Determining Suns GHA and dec with HO249 modified Table4, step by step

1. Write down the observed SUN info: **DATE**: dd-mm-yyyy, and **W**atch**T**ime hh:mm:ss
2. Correct your **W**atch**T**ime to **GMT**. GMT=WT+ZD
3. Round the **GMT** Time to the nearest integral hour.
   Before or on xx h 30 m use xx h, After or on xx h 31 m use xx+1 h
4. Look in table **a** for the Year correction with as input above yyyy.
   If date is after 29 feb, in a leap year, take the year value with the *.
5. Ad or subtract the hours from table **a**, to the rounded GMT time ± hh, to get the OT (Orbit time)
   There are now 3 answers possible.
   Or: OT is >00 h and <24 h. You can use de DATE and the calculated OT
   Or: OT is <00 h. Ad 24:h to the answer that is the OT. And subtract 1 day from the DATE.
   Or: OT is >24 h. Subtract 24 h from the answer that is the OT. And ad 1 day to the DATE.
6. Go to the main Table4. Find the intersection of Month →(horizontal) and the day ↓ (vertikal).
   For instance: on 7 feb E dec

01°29'	**S 15°29'**
Diff –1	**Diff -18**

7. Write down the E and the ± diff and the N/S dec ± diff
8. Go to table b first for E (minute ‘) and then for dec (minute ‘) correction.
   Intersection of diffvalue →(horizontal) and the OT time ↓ (vertikal).
   Write down: E1 correction is ± . .’ dec correction is ± . .’, ad the dec’s, the sum is the **dec**
9. Go to table c . Find the intersection of multiple of 10 minutes of the **GMT-TIME** (NOT the OT) →(horizontal) and the whole GMT hour ↓ (vertikal).
10. Write down the E2 correction is . . . ° . . ‘
11. Go to table d. Find the remaining **GMT** minutes and secondes. Interpolate to find . ° . . ‘ value.
12. Write down the E3 correction is . ° . . ‘.
13. Add E and the E1,E2,E3 values, the answer is the **GHA**.

GMT= . . h	E = . . . ° . . ‘ d= ± . .	N/S dec . . ° . . ‘ d= ± . .
Year corr ± . . h	E1 = ± 000° . . ‘	dec corr ± 00° . . ‘
---------- +	E2 = . . . ° . . ‘	---------- +
OT= . . h	E3 = . ° . . ‘	**N/S dec . . ° . . ‘**
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	GHA = . . . ° . . ‘	

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