CELESTIAL MOTION ILLUSTRATOR

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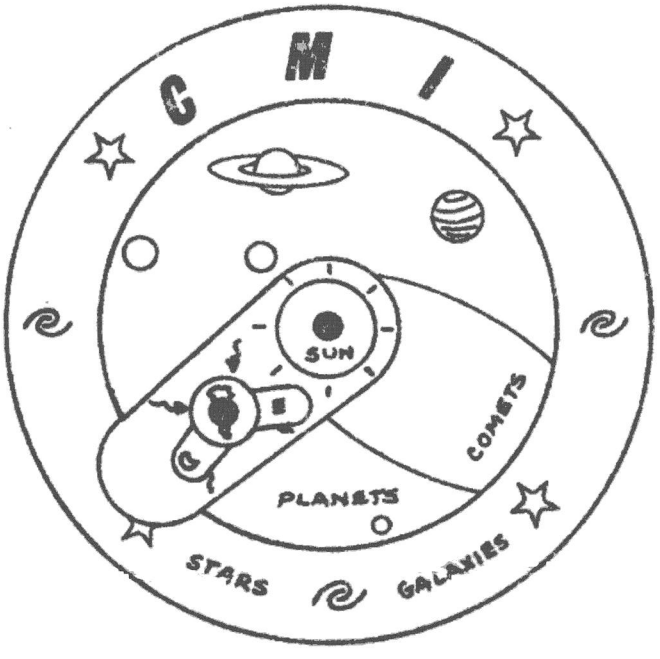
March-April 1977



FINAL
ASSEMBLY

INTRODUCTION

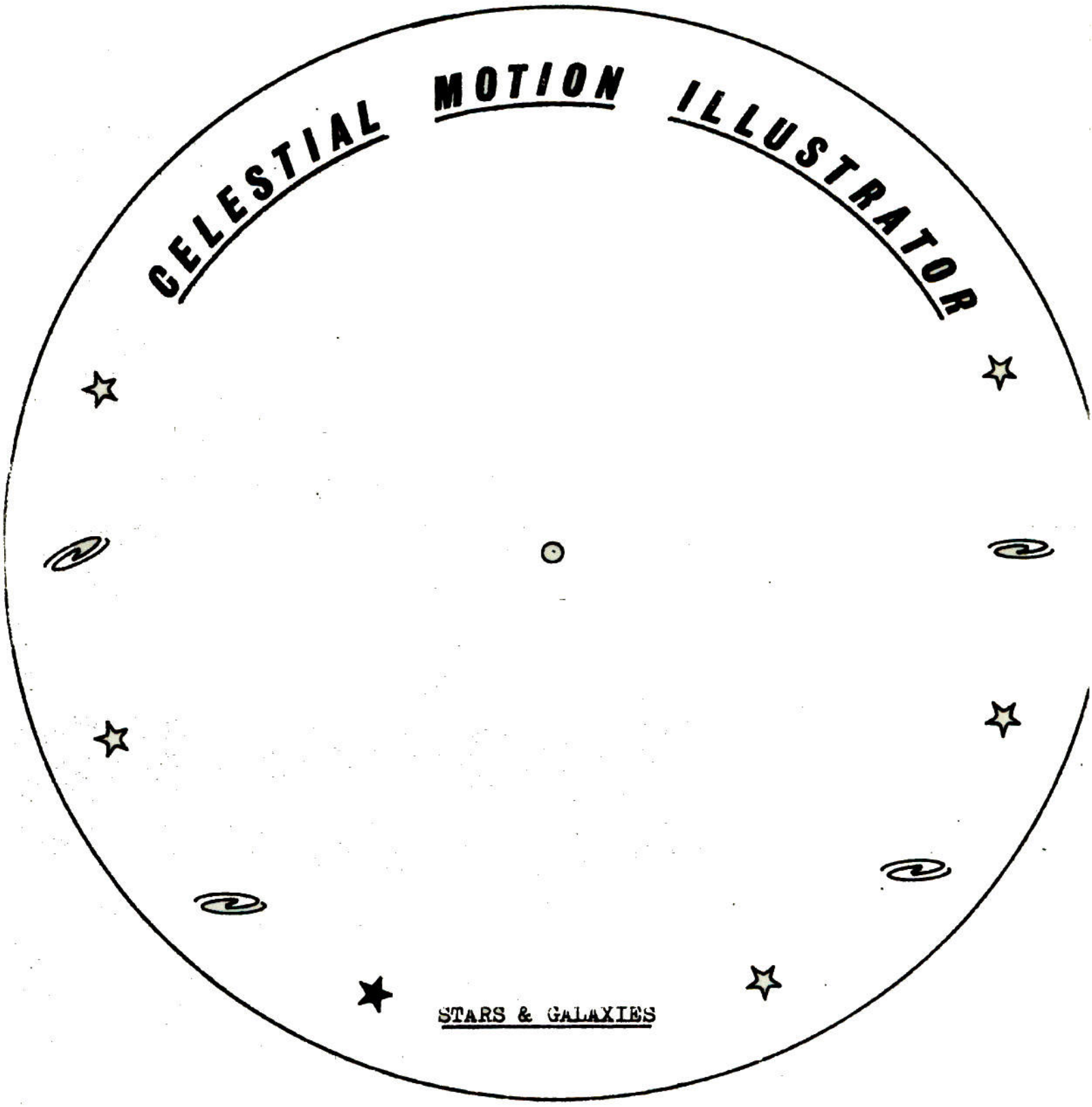
The Celestial Motion Illustrator was developed as a result of seeking an answer to the question:"How do we know scientifically that the earth rotates daily and goes around the sun annually?".

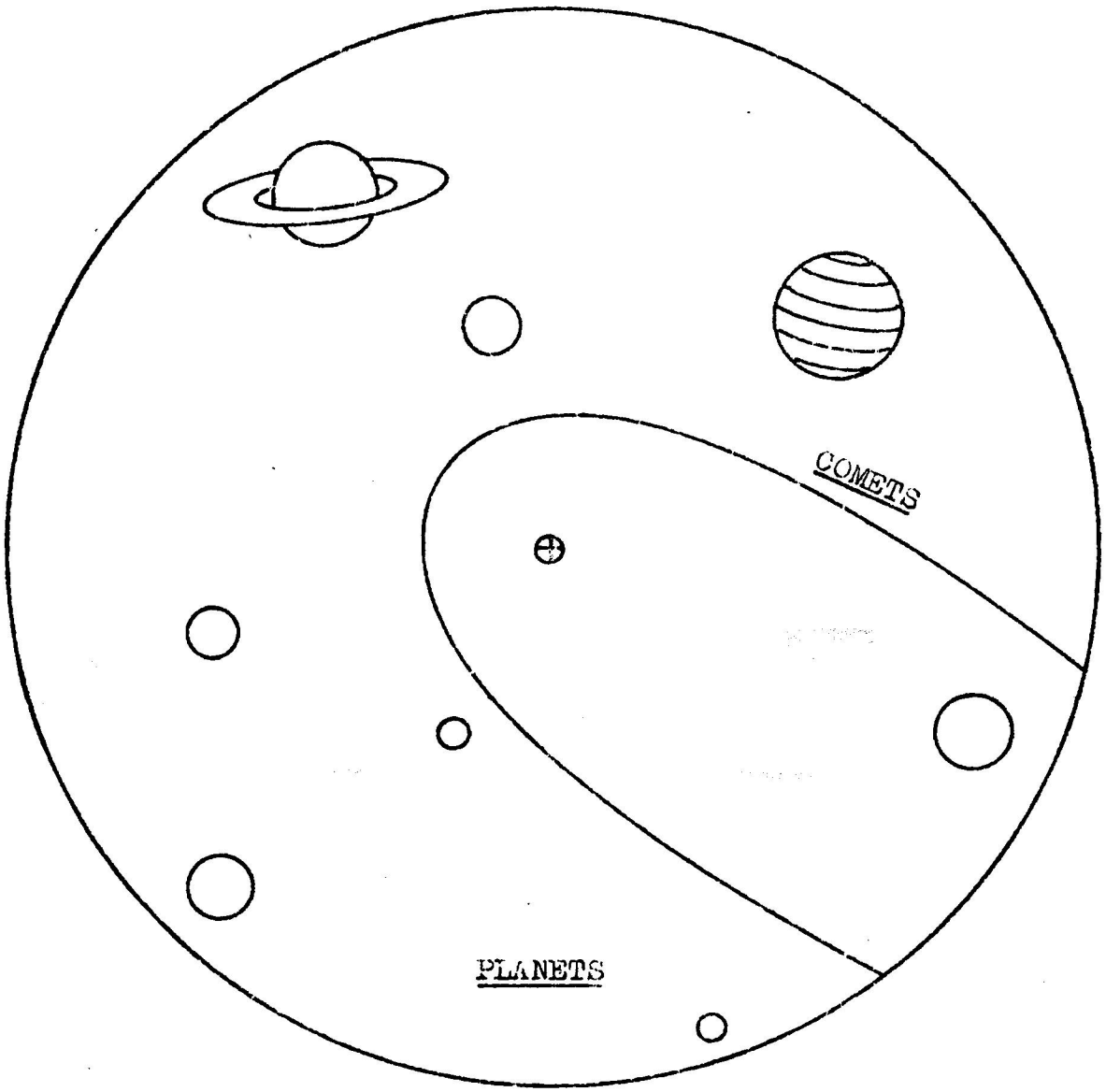
Various observed phenomena and past experiments were investigated, and although bits of evidence can be presented on both sides of this old issue, it appears that there is no way to know for sure, either from the earth,or from an object launched from the earth, whether the heliocentric (Copernican) or geocentric (Tychonian) model is correct.

The purpose of the CMI is to illustrate, in a simple way, the known relative motions of various astronomical bodies, and to show that these relative motion requirements may be satisfied equally well by either model. It does not attempt to answer the original question in terms of absolute motion, but shows that the question is still open, and not "all settled" as is widely taught and believed today.

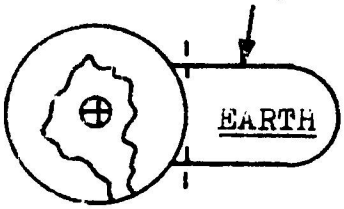
The final answer, it seems, will depend on further experimentation and discovery in this fascinating cosmological field. Your ideas and suggestions toward this end are welcomed.

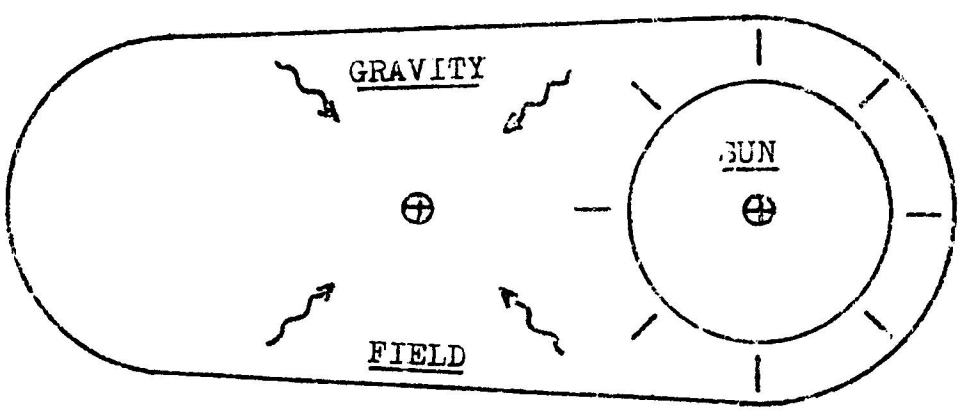
R G Elmendorf
5 March 1977

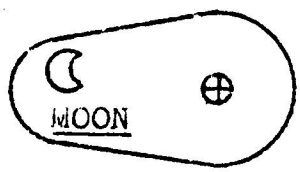

CELESTIAL MOTION ILLUSTRATOR
STARS & GALAXIES



Bend Tab Up
@ 45°







NOTES

This Celestial Motion Illustrator is equally applicable to geocentric, heliocentric or anywhere-centric universe, with relative astronomical motions as currently understood.

Illustrator is idealized: Circular orbits in epicyclic plane, out of scale, planets and comets combined, sun-star linear motion not shown.

TYCHONIAN (GEOCENTRIC) MODEL

EARTH = Fixed, non-rotating
MOON = Approx daily (24.9 hr) around earth
GRAVITY FIELD = Daily around earth
SUN = Daily around earth
PLANETS/COMETS = Daily around earth
Various periods around sun
STARS = Daily around earth
Yearly around sun

COPERNICAN (HELIOCENTRIC) MODEL

EARTH = Revolves daily
Yearly around sun
MOON = Monthly around earth
GRAVITY FIELD = Non-rotating
Yearly around sun
SUN = Fixed
PLANETS/COMETS = Various periods around sun
STARS = Fixed

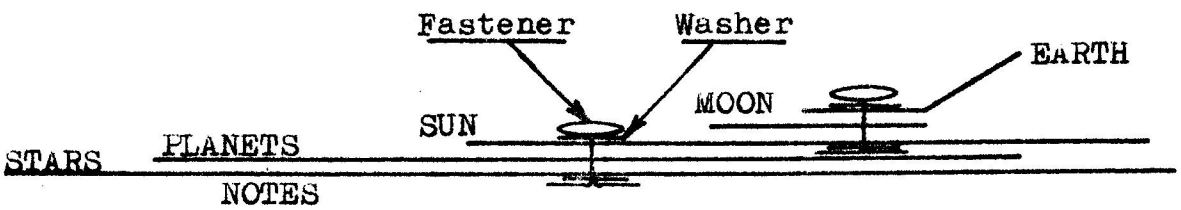
OBSERVED PHENOMENA

1. Annual aberration of pole star positions.
2. Annual spectrum-shift of equator stars.
3. Precession of earth pendulum.
4. Michelson-Morley experiment.
5. Planet "retrograde".
6. Rotating system mass balance.
7. Airy's experiment.
8. Coriolis effect.
9. Precession of equinoxes.
10. Moon phases.
11. Earth seasons.
12. Fizeau's experiment.
13. Precession of planet perihelions.

CELESTIAL MOTION ILLUSTRATOR

ASSEMBLY INSTRUCTIONS

1. Cut out parts roughly.
2. Paste on cardboard and trim to exact size.
3. Paste NOTES on back of star/galaxie disk and trim.
4. Color sun, earth and planets if desired.
5. Punch holes as marked.
6. Assemble in sequence shown with brass fasteners and washers furnished:



OPERATING INSTRUCTIONS

Use the Illustrator to compare the two models and demonstrate observed phenomena. Experiment with one motion at a time, rather than trying to get everything going at once.

To compare rotating earth with non-rotating earth, first hold moon/sun/planets/stars stack stationary with one hand and rotate earth with other hand. Then hold earth stationary and rotate stack. Note that most celestial observations made from the earth would be the same in either case.

To produce the annual equator-star spectrum-shift in the geocentric model, rotate the star disk around the sun "annually" to oscillate star-earth distance and produce the shift.

To visualize precession of a pendulum in the geocentric model, rotate the earth's gravity field around the stationary earth, which would produce the same effect as rotating the earth in a stationary field. In the heliocentric model, this phenomenon requires an answer to the question:"If gravity is due to the mass of the earth, why does the gravity field not rotate with the earth, carry the pendulum with it, and prevent precession?".

To visualize moon phases in either model, place the moon at various "monthly" positions during other experiments.

Check out various other motions given in the two models for compatibility with observed phenomena. Are you still sure the earth goes around the sun?