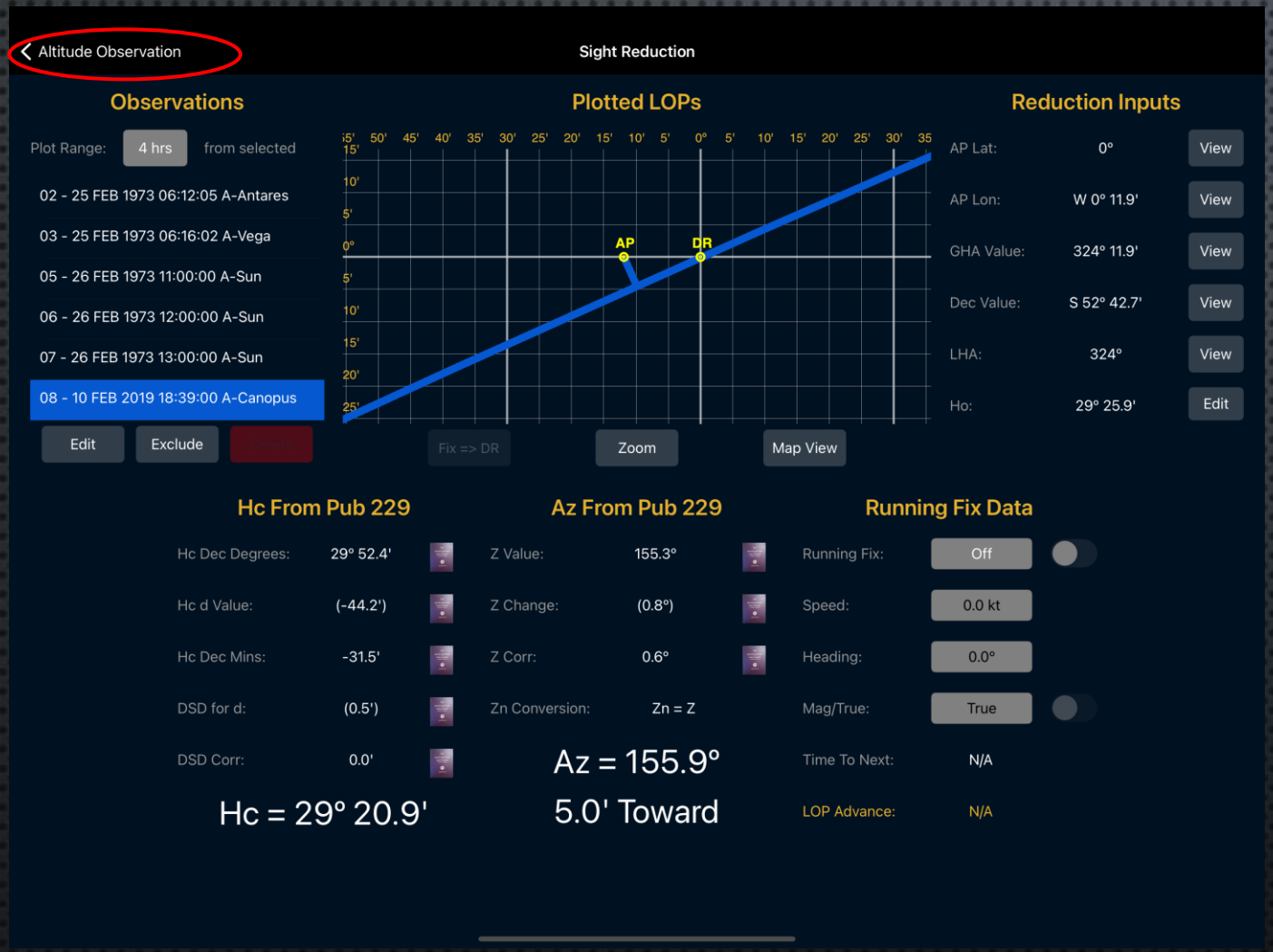
- Click or touch Canopus on the star map to select it for observation.
- Click or touch the "Shoot Alt." button to transition to the shoot screen.

5. MAKE THE CANOPUS OBSERVATION



- FOR THIS EXAMPLE, WE WILL JUST STAY WITH THE OBSERVATION TIME CALCULATED BY THE FIND EVENT TIME FUNCTION, 18:39:00.
- PRESS THE "CALC" BUTTON TO CALCULATE THE HS ALTITUDE AT THIS TIME.
- PRESS THE "SAVE AND REVIEW" BUTTON TO SAVE THIS OBSERVATION AND TRANSITION TO THE "SIGHT REDUCTION".

6. REVIEW CANOPUS REDUCTION DATA

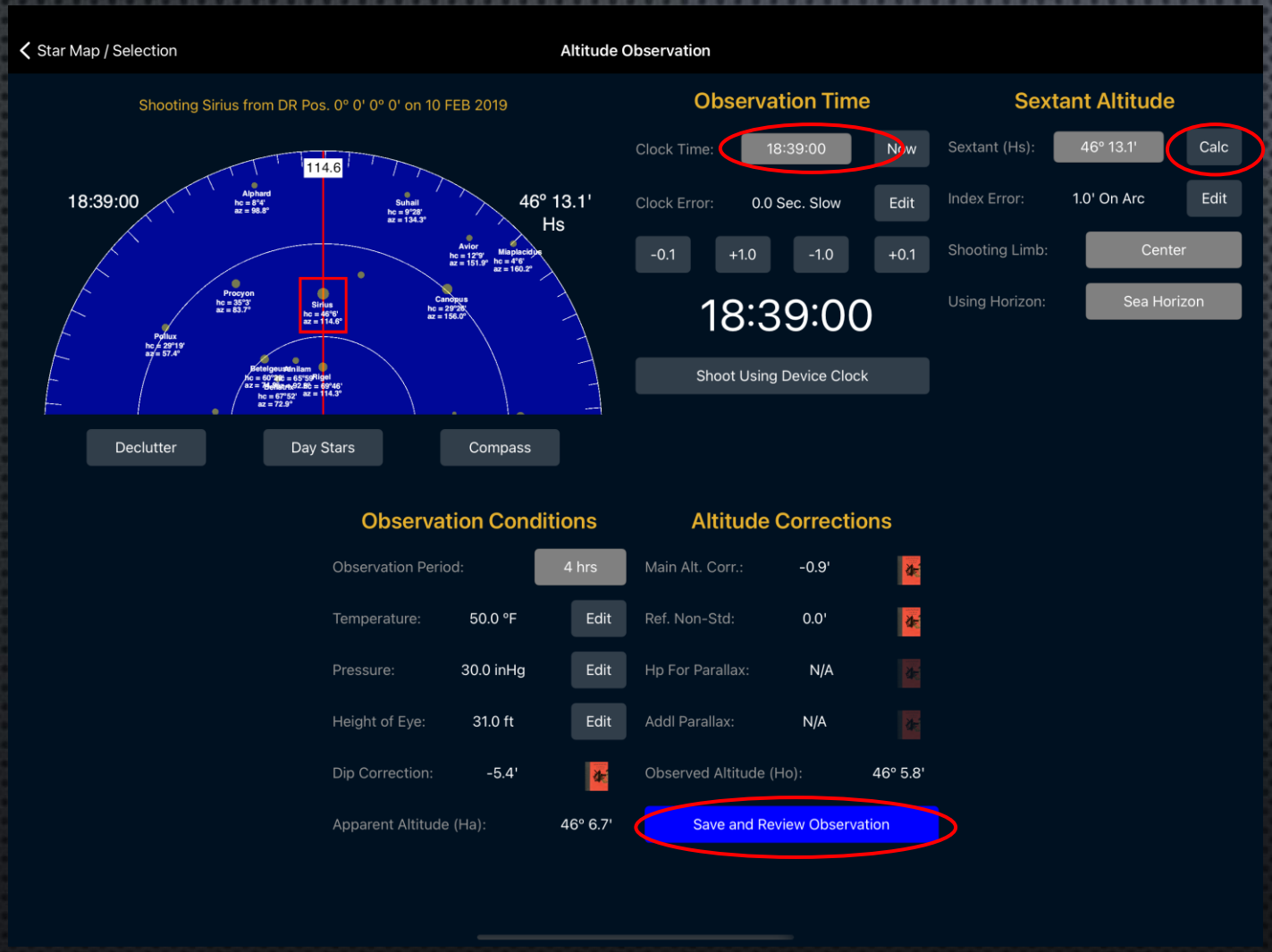


- YOU CAN NOW REVIEW THE SIGHT REDUCTION DATA AND PLOTTED LOP FOR THE CANOPUS OBSERVATION.
- CLICK OR PRESS THE BACK BUTTON TWICE TO RETURN TO THE STAR MAP SCREEN

7. SELECT SIRIUS FOR OBSERVATION

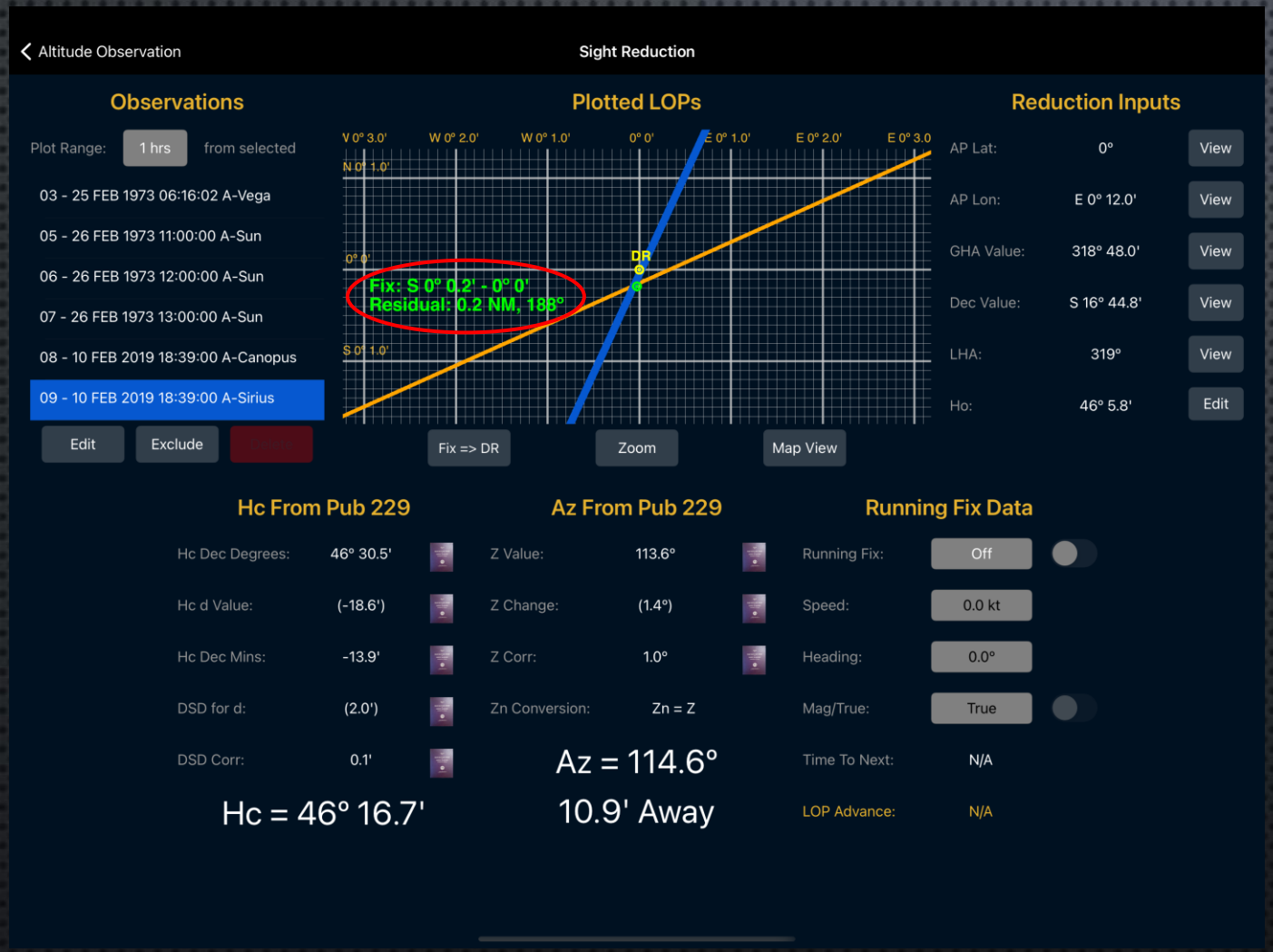
- CLICK OR TOUCH SIRIUS ON THE STAR MAP TO SELECT IT FOR OBSERVATION.
- CLICK OR PRESS THE "SHOOT ALT." BUTTON TO TRANSITION TO THE SHOOT SCREEN.

8. MAKE SIRIUS OBSERVATION



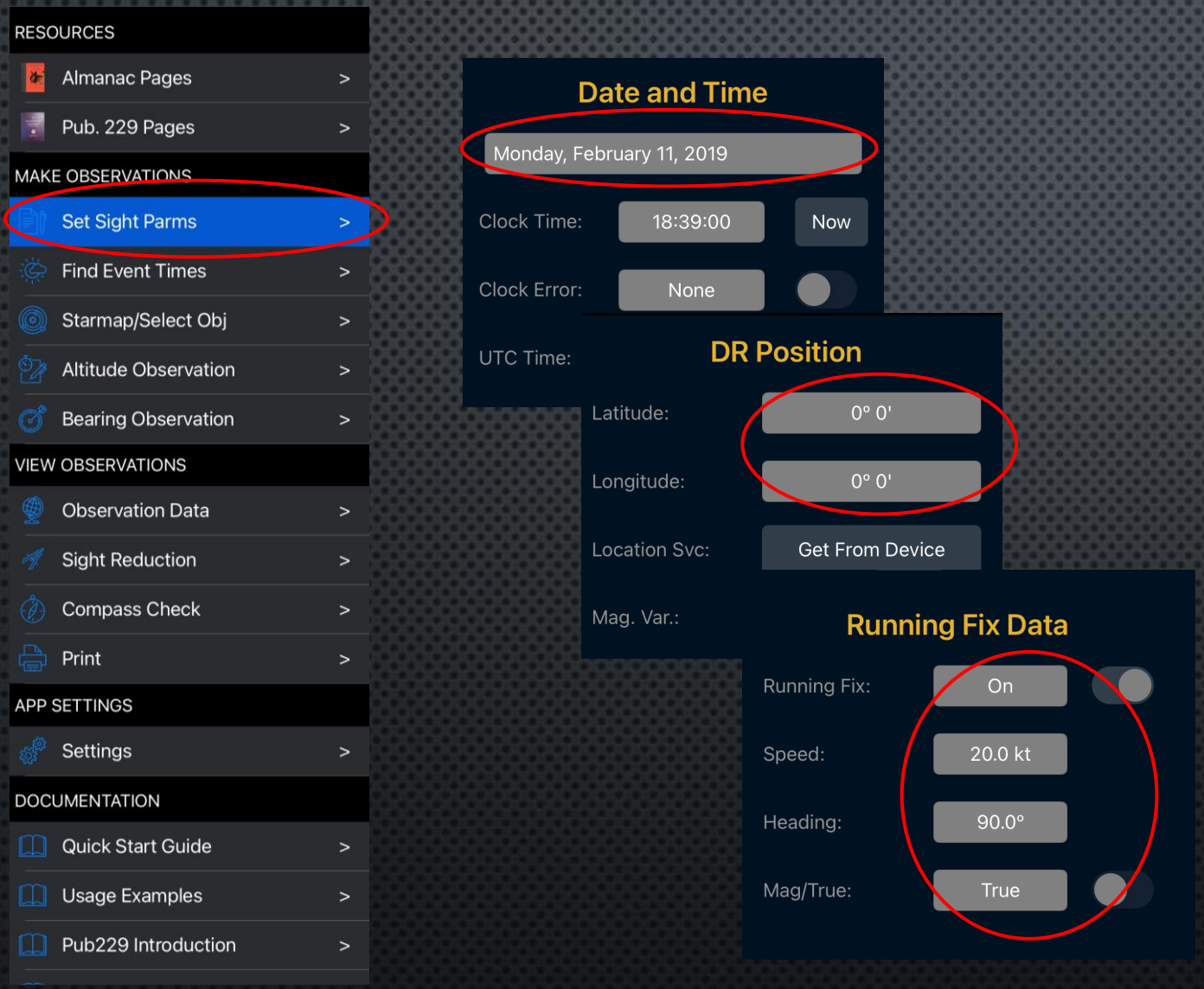
- SINCE THIS IS NOT A RUNNING FIX, WE WILL AGAIN JUST STAY WITH THE OBSERVATION TIME CALCULATED BY THE FIND EVENT TIME FUNCTION, 18:39:00.
- PRESS THE "CALC" BUTTON TO CALCULATE THE HS ALTITUDE AT THIS TIME.
- PRESS THE "SAVE AND REVIEW" BUTTON TO SAVE THIS OBSERVATION AND TRANSITION TO THE "SIGHT REDUCTION" SCREEN.

9. ZOOM AND CLICK TO FIND THE FIX



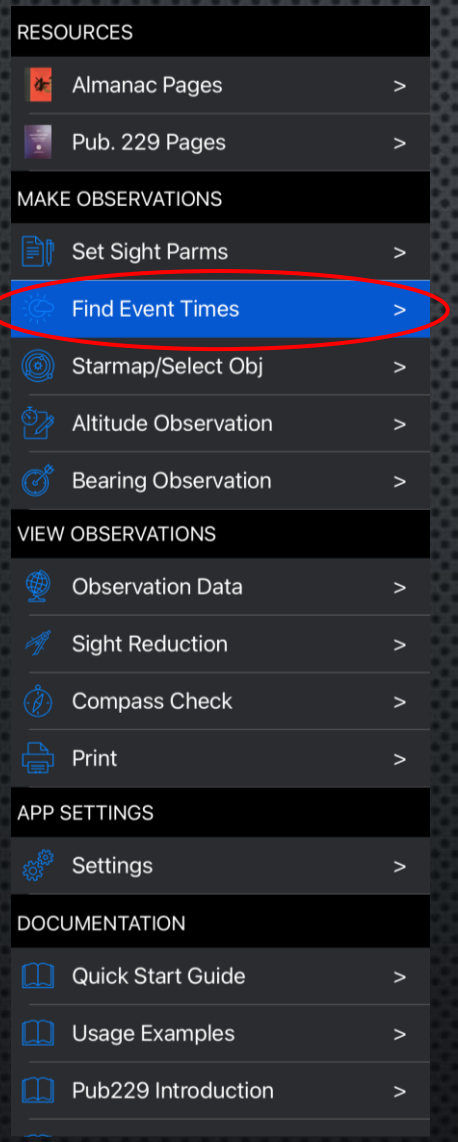
- CLICK OR TOUCH THE SCREEN WHERE THE LINES CROSS TO MARK YOUR FIX.
- THE "RESIDUAL" IS THE DIFFERENCE BETWEEN THE FIX AND DR POSITIONS.
- CONGRATULATIONS ON YOUR FIRST FIX WITH EZALMANACONE!

10. SET THE DATE FOR NEXT EXAMPLE



- GO BACK TO THE "SET SIGHT PARAMETERS" SCREEN.
- SET THE DATE FOR THE NEXT EXAMPLE TO 11 FEB 2019.
- LEAVE THE DR POSITION AT LATITUDE 0, LONGITUDE 0 AS BEFORE.
- ACTIVATE RUNNING FIX FOR 20 KNOTS AT HEADING 90 DEGREES TRUE

11. DETERMINE THE SUN MERIDIAN TIME

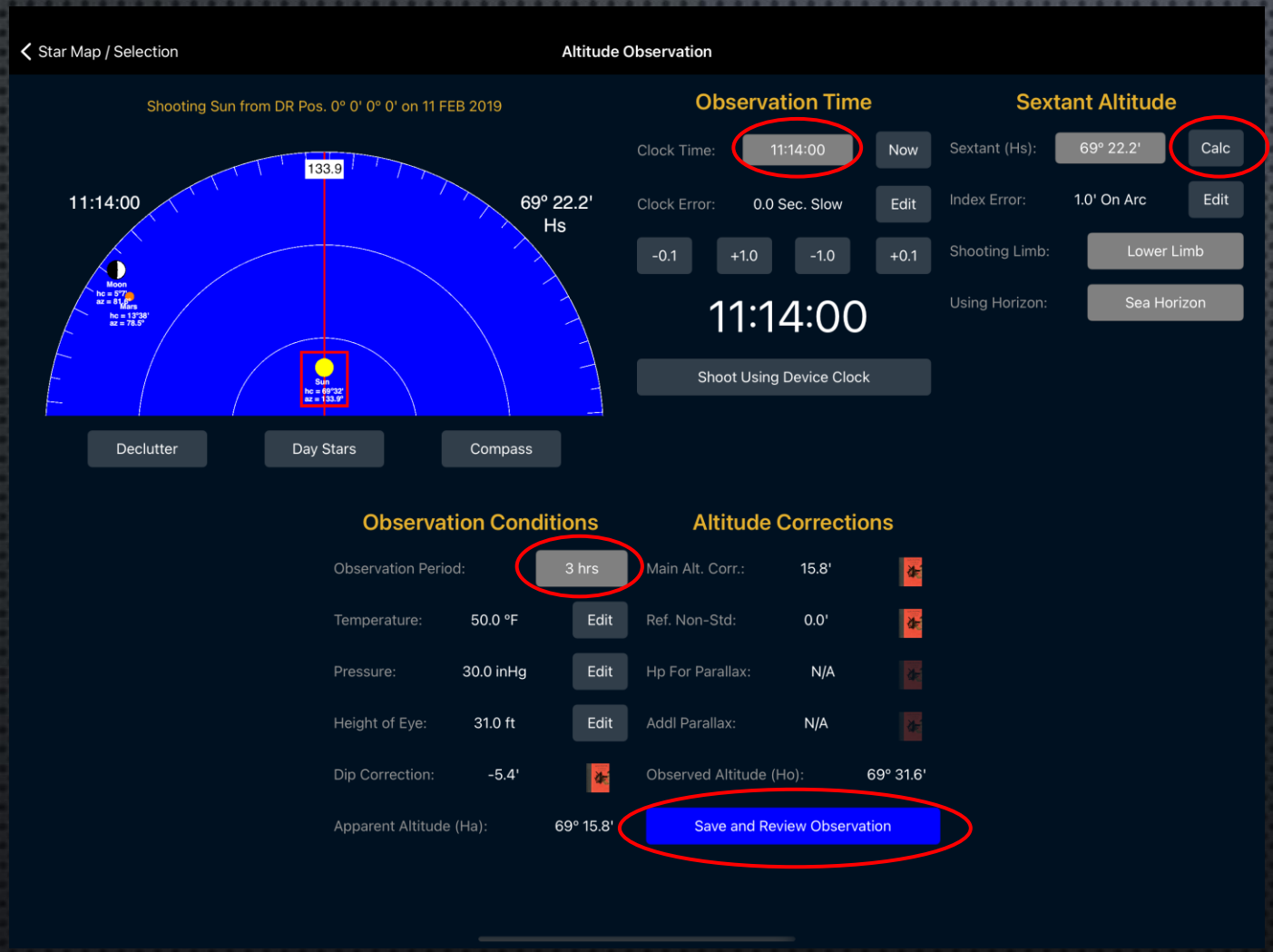


- In this example we will make 2 sun observations – one an hour before the meridian time and one an hour after meridian time
- Go to the "Find Event Times" screen.
- Set the object to sun and the event to Meridian.
- Press the "Select Objects at Event Time" button.

12. SELECT THE SUN FOR OBSERVATION

- Click or touch the sun on the star map to select it for observation.
- Click or press the "Shoot Alt." button to transition to the shoot screen.

13. MAKE SUN OBSERVATION BEFORE MERIDIAN

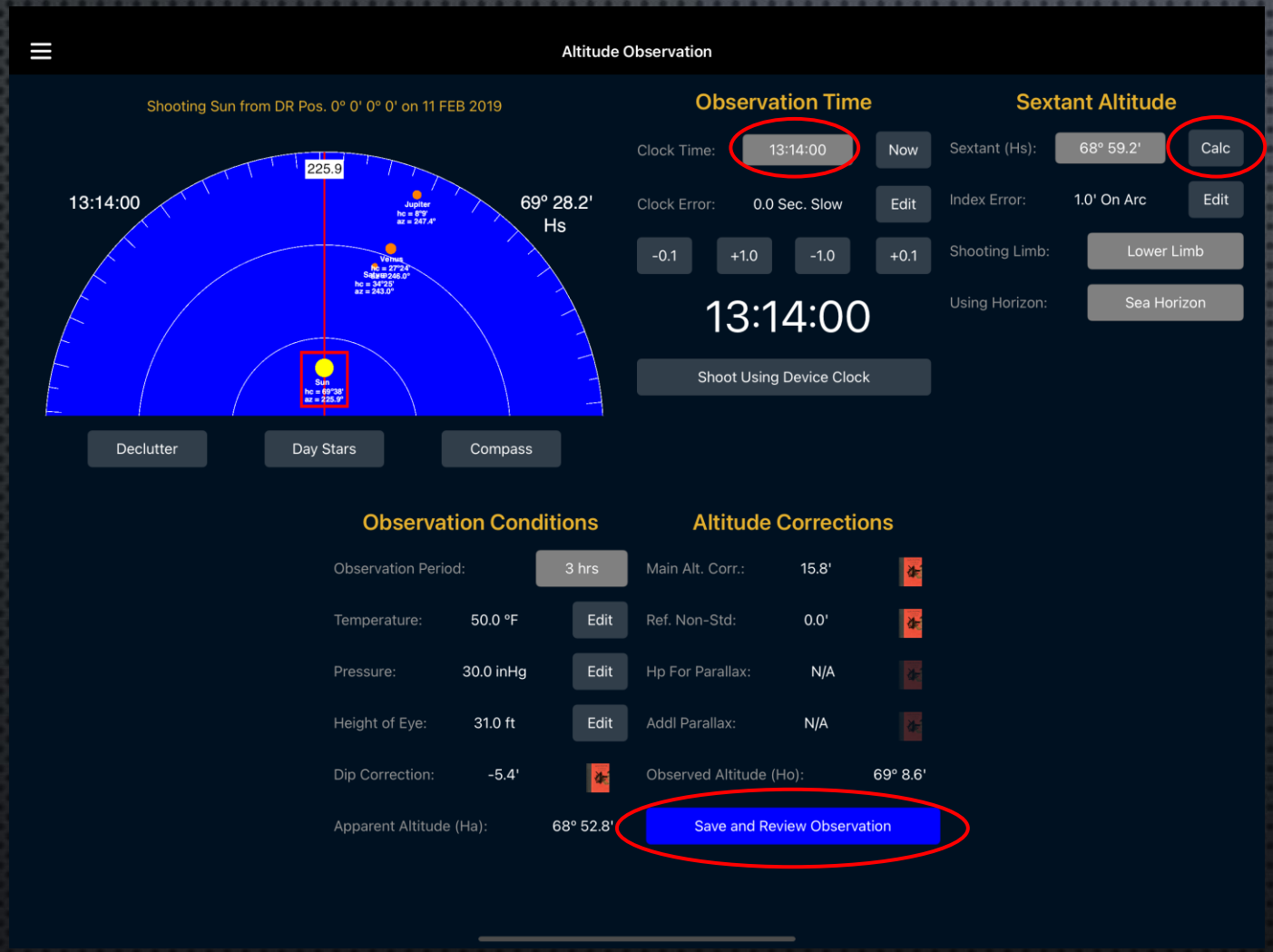


- SET THE TIME TO 1 HOUR BEFORE THE MERIDIAN TIME WE JUST FOUND, 11:14:00.
- PRESS THE "CALC" BUTTON TO CALCULATE THE HS ALTITUDE AT THIS TIME.
- SET THE OBSERVATION PERIOD TO 3 HOURS SINCE WE WILL ENTER ANOTHER OBSERVATION AFTER THE MERIDIAN.
- PRESS THE "SAVE AND REVIEW OBSERVATION" BUTTON.

14. REVIEW THE SUN OBSERVATION DATA

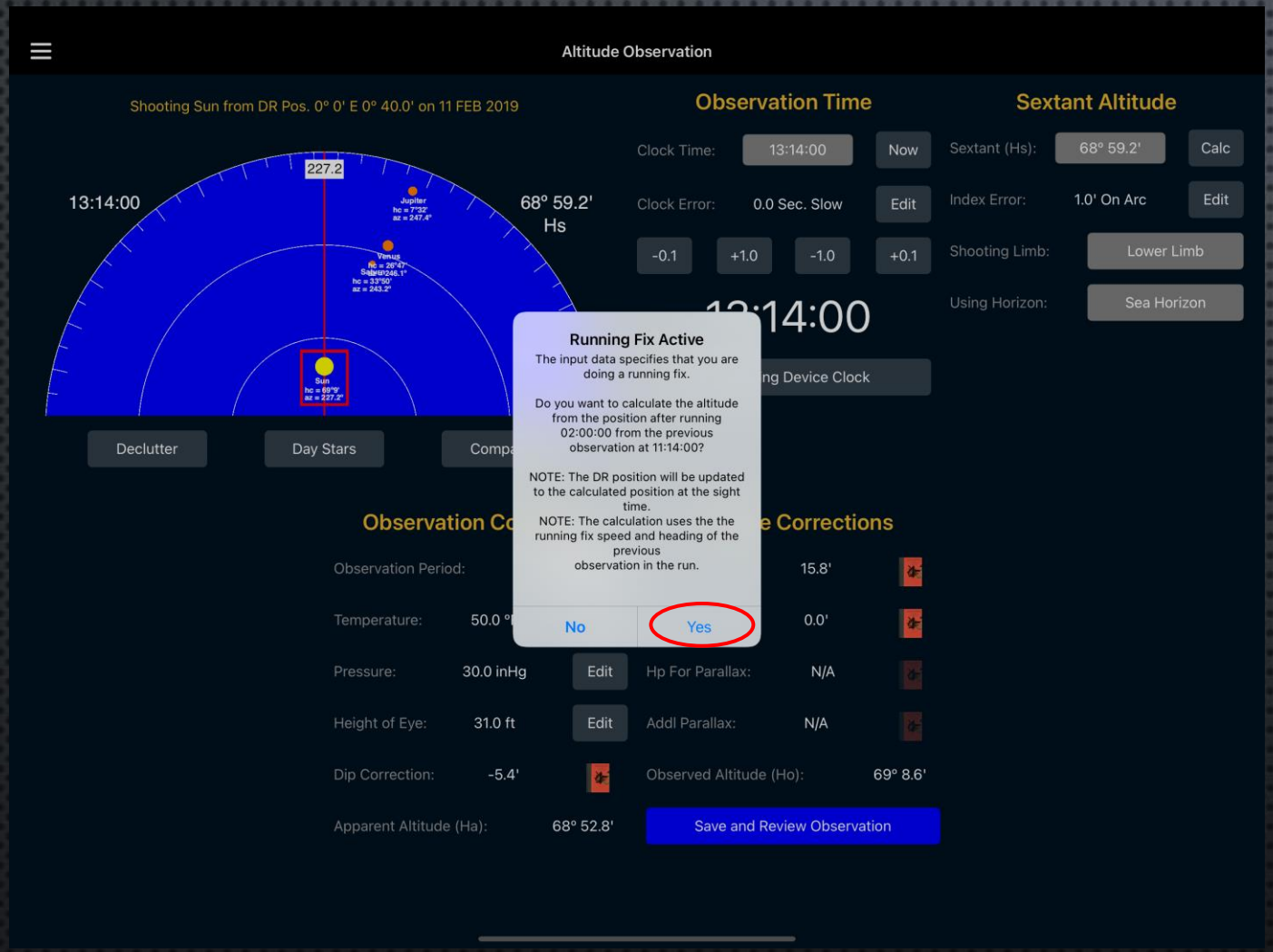
- THIS IS THE SIGHT REDUCTION DATA AND PLOTTED LOP FOR THE OBSERVATION BEFORE MERIDIAN.
- CLICK OR PRESS THE BACK BUTTON TO RETURN TO THE ALTITUDE OBSERVATION SCREEN AND MAKE THE SECOND OBSERVATION.

15. MAKE SUN OBSERVATION AFTER MERIDIAN



- SET THE TIME TO 1 HOUR AFTER MERIDIAN, 13:14:00.
- PRESS THE "CALC" BUTTON TO CALCULATE THE HS ALTITUDE AT THIS TIME.
- PRESS THE "SAVE AND REVIEW" BUTTON.

16. MAKE SUN OBSERVATION AFTER MERIDIAN



- When entering the sight after meridian you should be prompted to calculate the altitude from a projected position. Select Yes in this dialog.
- If you did not get this notification, confirm that the "Observation Period" field is set to 3 hours and that the running fix parameters were set on the observation entered at 11:14:00

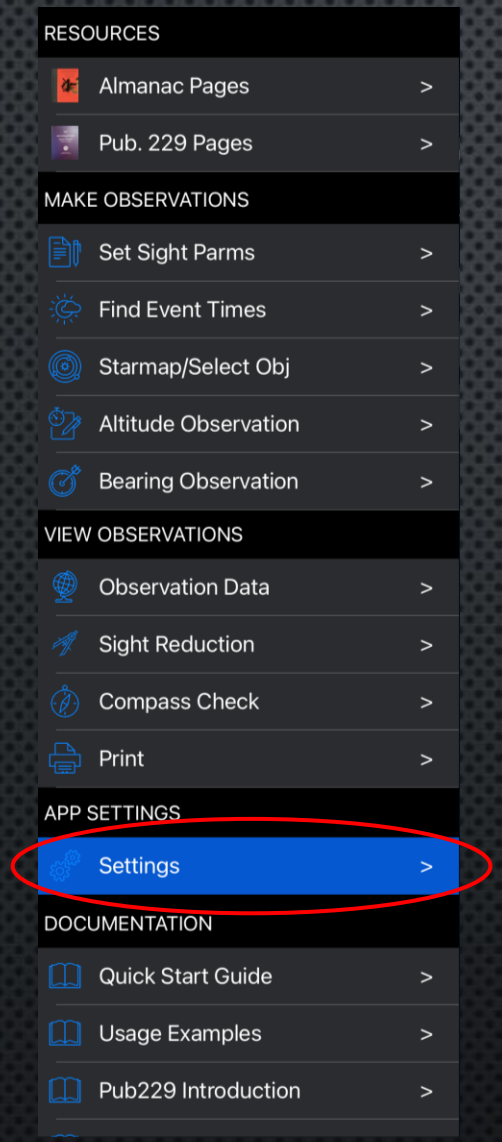
17. ZOOM AND CLICK TO FIND THE FIX

- CLICK OR TOUCH THE SCREEN WHERE THE LINES CROSS TO MARK YOUR FIX.
- THE "RESIDUAL" SHOWS THE EXPECTED RUN OF ABOUT 40 NAUTICAL MILES.
- CONGRATULATIONS ON YOUR FIRST RUNNING FIX WITH EZALMANACONE!

Find yourself

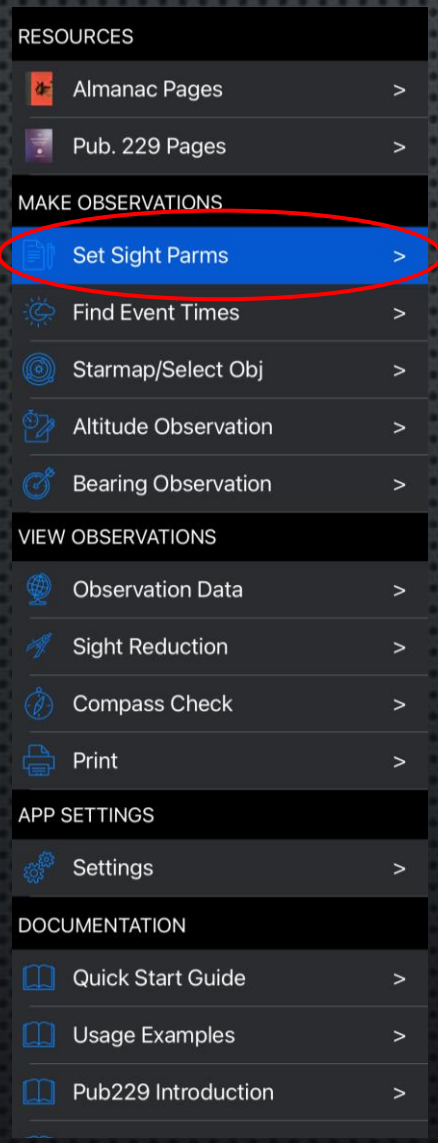
- Use the following steps to find yourself at your current location
- You will be using your own position, the current date, and objects that will be visible to you on that date. The data on the screens shown here will not match what you are doing but the steps are the same.

18. SET THE TIME ZONE



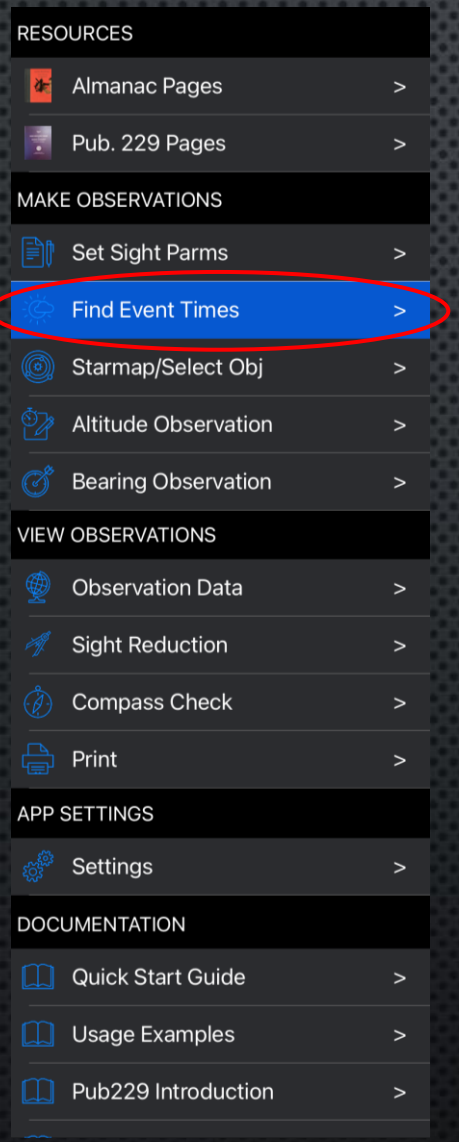
- GO TO THE "SETTINGS" SCREEN.
- SET THE TIME ZONE TO THE ZONE BEING USED BY YOUR DEVICE.

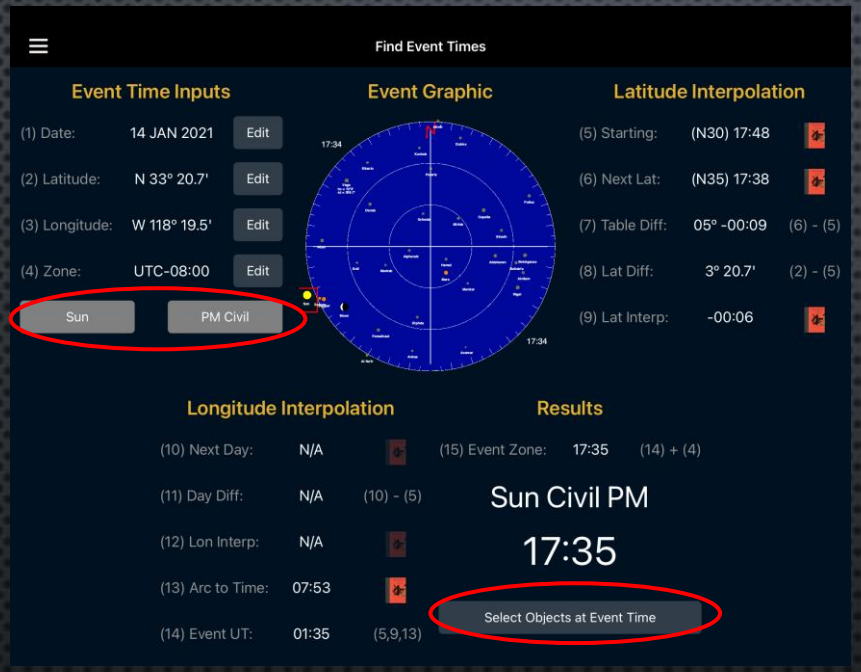
19. SET THE DATE AND DR POSITION



- GO TO THE "SET SIGHT PARMS" SCREEN.
- PRESS THE "NOW" BUTTON TO SET THE CURRENT TIME AND DATE.
- PRESS THE "GET FROM DEVICE" BUTTON TO GET YOUR CURRENT POSITION.
- TURN RUNNING FIX OFF FOR THIS EXAMPLE.

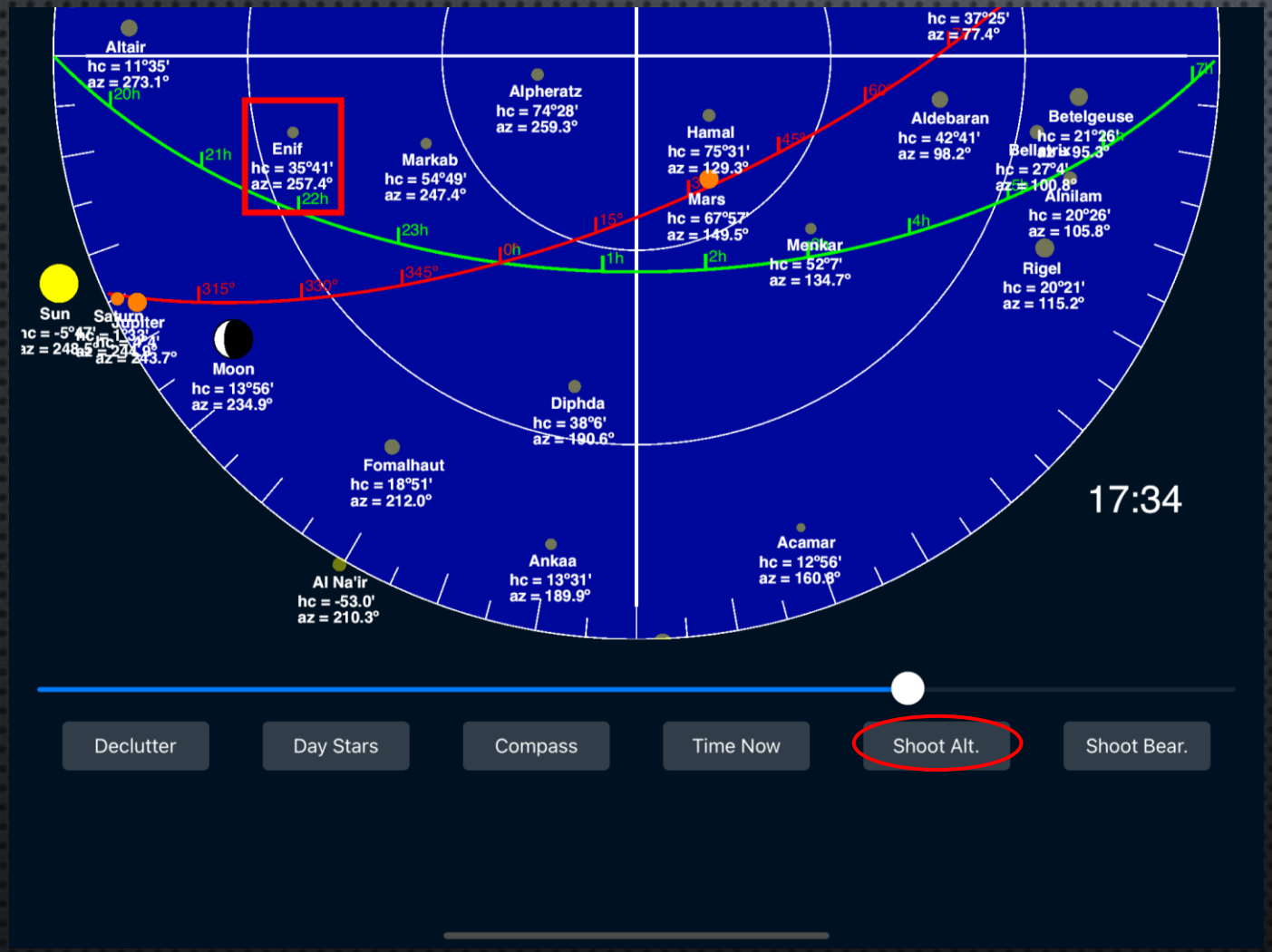
20. DETERMINE EVENING TWILIGHT





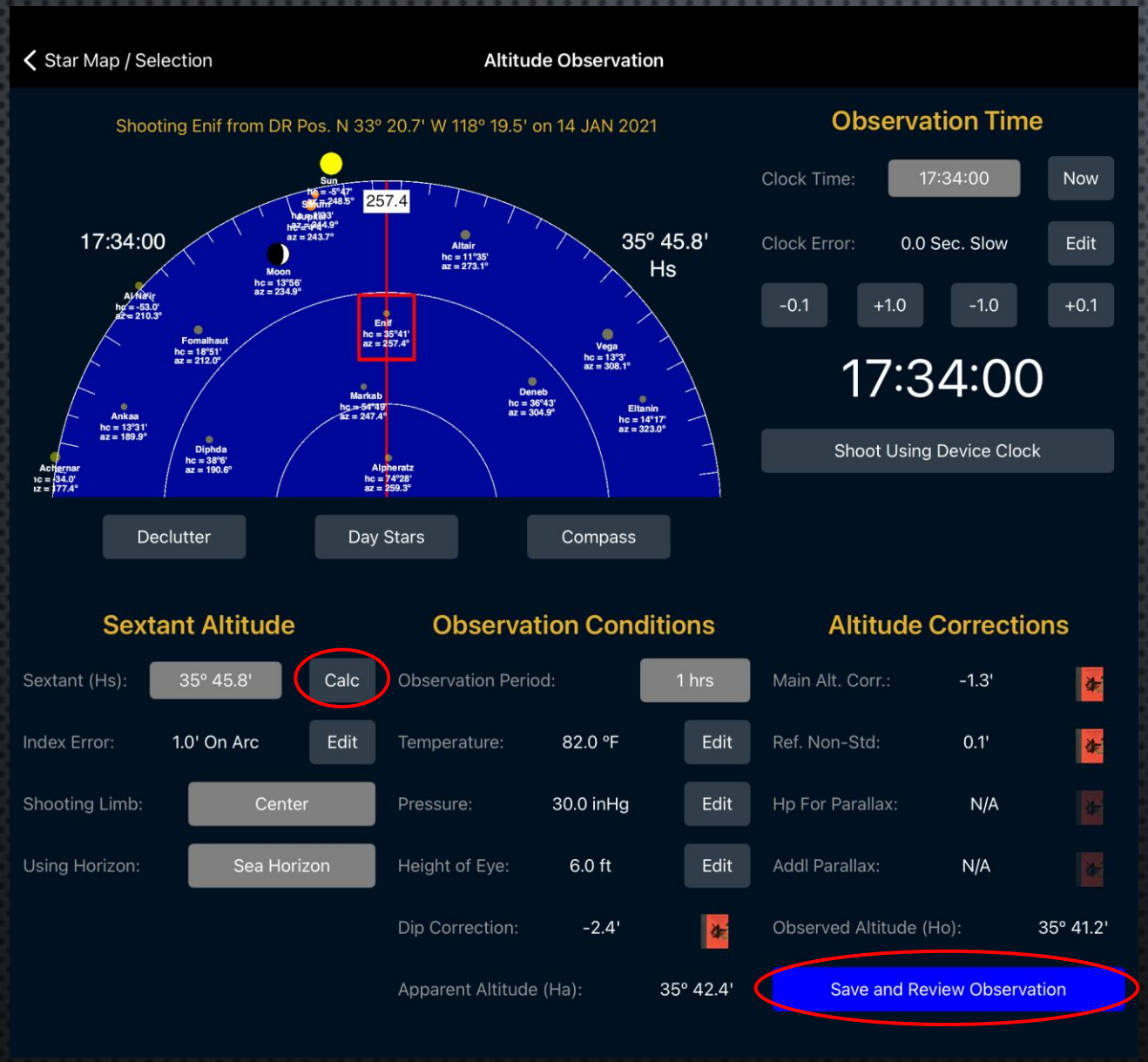
- Go to the "Find Event Times" screen.
- Set the object to Sun and the event to PM civil twilight.
- Press the "Select Objects at Event Times" button.

21. SELECT AN OBJECT FOR OBSERVATION



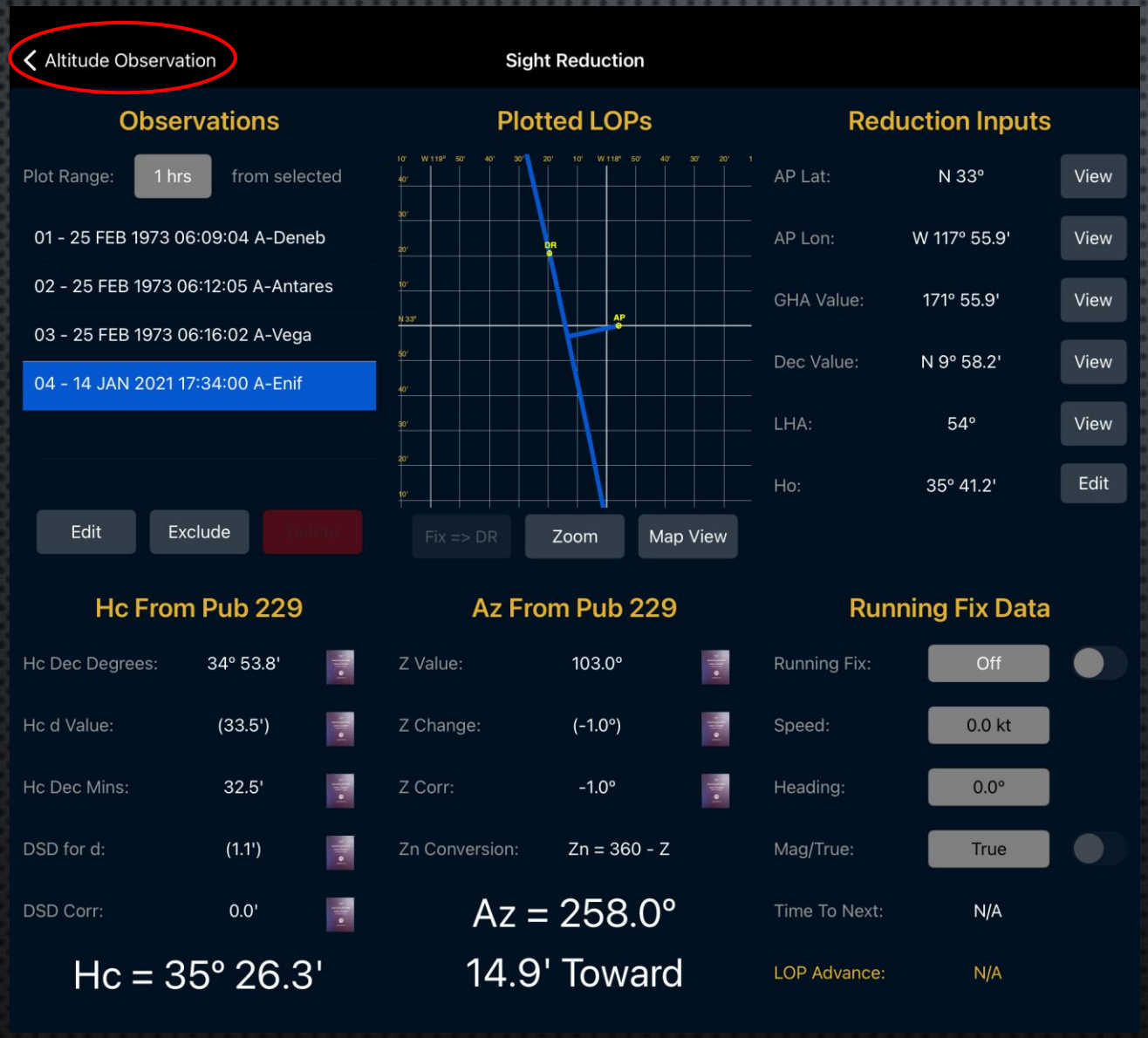
- Click or touch any object to select it for observation.
- Click or press the "Shoot Alt." button to transition to the shoot screen.

22. MAKE THE FIRST OBSERVATION



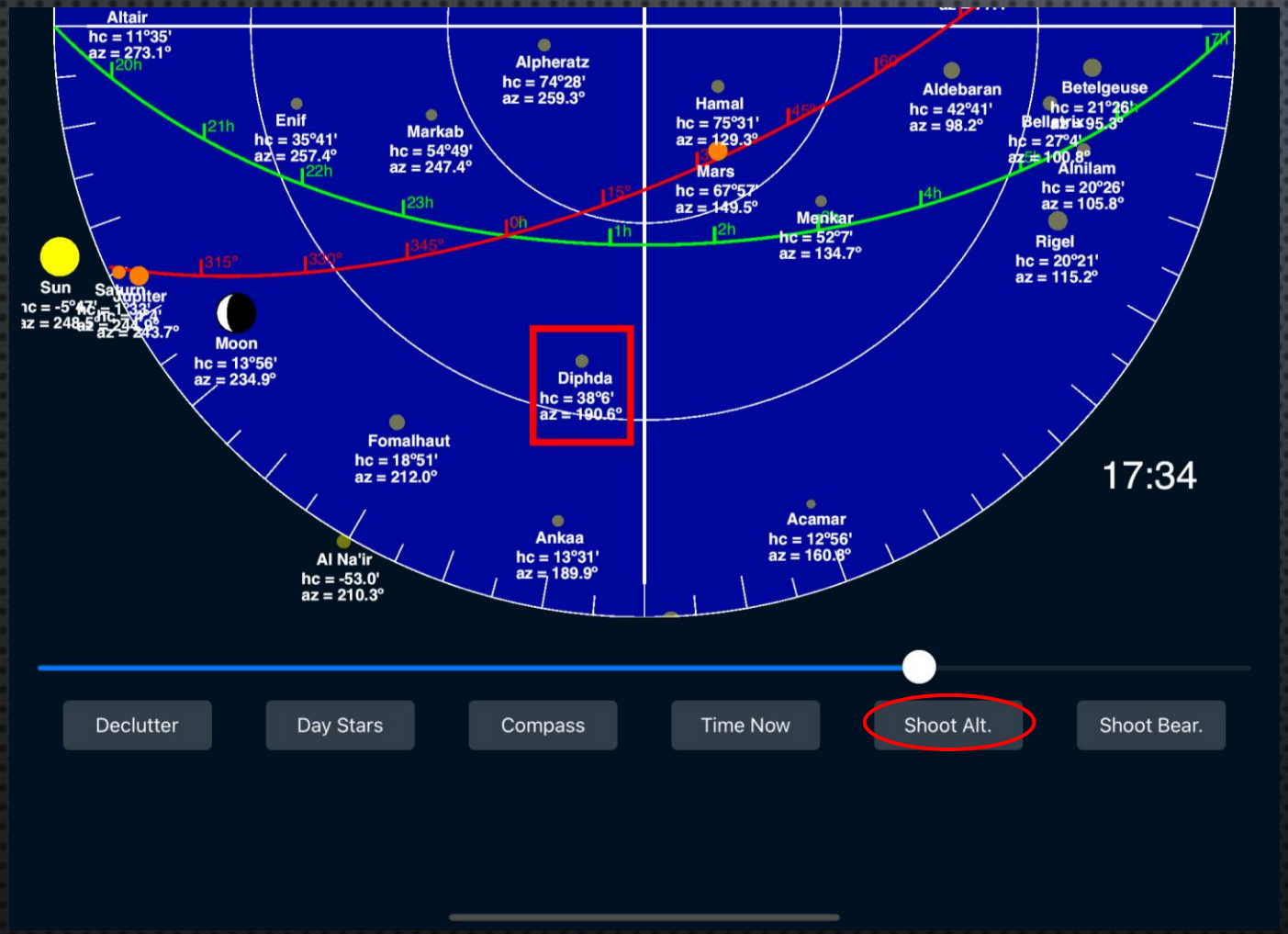
- PRESS THE "CALC" BUTTON TO CALCULATE THE HS ALTITUDE AT THIS TIME.
- PRESS THE "SAVE AND REVIEW OBSERVATION" BUTTON.

23. REVIEW THE FIRST OBSERVATION



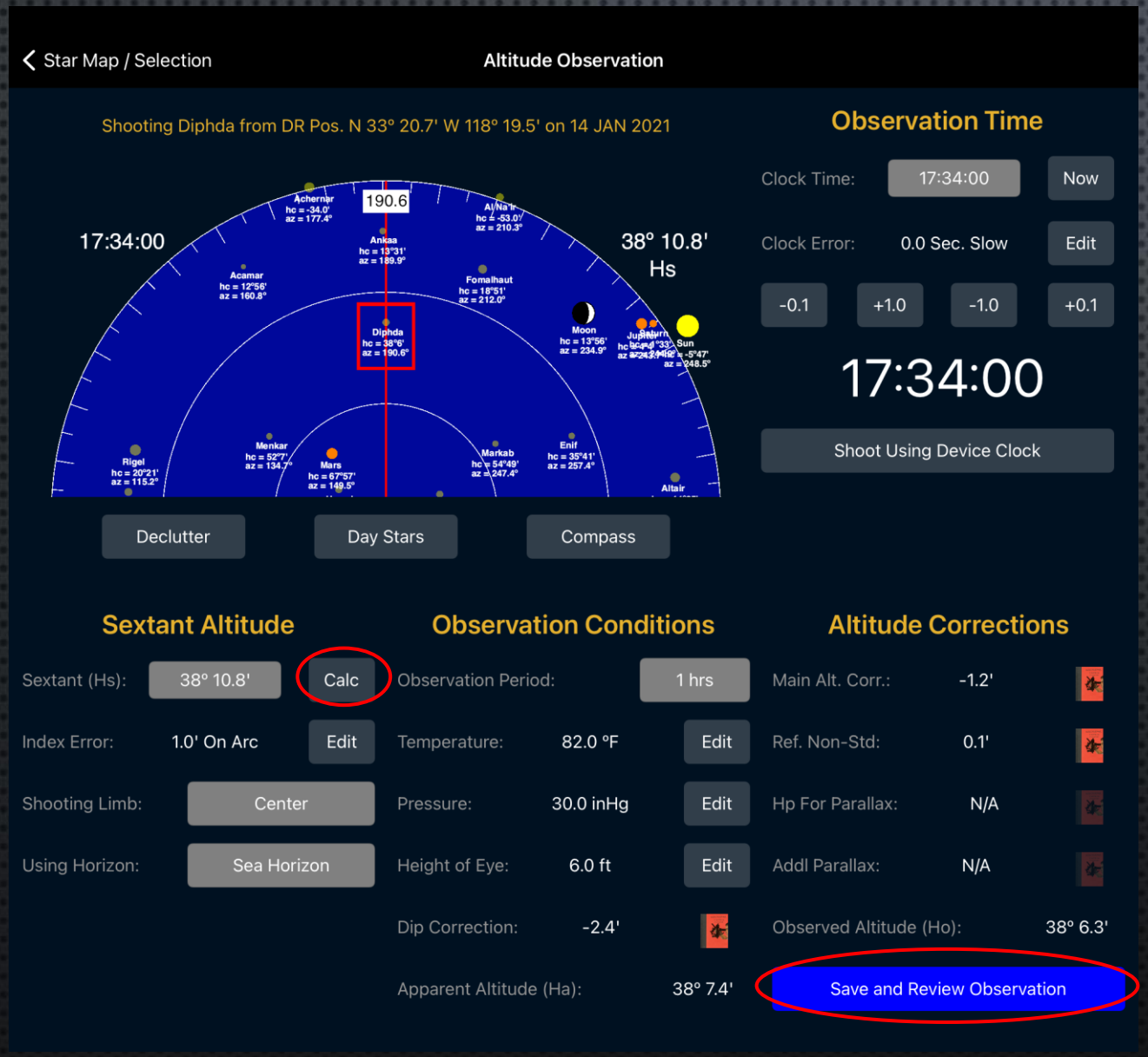
- CLICK OR PRESS THE BACK BUTTON TWICE TO RETURN TO THE STAR MAP SCREEN

24. SELECT ANOTHER OBJECT FOR OBSERVATION



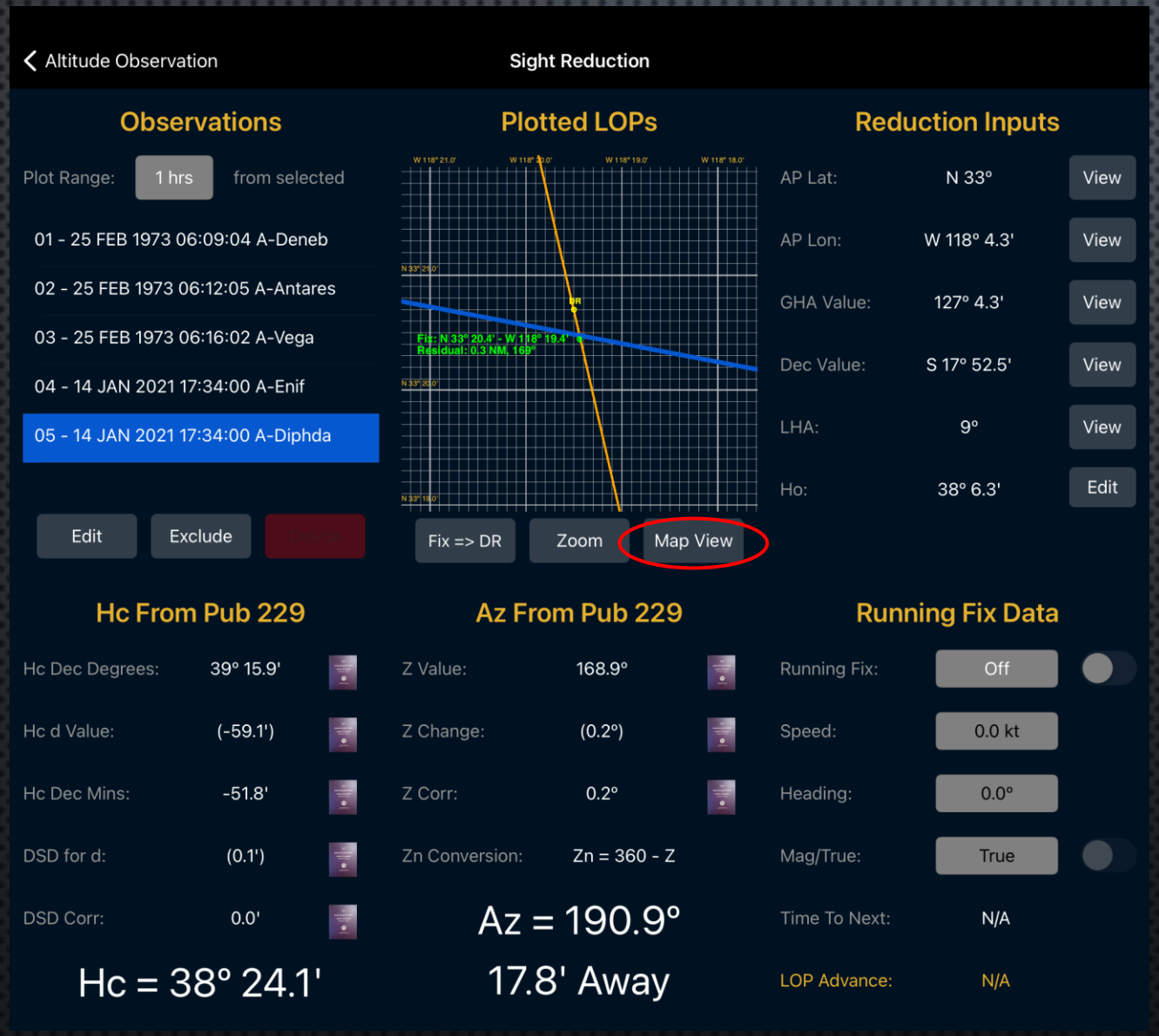
- Click or touch another object to select it for observation.
- Click or press the "Shoot Alt." button to transition to the shoot screen.

25. MAKE THE SECOND OBSERVATION



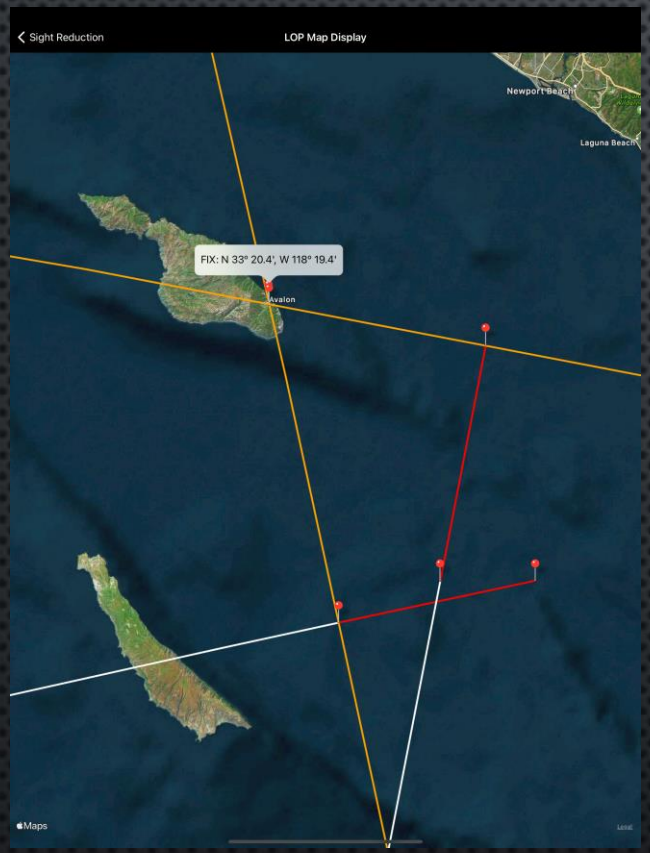
- PRESS THE "CALC" BUTTON TO CALCULATE THE HS ALTITUDE AT THIS TIME.
- PRESS THE "SAVE AND REVIEW OBSERVATION" BUTTON.

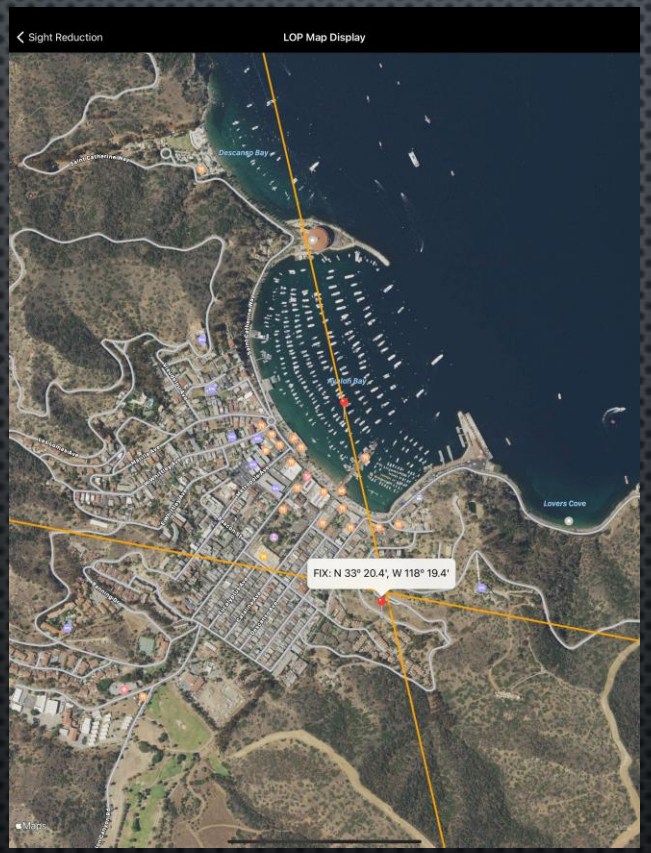
26. FIND YOUR FIX



- Click or touch the screen where the lines cross to mark your fix.
- Click or press the "Map View" button to see your fix on the map.

27. VIEW YOUR FIX ON THE MAP





- I AM IN AVALON BAY ON CATALINA ISLAND … WHERE ARE YOU?