ONZE STERRENHEMEL

INITIATIE CURSUS STERRENKUNDE

MICHIEL COIGNET OBSERVATORIUM

ROGER VAN DER LINDEN

OVERZICHT

- De hemelkoepel
- De grote hemelcirkels
  - De horizon
  - De hemelevenaar
  - De ecliptica
- De positie en de afstand van sterren
- De sterrenbeelden
- De helderheid van sterren
- De sterrenkaart
- Circumpolaire sterren
- Zichtbare evolutie van sterren
- De melkweg
- Sterrenhopen
- Satellieten

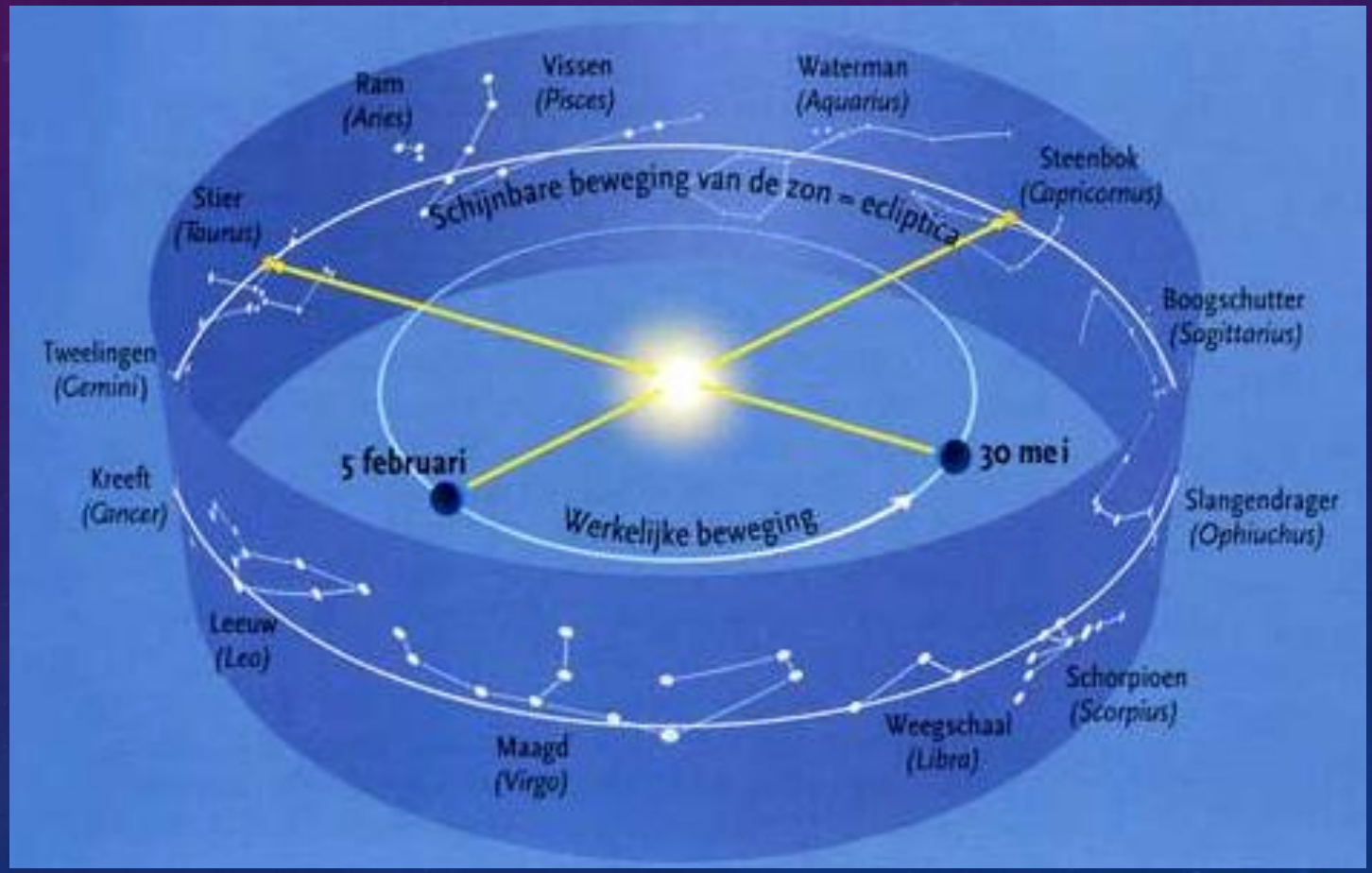
DE HEMELSFEER

DE STERRENHEMEL

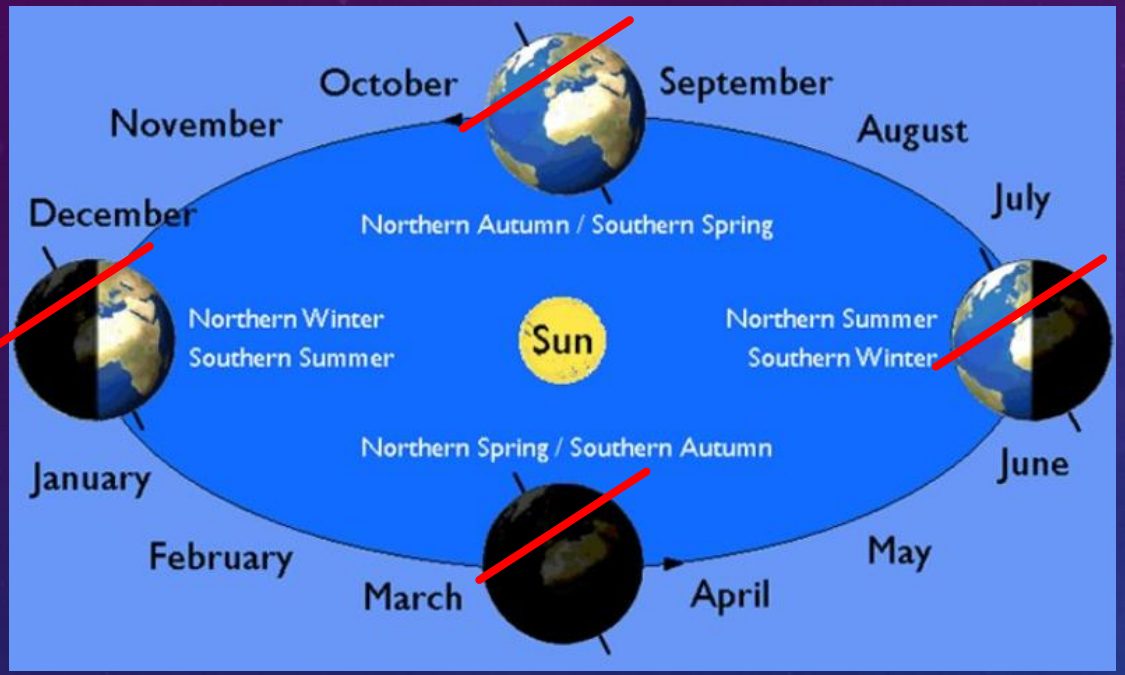
- De zichtbare sterrenhemel is afhankelijk van

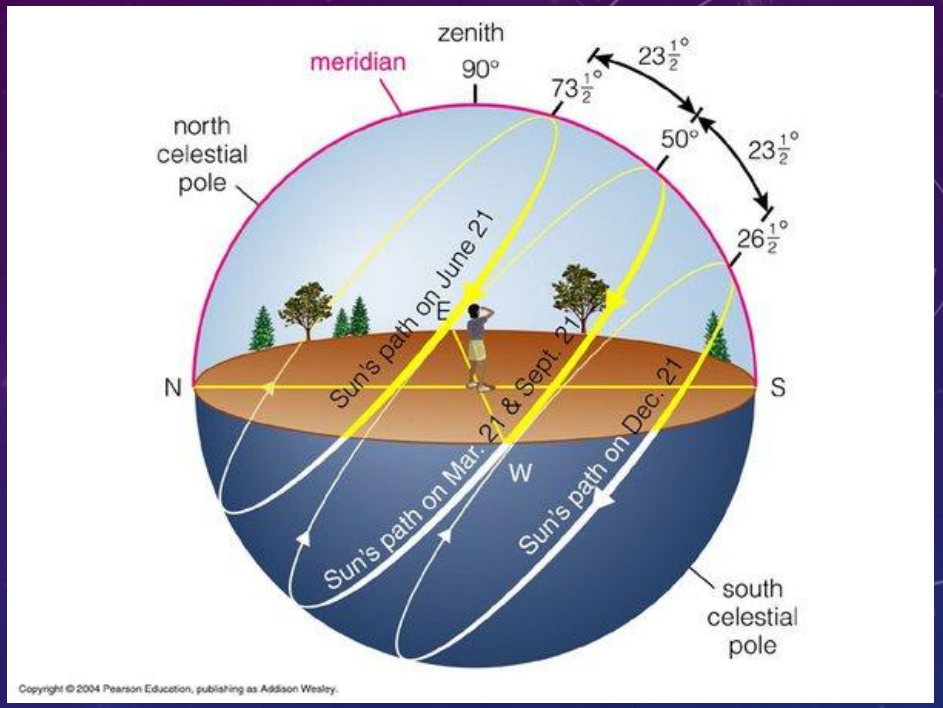
- 1) de plaats van de waarnemer, die de horizon bepaalt
- 2) de datum, bepaald door de plaats t.o.v. de zon
- 3) het uur, bepaald door de draaiing van de aarde om zijn as

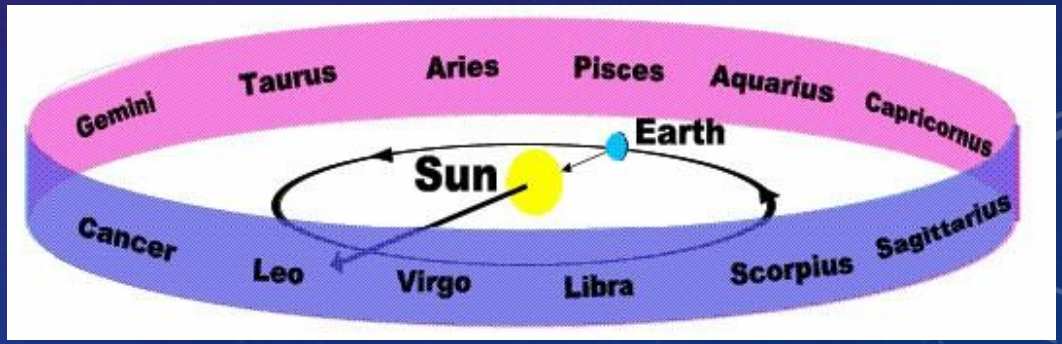
DE DIERENRIEM



DE ECLIPTICA/ZODIAC/DIERENRIEM



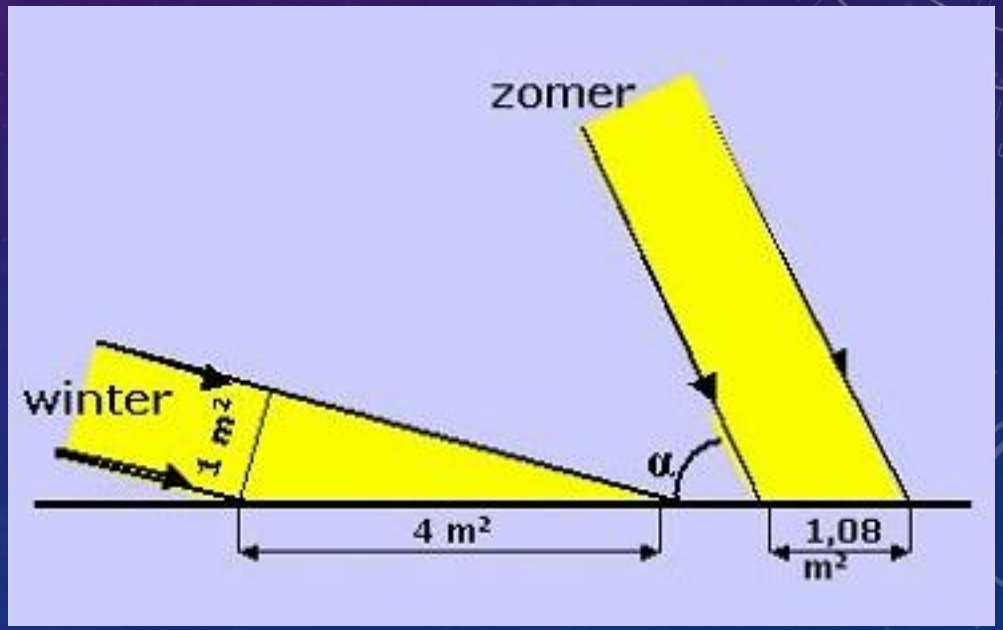




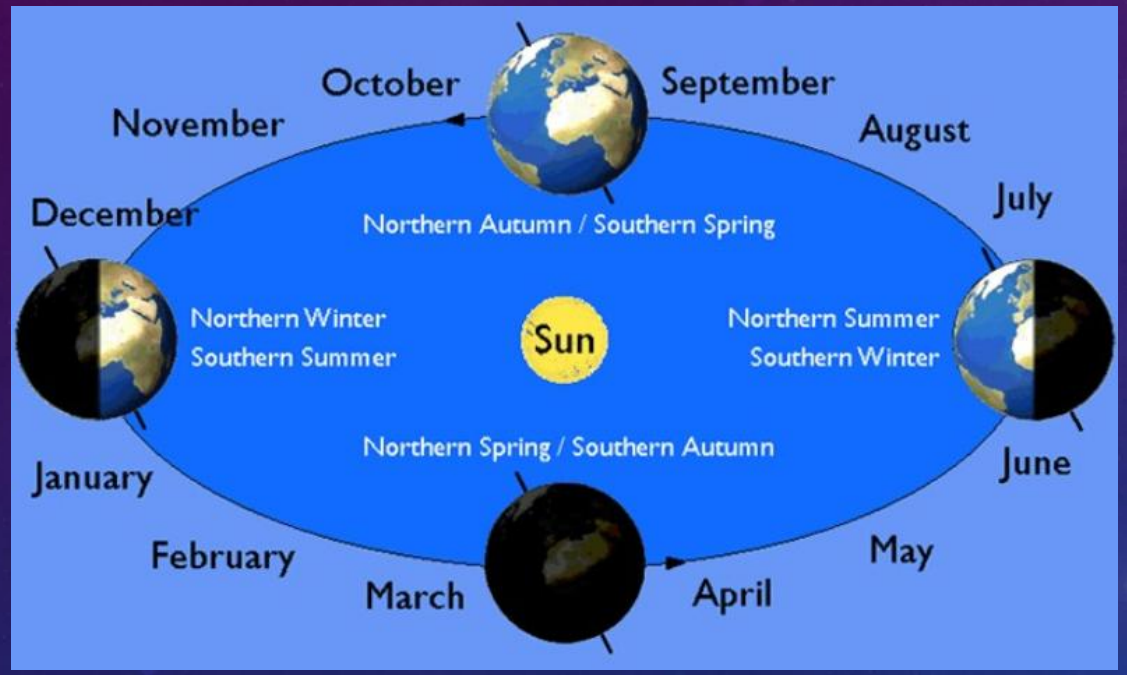
Elke dag schuift de aarde 360°/365 =~ 1° op

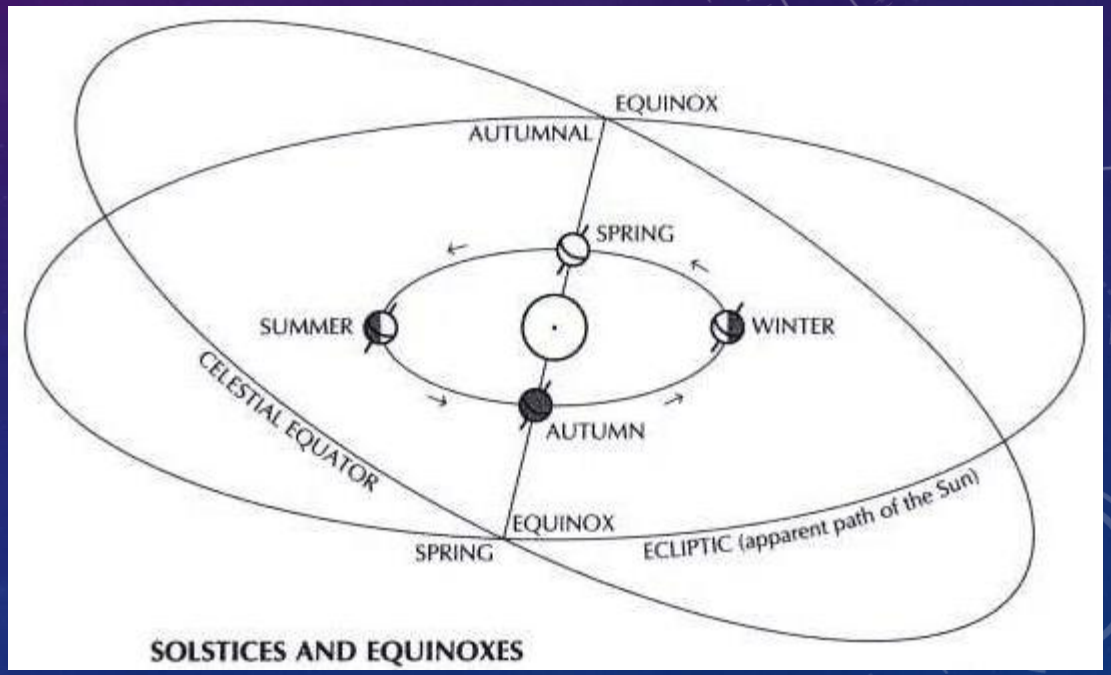
ZONNESTAND


standen van de zon in Uithoorn - per maand - van opkomst tot ondergang
ZONNESTAND


zomer
winter
1 m²
α
4 m²
1,08
m²

HET LENTEPUNT





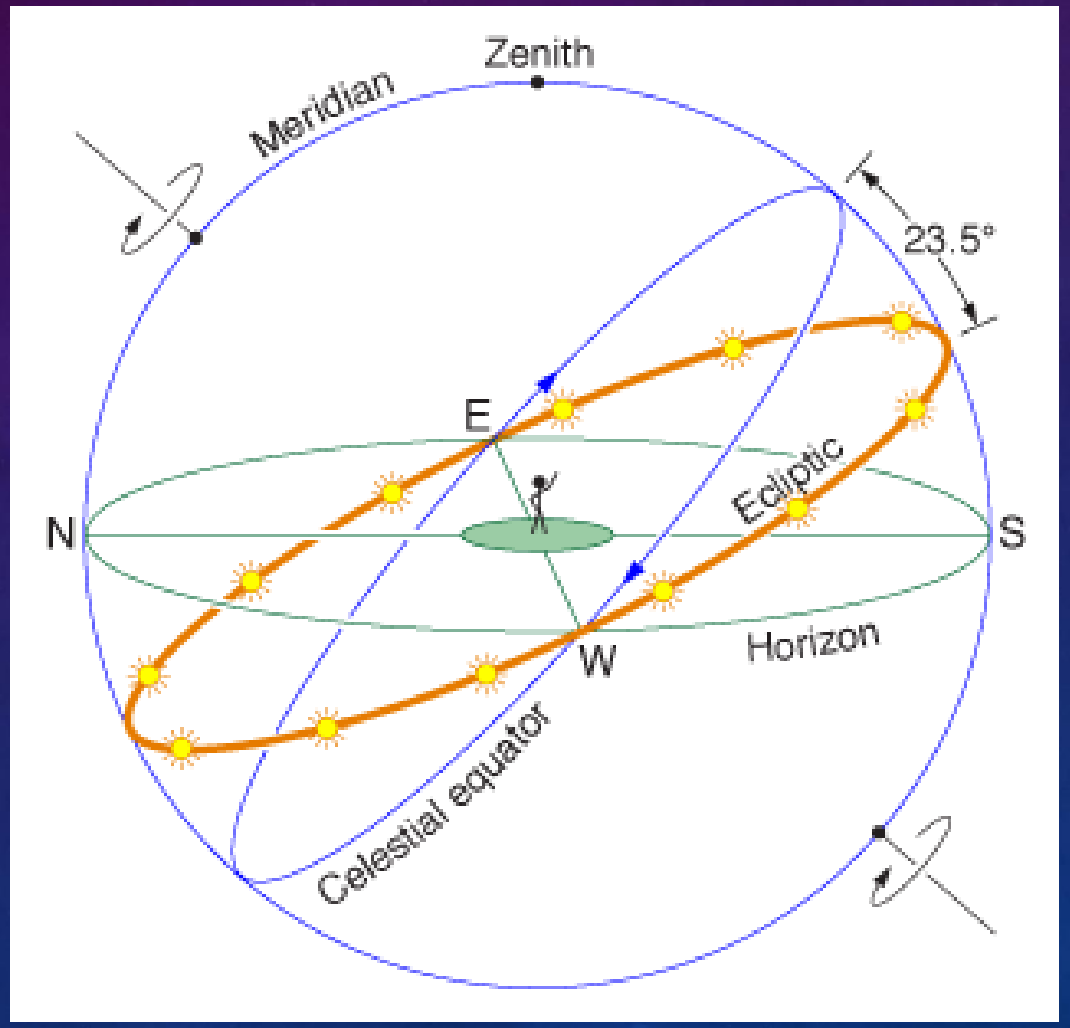
DE HEMELBANEN

Hemelsfeer :

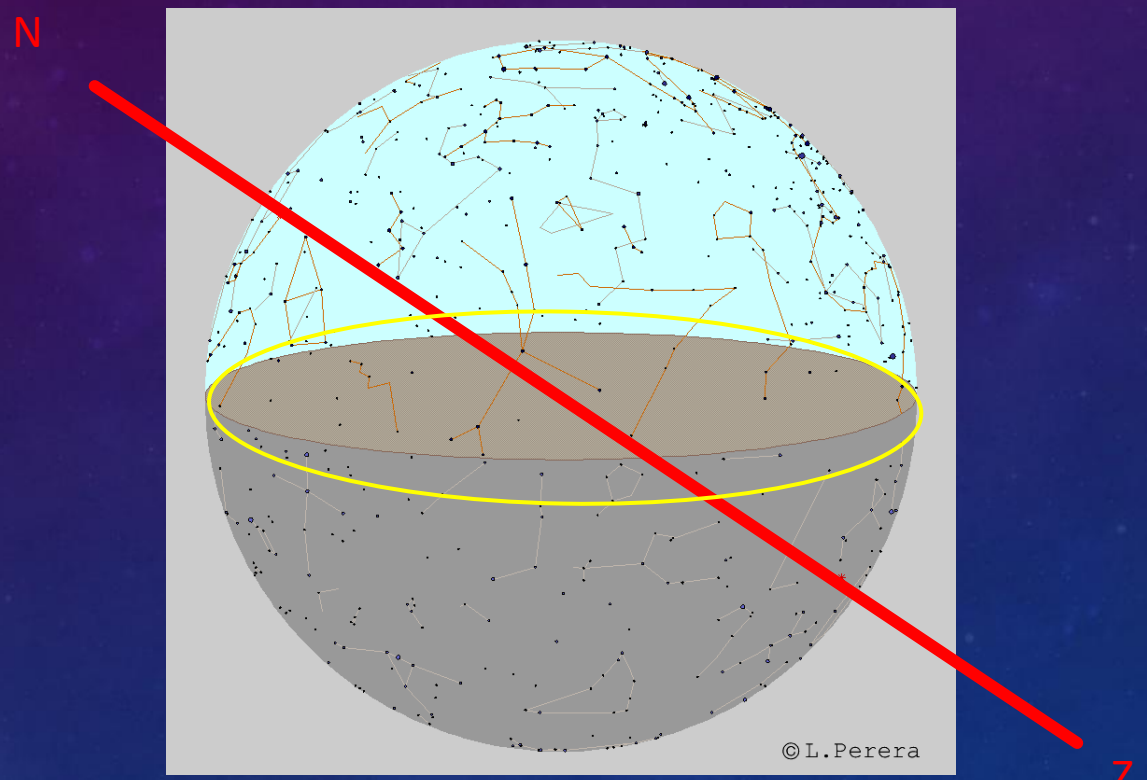
Horizon

Hemelevenaar

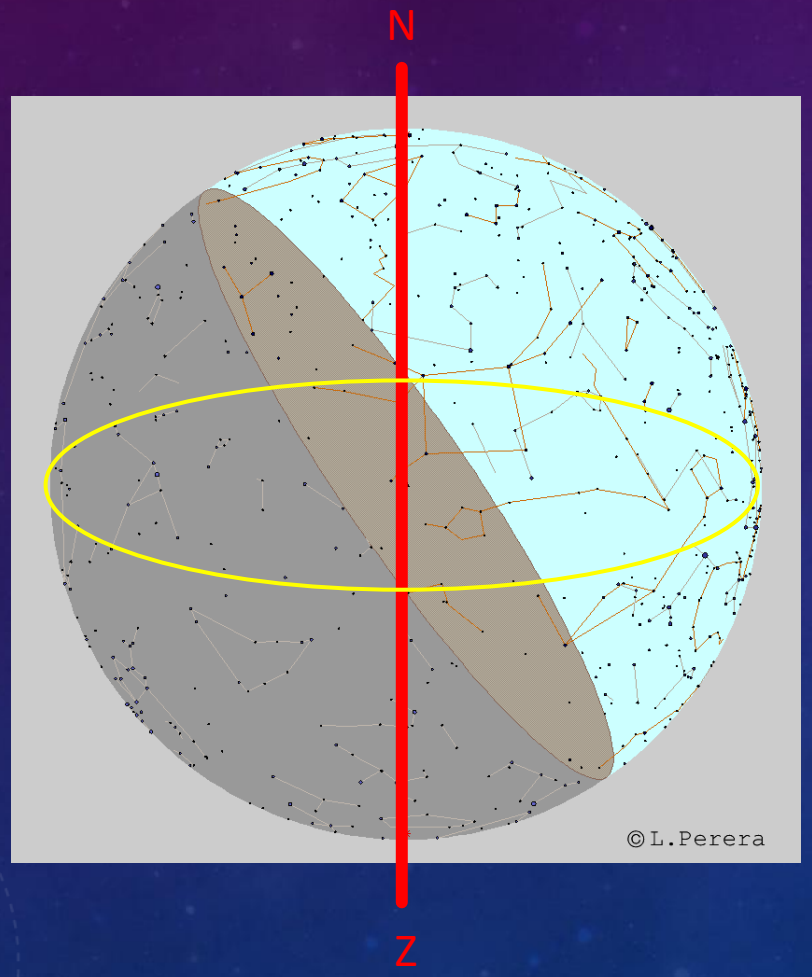
Ecliptica (zodiac, dierenriem)

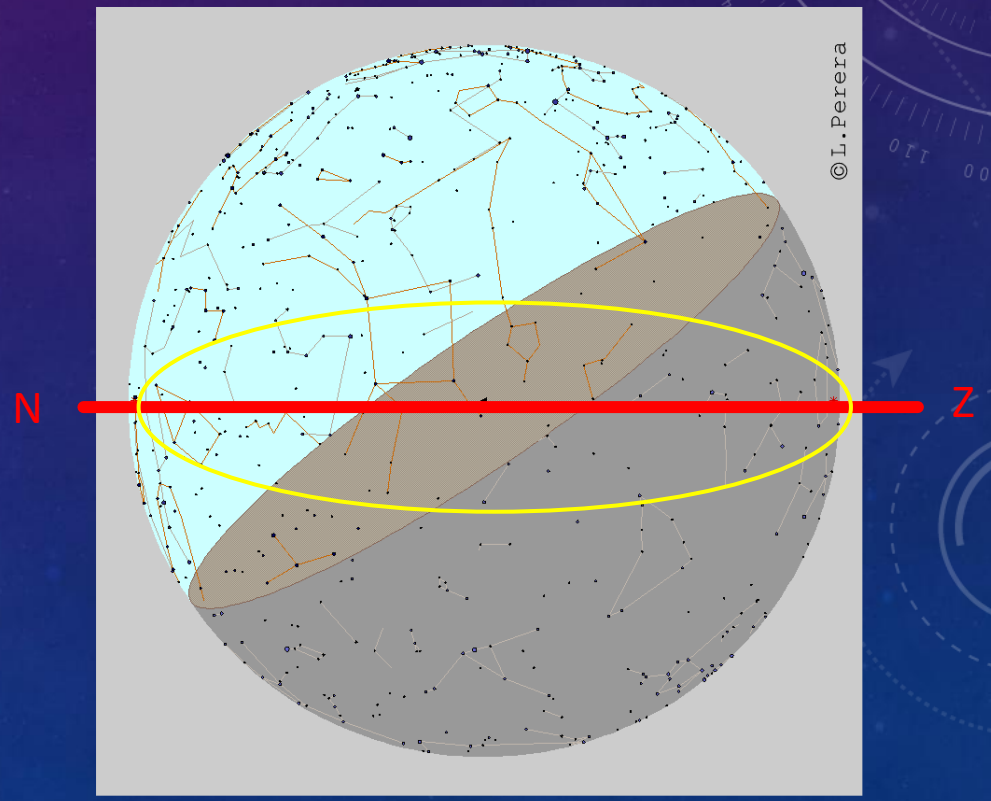


DE HEMELKOEPEL

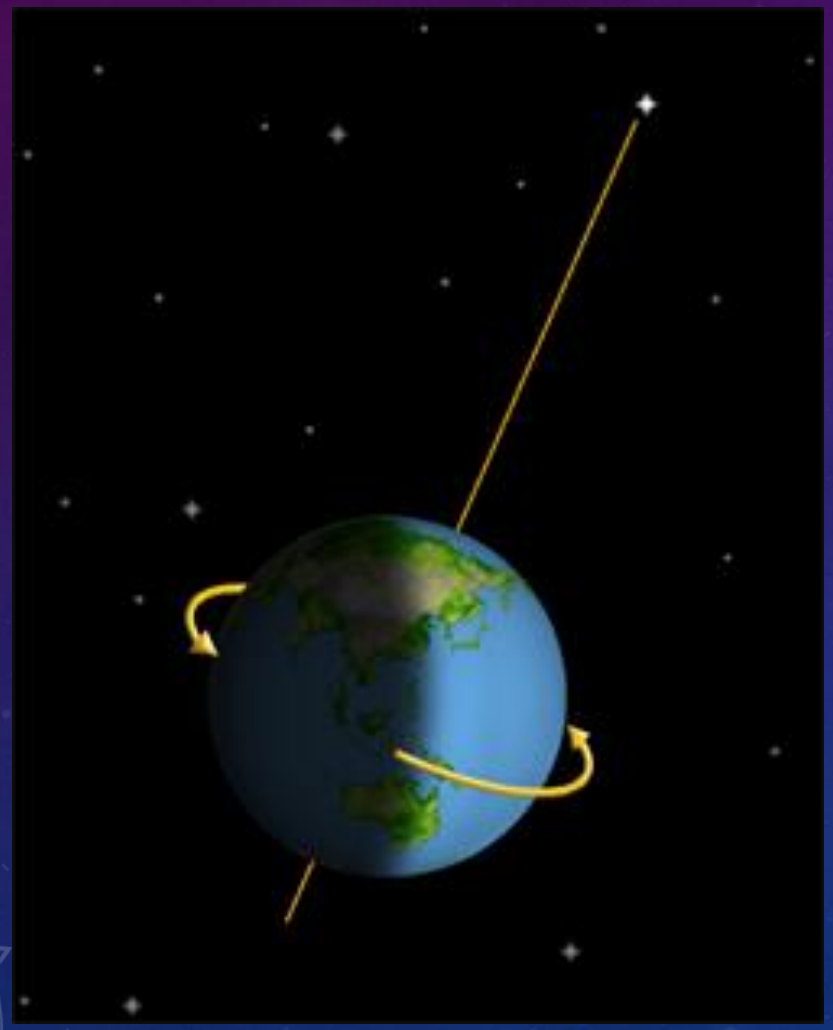


OP DE NOORDPOOL EN DE EVENAAR

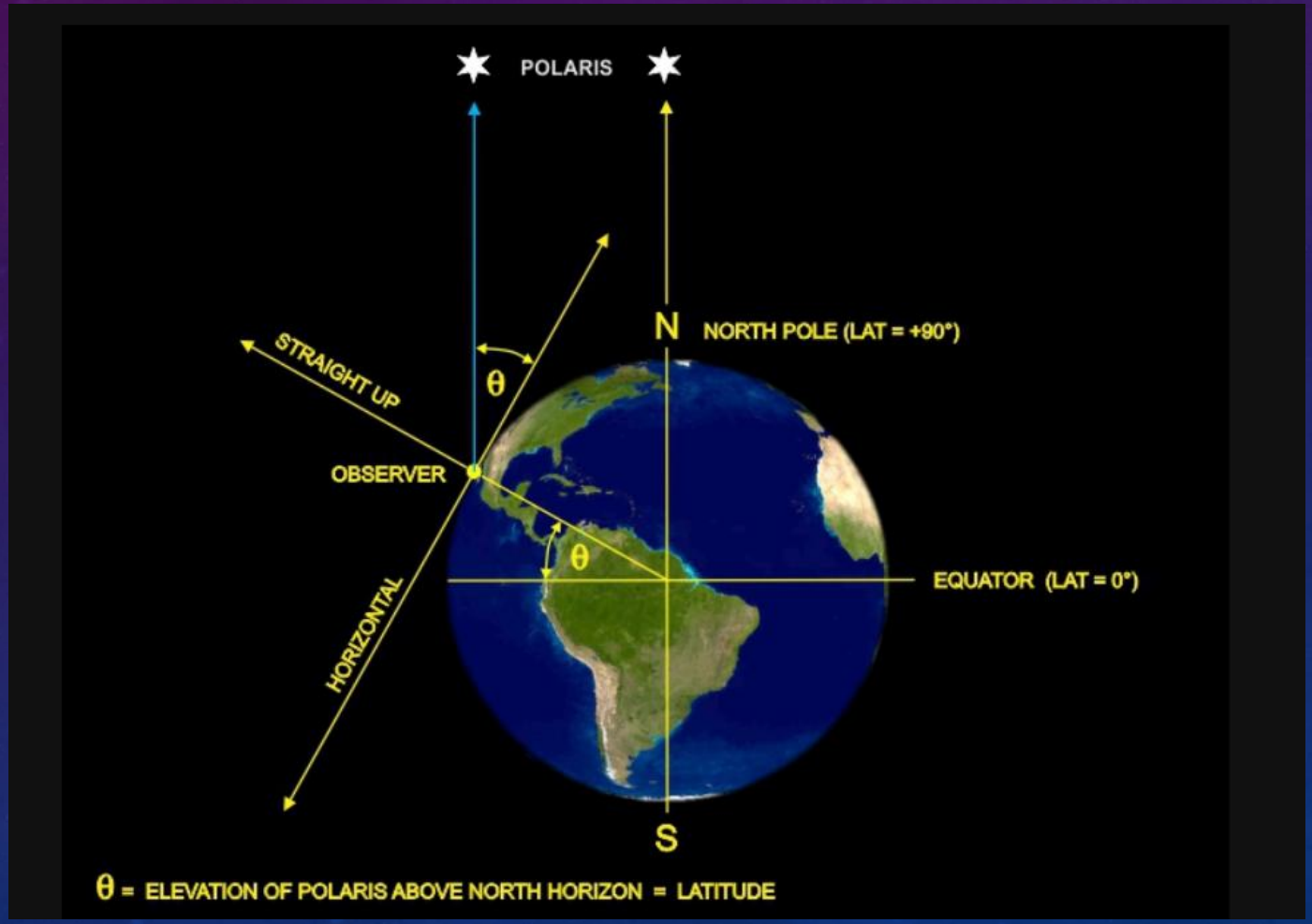




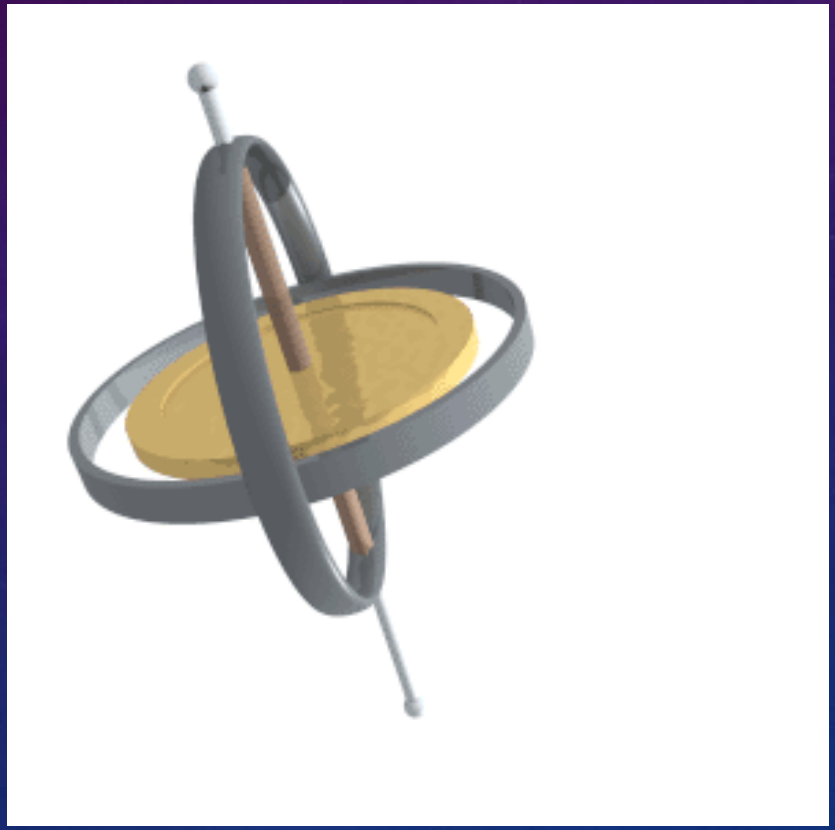
WAAROM BLIJFT DE POOLSTER OP HAAR PLAATS?



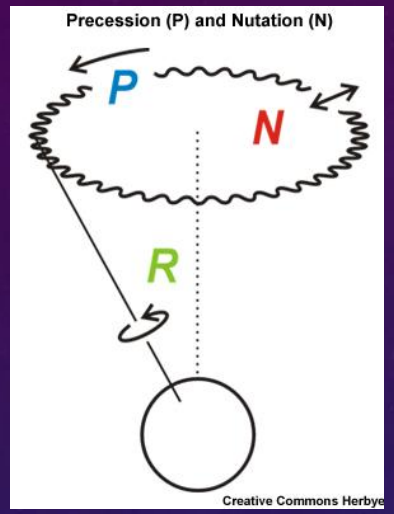
POOLSHOOGTE NEMEN

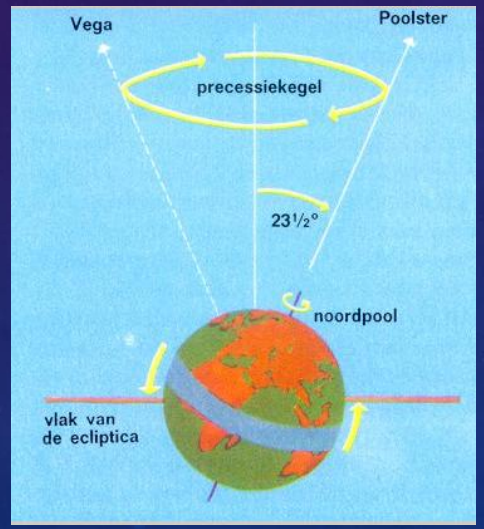


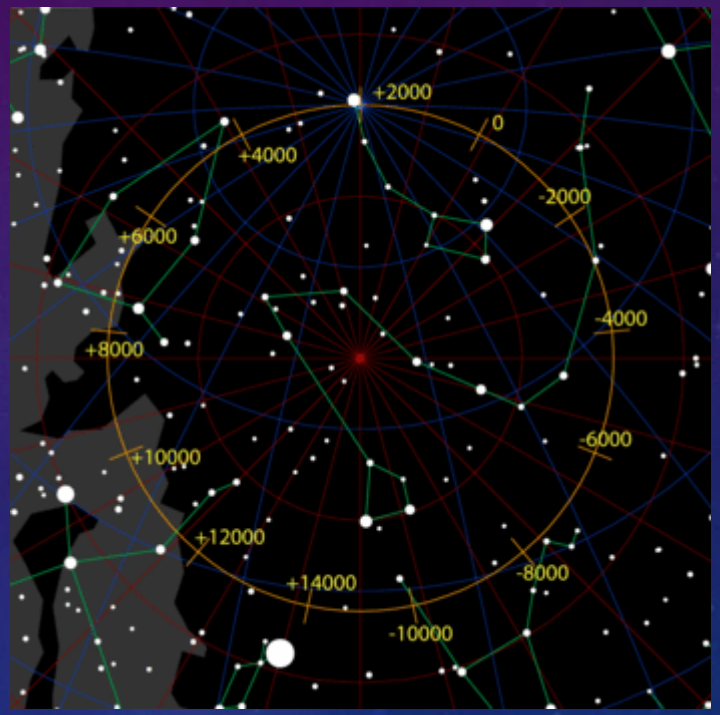
DE GYROSCOOP

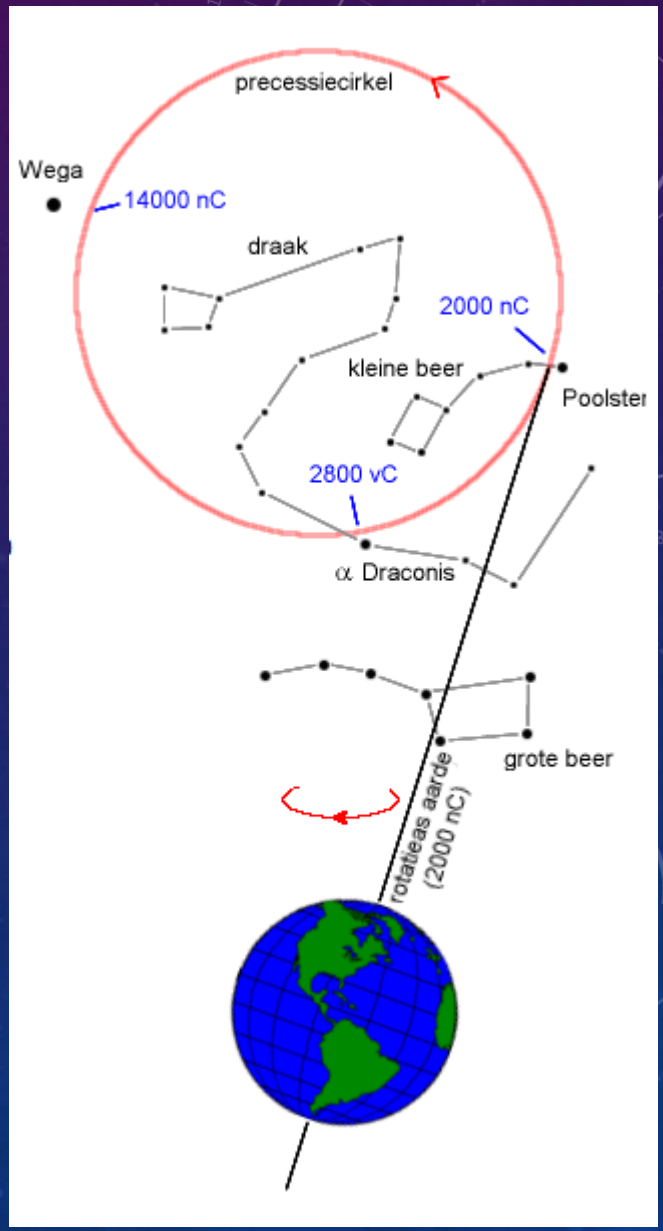


DE PRECESSIEBEWEGING VAN DE AARDE

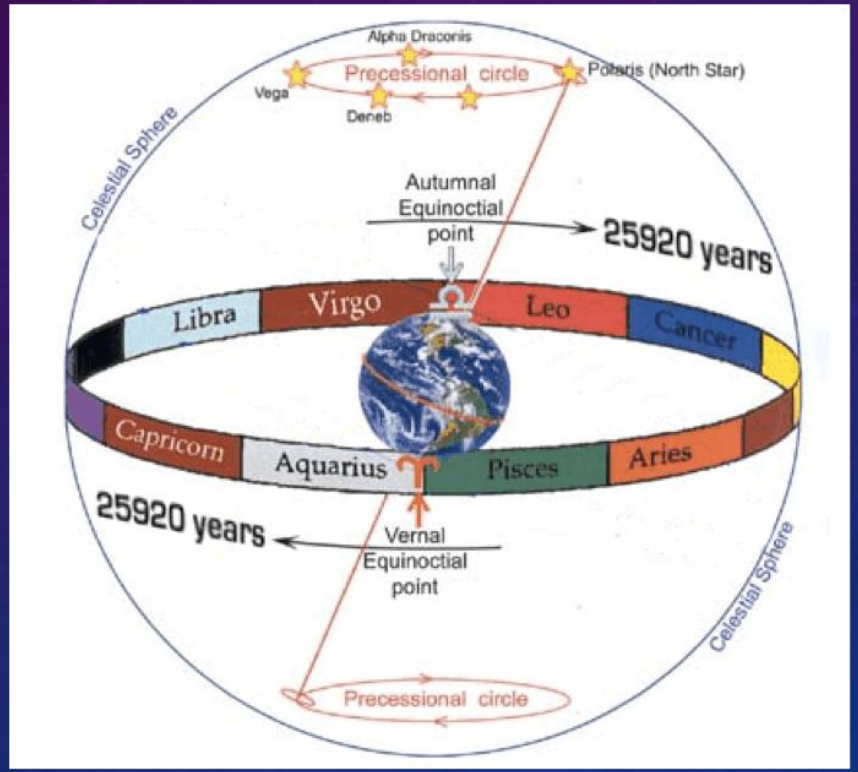




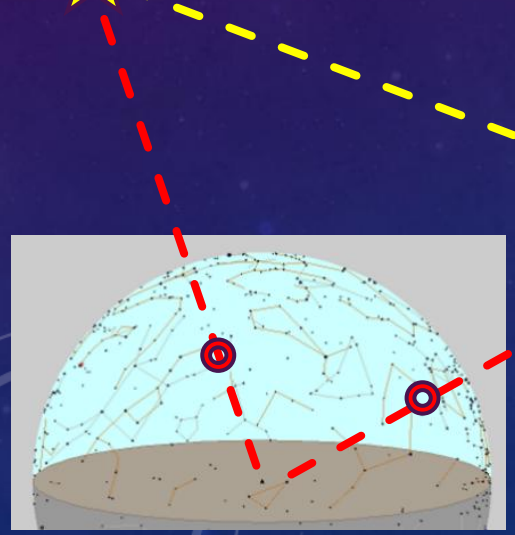


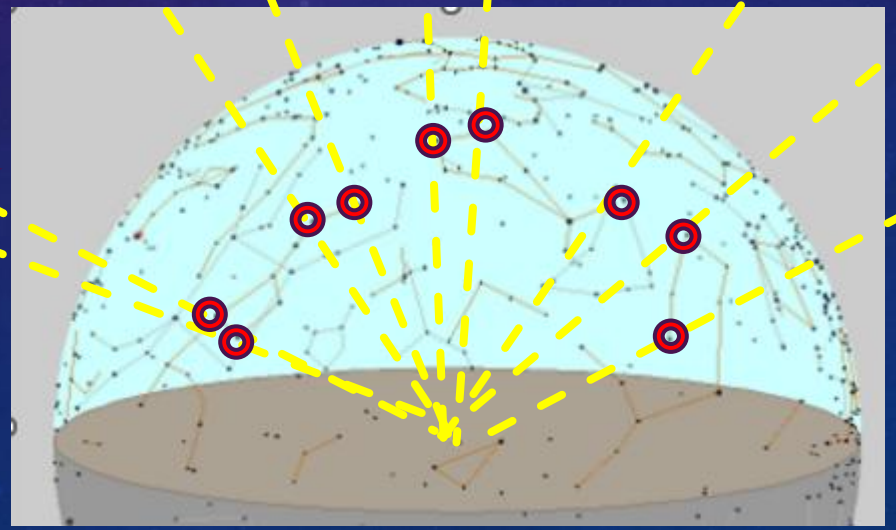


DE PRECESSIE OVER DE DIERENRIEM

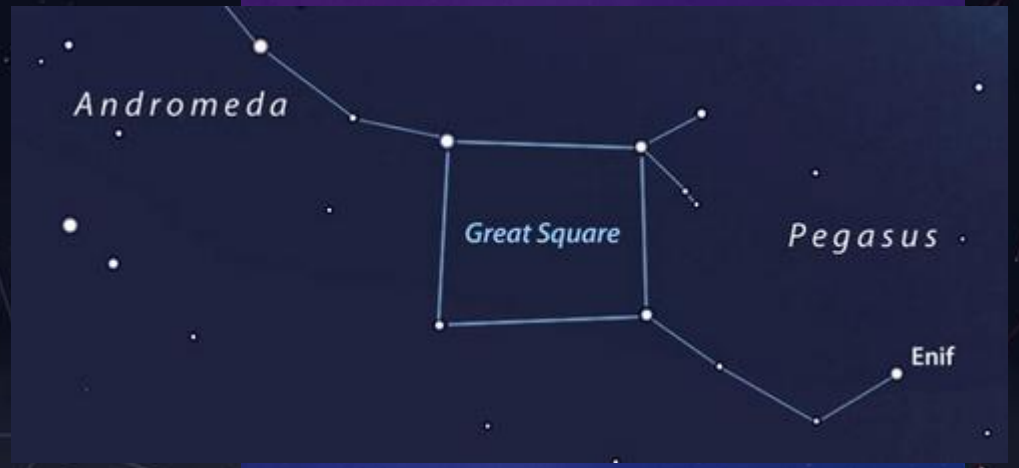


STERRENBEELDEN : OPTISCHE ILLUSIE

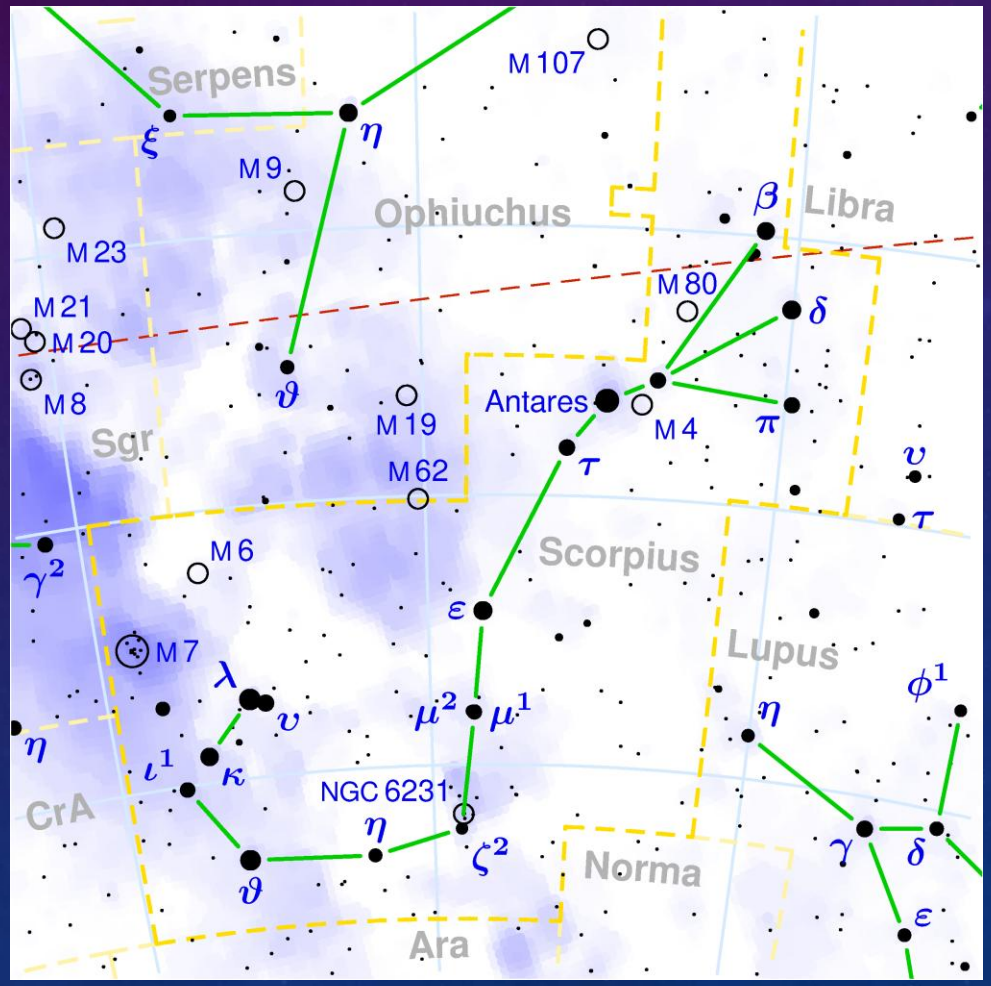




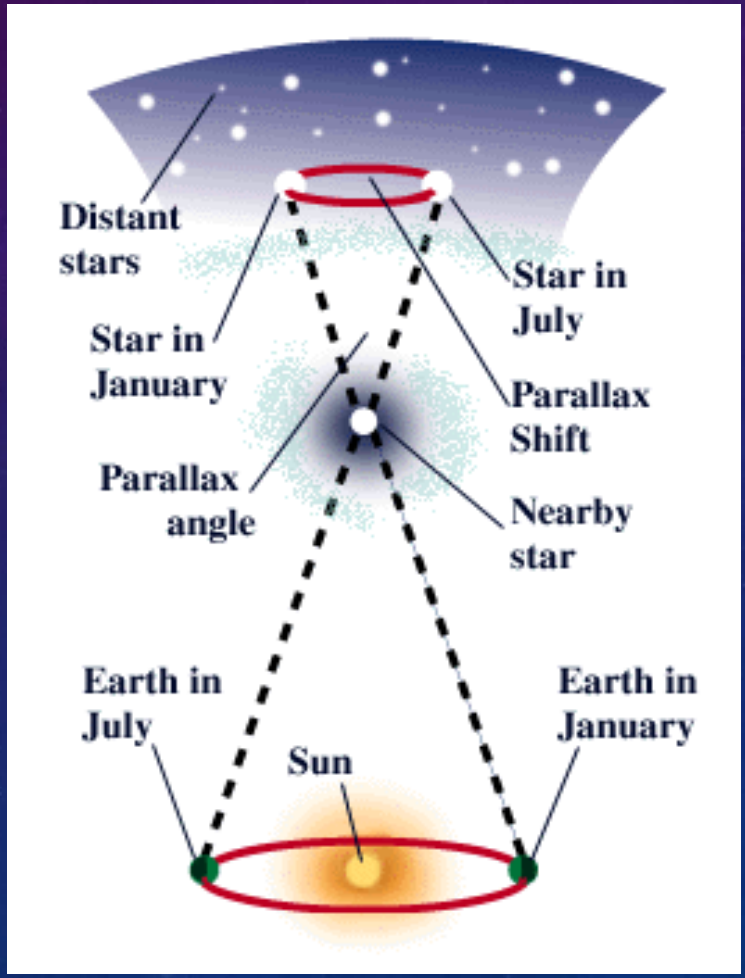
CONSTELLATIES



STERRENBEELDEN : BENAMING

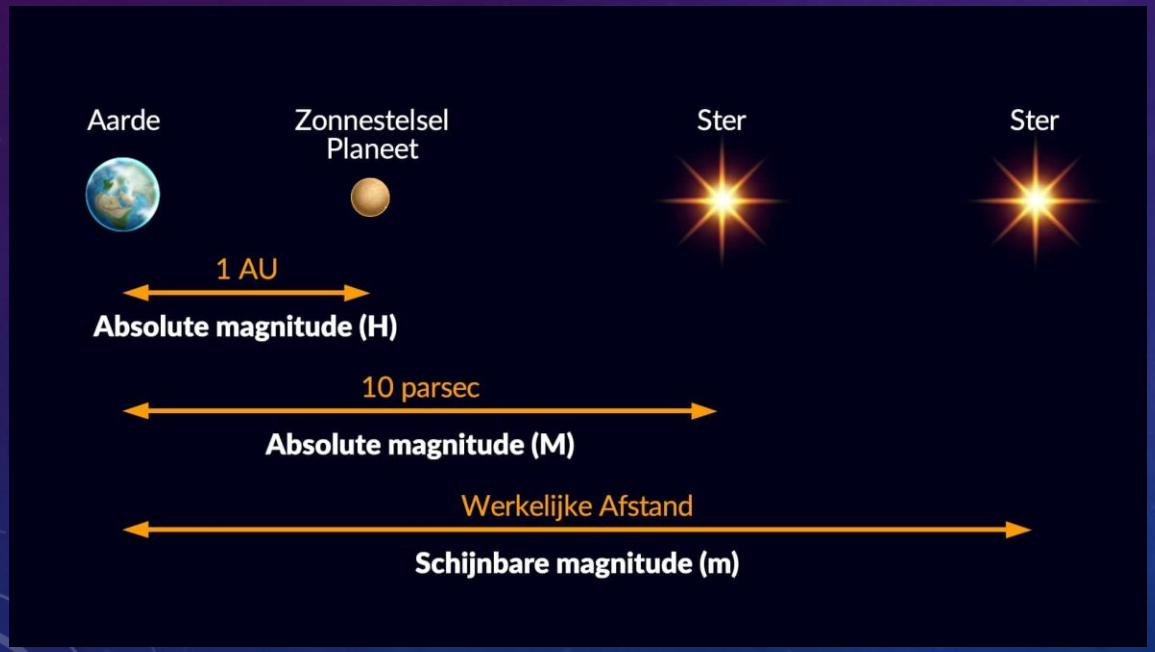


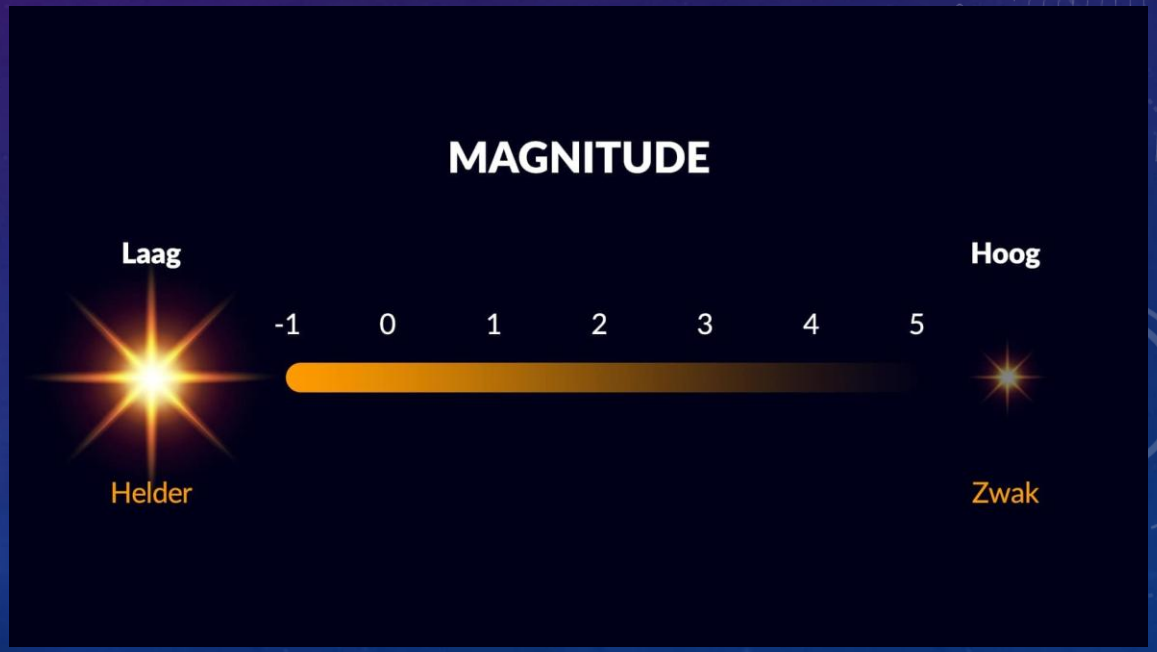
AFSTAND VAN STERREN



ZICHTBARE GESCHIEDENIS

HELDERHEID VAN STERREN

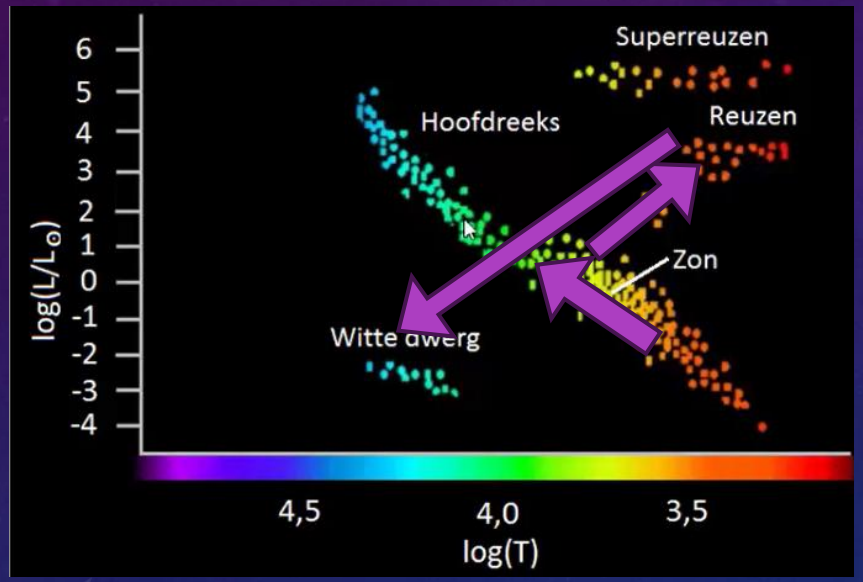




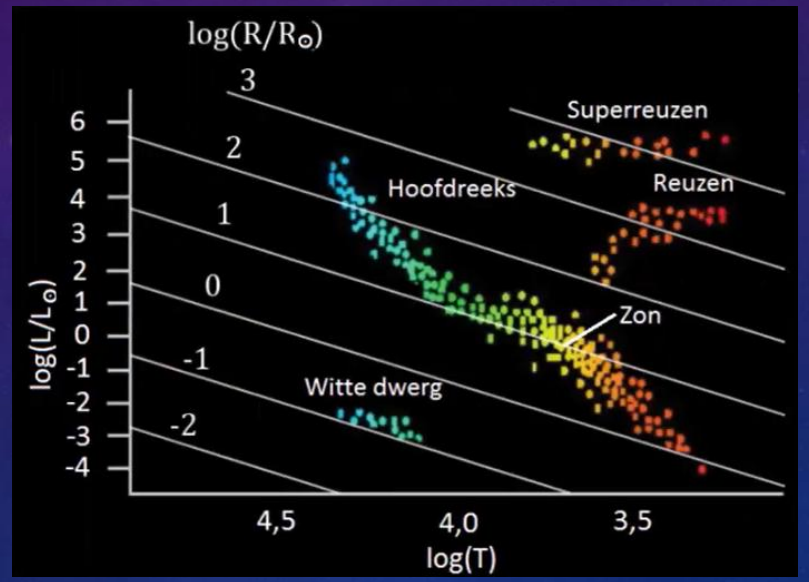
ZICHTBARE EVOLUTIE VAN STERREN

KLASSIFICATIE VAN STERREN

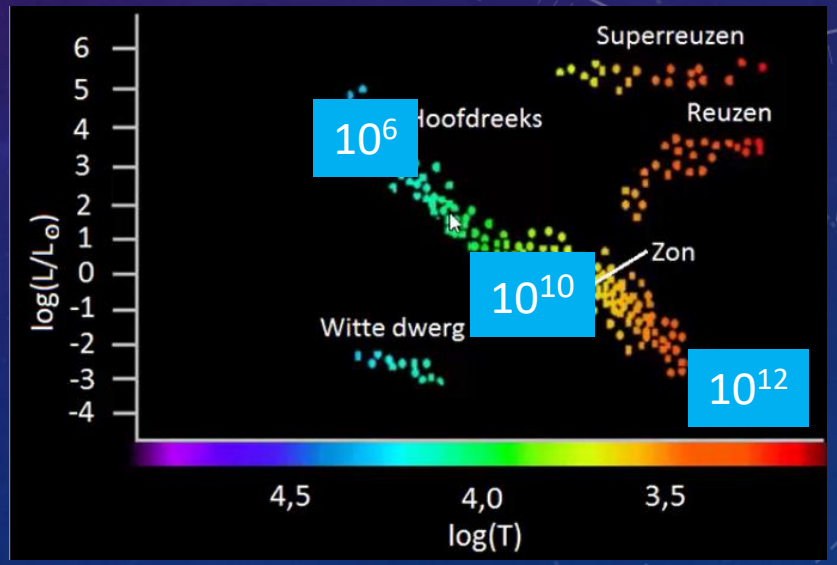
Evolutie



Straal

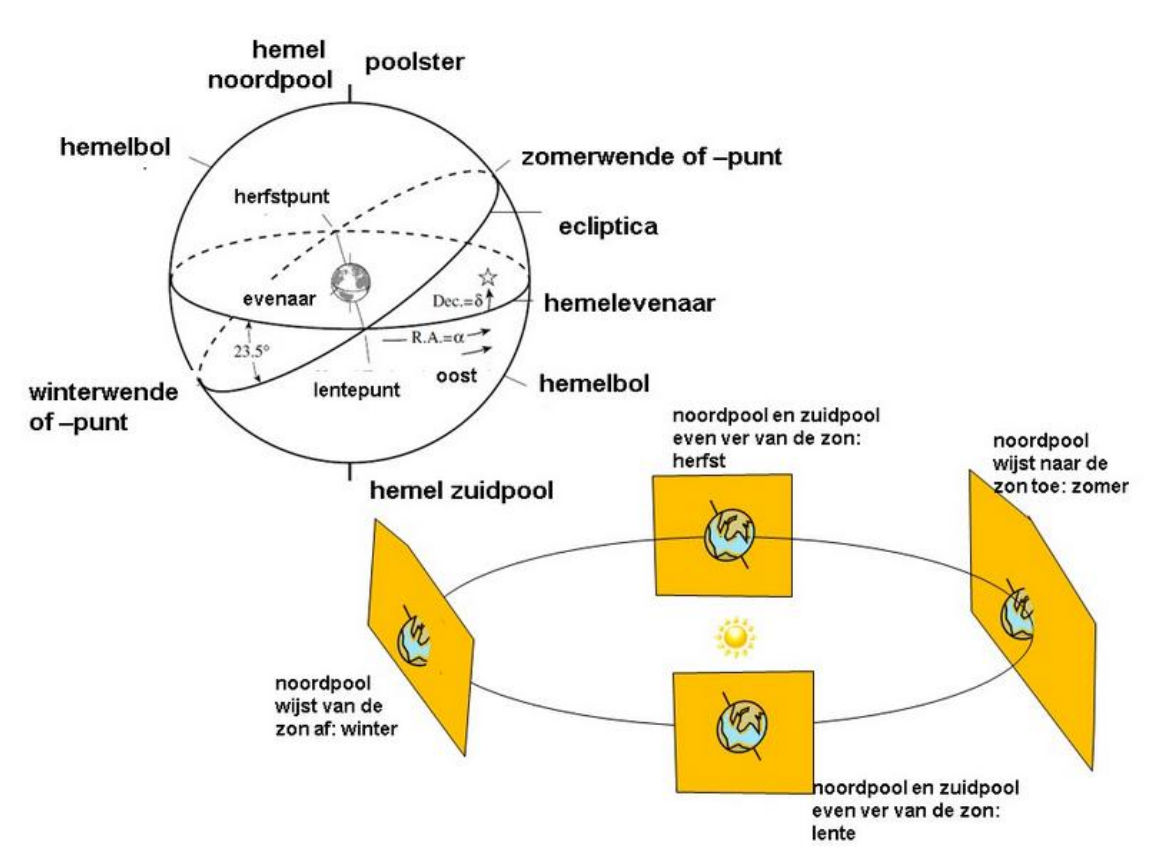


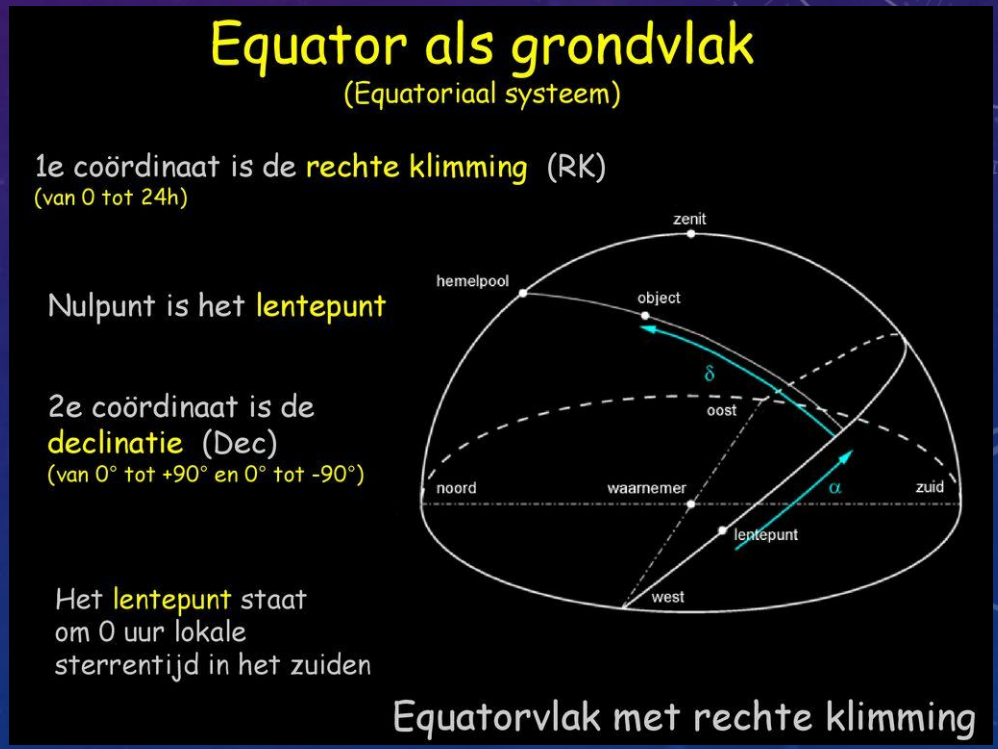
Levensduur



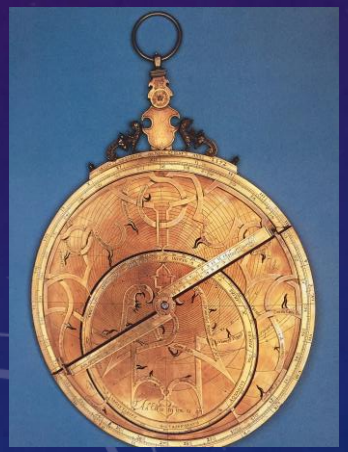
$$\tau_{MS} \approx 10^{10}\,\text{years} \cdot \left[\frac{M}{M_\odot}\right] \cdot \left[\frac{L_\odot}{L}\right] = 10^{10}\,\text{years} \cdot \left[\frac{M}{M_\odot}\right]^{-2.5}$$

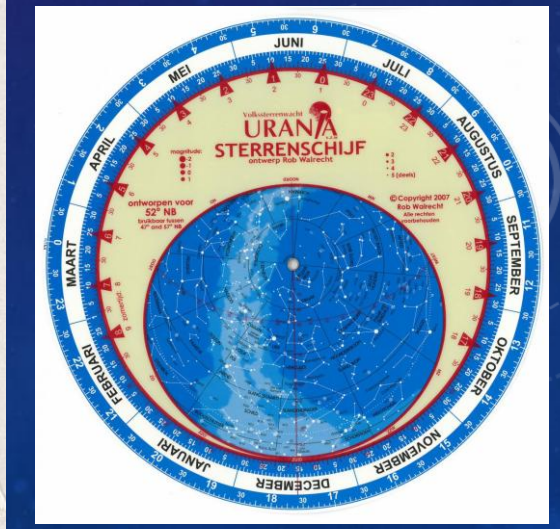
POSITIE VAN STERREN



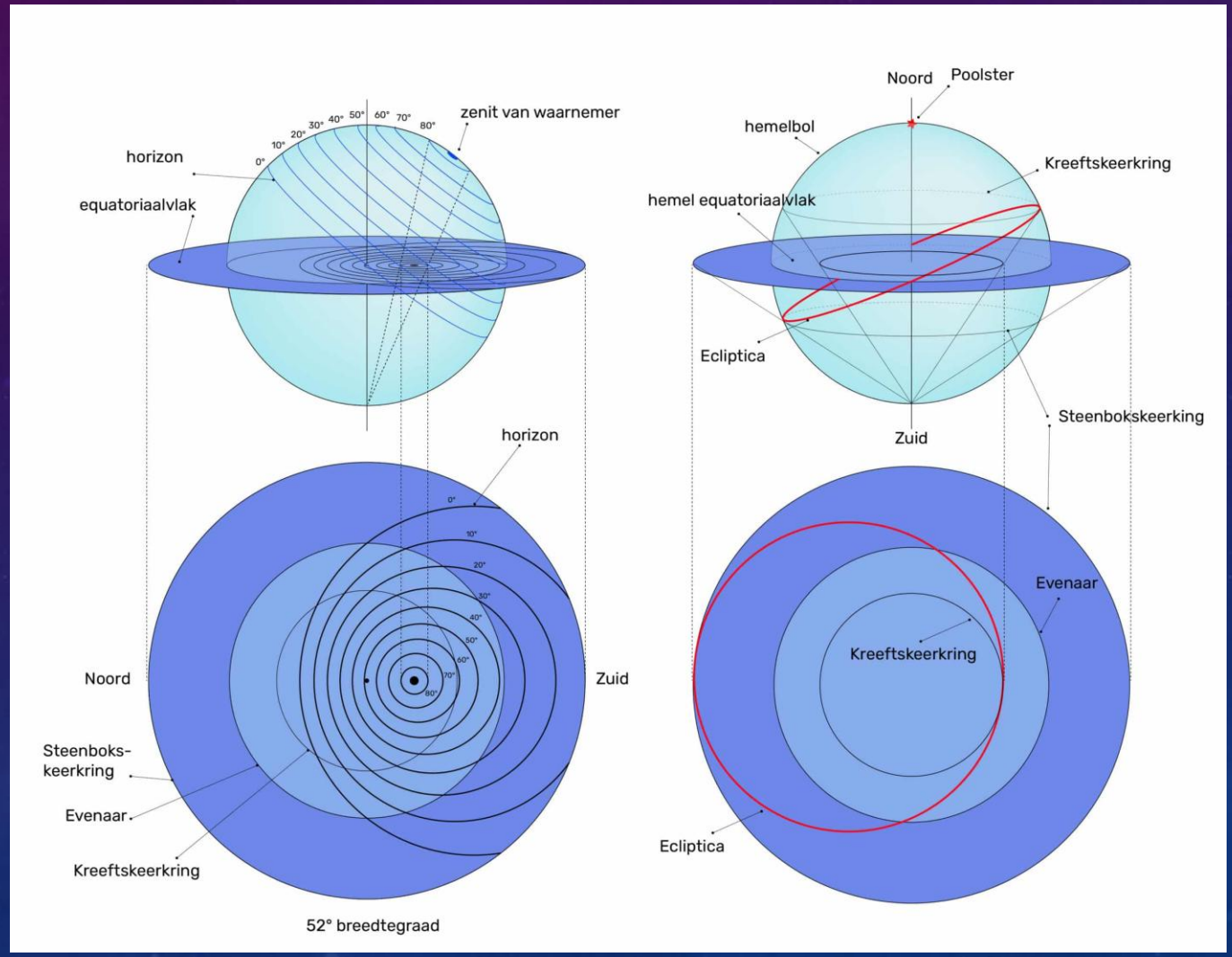


LIBER VI : PROJECTIES

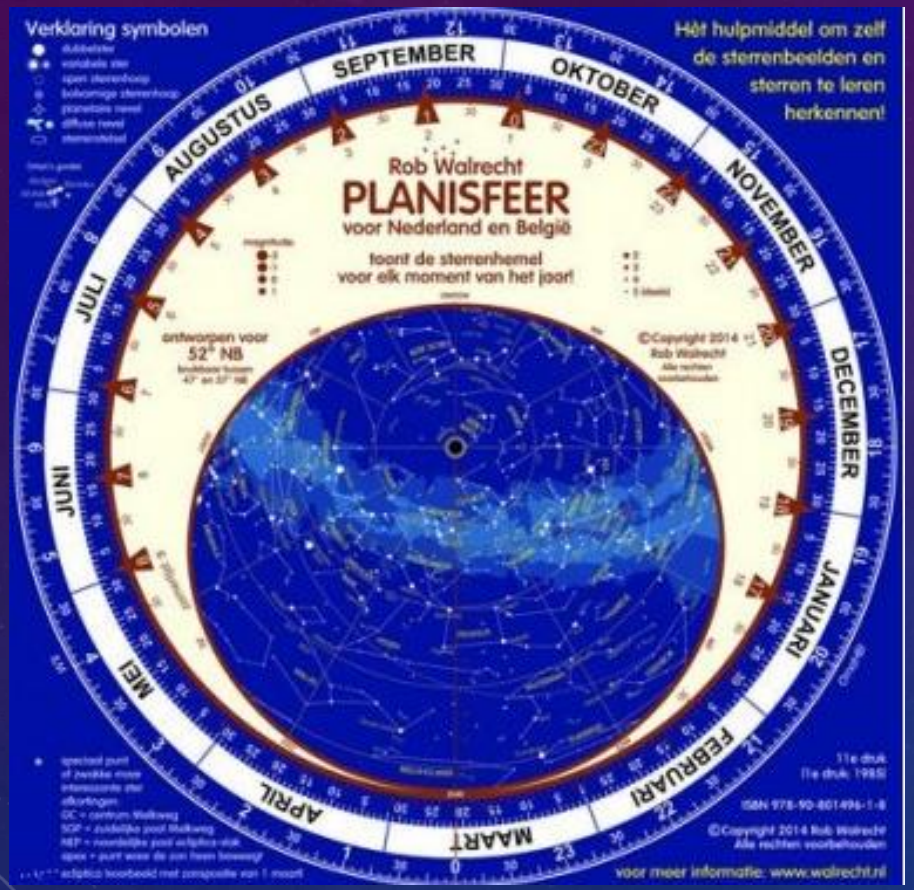


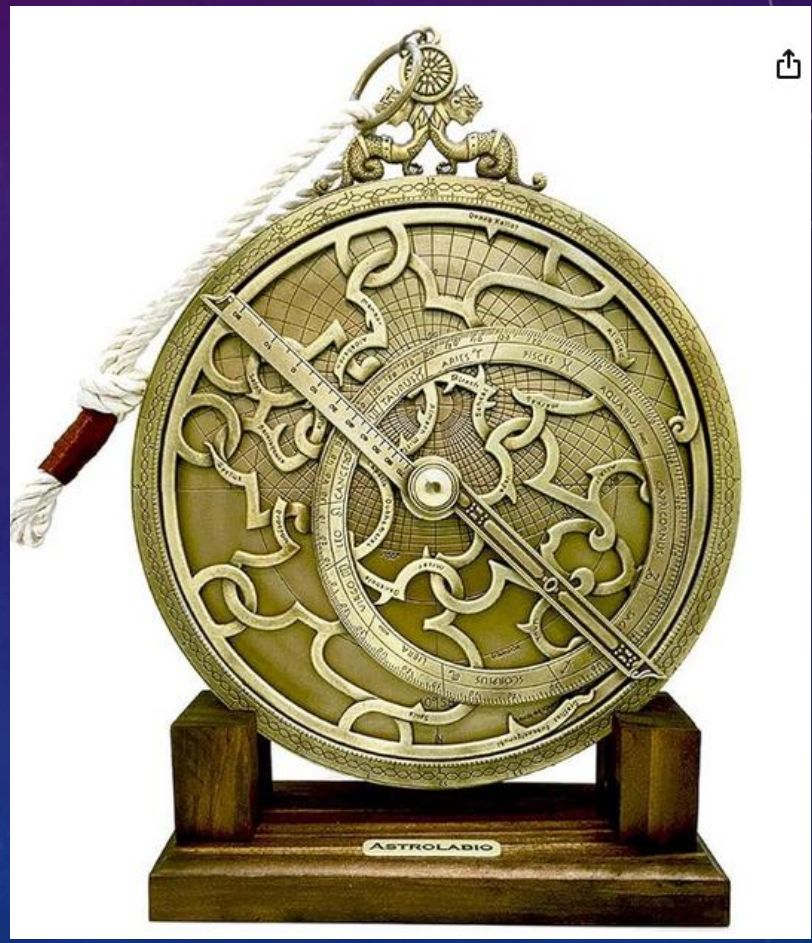


DE STEREOGRAFISCHE PROJECTIE



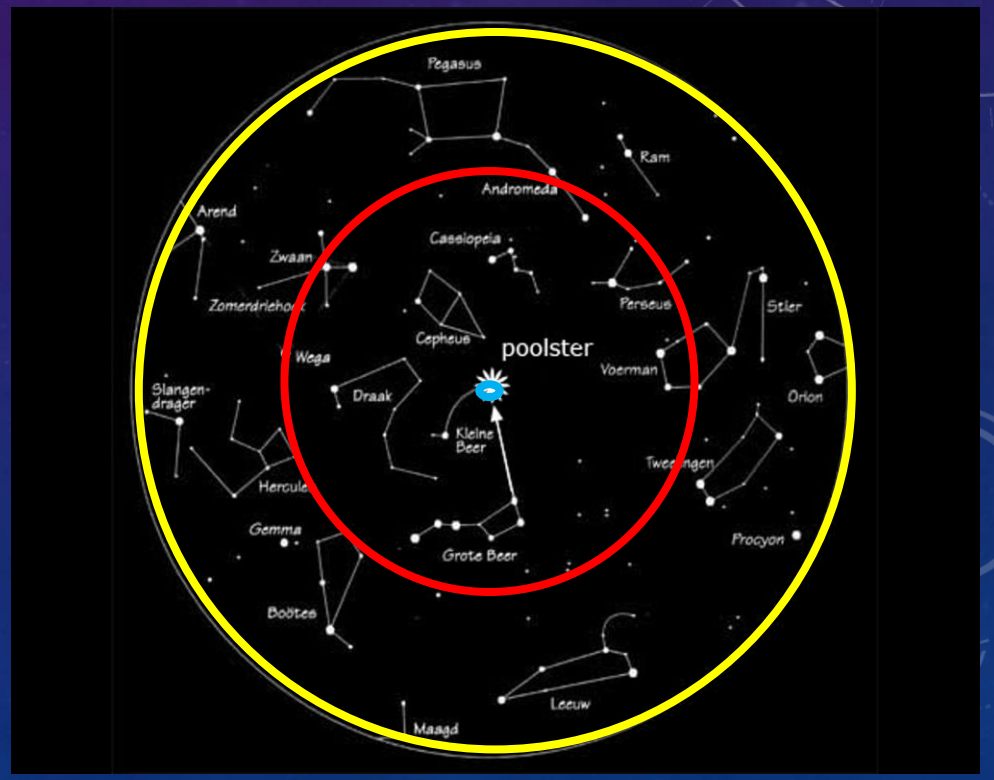
DE STERRENKAART



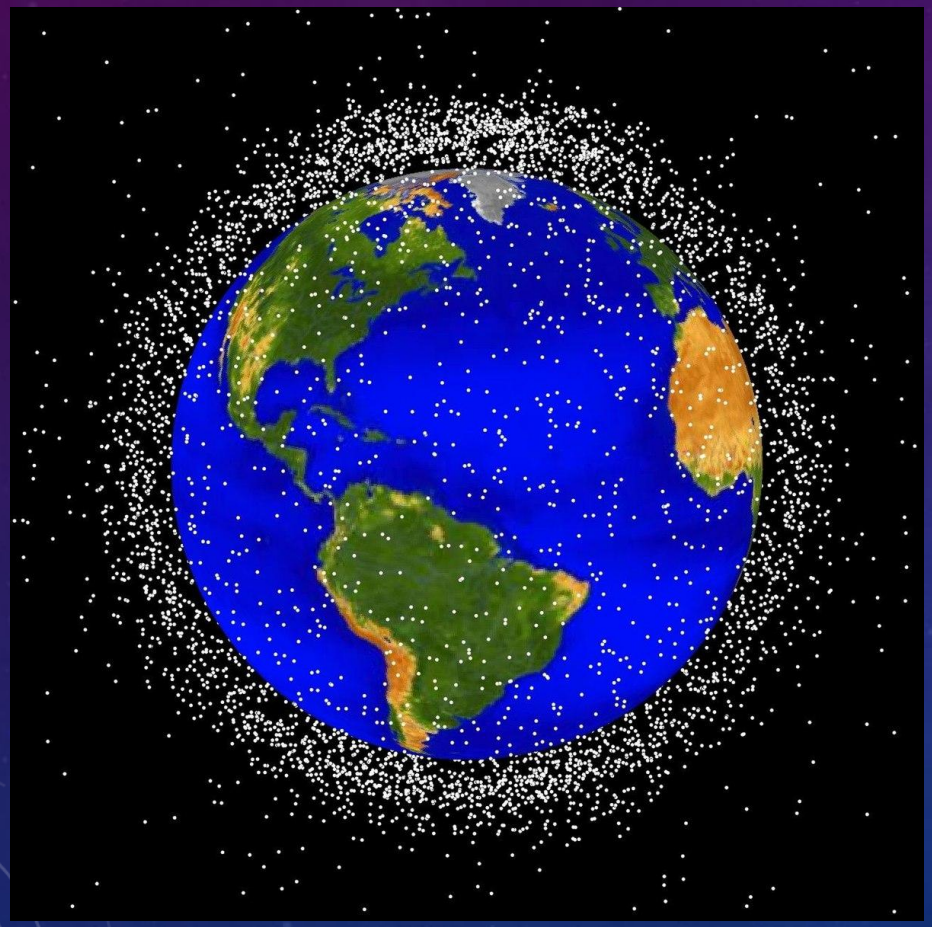


STERRENHOPEN - DUBBELCLUSTER

CIRCUMPOLAIRE STERREN



SATELLIETEN

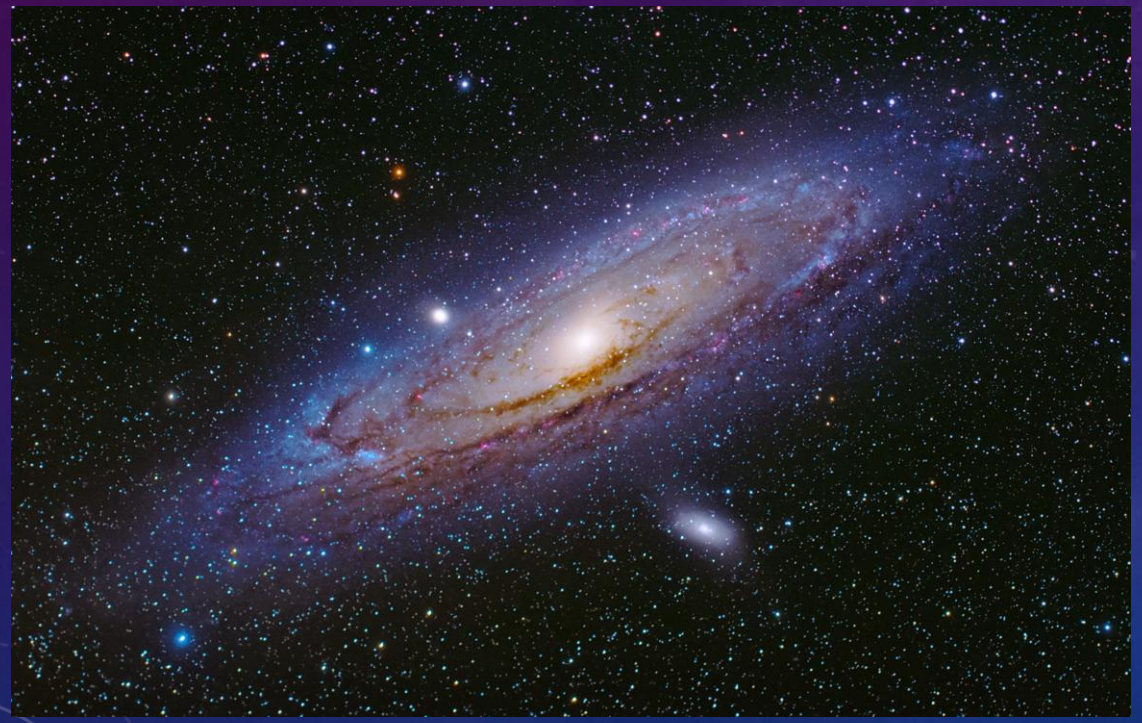


DE MELKWEG RUBENS 1620

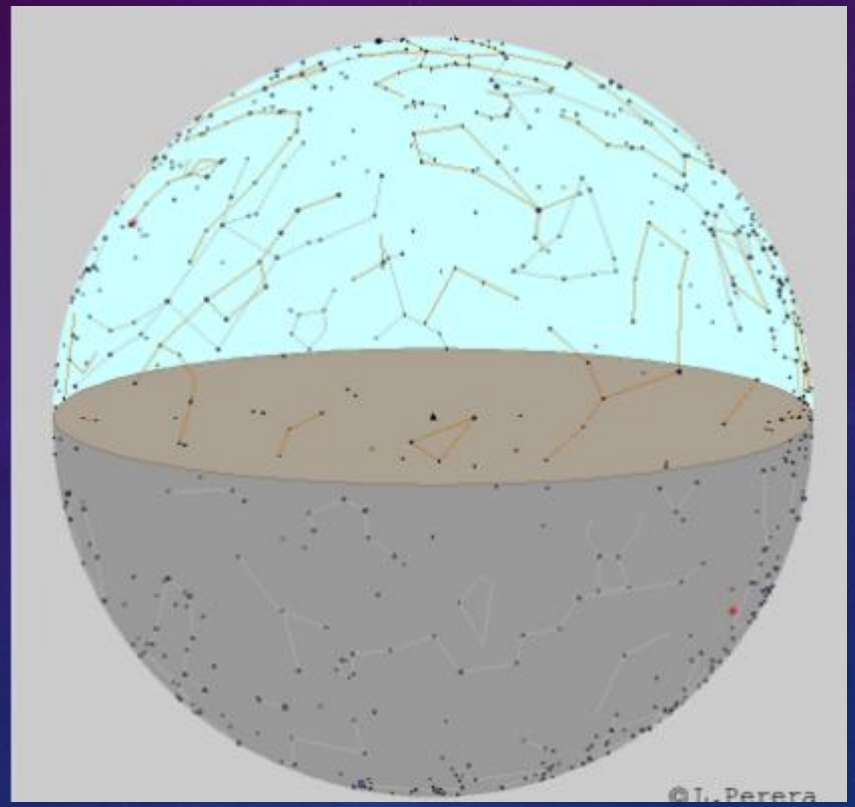
ONS MELKWEGSTELSEL

13.3 10^9 j oud
250. 10^9 sterren
Ø: 100.000 lj
M= 5. 10^{44} g

DE MELKWEG



Einde


©L.Perera