



CENTRE FOR THE
STUDY OF
MANUSCRIPT
CULTURES



European
Research
Council

Describing contents of astronomical manuscripts: the case of astronomical tables

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CSMC Hamburg *Cataloguing...* conference May, 2018



ALFONSINE ASTRONOMY

Shaping a European Scientific Scene: Alfonsine Astronomy

CoG 2016 grant agreement n° 723085

Content types in astral sciences manuscripts

Content types in astral sciences manuscripts

Texts

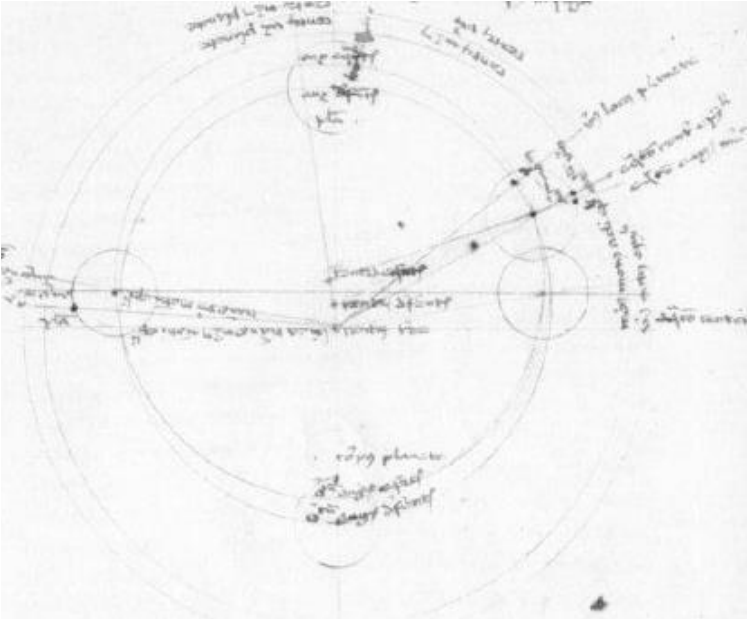


Erfurt, UFB, Amplon. F. 376

Content types in astral sciences manuscripts

Texts

Technical diagrams



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BnF lat. 7197 f. 53v, source
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Content types in astral sciences manuscripts

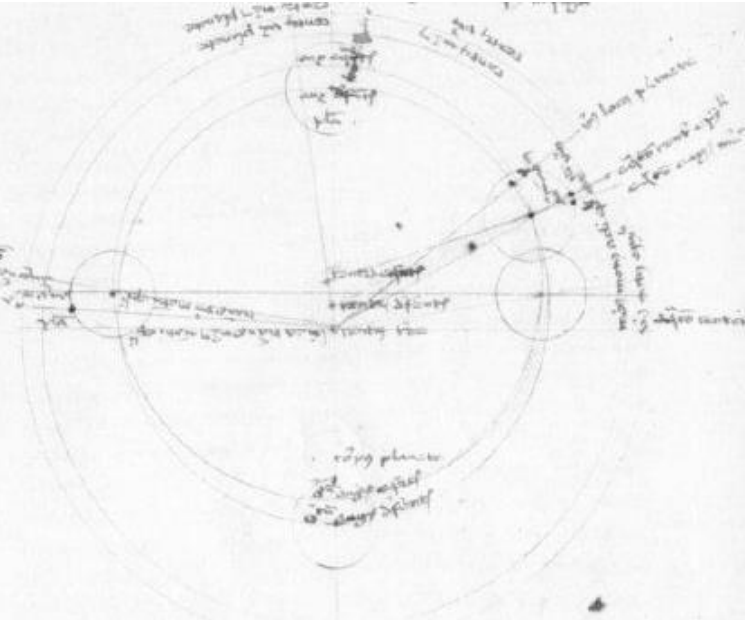
Texts

Technical diagrams

Astronomical tables



Erfurt, UFB, Amplon. F. 376



BnF lat. 7197 f. 53v, source Gallica

Saturni

Tabula equatorum Saturni prima										Centrum medium														
Argu	0	0	0	0	1	1	1	1	2	Argu	0	0	0	0	1	1	1	1	2	Argu				
iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii	iii				
0	0	37	1	10	1	22	2	18	2	25	3	16	3	20	2	12	2	38	2	1	23	28	11	
0	6	0	1	0	36	1	10	1	22	2	18	2	24	3	12	3	38	2	1	23	28	11		
0	12	0	2	0	36	1	10	1	22	2	18	2	12	2	20	3	4	3	28	3	40	18	11	
0	18	1	2	0	30	2	0	31	1	9	1	38	2	6	2	33	2	46	3	16	12	11		
0	24	1	3	0	24	0	6	9	38	1	8	1	34	2	1	2	24	2	21	28	11			
1	0	2	6	7	31	0	46	0	23	0	8	0	38	1	6	1	32	1	46	2	11	0	11	
1	6	2	38	2	0	1	21	0	21	0	9	0	36	1	3	1	21	1	28	28	10			
1	12	2	2	28	1	13	1	20	0	28	0	18	0	10	0	36	1	0	1	21	18	10		
1	18	3	28	2	43	2	18	1	24	1	13	0	22	0	14	0	12	0	36	0	41	12	10	
1	24	3	42	3	16	2	22	2	1	32	1	8	0	36	0	10	0	12	0	34	6	10		
2	0	8	13	3	31	3	2	28	1	46	1	24	0	41	0	30	0	1	14	0	10			
2	6	8	31	3	44	3	20	2	28	1	23	1	12	0	46	0	28	0	1	28	9			
2	12	8	21	2	10	3	34	3	1	28	1	46	1	21	1	0	0	36	0	12	18	1		
2	18	8	44	2	23	3	21	3	12	2	39	2	1	11	0	26	0	21	0	28	12	1		
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3	12	4	11	2	33	3	44	3	19	2	24	2	12	1	22	1	12	0	28	0	24	18	8	
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Erfurt F. 388 f. 3

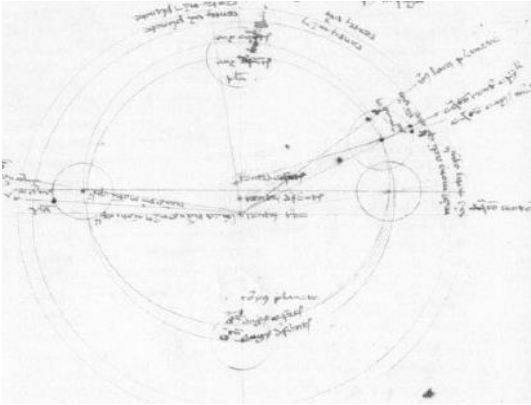
Managing content in astral sciences manuscripts

Astronomical tables

Tabula equinoctii Saturni prima												Centrum medium											
Signi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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0 6	0 1	0 36	1 10	1 22	2 18	2 24	3 12	3 38	4 1	4 23	4 51	0 6	0 1	0 36	1 10	1 22	2 18	2 24	3 12	3 38	4 1	4 23	4 51
0 12	0 32	0 2	0 50	1 10	1 22	2 12	2 30	3 4	3 28	3 40	4 11	0 12	0 32	0 2	0 50	1 10	1 22	2 12	2 30	3 4	3 28	3 40	4 11
0 18	1 2	0 30	0 2	0 38	1 9	1 38	2 6	2 33	2 46	3 16	3 11	0 18	1 2	0 30	0 2	0 38	1 9	1 38	2 6	2 33	2 46	3 16	3 11
0 24	1 36	1 1	0 28	0 9	0 38	1 8	1 34	2 1	2 24	2 28	2 11	0 24	1 36	1 1	0 28	0 9	0 38	1 8	1 34	2 1	2 24	2 28	2 11
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1 18	3 28	2 43	2 18	1 24	1 13	0 22	0 14	0 12	0 30	0 48	1 2 10	1 18	3 28	2 43	2 18	1 24	1 13	0 22	0 14	0 12	0 30	0 48	1 2 10
1 24	3 42	3 16	2 22	1 13	1 32	1 2	0 30	0 10	0 18	0 34	0 10	1 24	3 42	3 16	2 22	1 13	1 32	1 2	0 30	0 10	0 18	0 34	0 10
2 0	4 15	3 34	2 22	2 28	1 46	1 24	0 48	0 30	0 18	0 14	0 10	2 0	4 15	3 34	2 22	2 28	1 46	1 24	0 48	0 30	0 18	0 14	0 10
2 6	4 31	3 44	2 20	2 26	1 18	1 23	1 18	0 48	0 28	0 1	2 8 9	2 6	4 31	3 44	2 20	2 26	1 18	1 23	1 18	0 48	0 28	0 1	2 8 9
2 12	4 48	4 10	3 34	2 12	2 28	1 46	1 28	1 0	0 30	0 18	1 8 1	2 12	4 48	4 10	3 34	2 12	2 28	1 46	1 28	1 0	0 30	0 18	1 8 1
2 18	5 14	4 23	3 28	1 2	2 39	2 11	1 39	1 11	0 20	0 28	1 2 9	2 18	5 14	4 23	3 28	1 2	2 39	2 11	1 39	1 11	0 20	0 28	1 2 9
2 24	5 8	4 32	3 46	2 0	2 28	2 14	1 28	1 16	0 48	0 31	0 9	2 24	5 8	4 32	3 46	2 0	2 28	2 14	1 28	1 16	0 48	0 31	0 9
3 0	4 18	4 36	3 48	2 23	2 29	2 18	1 28	1 20	0 48	0 32	0 9	3 0	4 18	4 36	3 48	2 23	2 29	2 18	1 28	1 20	0 48	0 32	0 9
3 6	4 18	4 36	3 49	2 28	2 29	2 16	1 26	1 16	0 31	0 31	2 8 8	3 6	4 18	4 36	3 49	2 28	2 29	2 16	1 26	1 16	0 31	0 31	2 8 8
3 12	4 11	4 33	3 44	2 24	2 12	2 12	1 22	1 12	0 28	0 24	1 8 8	3 12	4 11	4 33	3 44	2 24	2 12	2 12	1 22	1 12	0 28	0 24	1 8 8
3 18	4 8	4 26	3 28	1 2	2 31	2 2	1 33	1 2	0 49	0 14	1 2 8	3 18	4 8	4 26	3 28	1 2	2 31	2 2	1 33	1 2	0 49	0 14	1 2 8

Erfurt F. 388
f. 3

Technical diagrams



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Texts



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Ptolemaeus
Arabus et Latinus



History of Astronomical and
Mathematical Sciences in India

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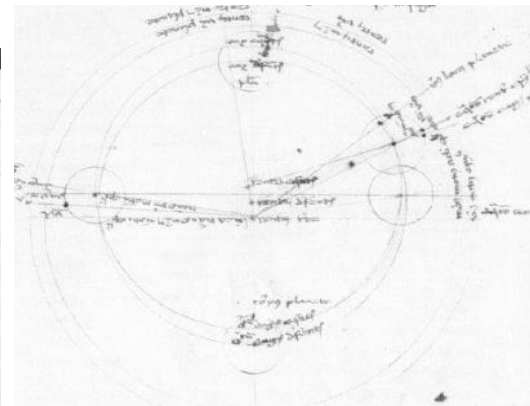
Tables Analysis Method for the history of Astral Sciences

Astronomical tables

Tabula equinoctii Saturni prima												Centrum medium																	
Aequinoctium						Saturni prima						Centrum medium						Aequinoctium											
12	15	22	30	1	1	1	1	1	1	1	1	12	15	22	30	1	1	1	1	1	1	1	1	12	15	22	30	1	1
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0 6	0 1	0 36	1 10	1 28	2 11	2 28	3 16	3 26	3 42	4 12	4 36	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18	0 18
0 12	0 6	0 32	1 6	1 24	2 6	2 24	3 6	3 18	3 36	4 6	4 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24	0 24
0 18	1 2	0 30	0 24	1 6	1 24	1 36	2 6	2 18	2 36	3 6	3 24	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30	0 30
0 24	1 6	0 28	0 24	1 12	1 24	1 36	2 12	2 24	2 42	3 12	3 24	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36	0 36
1 0	1 12	0 26	0 24	1 18	1 30	1 42	2 18	2 30	2 48	3 18	3 30	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42	0 42
1 6	1 24	0 24	0 24	1 24	1 36	1 48	2 24	2 36	2 54	3 24	3 36	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48	0 48
1 12	1 36	0 24	0 24	1 30	1 42	1 54	2 30	2 42	3 0	3 30	3 42	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54	0 54
1 18	1 48	0 24	0 24	1 36	1 48	2 0	2 36	2 48	3 6	3 36	3 48	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0
1 24	1 54	0 24	0 24	1 42	1 54	2 6	2 42	2 54	3 12	3 42	3 54	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6	1 6
2 0	2 0	0 24	0 24	1 48	2 0	2 12	2 48	3 0	3 18	3 48	4 0	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12	1 12
2 6	2 12	0 24	0 24	1 54	2 6	2 18	2 54	3 6	3 24	3 54	4 6	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18	1 18
2 12	2 18	0 24	0 24	2 0	2 12	2 24	3 0	3 12	3 30	4 0	4 12	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24	1 24
2 18	2 24	0 24	0 24	2 6	2 18	2 30	3 6	3 18	3 36	4 6	4 18	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30	1 30
2 24	2 30	0 24	0 24	2 12	2 24	2 36	3 12	3 24	3 42	4 12	4 24	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36	1 36
2 30	2 36	0 24	0 24	2 18	2 30	2 42	3 18	3 30	3 48	4 18	4 30	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42	1 42
2 36	2 42	0 24	0 24	2 24	2 36	2 48	3 24	3 36	3 54	4 24	4 36	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48	1 48
2 42	2 48	0 24	0 24	2 30	2 42	2 54	3 30	3 42	4 0	4 30	4 42	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0	2 0
2 48	2 54	0 24	0 24	2 36	2 48	3 0	3 36	3 48	4 6	4 36	4 48	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6
2 54	3 0	0 24	0 24	2 42	2 54	3 6	3 42	3 54	4 12	4 42	4 54	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12	2 12
3 0	3 6	0 24	0 24	2 48	3 0	3 12	3 48	4 0	4 18	4 48	5 0	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18	2 18
3 6	3 12	0 24	0 24	2 54	3 6	3 18	3 54	4 6	4 24	4 54	5 6	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24	2 24
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3 18	3 24	0 24	0 24	3 6	3 18	3 30	4 6	4 18	4 36	5 6	5 18	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36	2 36

Erfurt F. 388
f. 3

Technical diagrams



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Texts



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ALFONSINE ASTRONOMY

Ptolemaeus
Arabus et Latinus

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Tables Analysis Method for the history of Astral Sciences



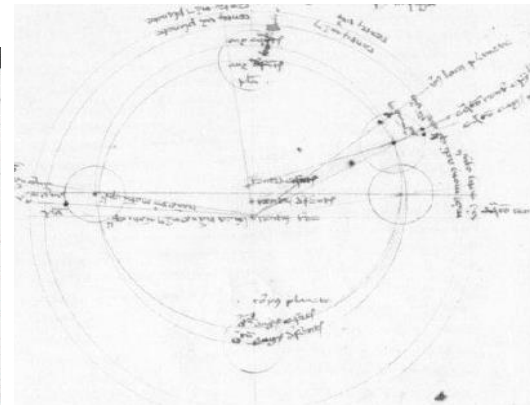
History of Astronomical and
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Erfurt, UFB, Amplon. F. 376

Technical diagrams



BnF lat. 7197 f. 53v, source
Gallica

Astronomical tables

Libula equinoctialis Saturni prima		Centrum medium										Aequinoctialis	
Agus	in m	0	12	15	22	0	1	1	1	1	2	0	0
0 0	0 34	1 10	1 22	1 11	2 25	3 16	3 26	2 12	2 36	2 41	0 12	0 12	0 12
0 6	0 1	0 36	1 10	1 22	2 12	2 21	2 12	3 38	2 1	2 23	2 8	1 11	2 8
0 12	0 32	0 2	0 36	1 10	1 22	2 12	2 21	2 33	3 4	3 28	3 40	1 11	1 11
0 18	1 2	0 30	0 2	0 31	1 9	1 38	2 6	2 33	2 46	3 16	12 11	12 11	12 11
0 24	1 36	1 1	0 21	0 6	0 38	1 8	1 34	2 1	2 24	2 21	0 11	0 11	0 11
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1 12	3 2	2 28	1 11	1 20	0 28	0 18	1 0	1 30	1 0	1 21	1 11	1 11	1 11
1 18	3 28	2 43	2 18	1 24	1 13	0 22	1 14	1 12	0 36	0 41	1 12	1 12	1 12
1 24	3 42	3 16	2 22	1 1	1 32	1 2	0 36	0 10	0 12	0 34	0 10	0 10	0 10
2 0	4 15	3 31	2 22	2 28	1 46	1 24	0 41	0 30	0 11	0 14	0 10	0 10	0 10
2 6	4 31	3 44	2 20	2 26	2 12	1 23	1 12	0 48	0 22	0 1	2 8	2 8	2 8
2 12	4 44	4 10	3 34	2 22	2 28	1 46	1 21	1 0	0 36	0 12	1 11	1 11	1 11
2 18	4 54	4 23	3 21	2 12	2 39	2 11	1 34	1 11	0 26	0 22	1 2	1 2	1 2
2 24	5 8	4 32	3 16	2 20	2 21	2 14	1 21	1 16	0 48	0 31	0 1	0 1	0 1
3 0	5 12	4 36	3 18	2 22	2 21	2 11	1 28	1 20	0 42	0 32	0 1	0 1	0 1
3 6	5 18	4 36	3 18	2 22	2 21	2 16	1 26	1 16	0 31	0 31	2 8	2 8	2 8
3 12	5 11	4 33	3 14	2 19	2 24	2 12	1 22	1 12	0 28	0 24	1 8	1 8	1 8
3 18	5 8	4 26	3 22	2 12	2 31	2 2	1 33	1 2	0 19	0 14	1 2	1 2	1 2

Erfurt F. 388
f. 3

“... Cataloguing astronomical tables poses specific problems that are not easy to resolve. When there are sets of tables, their content can shift from manuscript to another; When there are isolated tables, the titles ordinarily do not suffice for their definition or identification. Catalogs produced by non-specialists of astronomy refer happily and carelessly to an ‘astronomical table’, which is deceptive and useless even when it is not inexact because in fact it conceals astrological or computist goods”

-Emmanuel Poulle, 1985 review of Rosinska 1984

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What can we say today?

- What are past and current cataloguing practices for astronomical tables?
- What type of content are astronomical tables?
- Can we agree on good practices, develop tools for the future?

What are past and current cataloguing practices for astronomical tables?

A. The case of general catalogues

What are past and current cataloguing practices for astronomical tables?

A. The case of general catalogues

In Cursiva des späteren 14. Jh. 1 sp. ohne Uffentassung eines Randes geschr.

376. Pgt. 2^o Mitte des 14. Jh. 102 Bl.

Einb.: Holzdeckel mit grünem Lederrücken; v. i.: 40., wohl = Cat. Ampl. Mathem. 40., wach:

- 1) Bl. 1—13'. Item egregia scripta super spera materiali (Iohannis de Sacrobosco).

Anf.: Sicut dicit Aristoteles in principio de anima: omnium rerum. *Ende:* sive grata missa cantatur et in hoc terminatur expositio spere.

- 2) Bl. 14—20'. **Questiones circa eandem** valde bone.

Anf.: Quia dictum est, quod iste liber supponitur astrologic. *Ende:* ibi sunt solsticia et equinoctium per totum annum.

In kleiner spitzer Cursiva 2sp. auf vollst. Schma geschr.; Schmuck mit bunten Initialen u. §§ beabsichtigt; Textanfänge in etwas größerer Schrift. Quarter. mit arabischen Zahlen auf dem 1. Bl. links unten. Bl. 20' einige Nachträge von anderer Hand.

- 3) Bl. 21—27. **Tractatus de spera Petzam** (i. e. Iohannis Peacham) optimus.

Der obere Theil der 1. Sp. Bl. 21 mit schwarzer Farbe bedeckt, darunter halb ausradirt: Expl. super librum de morte et vita; am unteren Rande in feiner Cursiva: Iste tractatus est ad usum fratris Bernardi (?) ordinis Minorum Anf.: Corporum principalium mundanorum numerum, figuras. Ende: sol illi regno non derogetur. Hec simplicioribus scripsi coactus. Vor dem letzten Satze in Cursiva von 2 verschiedenen Händen eingeschoben: Expl. spera fratris Iohannis Pischam.

In Minuskel, die eher in den Anfang des 14. Jh. gehört, mit sehr blasser Tinte auf vollst. Schema geschr.; einfacher rother Schmuck.

- 4) Bl. 27'—29'. **Notae variae.**

Auf letzterer Seite nur: continentis X quaternos; principium expositionis Grecismi. Nature nostre nimis etc.

In äußerst kleiner u. feiner Cursiva.

- 6) Bl. 30'—53'. Deinde sequuntur **tabule septem planetarum, maxime solis et lune. Tabule Iohannis de Liniis.**

Einrichtung wie üblich; rothe u. schwarze arabische Zahlen; Anordnung der Tafeln etwas abweichend von F. 384 u. 385.

- 7) Bl. 54—57'. **Tractatus de mensurationibus** (Iohannis in morte Angli),

What are past and current cataloguing practices for astronomical tables?

A. The case of general catalogues

in Cursus des spateren 14. Jh. 1 sp. ohne Offenlassung eines Canones gesehr.

376. Pgt. 90. Mss. 20. 14. Bl. 102 D)

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auf v.

4) Bl. 27'
Auf
Greci
In

5) Bl. 30'
et lu
E
Tafel

1) Bl. 34

Latin 7286C



Cote : Latin 7286C

tabulae astronomicae : accedunt canones.

decimo quarto saeculo exaratus videtur.



Parchemin.

Manuscrit en latin

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Historique de la conservation

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Bibliographie

2003

cité pp. 172, 252-254, 267

José CHABAS — B. R. GOLSTEIN, *The Alfonsine tables of Toledo*, Dordrecht, Kluwer academic publ., 2003

Tolbiac [2005-190946F. 1-18v

2003

Voir recension 2732 dans *Medioevo latino*, 27 (2006)

[B. R. GOLDSTEIN — J. CHABAS I BERGON, « John Vimond and the Alfonsine Trepidation Model », *Journal of the History of Astronomy*, 34 (2003), p. 165-170]

Mss. [P 186F. 1-18v

2003

cité dans Bulletin codicologique n°58, *Scriptorium*, 59 (2005)

[J. CHABAS — B.R. GOLDSTEIN, « John Vimond and the Alfonsine Trepidation Model », *Journal of the History of Astronomy*, 34 (2003), p. 163-170]

Mss. [P 91

Bibliographie

[Consulter la fiche bibliographique numérisée](#) [Consulter la fiche bibliographique numérisée](#) [Consulter la fiche bibliographique numérisée](#)

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Microfilm en noir et blanc. Cote de consultation en salle de lecture : MF 21908. Cote de la matrice (pour commander une reproduction) : R 46951

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What are past and current cataloguing practices for astronomical tables?

A. The case of general catalogues

The screenshot displays the University of Heidelberg Digital Library interface. On the left, a thumbnail of a manuscript page is visible, with folios 376r, 376v, 377r, 377v, 378r, 378v, 379r, 379v, 380r, and 380v listed. The main content area shows the record for 'Latin 7286C', identified as 'tabulae astronomicae' from the 14th century. The record includes a search bar, navigation options (HEIDI, This site), and various service links such as 'Searching and ordering literature', 'Digital Library', 'Reader services', 'Resources by Subject', 'Courses, Advice, E-Learning', and 'Libraries'. A 'Quick links' section provides access to 'Opening hours', 'For Beginners', 'Virtual tour', 'User Account', 'Group study rooms', 'MyUB', 'Reference Management', 'Electronic Publishing', and 'Ask your question!'. The 'Content' section lists the manuscript's structure, including the 'Einband', '1r Nota', and various astronomical tables (e.g., 'Tabulae Alphonsinae', 'Tabulae astronomicae', 'Tabulae motuum planetarum per menses', 'Tabula partis proportionalis', 'Tabulae ad inveniendum verum locum lunae', 'Tabulae coniunctionum solis et lunae annorum 1400-1519').

Vat. Pal. Lat.
Digital library
consulted
04.05.18

What are past and current cataloguing practices for astronomical tables?

A. The case of general catalogues

The screenshot displays a digital library interface for 'Latin 7286C'. On the left, a manuscript list shows folios 376, 1, 14, 21, 27, and 30. The main content area shows the title 'Latin 7286C' and a detailed description: 'tabulae astronomicae : ac decimo quarto saeculo exarata Parchemin. Manuscrit en latin Bibliothèque nationale de France'. It includes a 'Bibliographie' section with references to works by José CHABAS and B. R. GOLDSCHMIDT. The right sidebar contains a search bar, navigation links like 'Digital Library' and 'Reader services', and a 'Quick links' section. Below the sidebar, there are 'Go to page' and 'Content' sections. The 'Content' section lists various parts of the manuscript, such as 'Einband', '1rv Nota', '2r-24v Tabulae Alphonsinae', and '26r-46v Johannes de Lineriis: Tabulae astronomicae'.

- We know there are tables
- Sometimes a title is provided or the name of an astronomer
- Really not enough to have a minimal identification of the content and understand its relation to the (physical) structure of the manuscript

What are past and current cataloguing practices for astronomical tables?

B. The case of specialized catalogues or survey

What are past and current cataloguing practices for astronomical tables?

B. The case of specialized catalogues or survey

8 SANSKRIT ASTRONOMICAL TABLES IN ENGLAND

- Ff. 10v-11r. Table 32 of the *Grahasāraṇī*.
Ff. 11r-11v. Table 33 of the *Grahasāraṇī*.
Ff. 11v-12r. Table 34 of the *Grahasāraṇī*.
Ff. 12r-12v. Table 35 of the *Grahasāraṇī*.
Ff. 12v-13r. Table 36 of the *Grahasāraṇī*.
F. 13r. Table 37 of the *Grahasāraṇī*.
Ff. 13r-14r. Table 38 of the *Grahasāraṇī*.
F. 14r. Tables 39 and 40 of the *Grahasāraṇī*.
Ff. 14r-14v. Table 41 of the *Grahasāraṇī*.
F. 14v. Tables 42 and 43 of the *Grahasāraṇī*.
F. 15r. Tables 44 and 45 of the *Grahasāraṇī*.
F. 15v. iti śrigrahasāraṇī samāptaḥ.

Add. 14,363b (Bendall 453). No. 22 in Jervis' collection. 46ff.
Ff. 1-46. *Grahalāghava* composed by Gaṇeśa in Śaka 1442=A.D. 1520 with the commentary composed by Mallāri in ca. A.D. 1600.

Add. 14,363c (Bendall 454). No. *22 in Jervis' collection 36ff.
On f. 36v is written: śake 1675 vijayanāmasamvatsare aśvinavadi 3 ravau goladhekarapanāmakaviṭṭhaladaivaivajñātmaja - anantadai vajñena likhito' yaṃ granthaḥ. The copying, then, was finished on Sunday 3 October 1753 Julian by Ananta, the son of Viṭṭhala Goladhekara.

Ff. 1-36. *Grahalāghavaṭīkā* composed by Mallāri in ca. A.D. 1600.

Add. 14,363d (Bendall 470). 1f.

Ff. 1r. *Grahāgama* written by the son of Govinda in Śaka 1695 = A.D. 1773 in 20 verses.

F. 1v. Blank.

Add. 14,363e (Bendall 455). No. 24 in Jervis' collection. 6ff.

Ff. 1-6. *Grahalāghava* composed by Gaṇeśa in Śaka 1442=A.D. 1520.

Add. 14,363f (Bendall 461) No. 23 in Jervis' collection. 1f.

Ff. 1r-1v. *Bṛhattithicintāmaṇī* composed by Gaṇeśa in Śaka 1474 = A.D. 1552; verses 1 to 18 only.

British Museum Add. 14,365. Seventeen manuscripts bound together. Purchased from Major Thomas Best Jervis in July 1843.

CATALOGUE OF MANUSCRIPTS

9

Add. 14,465a (Bendall 464). 74ff.

Ff. 1r-74r. *Grahānayanādihikāra*, the first adhikāra, in the *Āśayavivarāṇa*, a commentary composed by Munīśvara (born 1603) on his own *Siddhāntasārvabhauṃsa*; on f. 74r is also the beginning of the second adhikāra, but it breaks off abruptly.

Add. 14,365b. A p. 1.

P. 1. *Grahāgama* composed by Govindasūnu in Śaka 1695 = A.D. 1773.

Add. 14,365c. A pp. 1-2.

Pp. 1-2. *Grahaṇābodha* composed by Nāgeśa in Śaka 1541 = A.D. 1619.

P. 2. Table of mean motions of the planets (cālanas) for 7 days; 14 days; and 1 day. The mean daily motions are:

Saturn	0;2,0,23.8...°
Jupiter	0;4,59,8.34,...
Mars	0;31,26,31
Sun	0;59,8,10,17,...
Venus' anomaly	0;36,59,40,8,...
Mercury's anomaly	3;6,24,8,8,...
Moon	13;10,34,52
Lunar apogee	0;6,40,51,25,...
Lunar node	-0;3,10,49,51,...

Add. 14,365b. B pp. 1-2.

P. 1. Tables 1 to 9 of the *Grahāgama* of Govindasūnu.

P. 2. Tables 10 to 19 of the *Grahāgama*.

Add. 14,365c. B pp. 1-11.

P. 1. Table 2 of the *Grahaṇābodhasāriṇī* of Yādava.

Pp. 1-2. Table 3 of the *Grahaṇābodhasāriṇī*.

P. 2. Table 4 of the *Grahaṇābodhasāriṇī*.

Pp. 2-3. Table 5 of the *Grahaṇābodhasāriṇī*.

P. 3. Table 6 of the *Grahaṇābodhasāriṇī*.

Pp. 3-4. Table 7 of the *Grahaṇābodhasāriṇī*.

P. 4. Table 8 of the *Grahaṇābodhasāriṇī*.

Pp. 4-5. Table 9 of the *Grahaṇābodhasāriṇī*.

P. 5. Table 10 of the *Grahaṇābodhasāriṇī*.

Pp. 5-6. Table 11 of the *Grahaṇābodhasāriṇī*.

What are past and current cataloguing practices for astronomical tables?

B. The case of specialized catalogues or survey

Ff. 10v-11r. Table 32 of the *Grahasūrya*.
 Ff. 11r-11v. Table 33 of the
 Ff. 11v-12r. Table 34 of the
 Ff. 12r-12v. Table 35 of the
 Ff. 12v-13r. Table 36 of the
 F. 13r. Table 37 of the
 Ff. 13r-14r. Table 38 of the
 F. 14r. Tables 39 and 40 of the
 Ff. 14r-14v. Table 41 of the
 F. 14v. Tables 42 and 43 of the
 F. 15r. Tables 44 and 45 of the
 F. 15v. *iti śrīgrahasūrya*

Add. 14,363b (Bendall)
 Ff. 1-46. *Grahalāghava* composed
 with the commentary composed

Add. 14,363c (Bendall)
 On f. 36v is written: śāke
 3 ravau golāhkekarapa
 vajñeṣa likhito' yam granti
 Sunday 3 October 1753 J.
 Golāhkekarā.

Ff. 1-36. *Grahalāghavatikā*
 Add. 14,363d (Bendall)
 Ff. 1r. *Grahāgama* written
 A.D. 1773 in 20 verses.
 F. 1v. Blank.

Add. 14,363e (Bendall)
 Ff. 1-6. *Grahalāghava* composed
 Add. 14,363f (Bendall)

Ff. 1r-1v. *Bṛhattiṭicintāmatā*
 A.D. 1552; verses 1 to 18 or
 British Museum Add. 14,363
 together. Purchased from Ma

72 SANSKRIT ASTRONOMICAL TABLES IN ENGLAND

8. Table of the longitudes of the lunar node at the Sun's entry into each of the 27 nakṣatras, in four columns. Column 1 gives the initial of the nakṣatra, column 2 the longitude of the node, column 3 the node's daily motion (always 0;3,11°), and column 4 the numbers of the nakṣatras (1 to 27).

Nakṣatra	Longitude	Difference	Nakṣatra	Longitude	Difference
Āsvini	-0;0,0°		Svāti	-10;15,45	0;42,37
Bharaṇi	-0;43,31	0;43,31	Viśākhā	-10;58,1	0;42,16
Kṛttikā	-1;27,24	0;43,53	Anurādhā	-11;39,59	0;41,58
Rohiṇi	-2;11,36	0;44,12	Jyeṣṭhā	-12;21,43	0;41,44
Mṛgaśiras	-2;56,3	0;44,27	Mūla	-13;3,18	0;41,35
Ārdrā	-3;40,41	0;44,38	Pūrvāṣādhā	-13;44,45	0;41,27
Punarvasu	-4;25,23	0;44,42	Uttarāṣādhā	-14;26,12	0;41,27
Puṣya	-5;10,4	0;44,41	Śravaṇa	-15;7,42	0;41,30
Āśleṣā	-5;54,38	0;44,34	Dhanuṣṭhā	-15;49,19	0;41,37
Maghā	-6;38,59	0;44,21	Śatabhiṣak	-16;31,9	0;41,50
Pūrvaphālgunī	-7;23,3	0;44,4	Pūrvabhādrapadā	-17;13,15	0;42,6
Uttaraphālgunī	-8;6,47	0;43,44	Uttarabhādrapadā	-17;55,39	0;42,24
Hasta	-8;50,9	0;43,22	Revati	-18;38,24	0;42,45
Citra	-9;33,8	0;42,59	<Āsvini	-19;21,34	0;43,10>

Manuscripts: IO 2464c. f. 6v.

9. Table of the true longitudes of Mars. There exists a table for each increment of 13;20° (a nakṣatra) in Mars' mean longitude, and each table begins at the beginning of a moon sidereal year with the Sun at Aries 0°. There are, then, 27 (N = 1 to 27) tables. Each of these contains 4 columns; the first gives as the argument 1 to 27 avadhīs of 14 days each, the second the true longitudes of the planet, the third the daily progress of the planet at the beginning of each avadhī, and the fourth a function relating to the planet's latitude (it is sometimes identified as da<ksīṇa>, "southern," or u<tara>, "northern"). This last function reaches its maximum near opposition. For Mars that maximum is 338;24 at N = 24, k = 24; the longitude of Mars' node according to the Brāhmapakṣa is 338°. The longitudes of the planet's heliacal risings and settings are given to the right of the table.

Manuscripts: RAS Tod 36c. ff. 1r-7v.

10. Table of the true longitudes of Mercury set up as is table 9.
 Manuscripts: RAS Tod 36c. ff. 7v-14r.

11. Table of the true longitudes of Jupiter set up as is table 9.
 Manuscripts: RAS Tod 36c. ff. 14v-17v.

The *Laghukhecarasiddhi* of Śrīdhara.

I. The Life of Śrīdhara.

Verses 1 and 2 of the *Laghukhecarasiddhi* tell us the author's name, correctly inform us of the fact that he follows the Brāhmapakṣa, and state that the epoch of his treatise is Śaka 1149 = A.D. 1227.

nārāyaṇaṃ śrīdhṛtapādapadmaṃ
 pārāyaṇaṃ puṇyavatāṃ praṇama /
 śrībrahmasiddhāntasamāṃ karomi
 śrīśrīdharaḥ khecarasiddhim alpāṃ // 1 //
 nandābdhirudronaśako'rkaṇighnaś
 caitrādimāsair yug adho'sṭayuktaḥ /
 svabhūrasāṃsena viyug radāpto
 yuto'dhimāsaiḥ ghagunaḥna āḍhyāḥ // 2 //

The last verse, numbered 20, and the colophon add little to this information:

pāṭikuṭṭakabijagolasahitān (gaṇitān) paitāmahādīn vyaṃ
 siddhāntād api manmahe pratidinaṃ khetān nanu
 prasphuṭān /
 ity ākarṇya vidāṃ vacāmsi kṛpayā śrīśrīdharaḥ prasphuṭāṃ
 cakre khecarasiddhim indudhavalāṃ satkirtivallim iva
 // 20 //
 iti śrīgaṇakacakracūḍāmaṇiśrīśrīdharačāryaviracitā
 laghukhecarasiddhiḥ samāptā //

II. Manuscripts.

*IO 2408b. 9ff. Copied in Sam. 1611, Śaka 1477 = A.D. 1555.
 Baroda 3094. 2ff. Copied in Sam. 1971 = A.D. 1914.
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Add. 14,363c (Bendall)
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F. 1v. Blank.

Add. 14,363e (Bendall)
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Add. 14,363f (Bendall)

Ff. 1r-1v. *Bṛhattiṅgīcintāma* A.D. 1552; verses 1 to 18 or 19. British Museum Add. 14,363. Purchased from Mr. ...

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Robhīṭ	-2;11,36	0;44,12	Jyēṣṭhā	-12;21,43	0;41,44
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Puṣya	-5;10,4	0;44,41	Śravana	-15;7,42	0;41,39
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Māghā	-6;38,59	0;44,21	Śatabhīṣak	-16;31,9	0;42,6
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Uttaraphālgunī	-8;6,47	0;43,44	Uttarabhādrapadā	-17;55,39	0;42,45
Hasta	-8;50,9	0;43,22	Revatī	-18;38,24	0;42,45
Citra	-9;35,8	0;42,59	<Āśvini	-19;21,34	0;43,10>

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ANALYSIS OF TABLES

The *Laghukhecacasiddhi* of Śrīdhara.

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pārāyaṇaṃ puṇyavatāṃ prapāmya /
śrībrahmasiddhāntasamāṃ karomi
śrīśrīdharaḥ khecarasiddhim alpām //1//
nandabdhirudronaśako'rkaṇighnaś
caitrādīmāsair yug adho'sṭayuktāḥ /
svabhūrasāpāna viyug radāpto
yuto'dhimāsaiḥ ghagūṇaghna āḍhyāḥ //2//

The last verse, numbered 20, and the colophon add little to this information:

pātikūṭṭakabijagolasahitān (ganitān) paitāmahādin vyaṃ
siddhāntād api manmahe pratidināṃ khetān nanu prasphuṭān /
ity ākārya vidāṃ vacāṃsi kṛpāyā śrīśrīdharaḥ prasphuṭāṃ
cakre khecarasiddhim indudhavalāṃ satkirtivallim iva //20//
iti śrīgaṇakacakracūḍāmaṇiśrīśrīdharaścāryaviracitā
laghukhecacasiddhiḥ samāptā //

II. Manuscripts.

*IO 2408b. 9ff. Copied in Sam. 1611, Śaka 1477 = A.D. 1555.
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Oudh XXI (1889) VIII 6. 12pp. Property of Paṇḍita Vindhyaśvārī Prasāda of Gonda Zila.

- In some cases only the second part of the catalogue is provided
- Detailed technical information about the tables; constitution of standards sets
- No codicological information, very little about the layout: tables are "abstracted" from the manuscripts

What type of content are astronomical tables?

A. Documentary aspects

What type of content are astronomical tables?

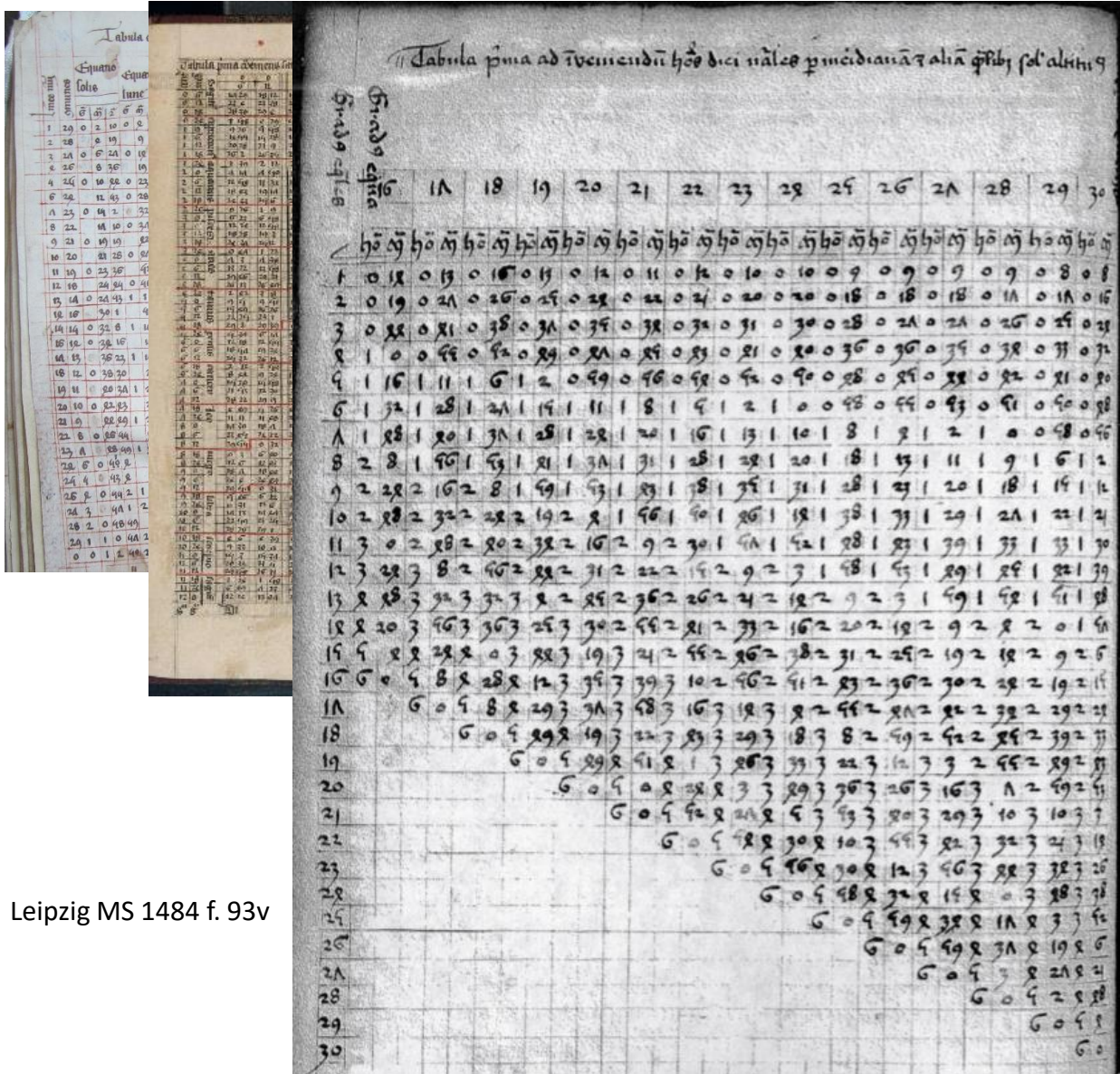
A. Documentary aspects

Tabula equatoris solis et lune: Et ad Inveniendum motu solis et lune in vna hora.

Inco m ^o m ^o m ^o	Equano solis				Equatio solis				Equo solis				Equano lune				Equatio lune				Equo lune											
	6	7	8	9	6	7	8	9	6	7	8	9	6	7	8	9	6	7	8	9	6	7	8	9								
1	29	0	2	10	0	2	26	2	23	30	18	1	2	26	2	21	26	2	22	30	31	1	41	41	2	24	31	26				
2	28	0	1	19	0	1	31	2	23	30	18	1	6	31	2	24	44	2	22	30	38	1	42	46	10	21	24	24				
3	21	0	6	21	0	12	14	2	23	30	18	1	8	28	2	30	4	2	22	30	20	1	42	9	2	13	7	2	26	31	21	
4	26	0	8	36	0	19	0	2	23	30	19	1	10	19	2	32	12	2	22	30	21	1	44	6	14	34	2	26	31	21		
5	21	0	10	22	0	23	22	2	23	30	19	1	12	9	2	38	11	2	22	30	22	1	46	9	2	18	7	2	26	31	21	
6	22	0	12	43	0	28	28	2	23	30	19	1	13	48	2	22	21	2	22	30	23	1	48	11	20	21	2	26	31	21		
7	23	0	14	2	0	32	11	2	23	30	20	1	14	21	2	26	22	2	22	30	22	1	48	2	2	22	41	2	26	31	21	
8	22	0	11	10	0	31	42	2	23	30	20	1	11	22	2	40	19	2	22	30	26	1	48	42	24	20	2	26	31	21		
9	21	0	19	19	0	22	21	2	23	30	20	1	19	6	2	42	12	2	22	30	21	1	49	21	2	21	12	2	26	31	21	
10	20	0	21	28	0	21	19	2	23	30	21	1	20	28	2	42	1	2	22	30	28	2	0	26	2	2	18	2	26	31	21	
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What type of content are astronomical tables?

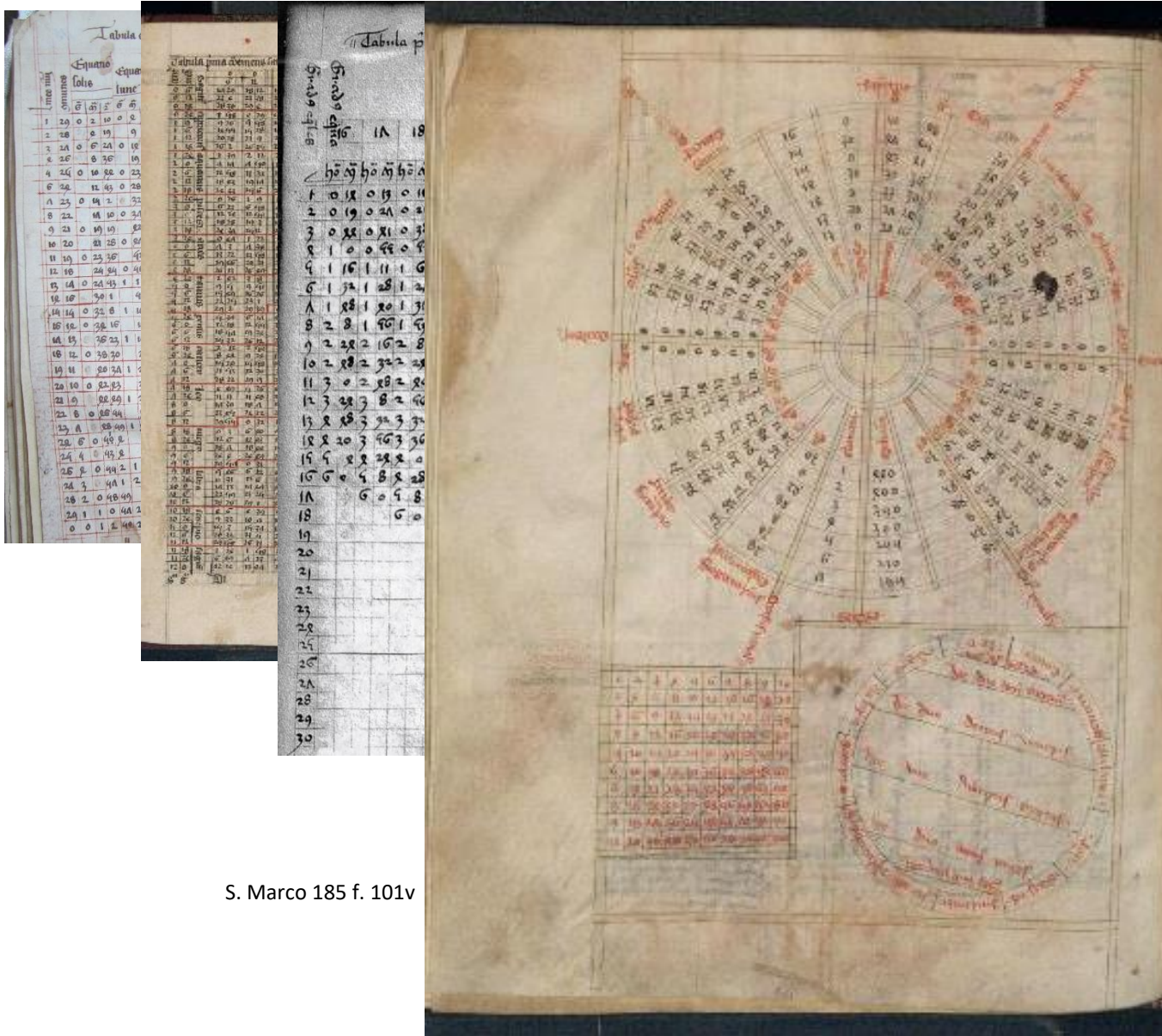
A. Documentary aspects



Leipzig MS 1484 f. 93v

What type of content are astronomical tables?

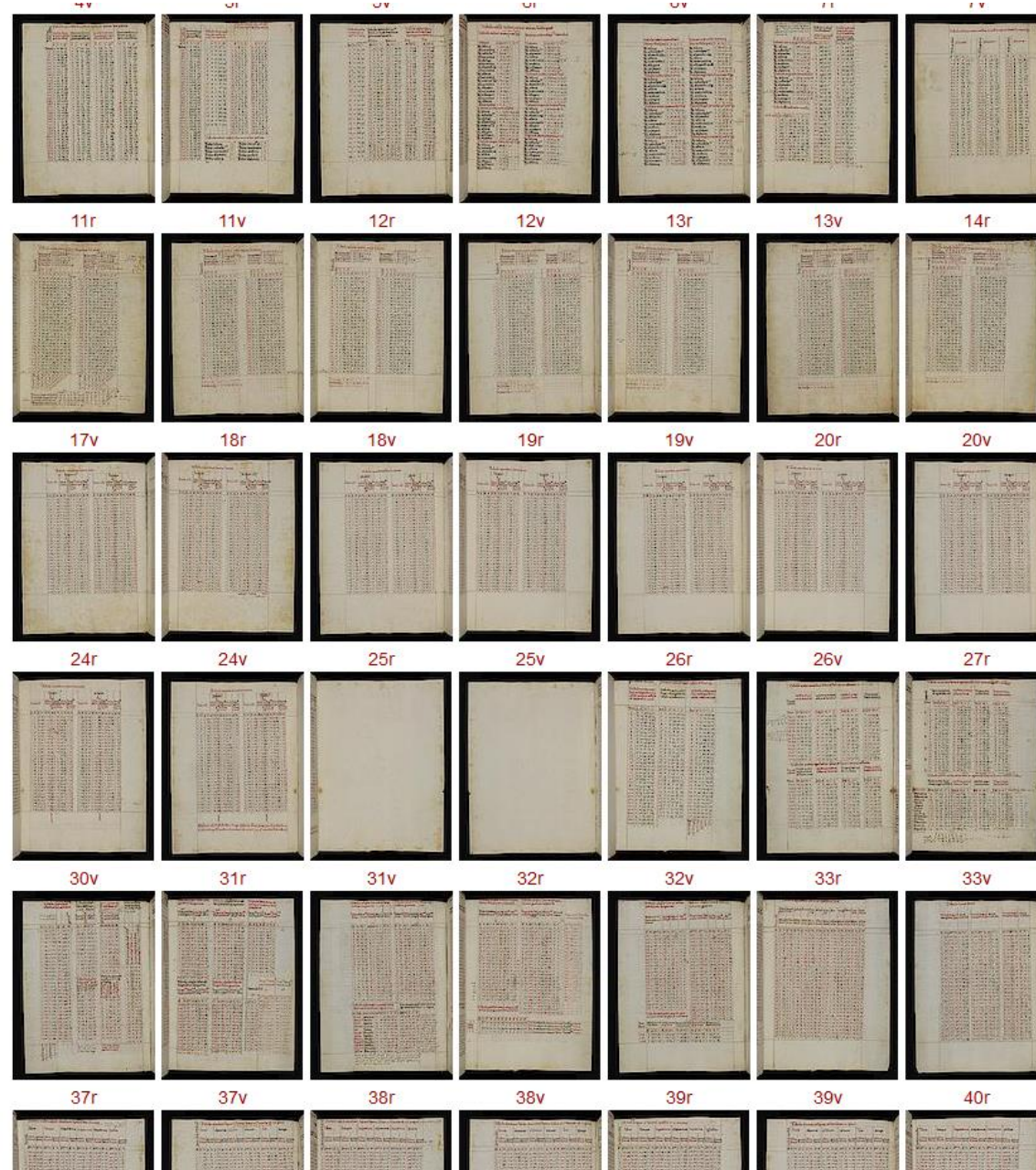
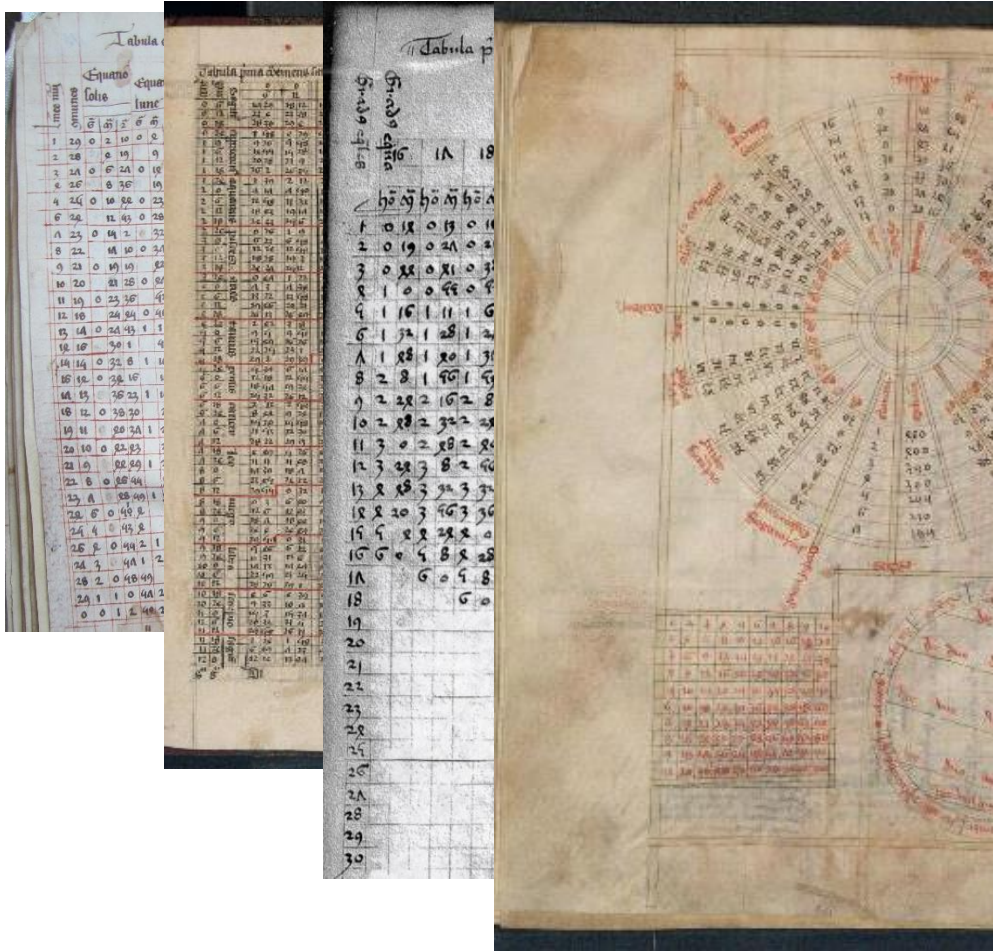
A. Documentary aspects



S. Marco 185 f. 101v

What type of content are astronomical tables?

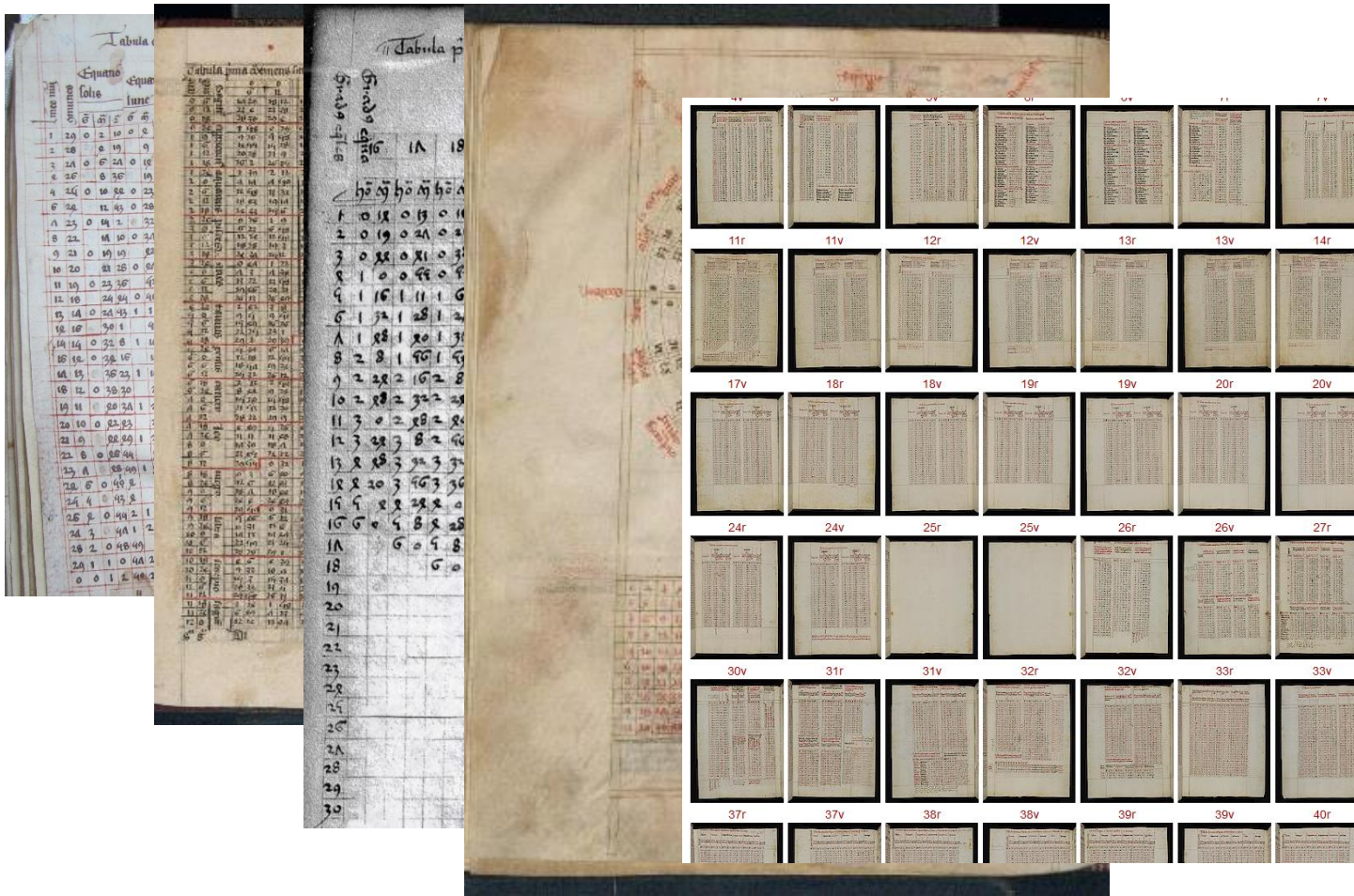
A. Documentary aspects



Vat, Pal. Lat. 1374, visualisation form Pal. Lat digital Library consulted 04.05.18

What type of content are astronomical tables?

A. Documentary aspects



- The importance and the variety of tables layout
- Ways to “fill” the table
- The uses of colours, of various type of lines
- Record tables individually in order to allow a study of their arrangement in sets at the levels of a folio, quire, codicological unit, codex

What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

Tabula continens mediu motu aianas

Inserunt	S S S S S S						S S S S S S									
	1	2	3	4	5	6	7	8	9	10	11	12				
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Radix S S S S S S
Radix S S S S S S
Radix S S S S S S

What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

Tabula continens mediu motu aianas

Inserunt	S 8 7 6 5 4 3						S 8 7 6 5 4 3									
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Radix x S 8 7 6 5 4 3
Radix 0 21 22 0 16 22 4
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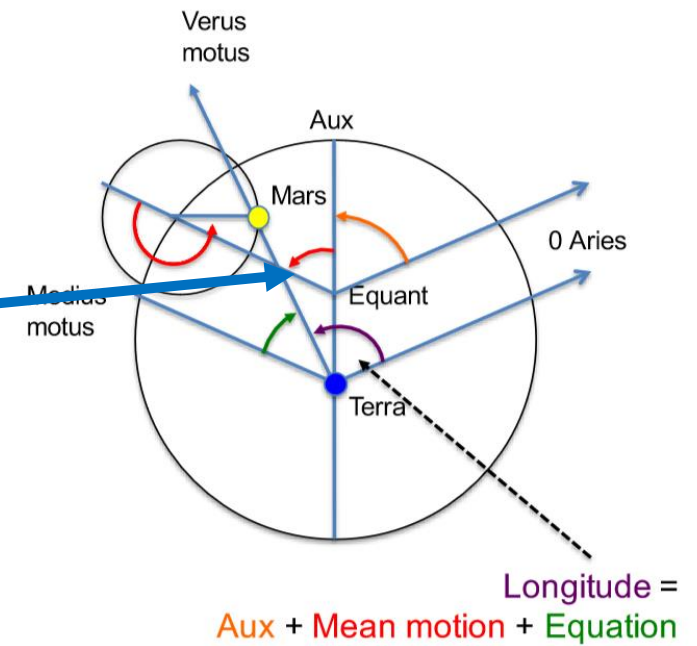
What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

Tabula continens mediu motu aaras

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4	0	3	36	7	60	40	40
5	0	4	38	1	67	0	56
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7	0	6	42	19	81	40	88
8	0	7	44	13	88	0	104
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13	0	12	54	13	123	40	184
14	0	13	56	7	130	0	200
15	0	14	58	1	137	20	216
16	0	15	60	25	144	40	232
17	0	16	62	19	151	0	248
18	0	17	64	13	158	20	264
19	0	18	66	7	165	40	280
20	0	19	68	1	172	0	296
21	0	20	70	25	179	20	312
22	0	21	72	19	186	40	328
23	0	22	74	13	193	0	344
24	0	23	76	7	200	20	360
25	0	24	78	1	207	40	376
26	0	25	80	25	214	0	392
27	0	26	82	19	221	20	408
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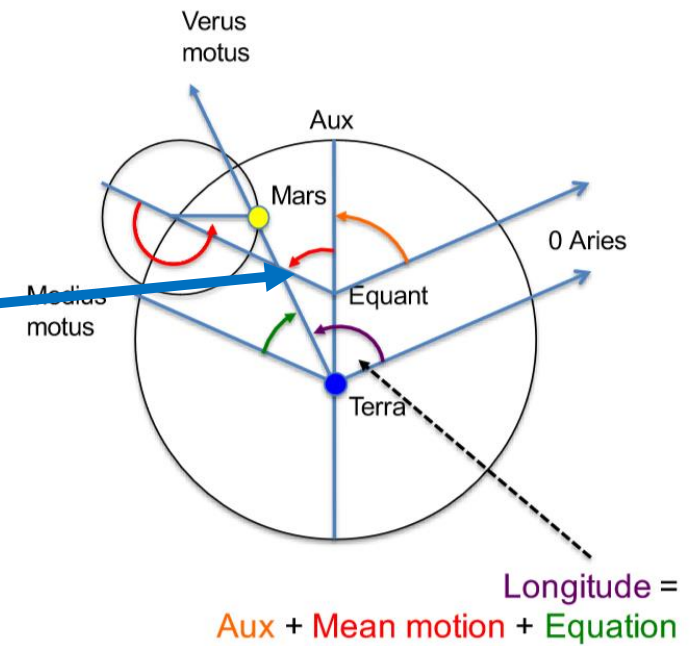
What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

Tabula continens mediu motu aaras

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6	0	2	22	49	28	0	24
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8	0	4	24	43	4	20	44
9	0	6	11	19	22	1	0
10	0	6	28	26	22	21	4
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12	0	1	41	39	20	1	14
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Explicit parameter



What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

12

Tabula continens mediu motu aaras

	S	8	7	6		S	8	7	6
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Radix x S 8 7 6
Radix 0 21 22 0 16 22 4
Radix 0 21 22 0 31 30

What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

The image shows two pages from a medieval manuscript. The left page, folio 21r, contains a table titled "Tabula robuens medii m" with columns labeled "P", "R", "S", "T", "U", "V", "W", "X", "Y", "Z". The right page, folio 21v, contains a table titled "Tabula equacionis maris scanda" with columns labeled "Longior" and "Proxior". Each column in the right table has sub-headers: "Linee unī", "Equo centū", "Log. d. argu.", "Equo centū", "Log. d. argu.", "Longior", "Proxior", "Linee unī", "Equo centū", "Log. d. argu.", "Equo centū", "Log. d. argu.", "Longior", "Proxior". The tables contain numerical data in sexagesimal notation, representing astronomical calculations for Mars.

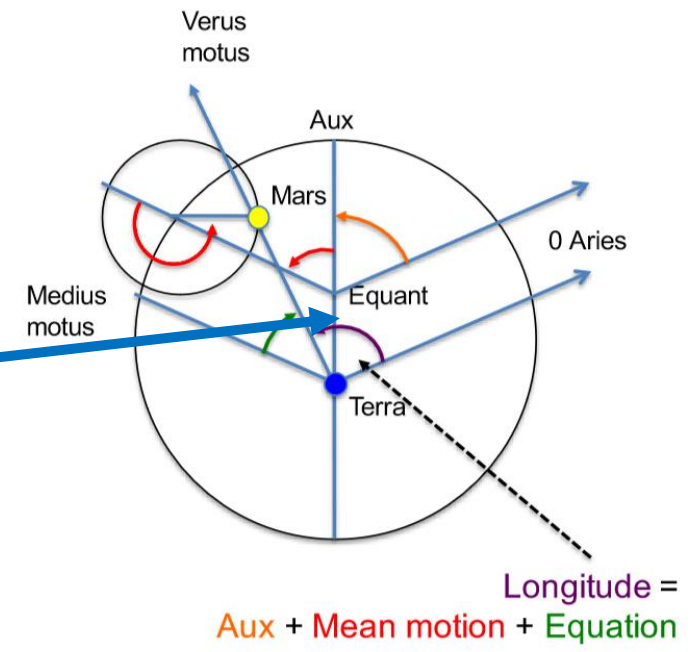
BAV, Pal. Lat;
1374 f. 21r

What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

Tabula euaquans maris scanda

Longior	Longior						Proxior					
	lince uui	Equo centri	log. d. dyamete	Equo centri	long. d. dyamete	lince uui	Equo centri	log. d. dyamete	Equo centri	long. d. dyamete	lince uui	
1	0	0	3120	38	20	0	0	0	3120	38	20	0
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4	0	2	4	86	30	20	0	2	4	86	30	20
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6	0	3	839	42	0	30	0	3	839	42	0	30
7	0	3	80	30	20	34	0	3	80	30	20	34
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12	0	6	119	82	1	0	0	6	119	82	1	0
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14	0	8	44	37	88	1	0	8	44	37	88	1
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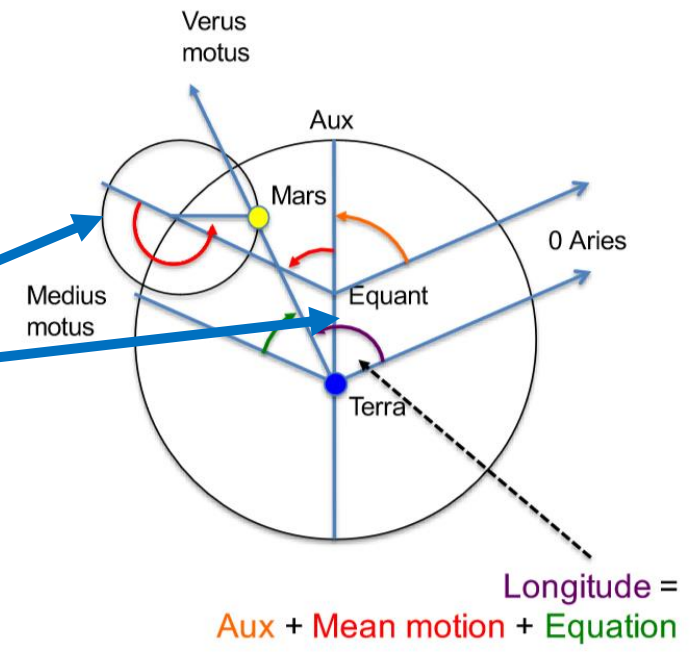
BAV, Pal. Lat;
1374 f. 21r

What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

Tabula euaquans maris scanda

Longior	Longior					Proxior						
	lince uui	Equo centri	log. d. dyamete	Equo centri	long. d. dyamete	lince uui	Equo centri	log. d. dyamete	Equo centri	long. d. dyamete		
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2	0	1	2	49	11	20	10	0	1	2	49	11
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29	0	10	19	37	21	1	50	0	10	19	37	21
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BAV, Pal. Lat;
1374 f. 21r

BAV, Pal. Lat; 1376 f. 115r

What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

Tabula euationis maris scanda

Longior	Longior					Proxior																							
	Linee unī	Equo centri	log. d. dyameter	Equo. longior	longior	Linee unī	Equo centri	log. d. dyameter	Equo. longior	longior																			
1	0	31	20	38	20	4	0	31	20	38	20																		
2	0	1	2	49	11	20	10	0	1	2	49	11	20	10															
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What type of content are astronomical tables?

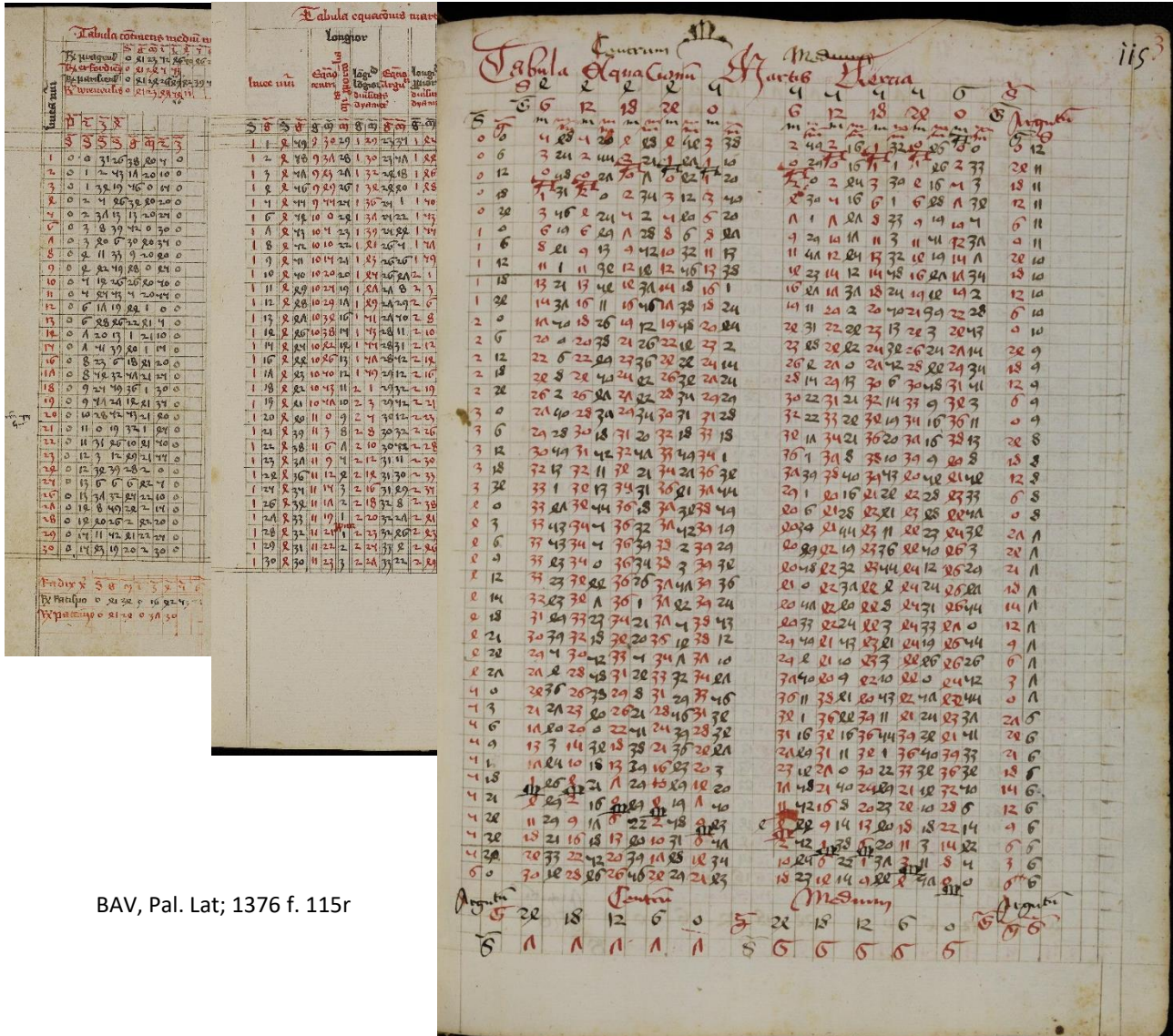
B. Mathematical and astronomical aspects: Mars

The image shows two pages of a medieval manuscript, likely a table of Mars. The left page is titled "Tabula robuens medii m" and the right page is titled "Tabula equacionis maris scanda". Both pages contain columns of numbers in a medieval script, with some numbers in red ink. The tables are organized into sections for "longior" and "proxior" aspects, with sub-columns for "lince uni", "Equo", "log", "Equo", and "longior".

BAV, Pal. Lat;
1374 f. 21r

What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars



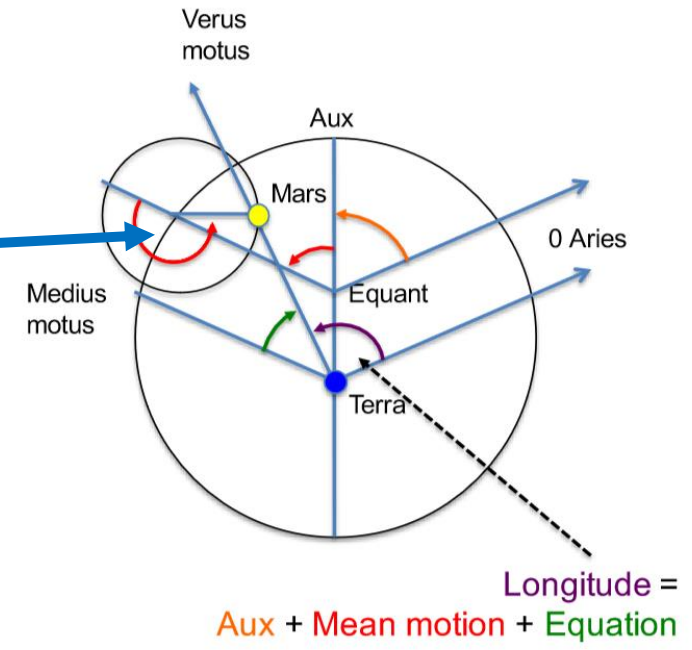
BAV, Pal. Lat.; 1376 f. 115r

What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

The image shows two pages from a medieval manuscript, likely the BAV, Pal. Lat. 1376 f. 115r. The left page is titled "Tabula roborens medii m" and the right page is "Tabula Equatorum". Both pages contain columns of numbers, likely representing astronomical data for Mars. The right page has a blue box highlighting a specific section of the table.

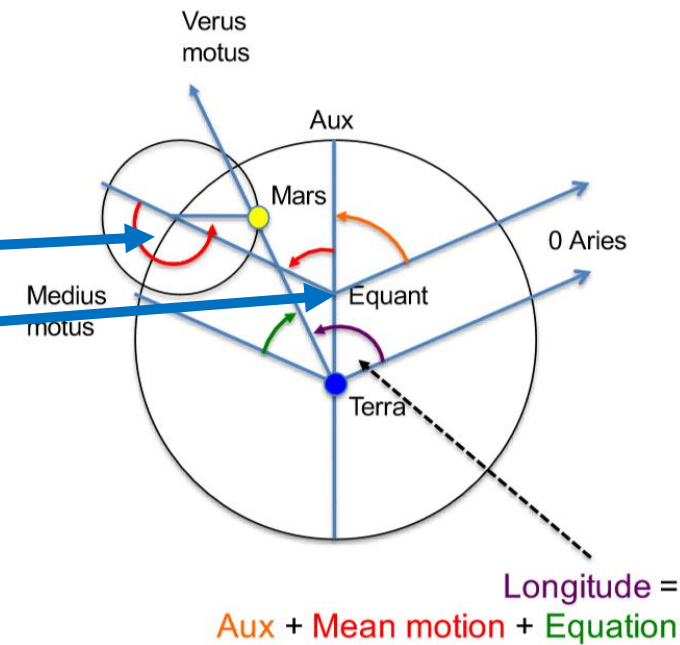
BAV, Pal. Lat.; 1376 f. 115r



What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

The image shows two pages from a medieval manuscript, likely the BAV, Pal. Lat. 1376 f. 115r. The left page is titled "Tabula robuens medii" and the right page is "Tabula Equatorum". Both pages contain columns of numbers representing astronomical data, with some cells highlighted in blue. The right page has a heading "iis" and "Mars".



Longitude =
 Aux + Mean motion + Equation

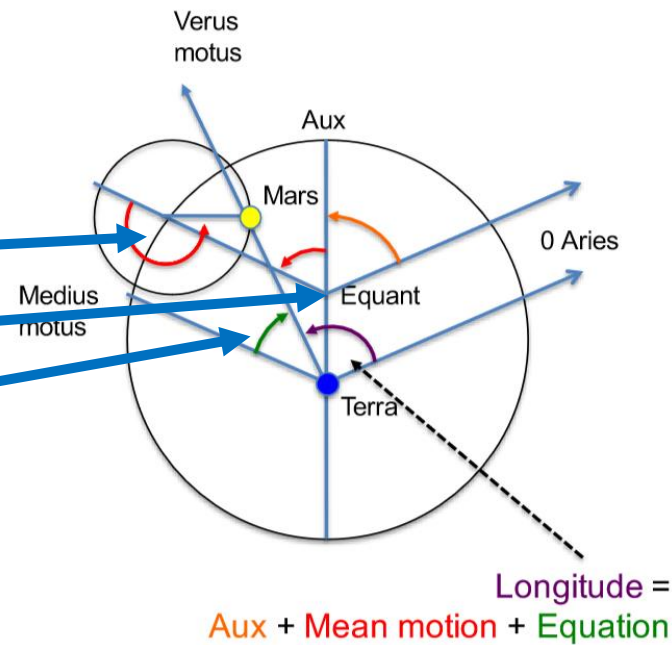
BAV, Pal. Lat.; 1376 f. 115r

What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars

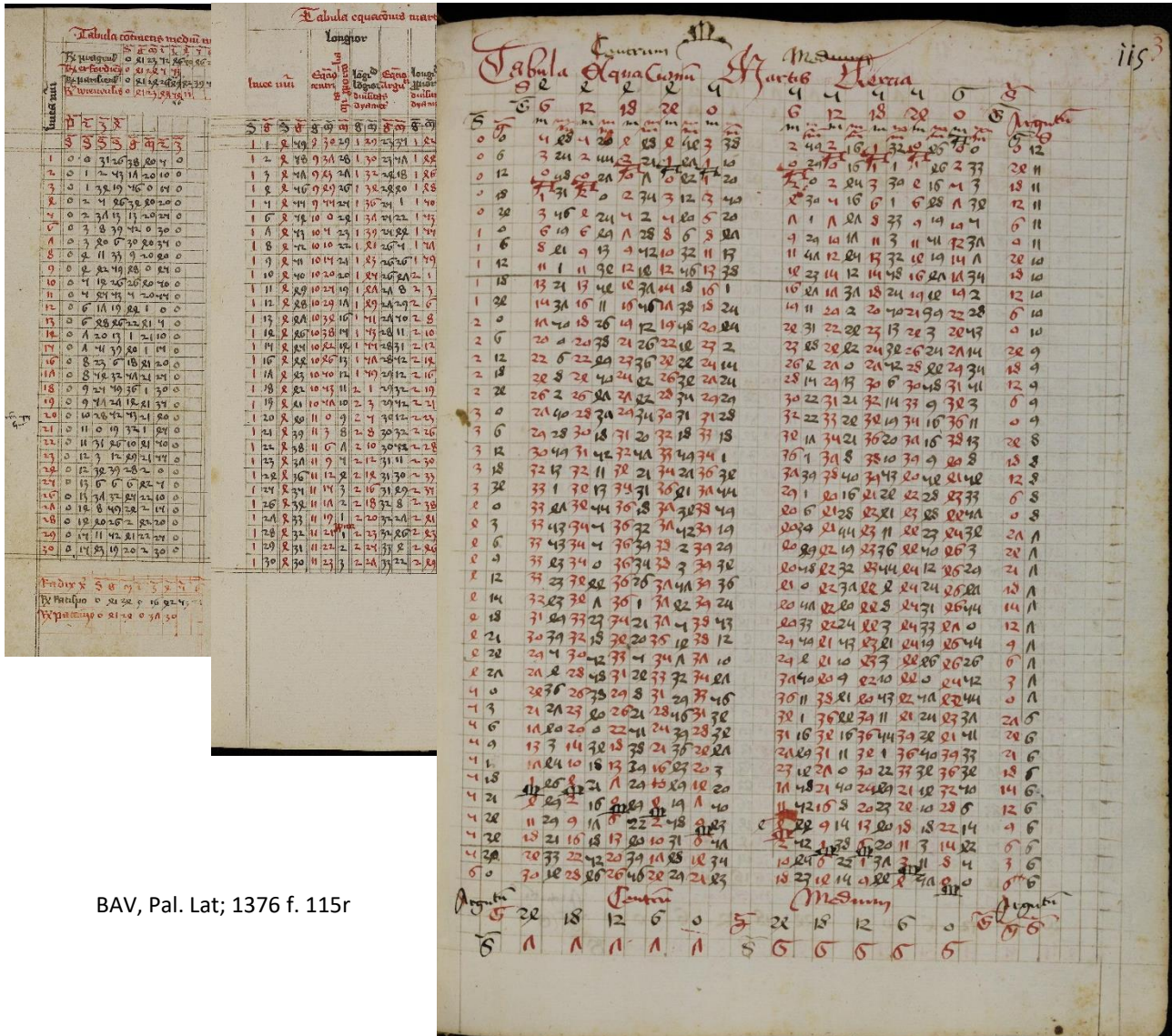
The image shows two pages from a medieval manuscript, likely a Ptolemaic astronomical table. The left page is titled "Tabula robuens medii" and the right page is "Tabula Equatorum". Both pages contain columns of numbers representing astronomical data, with some cells highlighted in blue. The right page has handwritten labels "Augm", "Centru", and "Medium" at the bottom.

BAV, Pal. Lat; 1376 f. 115r



What type of content are astronomical tables?

B. Mathematical and astronomical aspects: Mars



BAV, Pal. Lat.; 1376 f. 115r

Can we agree on good practices, develop tools for the future?

A. Suggestions and propositions

Can we agree on good practices, develop tools for the future?

A. Suggestions and propositions

- Identify the content its mathematical and astronomical meaning
- Understand its relation to the (physical) structure of the manuscript
 - The importance and the variety of tables layout
 - Ways to “fill” the table
 - The uses of colours, of various type of lines
 - Record tables individually in order to allow a study of their arrangement in sets at the levels of a folio, quire, codicological unit, codex
- Record the title of the tables; their headings, the units.
- The step and range of the arguments
- The precisions of the entries
- Record key values: first/last lines, extremum
- Records places, dates and radices

Can we agree on good practices, develop tools for the future?

A. Suggestions and propositions

Aims:

- Identify the content its mathematical and astronomical meaning
- Understand its relation to the (physical) structure of the manuscript

Can we agree on good practices, develop tools for the future?

A. Suggestions and propositions

Aims:

- Identify the content its mathematical and astronomical meaning
- Understand its relation to the (physical) structure of the manuscript

Systematic:

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- Record the title of the tables; their headings, the units.
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Can we agree on good practices, develop tools for the future?

A. Suggestions and propositions

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Deeper analysis:

- The importance and the variety of tables layout
- The uses of colours, of various type of lines
- The step and range of the arguments
- The precisions of the entries
- Ways to “fill” the table

Can we agree on good practices, develop tools for the future?

A. Suggestions and propositions

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Deeper analysis:

- The importance and the variety of tables layout
- The uses of colours, of various type of lines
- The step and range of the arguments
- The precisions of the entries
- Ways to “fill” the table



What can we do for cataloguers

Can we agree on good practices, develop tools for the future?

B. Thinking about future tools?

Can we agree on good practices, develop tools for the future?

B. Thinking about future tools?

The logo for DISHIAS, featuring the word in a stylized, blue, sans-serif font. The letter 'I' is replaced by a vertical bar with a small white crossbar, resembling a plus sign or a specific character. The letters have a subtle gradient and a slight shadow effect.

Can we agree on good practices, develop tools for the future?

B. Thinking about future tools?



Interfacing different tools

Editing and analysing historical astronomical tables
Tools and techniques used by historians of the exact sciences for handling tabular data

Scientific editors

Matthieu Husson (CNRS-SYRTE, Observatoire de Paris, France)
Clemency Montelle (University of Canterbury, New Zealand)
Benno van Dalen (Bavarian Academy of Sciences and Humanities, Germany)

Rationale
Astronomical tables constitute a major and challenging genre for historians of the astral sciences. Despite being a significant portion of surviving historical scientific sources, they remain seriously understudied. For

Can we agree on good practices, develop tools for the future?

B. Thinking about future tools?



Interfacing different tools

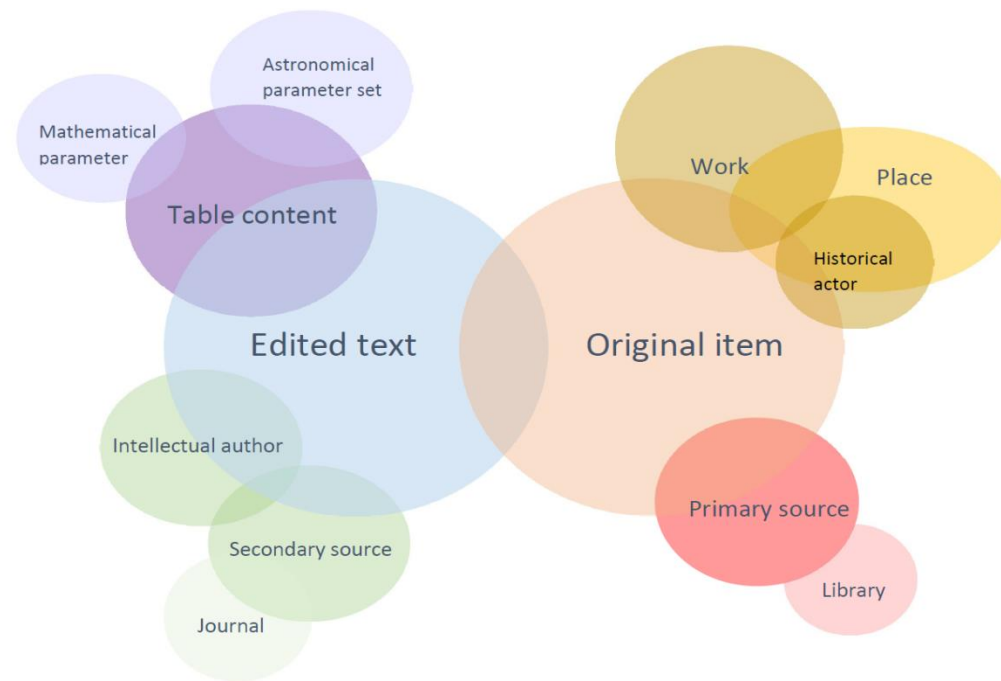
Editing and analysing historical astronomical tables
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Smart design of data structure



Can we agree on good practices, develop tools for the future?

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Interfacing different tools

Editing and analysing historical astronomical tables
Tools and techniques used by historians of the exact sciences for handling tabular data

Admin
Original Text Full record

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Id n°:	96
Language:	Sanskrit
Script:	Devanagari, Nepali, Nepali script
Time range:	1590 - 1640
Primary Source:	Tokyo Daigaku Sanskrit 19 Page/Folio range: 49v-50v Copied in Nepal
Work:	yā pāṇḍitarīmadrapurī virāṅgale śrīśivadvaitācārya saṅgā dīśānāgāra śāstrīnā vācānā khetayānā vīkīrṇāṅgā 7 Work creator(s): 1. Nityananda (1590 - 1650), Old Delhi, New Delhi, Delhi, India Created in Old Delhi, New Delhi, Delhi, India (1590 - 1640)



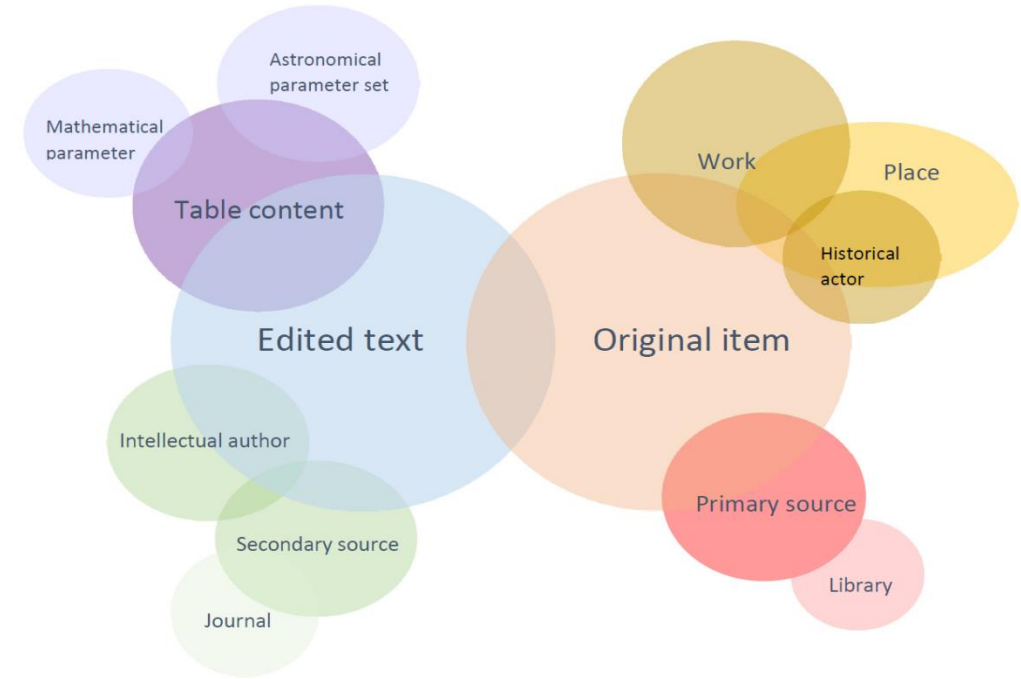
Admin board
Edit Delete

ces. Despite studied. For

The solar declination tables are written in three blocks with arguments extending from 1 to 30, 31 to 60, and 61 to 90. The tables are legible, with occasional scribal corrections. The original scan copies of the manuscript can be seen at http://pickservice.soc.u-tokyo.ac.jp/03_150219-111.library_sanskrit_ms/MF13_03_004-MF13_03_004?pageid=001

Written by Galla Topalian (2017-07-13)
(last update: 2017-07-13)

Smart design of data structure



Can we agree on good practices, develop tools for the future?

B. Thinking about future tools?



Interfacing different tools

Smart design of data structure

Editing and analysing historical astronomical tables
Tools and techniques used by historians of the exact sciences for handling tabular data

Admin
Original Text Full record

GENERAL INFORMATION

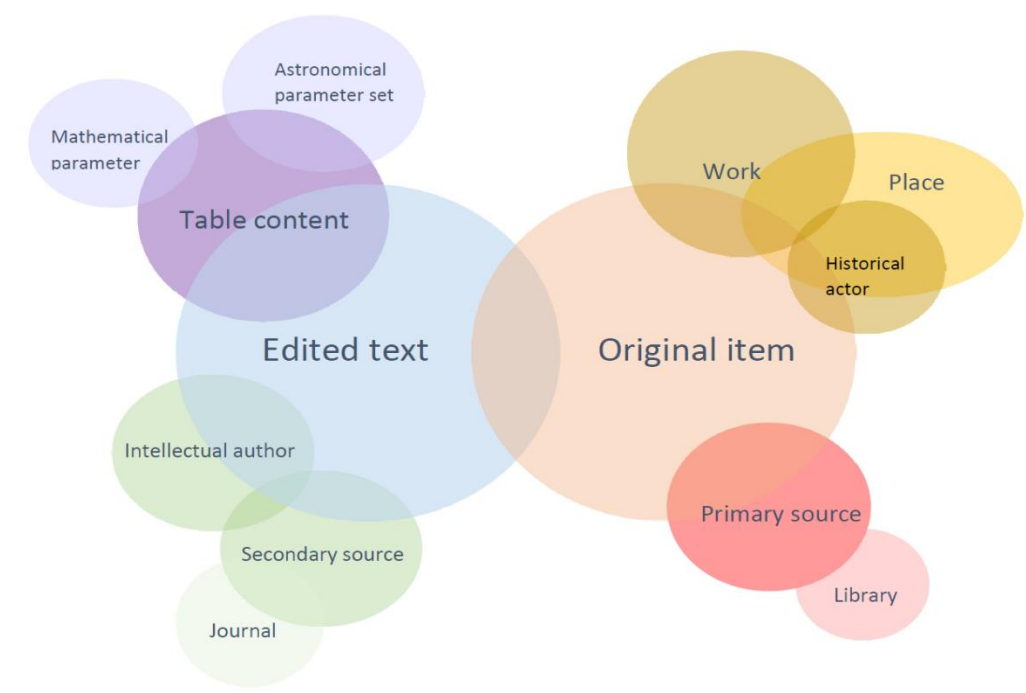
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Id n°: 96
Language: Sanskrit
Script: Newa, Newar, Newari, Nepāli lipi
Time range: 1590 - 1640

Primary Source: Tokyo Daigaku | Sanskrit 19
Page/Folio range: 49v-50v
Copied in Nepal

Work: *yā pāṃdhār imdṛapuri viraṅgale | śrīśivadattasya soto
dvāṅgale śaṣṭam vacan khetayam vikṛtaḥ || 7 ||*
Work creator(s):
1. Nityananda (1590 - 1650), Old Delhi, New Delhi, Delhi, Inde
Created in Old Delhi, New Delhi, Delhi, Inde (1590 - 1640)

The solar declination tables are written in three blocks with arguments extending from original scan copies of the manuscript can be seen at <http://pckservice.soc.u-tokyo.ac>

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32	18	27	41	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	36	55	23	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	55	23	4	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	13	50	46	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	32	18	27	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	50	46	9	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	9	13	50	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	27	41	32	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	46	9	13	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	4	36	55	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	23	4	36	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	41	32	18	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	18	27	41	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	36	55	23	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Thank you!