***Cosmos, Liturgy, and The Arts in the Twelfth Century: Hildegard's Illuminated Scivias*, by Margot E. Fassler. (Philadelphia, University of Pennsylvania Press, 2023). Pp. xvii + 358. ISBN 978-1-512-823073 (hardback), 180 × 260 mm, US$65.**

A great deal of research on the twelfth century that has some bearing on the history of astronomy is currently underway. With a larger-than-usual format that gives its 16 colour plates the appropriate display space, this book is excellent example of that research.

The focus of this study is the famous Benedictine nun Hildegard of Bingen (1098–1179). As author Margot E. Fassler tells us at the outset, a study of her work offers us a unique perspective, and

> To know her views both as expressed in her first major treatise and in its illuminations is to gain otherwise unattainable knowledge about the past and about medieval cosmological investigations in their multidisciplinary splendour. (page 1).

Fassler is Keough Hesburgh Professor of Music History and Liturgy at the University of Notre Dame and Robert Tangeman Professor of Music History, Emerita at Yale University. This remarkable book is the result of a lifetime of study by a great scholar.

A good portion of the book is devoted to liturgical chants written by Hildegard; many musical scores are given, along with a deep analysis. For this review I will focus rather on The Cosmic Egg, and a subsequent painting, both of which appeared in her illuminated manuscript *Scivias*, completed in 1151 or 1152. "Hildegard's cosmic egg and the drawing accompanying it," writes Fassler, "are indeed like nothing else that can be found in theological treatises or in medieval art." (page 131). At the centre of the egg is Earth. Moving upwards she shows the Moon, Mercury, Venus, the Sun, and the three outer planets. The Earth is shown with a great amount of detail, including green islands, a mountain and a stream of water. As for the planets,

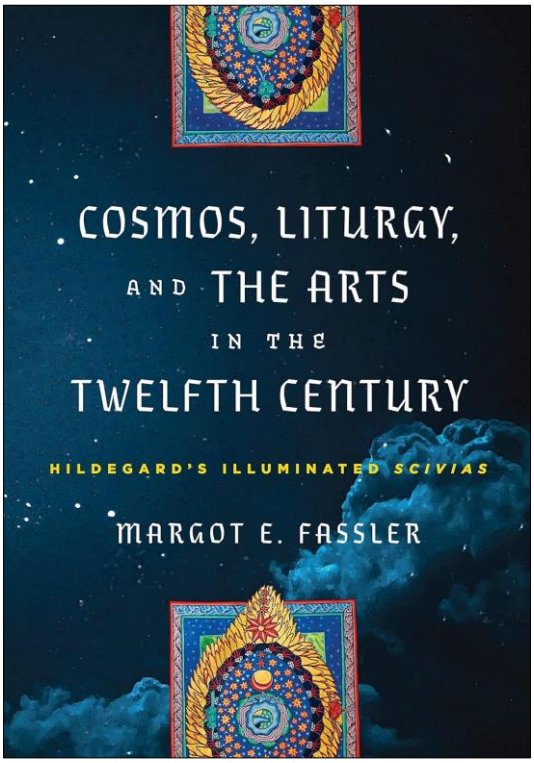
> Hers is the only such diagram that deliberately places the planets in zones that are part of an egg, with a shell, an egg white, and a yolk-like earth. (page 140).

The shell is depicted as a fiery envelope encasing the entire scene; within the yolk are not only earth, Moon, Mercury and Venus, but many stars against a blue background. It was not just a model on the known Universe, however. Each element held its own meaning.

Furthermore,

> That Hildegard's map of the cosmos … relates to her understanding of a cosmic model embodying sacramental action is perhaps the most creative and extraordinary of her ideas … The combination of its components, as far as can be told, was hers alone. (page 147)

Just to give some of the hidden meanings, Hildegard wrote about the interrelationship between the Moon as



> an allegory for the unconquered Church, and the Sun, as a representation of Christ. Taken together, these are in a partnership as spouses to save souls. (page 147).

And,

> Venus and Mercury are allegorized as two torches that sustain the Moon … They represent the two major sections of the Bible, the Old Testament and the New.

Hildegard referred to the egg white as the ether, and here she envisioned star-birth. Hildegard wrote

> And in that ether were scattered many bright spheres [i.e. stars], into which the white globe [the Moon] from time to time poured itself out and emitted its brightness. (page 141)

What is not so obvious in the cosmic egg diagram are four windheads; there are actually 12, as each is a tripartite head. Such windheads had been used earlier in the twelfth century, but the locations of hers within the cosmos are very different. The one on the south is positioned in the fiery shell itself, and its streams of air are red. They signify truth rushing forth, to be made available to human beings. By contrast, the windhead to the north "… belches out lies and falsehoods …" (page 134), signifying the constant battle between good and evil. In the west, airstreams are shot into the ether, where the stars, Moon and planets are, setting up the ongoing allegorical relationship between them that allows for star formation. The eastern windhead is set atop the watery zone that surrounds the Earth. It sends watery air through the cosmos which, for Hildegard, represented baptism in the Church.

While the balance between the windheads in the Cosmic Egg hold everything in place, their role in another painting evokes the End of Time. Instead of blowing away from one another, the windheads now face one another to create chaos. Fassler writes:

> It is an extraordinary image, and there is really nothing else like it known to me. It also provides yet another demonstration of the ways in which Hildegard created interrelationships between the paintings that I believe she designed to create a larger statement about the cosmos, time, and eternity. (page 242.)

Fassler concludes from all this that "Hildegard was obsessed (I think not too strong a word) with the state of the cosmos and with time before the Fall of mankind." (page 242). The nun integrated 14 of her chant texts into *Scivias*; Fassler's book explores the relationships between them. The first chant, for example, is related to the act of creation. Remarkably, still extant are letters written by the nun's secretary Guibert, and these describe

> … the ways in which Hildegard received music as part of her visions and what this meant for her subsequent compositional work. (page 259).

Combined with what Hildegard herself wrote, the descriptions and conclusions Fassler offers derive from the surviving texts instead of scholarly speculation.

As the head of a monastic community (in Bingen, part of modern-day Germany) Hildegard's work is put in context by Fassler. "Her own views of time were rooted in her understanding of the ways in which the liturgy is an allegorical reflection of cosmic action." (page 32). At a time of great change in understanding the Universe,

> … her work is especially useful in the study of comparative cosmology and the history of cosmology and culture at a particularly fruitful moment in European history. (page 37).

I have just a couple of minor quibbles with the book. The author introduces John Scottus Eriugena on page 31, a ninth century Irish scholar who divided the planets by harmonic intervals. He appears again on page 34, but this instance is not included in the Index. On page 114 Fassler describes a "… vibrantly dramatic painting …" that depicts Satan "… in the form of a thumblike protrusion on a hand of dark chaotic matter." While this is shown as a B&W image on the facing page, it is not given a separate colour plate.

Overall, however, this is a superb production, and a most valuable addition to medieval studies of the cosmos.

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Alfonsine Astronomy: The Written Record, edited by Richard Kremer, Matthieu Husson and José Chabás. (Turnhout, Brepols, 2022). Pp. 426. ISBN 978-2-503-59520-7 (hardback), 180 × 260 mm, € 85,00.

This book dips a toe into the vast corpus of 600 manuscript codices of the Alfonsine Tables that have survived the centuries. It is not meant to be the definitive work, but rather one in a projected series of books on Alfonsine astronomy.

The editors of this study on medieval astronomy are Richard Kremer (Emeritus Professor of History at Dartmouth College), Matthieu Husson (researcher in the history of late Medieval astronomy in Europe) and José Chabás (Emeritus Professor at Pompeu Fabra Universitat in Barcelona).

In an insightful review of this book, C. Phillipp Nothaft (Trinity College Dublin) expresses a serious concern about this book, which I entirely agree with. In what he terms "… a veritable elephant in the room that is medieval astronomy …" Nothaft (2023) argues that the term 'Parisian Alfonsine