We solved this numerical problem with the help of computer calculations and the modern theory of the moon's motion. We also tested our results by comparing them with the well-known Canons of eclipses [172, 177]. We considered *all* eclipses of the historical interval from 900 B.C. to 1600 A.D. The result obtained is as follows.

Statement 2. There exists a unique solution of the above-mentioned problem of dating of lunar eclipses in the Almagest which satisfies with an accuracy of 3 years all conditions imposed on inter-eclipse times and which have the necessary phases. This is the set of eclipses compiled in Table 4. It turned out that all these eclipses are medieval.

Table 4

No. of the eclipse	Date of eclipse				Phase of eclipse	Coordinates of the zenith point of the eclipse on the earth	
	year A.D.	day	month	hour (Greenwich)		longitude	latitude
1	491	5	8	16	11.1	110	−17
or							
	492	30	1	16	16.7	123	17
2	494	5	6	1	2.0	−28	−22
3	496	6	11	21	5.0	27	17
4	594	6	8	23	4.0	16	−17
5	693	27	3	14	5.6	138	−4
6	717	28	6	13	3.0	155	−23
7	728	27	5	21	2.5	31	−22
8	840	20	5	5	1.4	−77	−21
9	843	19	3	19	14.1	73	−1
10	1019	16	9	23	9.4	10	−1
11	1020	12	3	7	18.1	−111	1
12	1020	4	9	23	18.7	13	−6
13	1046	23	4	7	6.6	−116	−14
14	1079	20	1	3	4.0	−48	19
15	1344	23	9	1	2.4	−31	3
16	1349	30	6	23	21.7	1	−23
17	1349	25	12	12	9.8	178	23
18	1350	20	6	17	5.8	103	−23

This unique solution is stable with respect to variations of time. Ptolemy used different ancient documents describing the lunar eclipses. These documents sometimes use different chronological eras. For example:

– the eclipses Nos. 1–3 are dated in the ancient documents (as Ptolemy says) by dates of the era of Mardokempad;

– the eclipses Nos. 4–5—by dates of the era of Nabonassar;

– the eclipses Nos. 6–7—by dates of the era of Darius;