

PROGRAMME N° 7.

ASTRONOMY.

I.

1. Definition of astronomy.
2. Celestial sphere.—Axis of the sphere.—Poles.
3. Parallels.—Equator.—Meridians.
4. Vertical circle.—Zenith.—Nadir.—Horizon.

II.

5. Fixed stars; their distance from the earth.
6. Rising and setting of the stars;—Polar Star.
7. Stars of different magnitudes visible to the naked eye.
8. Periodical, temporary and colored stars.
9. Double stars; Milky Way; nebulae.
10. Cause for the disappearance of the stars during the day.
11. Circle of perpetual apparition and of perpetual occultation.
12. Classification of stars; principal constellations.

III.

13. Form of the earth, and phenomena which indicate it.
14. Apparent horizon.—Real horizon.
15. Axis of the earth.—Terrestrial Poles.—Meridian.—Equator.
16. Geographical longitudes. First meridian.
17. Determination of longitude and of latitude.
18. Parallel, oblique and right spheres.
19. Rotatory motion of the earth; principal facts which prove it.

IV.

20. The sun's annual change of position.
21. Ecliptic; its obliquity.
22. Equinoxes and soltices; change of the equinoxes.
23. Polar circles.—Colure.
24. Signs of the Zodiac.
25. Radius, size, mass and density of the sun.
26. Distance of the sun from the earth.
27. Spots in the sun;—revolution of the sun on his axis.
28. Physical constitution of the sun.

V.

29. True solar day; mean day;—true solar time; mean time.
30. Commencement of civil day and solar day.
31. Length of civil year.