

Kircher's largest publication on the subject of magnetism: the second edition, corrected and enlarged, includes studies of gravitation, the tides, music and the magnetism of love.

Kircher, Athanasius. *Magnes sive de arte magnetica opus tripartitum*. Coloniae Agrippinae [Cologne, Germany], apud Iodocum Kalcoven, 1643. 8 1/4 inches (210 mm), [14] pp. l., 797, [39] pp. illus., 28 pl. (1 fold.).

Athanasius Kircher (1602–80) was a prolific Jesuit scholar, based for most of his career in Rome, at the intellectual center of Jesuit life, the Collegio Romano, where he held what was essentially a research professorship. He not only published dozens of scientific, historical, and philological works, most of them richly illustrated, but he seems to have invented the magic lantern (a primitive slide-projector) and an *Organum Mathematicum* that was a sort of primitive computing device. He also published the first printed chart of the ocean currents and one of the first maps of the moon.

Kircher's Jesuit training in rhetoric and allegory inclined him to find a divinity, a world harmony, in every possible observed phenomenon. Magnetism was particularly hospitable to such interpretations, and Kircher returned to the field repeatedly during his career, publishing some half-dozen books or re-editions. His very first book, in fact, was an *Ars Magnesia* published at Würzburg in 1631 and available on rarebookroom.org as "kirars." This slender volume of a mere 63 pages gives no hint of the magnificence of his later Roman publications.

The volume reproduced here, *Magnes sive de arte magnetica opus tripartitum* (or *Lodestone, or a three-part work on the magnetism*) is Kircher's largest publication on the subject, first published in Rome in 1641. In its second, corrected and enlarged edition, printed two years later in Cologne (and here reproduced), it extends to 866 pages. The book, like so many of Kircher's, is dedicated to his patron Ferdinand III of Austria—the double-headed Austrian eagle fills the engraved title-page (**Spread 3**) and acts as the style for a sundial at **177**. A manuscript note (in Latin) dated 1663 on the printed title-page (**Spread 4**) notes that the book then belonged to the library of the Augustinian monastery in Angers—a somewhat later hand has changed "Augustinian" to "Carmelite."

Expanding on *Ars Magnesia*, the book covers not merely Kircher's many experiments with magnetism, but gravitation, the tides, music and the magnetism of love—Attraction and Repulsion, Love and Loathing—in plants as well as animals. Kircher's notorious "Sunflower Clock" or "Floral Sundial", in which Nature joins with Art (as a banner informs us) to point out the correct hour, appears at **Spread 360**. He concludes the volume by decisively fitting an ever-present, omnipotent, all-informing God into the big picture as "the Central Magnet of the Universe." One pictorial example may stand for all: the *I[esus] H[ominum] S[alvator]* or "Jesus, Savior of Mankind" at the center of the *Zodiacus Magneticus* at **Spread 141**.

It was in this work that the term electro-magnetism (in Greek) first appeared in print, in the chapter heading: (**Spread 319**). Also worthy of note are the rare folding paper styles at **Spreads 217** and **218**, which make this a sort of early scientific pop-up book. The magical aspects of an attraction so mysterious as magnetism could not but lead an author so subject to free-association as Kircher into the occult aspects of spider bites, as definitively expressed in the splendid plate at **Spread 421** of Apulia, the tarantula and the tarantella, with a banner informing the reader that "music alone is an antidote to the venom."