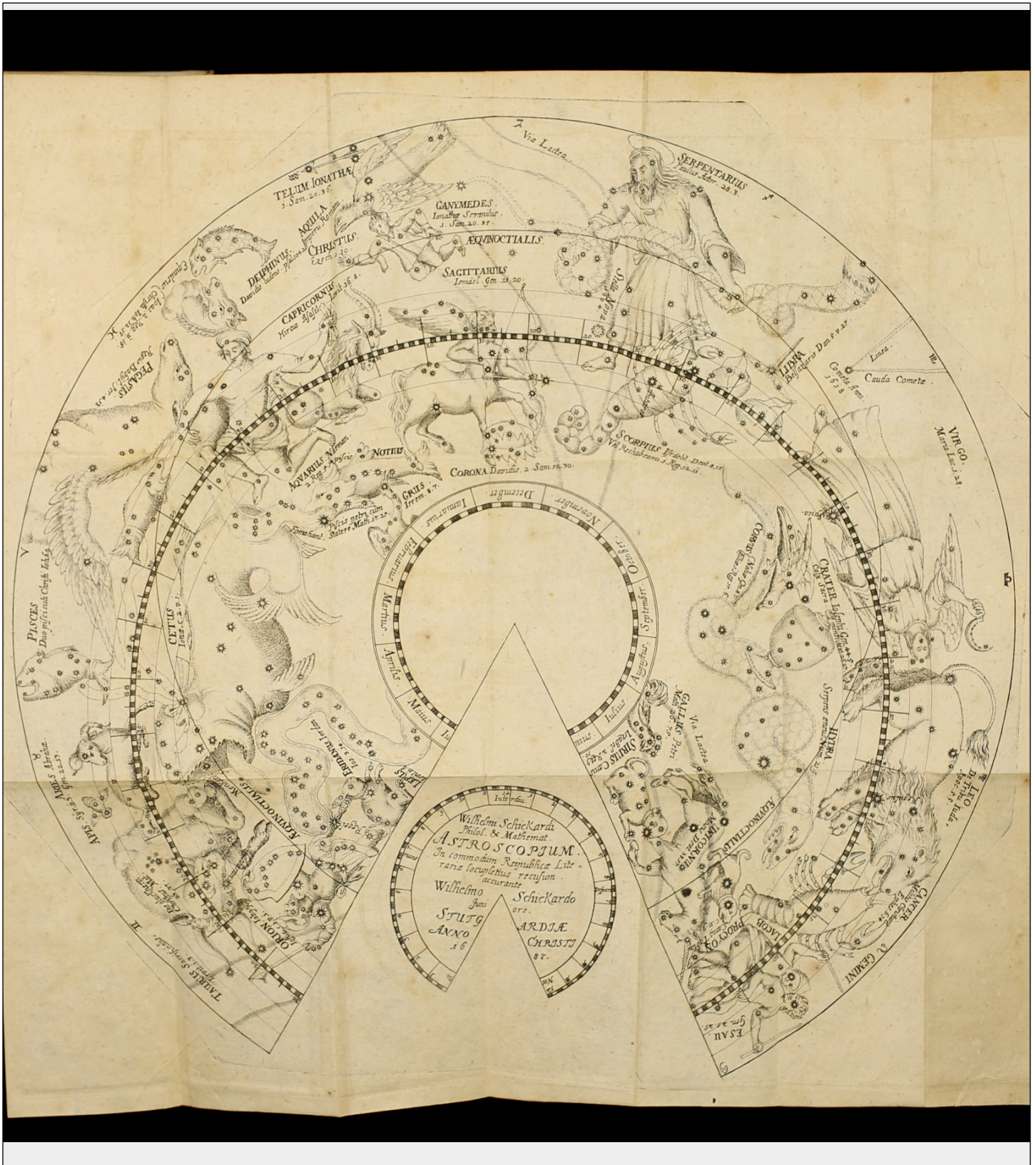


William Schickard Make your own Astroscopium

Learning Leaflet: Instruments
Lynx Open Ed



William Schickard, *Astroscopium* (Stuttgart, 1698)

Exhibit: Galileo's World | Gallery: Galileo, Engineer | No.: 11

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Who might use an astroscope?



1. Download the two plates and print them out on card stock. Print them on oversized sheets if possible.
2. Cut out the three dials and discard the blank border. Do not cut off the tabs, which will be used to fasten the pieces together. The large dial pictured on the front is the southern hemisphere (more or less), and the large dial pictured top right is the northern hemisphere (actually, a little more). These two dials will come together, printed sides visible, to make a double-cone shaped approximation of a celestial globe.
3. Place the large dials on top of each other, with printed sides outside, top and bottom, then tape them together using double-sided tape on the tabs. Do not tape or close up the triangular cut-outs until later. Use the zodiac symbols on the outer edges to line up the dials.
4. Tie a strong cord to a bead. This cord will hold the small dial on the south pole. Tie a longer strong cord to another bead; this cord will pass through the north pole to hang the finished *Astroscopium* from overhead.
5. Assemble the small dial using double-sided tape on the tabs to close up the triangular cut-out. The dial is now a cone. Place it on top of its larger dial (the southern hemisphere). Reach inside the two large dials and use a needle to run the shorter cord through the southern pole and the longer cord through the northern pole, leaving the beads inside to prevent the cords from pulling all the way through. Tie off the cords using two more beads on the outside. The small dial should rotate relative to the larger dial.
4. Close up the cut-outs of the large dials to make each a cone. Use double-sided tape on the cut-out tabs. Enjoy!

William Schickard: Astroscopium

William Schickard was a gifted linguist, skilled craftsman, and expert astronomer. He was also a friend of Johannes Kepler, and produced some of the illustrations for Kepler's *Epitome of Copernican Astronomy* (1618-1623).

In 1623 Schickard published his *Astroscopium*, which included conical images of the constellations designed to be assembled together. This "paper instrument" was a model intermediate between a planisphere and a celestial globe, and could calculate the positions of the stars for any day and hour of the year. The book itself measures only about 5" tall, but the pages which contain these conical maps of the night sky are considerably larger.

During his lifetime Schickard also created a mechanical calculating machine, produced two textbooks to teach Hebrew, one in Latin and one in German, and also taught astronomy, mathematics, and geodesy. Schickard died in 1635 as the result of a plague outbreak in central Europe.



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