

时间变换

- GPS标准历元: 1980 January 6.^d0,
• 2 444 244.5
- 标准参考历元: 2000 January 1.^d5
• 2 451 545.0
- 儒略日: 4713 B.C., January
1.^d5

时间变换

民用年历变换为儒略日

- 设民用的年,月,日,时为Y,M,D,UT,则
- $JD = \text{INT}[365.25y] + \text{INT}[30.6001(m+1)] + D$
+
- $UT/24 + 1720981.5$
- If $M \leq 2$, $y = Y - 1$, $m = M + 12$
- If $M > 2$, $y = Y$, $m = M$

时间变换

- The day of week:
 $N = \text{modulo}\{\text{INT}[\text{JD} + 0.5], 7\}$
- GPS week:
- $\text{Week} = \text{INT}[(\text{JD} - 2444244.5)/7]$

时间变换

GPS second

- $T_{gps} = (JD - 2444244.5 - \text{week} * 7) * 86400$