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Abraham Ibn Ezra's Scholarly Writings: A Chronological Listing

Introduction

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Understanding the intellectual evolution of a thinker requires, if possible and as a first step, locating his or her writings against the axes of time and place. This truism holds of Abraham Ibn Ezra even more than of most medieval thinkers: Ibn Ezra wrote his works—often in more than one version—for various patrons at the different stations of his peregrinations, and thus in diverse contexts and in response to different challenges. This applies in particular to his scholarly works—exegetical, grammatical, theological, and scientific—all of which were written between 1140 and 1160 in Italy, southern France, the Angevin territories, and England. Fortunately, most of Ibn Ezra's writings can be dated and situated geographically, often quite precisely. The basic data come from those works that have prefatory canticles, introductions, or detailed colophons that give the date and/or place of composition. Useful information can be derived from forward or backward references to other, datable, works.¹

Ibn Ezra wrote much of his oeuvre as a series of individual compositions that were intended as pieces of a greater ensemble, and while drafting one work had its place in

Scholarly research on Ibn Ezra has accumulated much information about the dating of his works. Thus it seemed both desirable and feasible to try to establish a chronological table that could provide Ibn Ezra scholars with the ability to rapidly contextualize each work, chronologically and geographically. Our purpose was to reflect the existing "state of the art" and not engage in new research; in cases of scholarly disagreement we generally mention the various opinions but selected the one we consider to be best established. Only with respect to Ibn Ezra's astrological works is the information presented here the result of new work by one of us (Sh.S.). Similarly, we chose not to take a stand on controversial issues on which there is no scholarly consensus: this refers in particular to questions regarding Ibn Ezra's authorship of certain treatises² or translations.³ Because this table is a first attempt to systematically order all of Abraham Ibn Ezra's scholarly works,⁴ and given the complexity of the available data, it makes no claim to being definitive and can certainly be improved. (Including Ibn Ezra's poetic oeuvre in the list was quite out of the question.⁵)

We classified Ibn Ezra's scholarly and scientific works into three large categories: biblical commentaries (B); books related to the Hebrew language or bearing on theology (LT); and scientific treatises (S). Works composed by Ibn Ezra as well as works that he translated from Arabic into Hebrew were included; the titles of the latter are followed by the designation [T]. In addition to his writings composed in Hebrew, Ibn Ezra produced some works directly in Latin, with the assistance of a Christian scholar, and no Hebrew original ever existed. For each work, accordingly, we have also indicated the language of composition. Translations of Ibn Ezra's works executed by third parties at a later date are not included here. We did include works (or versions of works) for which we have information but that are no longer extant, placing their titles in square brackets; in four instances, we know about these lost works from their medieval Latin translations and the Hebrew titles are reconstructions: these titles are placed in angle brackets. We give the

title of the work in the language of composition and an English translation. Each entry is numbered; the evidence concerning the circumstances of composition of the work in question is given in the correspondingly numbered note following the table. Works of uncertain date and place of composition have been relegated to a separate table. The dates in Ibn Ezra's Hebrew works all refer to the Jewish

that global project in mind. For this reason, his cross-references are intentional and numerous. We may therefore assume that originally they provided reliable indications for the order of composition of the individual works, even if some of them may have been corrupted in the process of transmission. Specifically, verb tenses can easily be modified by scribes; in some cases, too, cross-references provide contradictory information. Hence this method must be used with caution. See also Simon, *Four Approaches*, pp. 147–48, esp. n. 15.

- ² Renate Smithuis has recently made a strong case for attributing to Ibn Ezra the following works, which according to her he composed in Latin in the 1150s: *Tractatus magistri habrahe de tabulis tabularum, Ysagoge, Liber quadripartitus.* See Smithuis, "New Discoveries." Because Smithuis' hypothesis has not yet been discussed by scholars, we opted to omit the three works from the table. Abraham Ibn Ezra has also been credited with the authorship of commentaries on Ezra, Nehemiah, and Chronicles, but since this claim is disputed these works have also been left out. We saw no need to mention works that by scholarly agreement have been wrongly ascribed to Ibn Ezra (e.g., *Sefer ha-^cAsamim, Sefer ha-Nisyonot*, etc.).
- ³ E.g., the translations of Masha² allah²s *Book on Eclipses* and *Book of Interrogations*, which are probably apocryphal.
- ⁴ We know of only two similar (but by far less detailed) past attempts (Rosin, "Die Religionsphilosophie," p. 25; Levy, *Reconstruction*, pp. IX-XIII).
- ⁵ We excluded *Hai ben Meqis*, Ibn Ezra's Hebrew adaptation of Ibn Sinā's philosophical romance, from our corpus both because in all probability it was written before 1140 and because it is a poetical work, albeit with a philosophical content. On its possible date and place of composition see *Hai ben Meqis*, "Introduction," p. 13.

calendar (AM); we indicate that year, as well as the corresponding year of the Common Era (CE).⁶

The bibliography cites only editions and manuscripts of Abraham Ibn Ezra's works and the secondary literature used for the purposes of establishing this table. Unfortunately, there are scholarly editions of only a few of Ibn Ezra's works—a circumstance that is particularly relevant in the present context, because Ibn Ezra wrote more than one version of most of them. Consequently, while for some works we drew on printed editions—the best one available—we also used manuscripts of many works, trying to select the most reliable for the version in question. Where no specific edition of a biblical commentary is indicated, we used the text of *Miqra²ot gedolot* (Venice, 1525 [offset repr. Jerusalem, 1972]).

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Legend:

[T] following a title indicates that Ibn Ezra only translated (rather than composed) the work in question.

Square brackets indicate that the work in question is lost.

- Angle brackets indicate that the Hebrew original of this work is lost, but a Latin translation survives; in these instances, the Hebrew title is a reconstruction.
- Roman numerals after a title apply to works composed in more than one version; the numeral indicates the version.
- Boldface dates or places are based on solid evidence (notably explicit references in the body of the text or colophons), rather than inference and can be regarded as secure.
- Dates or places in italics have been directly inferred from explicit data and can be regarded as well-grounded.

- Dates or places in normal type have been indirectly inferred from implicit data or from what we know about Ibn Ezra's travels. While not conjectural, they are less certain than those in the preceding categories.
- A question mark indicates that the date or place are tentative or unknown.
- B indicates a biblical commentary.
- LT indicates a treatise bearing on Hebrew language or theology.

S indicates a scientific work.

⁶ Simplified by providing the Latin year corresponding to the greater part of the Hebrew year; e.g., AM 4900 = 1140 CE (instead of 1139/40). A similar remark applies to the months.

	Year	Place	Category	Title	Language
1	4900 [=1140]	Rome	В	Commentary on Ecclesiastes	Hebrew
2	1140-1142	Rome	В	Commentary on Esther I	Hebrew
3	1140–1142	Rome	LT	Judah Hayyuj, Sefer Otiyyot	Hebrew
				ha-noaḥ (Book of weak	
				letters) [T]	
				Idem, Sefer Pe ^c alei ha-kefel	
				(Book of verbs with double	
				letters) [T]	
				Idem, Sefer ha-Niqqud	
				(Treatise on punctuation) [T]	
4	1140–1142	Rome	LT	Sefer Mo ³ znayim (Book of	Hebrew
				scales)	
5	1140–1142	Rome	В	Commentary on Job	Hebrew
6	Shevat 4902	Rome	В	Commentary on	Hebrew
	[=Jan.1142]			Lamentations	
7	1140–1145	Rome/Lucca	В	Commentary on Daniel I	Hebrew
				(short commentary)	
8	1140–1145	Rome/Lucca	В	Commentary on Song of	Hebrew
				Songs I	
9	1140-1143	Rome/Lucca	В	Commentary on Psalms I	Hebrew
10	1142–1145	Lисса	В	Commentary on Minor	Hebrew
				Prophets I	
11	1142–1145	Lucca	В	Commentary on Pentateuch	Hebrew
				I (short commentary) =Sefer	
				ha-Yašar	
12	1142–1145	Lucca	В	Commentary on Ruth	Hebrew
13	Iyyar 4905	Lucca	В	Commentary on Isaiah	Hebrew
	[=May 1145]				
14	1142–1145	Lucca	LT	[Sefer ha-Yesod (Book of	Hebrew
				language fundamentals)]	

	Year	Place	Category	Title	Language
15	1142-1145	Lucca	LT	Yesod diqduq hu sefat yeter	Hebrew
				(The fundamentals of	
				grammar, [also called]	
				excellence of language) I and II	
16	1142–1145	Lucca	LT	Sefer Haganah ^c al Rav	Hebrew
				Sa ^c adia Ga ^s on	
				(Book of defense of R.	
				Saadia Gaon)	
17	1142-1145	Lucca	S	Sefer ha-Mispar (Book of	Hebrew
				number)	
18	1142–1145	Lucca	S	[Luhot I (Astronomical	Hebrew
				tables I)]	
19	1142–1145	Lucca	S	[Sefer Ța ^c amei ha-luḥot I	Hebrew
				(Book of the reasons of	
				astronomical tables I)]	
20	1142–1145	Pisa	S	Liber de rationibus	Latin
				tabularum I	
				(Book of the reasons of	
				astronomical tables I)	
21	Tishre 4906	Mantua	LT	Sefer Ṣaḥot (Book of correct	Hebrew
	[=Oct.1145]			language)	
22	4906 [=1146]	Mantua	S	Sefer Keli ha-neḥošet I	Hebrew
				(Book of the astrolabe I)	
23	4906 [=1146]	Verona	S	Sefer ha- ^c Ibbur I (Book of	Hebrew
				intercalation I)	
24	4906 [=1146]	Verona	S	Sefer Keli ha-neḥošet II	Hebrew
				(Book of the astrolabe II)	
25	1146	Verona	LT	Sefer Safah berurah (Book	Hebrew
				of purified language)	
26	before 1148	Béziers?	S	Sefer ha-'Eḥad (Book of the	Hebrew
				One)	
27	1148	Béziers	LT	Sefer ha-Šem (The book of	Hebrew
				the Name)	

	Year	Place	Category	Title	Language
28	1148	Béziers	S	Sefer Keli ha-neḥošet III	Hebrew
				(Book of the astrolabe III)	
29	Tammuz	Béziers	S	Sefer Re ² šit ḥo <u>k</u> mah I (Book	Hebrew
	4908			of the beginning of wisdom I)	
	[=June1148]				
30	1148	Béziers	S	Sefer ha-Te ^c amim I (Book	Hebrew
				of reasons I)	
31	1148	Béziers	S	Sefer ha-Moladot I (Book of	Hebrew
				nativities I)	
32	1148	Béziers	S	Sefer ha-Me ² orot (Book of	Hebrew
				luminaries)	
33	1148	Béziers	S		Hebrew
				elections I)	
34	1148	Béziers	S	Sefer ha-Še ³ elot I (Book of	Hebrew
				interrogations I)	
35	Marḥeshvan	Béziers	S	Seferha- ^c OlamI(Book of the	Hebrew
	4909			world I)	
	[= Nov. 1148]				
36	1148-1153	Narbonne	S	[Luhot II (Book of	Hebrew
				astronomical tables II)]	
37	1148–1153	Narbonne	S	[Sefer ha-ʿIbbur II (Book of	Hebrew
				intercalation II])	
38	1148-1153	Narbonne	S	Šaloš še ² elot (Three queries)	Hebrew
39	1148-1154	Midi or	S		Hebrew
		N. France		the world II)	
40	1154	Rouen	S	[Sefer Re ³ šit ḥo <u>k</u> mah II	Hebrew
				(Book of the beginning of	
				wisdom II])	
41	1154	Rouen	S	L (Hebrew
				astronomical tables III])	
42	1154	Rouen	S	Sefer ha-Țe ^c amim II (Book of	Hebrew
				reasons II)	

	Year	Place	Category	Title	Language
43	1154–1157	Rouen	S	Sefer Mišpetei ha-mazzalot (Book of the judgments of the zodiacal signs)	Hebrew
44	1154–1157	Rouen	S	[<i>Sefer ha-Moladot</i> II (Book of nativities II)]	Hebrew
45	1154–1157	Rouen	S	<i>Sefer ha-Še²elot</i> II (Book of interrogations II)	Hebrew
46	1154	Rouen	S	<i>Tractatus de astrolabio</i> (Treatise on the astrolabe)	Latin
47	1154	Angers	S	Liber de rationibus tabularum II (Book of the reasons of astronomical tables II)	Latin
48	1154	Rouen	S	<i>Liber de nativitatibus</i> (Book of nativities)	
49	1148–1155	Rouen	LT	Sefer Yesod mispar (Book on the fundamentals of numbers)	Hebrew
50	1153–1156	Rouen	В	Commentary on Esther II	Hebrew
51	Marḥeshvan 4916 [=Oct. 1155]	Rouen	В	Commentary on Daniel II (long commentary)	Hebrew
52	1155–1156	Rouen	В	Commentary on Genesis II (long commentary)	Hebrew
53	14 Elul 4916 [= Sept. 1, 1156]	Rouen	В	Commentary on Psalms II	Hebrew
54	1155–1157	Rouen	В	Commentary on Song of Songs II	Hebrew
55	1155–1157	Rouen	В	Commentary on Exodus II (long commentary)	Hebrew

	Year	Place	Category	Title	Language
56	1 Tevet 4917 [=Dec. 16,	Rouen	В	Commentary on Minor Prophets II	Hebrew
	[=Dec. 16, 1156]			rrophets II	
57	1157-1158	London	В	Commentary on Genesis III	Hebrew
58	Tammuz-	London	LT	Sefer Yesod mora' (The	Hebrew
	Av 4918			foundation of piety)	
	[=June-July				
	1158]		-		
59	14 Țevet	England	S	Iggeret ha-šabbat (The	Hebrew
	4919			epistle on the Sabbath)	
	[= Dec. 6,				
	1158]				
60	1160	England	S	Ța ^c amei luhot al-Muthani	Hebrew
				(Ibn al-Muthannā's	
				commentary on the	
				astronomical Tables of al-	
				Khwārizmī) [T]	

Works of uncertain date and place of composition

	Year	Place	Category	Title	Language
61	Ca. 1154?	Rouen?	S	Sefer ha-Mivḥarim II (Book of elections II)	Hebrew
62	after 1148	Angevin domains?	S	<sefer ha-moladot="" iii<br="">(Book of nativities III)> <tequfot (book<br="" (ha-šanim)="">of revolutions)> <sefer ha-mivḥarim="" iii<br="">(Book of elections III)> <sefer ha-še<sup="">2elot III (Book of interrogations III)></sefer></sefer></tequfot></sefer>	Hebrew

Annotations to table

1. Commentary on Ecclesiastes

A colophon states that it was completed in 4900 AM [=1140 CE]; see Comm. on Ecclesiastes, ed. Gomez Aranda, p. 128*. In the initial canticle Ibn Ezra informs us that "he came down to Rome with a frightened soul" (ואל רומי ירד בנפש נבהלת), which seems to indicate that this was the first commentary he wrote in Rome. The Comm. on Ecclesiastes includes no references in the past tense to other works by Ibn Ezra; on the other hand, there are retrospective references to it in the commentaries on Job (14:16, 37:23), written in Rome; on Exodus (21:10), Deuteronomy (4:35), and Isaiah (26:9), composed in Lucca; and in Sefer Mo³znayim. All of this establishes that it is one of Ibn Ezra's earliest works. See Friedlander, Essays, pp. 175, 187-88; Levy, Reconstruction, pp. X-XI; Fleischer, "Rome," pp. 100, 129-31; Comm. on Ecclesiastes, ed. Gomez Aranda, pp. XXV-XXIX, 128 and 191. Here we do not attempt a relative ordering of the works composed in Rome and immediately afterwards; for an overview of the literature on this question see Rottzoll, Kommentare, pp. XXVI-XXX. The commentary on Eccles. 5:1 is an excursus on poetic theory (edition in Yahalom, Poetic Language, pp. 183-96). The reason for the long digressions on grammatical questions seems to be that Ibn Ezra had not vet written his grammatical treatises, such as Sefer Mo²znayim.

2. Commentary on Esther (I)

There are no cross-references between this commentary and any other works by Ibn Ezra, which indicates that it is one of the earlier compositions written in Rome. Friedlander (*Essays*, pp. 185–86) has argued that of the two extant versions of the comm. on Esther, the text printed

by Zedner is the later one, because only it contains references to Ibn Ezra's previous works. See also No. 50 below; Walfish, "Two Commentaries," pp. 323-42, esp. 324; Fleischer, "Rome," p. 100. This is the version of the commentary on Esther printed in the standard *Migra*³ ot gedolot.

3. Translations of Judah Hayyuj, Sefer Otiyyot hanoah, Sefer Pe^calei ha-kefel, Sefer ha-Niqqud

In a colophon to Pe^calei hakefel (ed. Dukes, p. 178), Ibn Ezra indicates that the translation was produced במדינת רום . Scholars have taken the toponym RWM as a reference to Rome. See Graetz, History, 3:371; Fleischer, "Rome," pp. 100, 148-50. N. Golb (Jews of Rouen, p. 24 n. 72, p. 56), however, argued that (RWM) is more likely to be a corruption of רדום (RDWM), i.e., Rouen, and that Ibn Ezra produced these translations during his stay in that city. Simon rejects this suggestion: in private conversation he has supplemented his printed argument (Simon, Four Approaches, p. 261 n. 19; Commentaries on the Minor Prophets, p. 223) with the observation that the name RWM is followed by the adjective rabbati 'great' and that the description as a metropolis suits Rome better than Rouen. This argument is corroborated by the fact that Sefer Mo³znayim refers to the translation of Hayyuj's works (see No. 4 below). The colophon was published according to MS Munich, Bayerische Staatsbibliothek, Heb. 63; unfortunately the other manuscripts of this work (MS St. Petersburg, Russian National Library, Evr. 194, pp. 90v-102v [IMHM 51080]; MS Rome, Biblioteca Casanatense 3132 [IMHM 80], pp. 84v-100v) lack colophons and thus shed no further light on the issue. (We thank Dr. Abraham David for his kind help in this matter.) The date follows from what we know about Ibn Ezra's travels.

4. Sefer Mo²znayim

Rome as the place of composition is explicitly indicated in Sefer Safah berurah, ed. Wilensky, p. 73: ספר רומה ספר בעבור שכבר חברתי בדקדוק במדינת רומה

(For I have already composed [a work] on the subject of grammar, Sefer Mo²znayim, in Rome; in the city of Lucca [I composed] Sefer ha-Yesod and Sefat Yeter; and in the city of Mantua Sefer Ṣaḥot.) The same statement is made by the introductory canticle to the work (ed. Jiménez Patón and Sáenz-Badillos, p. 1*:7). It was completed after the translation of Hayyuj's three books; see Ochs, "Die Wiederherstellung," p. 120. Sefer Mo²znayim is referred to in the past tense in the commentary on Job (36:31, 37:6), in the commentary on the Pentateuch, composed in Lucca (Gen. 49:6; Ex. 18:19; Lev. 26:6 [in Levy, 26:7]; Num. 7:3 and 72; Deut. 32:5), and in Sefat yeter and Safah berurah. See Levy, Reconstruction, p. XI; Fleischer, "Rome," pp. 169-71.

5. Commentary on Job

Rome as the place of composition is mentioned in the initial canticle (Job, p. 5). The commentary on Job was composed after Sefer Mo³znayim and the commentary on Ecclesiastes, because it refers to both the former (36:31, 37:6) and the latter (14:16, 37:23) as finished works. It was written prior to the Italian commentaries on Exodus, Numbers, and Deuteronomy, which mention the commentary on Job as a completed work (on Ex. 7:1, Num. 22:22, and Deut. 24:6). See Friedlander, Essays, pp. 174–75; Levy, Reconstruction, p. X; Fleischer, "Rome," p. 100; Commentary on Job, ed. Gomez Aranda, "Introduction", pp. XXXVIII–XXXIX.

6. Commentary on Lamentations

According to a colophon, this commentary was completed in Shevat 4902 AM= January 1142 (Fleischer, "Rome," p. 96). This commentary

must be one of the first works produced by Ibn Ezra in Rome, for it contains no reference to any of his other writings but is quoted in his commentaries on Leviticus (13:46, 26:39) and Deuteronomy (28:46), written in Lucca. See Friedlander, *Essays*, p. 182.

7. (Short) Commentary on Daniel (I)

This commentary is repeatedly and retrospectively referred to in the first commentary on the Pentateuch (Gen. 4:4, 10:4, 27:40; Ex. 2:10, 29:37; etc.). From this one can infer that it was composed in Rome or Lucca, prior to 1145. See Friedlander, *Essays*, pp. 193–94; Levy, *Reconstruction*, p. XI; Fleischer, "Rome," pp. 100, 134–36; *Short Commentary on Daniel*, ed. Mondschein, "Introduction", pp. 25–29. See also No. 11 below.

8. Commentary on Song of Songs (I)

According to M. Friedlander (*Essays*, pp. 181-82), the first version of this commentary is that published in Mathews' edition. This first version was composed in Italy: it includes a word in Italian (giglio; grammatical section, 2:1) and is referred to retrospectively in the first commentary on Genesis (4:10) and in the commentary on Numbers (13.32). Ochs ("Die Wiederherstellung," p. 123) thinks it was composed in Rome. See also *Commentary on Song of Songs*, ed. Mathews, "Introduction", pp. VII-VIII; Levy, *Reconstruction*, p. X; Fleischer, "Rome," p. 100.

9. Commentary on Psalms (I)

The first commentary on Psalms, of which only the introduction and a fragment of its beginning survive (printed, with an English translation, in Simon, *Four Approaches*, pp. 308–29), was probably composed before the first commentaries on the Pentateuch, the commentary on Isaiah, and the *Book of Defense of Rabbi Saadya Ga'on*, i.e., in Lucca or Rome between 1140 and 1143 (Simon, *Four Approaches*, p. 149). For

the problems concerning the chronology of the two versions of the commentary on Psalms, see especially ibid., pp. 146–49. See also Friedlander, *Essays*, pp. 156–57; Levy, *Reconstruction*, p. X; Fleischer, "France," pp. 220–21.

10. Commentary on the Minor Prophets (I)

The date and place of composition of the first commentary on the Minor Prophets follow from its having been written before the commentaries on Isaiah and on the Pentateuch; see *Commentary on Minor Prophets*, ed. Simon, esp. p. 11, 294, 302. These commentaries were not composed verbatim by Ibn Ezra himself but were rather set down by one of his students.

11. (Short) Commentary on the Pentateuch (I) The place of composition is stated explicitly in the comment on Genesis 33:10: ושליש שעה והנה בין ירושלים ובין זאת המרינה שחברתי בה זה הפי ושמה לוקא שעה (There are one and a third hours between Jerusalem and the city where I composed this commentary, whose name is Lucca.) See Commentary on Genesis ha-Keter, p. 70; Fleischer, "Lucca," pp. 79, 186–94; Commentary on the Torah, ed. Weiser, esp. 1:8–29. See also Friedlander, Essays, pp. 142–95, esp. p. 195; Rosin, "Die Religionsphilosophie," p. 25. The terminus ante quem is given by the following cross-references: the commentary on Genesis (4:1; 27:40) refers to the commentaries on the Song of Songs and Daniel in the past tense; the commentary on Numbers (17:17) refers to the commentary (32:5) refers to Sefer Mo³znayim in the past tense.

The alternate title of this work, Sefer ha-Yašar, resists translation, because it is burdened by a multitude of intertextual references. Sefer ha-Yašar is in the first place the name of an ancient book of the Israelites, twice mentioned to in the Bible (Josh. 10:13 and 2 Sam. 1:18).

Targum Jonathan (on both verses) identifies this lost book with the entire Torah and is followed by a number of medieval scholars (e.g., Rashi and David Kimhi on Josh. 10:13). The Babylonian Talmud (Avodah zarah 25a; see also TJ Sotah 8a, Gen. Rabbah 6:9 and parallels) identifies Sefer ha-Yašar with the book of Genesis, on the grounds that the latter is the book of the Patriarchs Abraham, Isaac and Jacob, who are referred to as yešarim (here meaning "just" or "righteous"); this identification, too, is followed by medieval authorities (e.g., Rashi and David Kimhi on 2 Sam 1:18; Rabbenu Bahya ben Asher on both verses; Gersonides on 2 Sam. 1:18). By calling his commentary on the Torah Sefer ha-Yašar, Abraham Ibn Ezra is employing an alternate name of the Torah itself (or a part of it) to refer to his own exegesis, implying that it expounds the Torah as it really is. At the same time, Sefer ha-Yašar also means "the book of the yašar," the yašar being Ibn Ezra himself, who (alluding to the talmudic passage) implicitly suggests that he is following in the footsteps of the Patriarch whose name he bears. Lastly, yašar also means "correct," "straightforward," suggesting that these two qualities characterize this exegetical work, unlike the other bible commentaries that Ibn Ezra takes to task. Not having found an English title evoking all these connotations, we have left this title untranslated.

12. Commentary on Ruth

This commentary (1:15) refers retrospectively to the commentary on the Pentateuch. Ibn Ezra also mentions, as works he intends to write, the commentaries on Isaiah (1:16), Proverbs (3:1) and Ezra (1:2). It follows that the commentary on Ruth was written in Lucca before May 1145. See Friedlander, *Essays*, p. 184–85; cf. No. 11 above. See also Fleischer, "Rome," p. 100, where this commentary is assigned to the Rome period.

13. Commentary on Isaiah

A colophon at the end of this commentary states that it was completed in Iyyar [4]905 A.M [= May 1145] in the city of Lucca. See *Commentary on Isaiah ha-Keter*, p. 405; Fleischer, "Lucca," pp. 78, 190-92; Friedlander, *Essays*, pp. 164-65. For other relevant cross-references, see above, Nos. 1, 9, 10, and 12.

14. Sefer ha-Yesod

Sefer Safah berurah mentions Lucca as the place of composition of this lost work; see No. 4 above. See also Fleischer, "Lucca," pp. 109–111. On the characteristics and history of this lost book see Yesod diqduq, ed. Alony, pp. 51–7. It is referred to repeatedly in Ibn Ezra's commentary on the Pentateuch (Gen. 1:1, 2:17, 3:22, 13:1, 23:7; Ex. 8:3, 32:1; Deut. 17:3, 20:19). See No. 15 below.

15. Yesod diqduq / Sefat yeter

Lucca as the place of composition is indicated in Sefer Safah berurah; see No. 4 above. See also Fleischer, "Lucca," pp. 111–115. Golb (Jews of Rouen, p. 24 n. 72; p. 56), however, suggests that this work was written in Rouen, but only on the basis of the weak suggestion that it (like Safah berurah) features what he takes to be the hallmarks of the French period. See Wilensky, Sefer ha-Yesod, pp. 163–72 and Nos. 14 and 16. Ibn Ezra wrote two versions of this book, of which only the second, apparently the shorter one, is extant. The two versions were probably written in close succession; because their dates are unknown, we have combined them into a single entry. See Yesod diqduq, ed. Alony, pp. 47–50, 63. This work was also known as Yesod diqduq (= The fundamentals of grammar); see Yesod diqduq, ed. Alony, pp. 60–61.

16. Sefer Haganah ^cal Rav Sa^cadia Ga³on

The initial canticle of this treatise, stating that it offers a defense of Rabbi Saadia Gaon against the objections raised by Dunash Ben Labrat,

also refers to it as Sefat yeter: ספר לאברהם בנו מאיר / ספר קראהו שפח יחר (This book is by Abraham the son of Meir, a book that he called Sefat yeter.) This has led to a confusion of the two treatises. Apparently the canticle was wrongly attached to the work on Saadia and actually belongs to the grammar treatise Sefat yeter (see No. 15 above). For a discussion about the identity of this book see: Wilensky, Sefer ha-Yesod, pp. 163–72; Sefer Haganah, ed. Oshri, "Introduction," esp. pp. 23–25. For the date and place of this book, see ibid., esp. pp. 5–6.

17. Sefer ha-Mispar

In the absence of a critical edition of Sefer ha-Mispar based on all the extant manuscripts (of which there are about 40), dating this work requires caution. It twice mentions Sefer Ta^camei ha-luhot I, composed between 1142 and 1145. One reference is consistently in the future tense, but the second is in the future tense in some manuscripts and in the past tense in others (we thank Tony Lévy for this information). We assume that scribes, aware that the promised work had been written, are likely to change a future tense to the past, but not vice versa, and consequently accept the anticipatory references as trustworthy. This hypothesis is compatible with the fact that Sefer ha-Mispar is referred to in the past tense in Sefer ha-'Ibbur I, composed in Verona in 1146 (ed. Halberstam, p. 4a; see No. 23 below); see Sela, Abraham Ibn Ezra, pp. 19-21 and No. 19 below. It is remarkable that Sefer ha-CIbbur I is the only work in which Ibn Ezra mentions Sefer ha-Mispar. On the basis of all the data now available it seems that the work was composed prior to 1146, probably in Lucca. See also Lévy, "Abraham Ibn Ezra et les mathématiques." Tony Lévy and Charles Burnett ("Sefer ha-Middot") have recently discovered an anonymous treatise on arithmetic and geometry, which they ascribe to Abraham Ibn Ezra and consider to be a preliminary version of Sefer ha-Mispar. This opens the door to the possibility that some of the aforementioned references allude to this

early version and not to the text published under the title Sefer ha-Mispar, which could then be late. This possibility has yet to be studied.

18. Luhot (I)

According to the Joseph b. Eliezer (Bonfils, fourteenth century), Ibn Ezra wrote astronomical tables in Lucca and again in Narbonne; see *Safenat pa^cneab*, ed. Herzog, 1:142. Both are lost.

19. Sefer Ța^camei ha-luhot (I)

These are the canons of the now lost tables Ibn Ezra composed in Lucca (No. 18 above). The place and date of composition given by Joseph b. Eliezer are confirmed by the fact that Sefer ha-Mispar twice refers to Sefer *Ța^camei ha-luhot* in the future tense (Sefer ha-Mispar, ed. Silberberg, pp. 27, 79). See also Sela, Abraham Ibn Ezra, pp. 22–27.

20. Liber de rationibus tabularum (I)

The place of composition is indicated in the text itself (*Liber de rationibus tabularum*, ed. Millás Vallicrosa, p. 87): "he tabule composite sunt secundum meridiem Pisanorum quorum remotio est ab occidentis termino 33 gradus." The date follows from what we know about Ibn Ezra's travels. See also Sela, *Abraham Ibn Ezra*, pp. 22–27.

21. Sefer Sahot

The place of composition is given as Mantua in Safah berurah; see No. 4 above. See also Sefer Sahot, ed. del Valle Rodriguez, "Introduction," pp. 30-35. The date is given in the poem concluding the work; see ibid., pp. 33, 195 (= Yesod diqduq, ed. Alony, p. 63). Sefer ha-Šem (ed. Levin, p. 422), which was written in 1148 in Béziers, refers to Sefer Ṣaḥot in the past tense. See below, No. 27.

22. Sefer Keli ha-nehošet (I)

The year 4906 AM [=1146 CE] is recorded in the list of stars for the

rete⁷ (Keli ha-nehošet I, ed. Edelman, p. 31). In all the versions of Keli ha-nehošet, the year accompanying the lists of fixed stars is a reliable indication of the date of composition: as explained by Ibn Ezra himself, such lists serve to determine the exact age of an astrolabe by comparing the location of a star as given in the list of stars for the rete at the date of composition of the book with the location of the same star as observed at any other date, taking into account the precession of the fixed stars. This is confirmed by the *terminus ante quem* derived from Sefer ha-'Ibbur I, written in 1146 at Verona, in which Keli ha-nehošet is referred to in the past tense (Sefer ha-'Ibbur, ed. Halberstam, p. 8a). The place of composition follows from what we know about Ibn Ezra's travels. See below, No. 24; Sela, Abraham Ibn Ezra, pp. 28-30.

23. Sefer ha-cIbbur (I)

The date and place of composition are explicitly given in the text of this work as 4906 AM [=1146 CE] and Verona. See Sefer ha-^cIbbur, ed. Halberstam, pp. 8b, 9a, 9b; Sela, Abraham Ibn Ezra, pp. 39-44.

24. Sefer Keli ha-nehošet (II)

The year of composition, 4906 AM [=1146 CE], is recorded in the list of stars for the rete (Keli ha-nehošet II/MS, f. 39a). Whereas Keli hanehošet I is referred to in the past tense in Sefer ha-^cIbbur I (see above, No. 22), in Keli ha-nehošet II Sefer ha-^cIbbur I is referred to in the past tense (Keli ha-nehošet II/MS, f. 46b). This allows us to conclude that Keli ha-nehošet II was written after the completion of Sefer ha-^cIbbur I, at Verona, Ibn Ezra's next stop after Mantua. It also implies that we must date the composition of Sefer ha-^cIbbur I between Keli hanehošet I and II. See Sela, Abraham Ibn Ezra, pp. 29-30.

25. Sefer Safah berurah

Safah berurah is the last of Ibn Ezra's works on grammar, since it refers in the past tense to all his earlier compositions, written in Rome, Lucca,

and Mantua, respectively (Sefer Safah berurah, ed. Wilensky, p. 73; see above, No. 4). From this, Fleischer ("Safah Berurah," pp. 82–88) infers that Sefer Safah berurah itself was written in the same period, and therefore in Verona, to which Ibn Ezra moved from Mantua. Golb (Jews of Rouen, p. 55), however, suggests that it was written in Rouen, citing two retrospective references in the past tense in the second commentaries on Exodus (12:9) and Esther (4:5), written in Rouen, that seem to allude to Safah berurah. Whichever hypothesis is accepted, a colophon locating the composition of the work in Rome and in the improbable year 1167 (Friedlander, Essays, p. 158), seems to be erroneous. See also the detailed discussion in Safah Berurah, ed. Ruiz and Sáenz-Badillos, "Introduction," pp. 49–53, which refrains from taking a position on the question.

26. Sefer ha-'Ehad

That this work was composed prior to 1148 follows from the fact that Sefer ha-Šem (ed. Levin, p. 423) refers to it in the past tense. See Steinschneider, "Abraham Ibn Esra," pp. 464–65; Sela, Abraham Ibn Ezra, pp. 36–37; No. 27 below.

27. Sefer ha-Šem

Béziers is indicated as the place of composition in the initial canticle; see Sefer ha-Šem, ed. Levin, p. 419; Fleischer, "France," pp. 357–58. The year follows from the fact that Ibn Ezra was living in Béziers in 1148. Sefer ha-Šem is frequently referred to retrospectively in the commentaries written in Rouen: Genesis (II) 1:1 (grammatical section); Ex. (II)

⁷ On an astrolabe the *rete*, which is free to turn around an axis, is a stereographic projection of the ecliptic and a number of the brighter fixed stars; it is engraved on a circular disk from which most of the metal is cut away to reval the underlying component.

12:6; Ps. (II) 9:1, 80:20, 115:16; Daniel (II) 7:14. Sefer Yesod mispar in turn refers to Sefer ha-Šem as a completed work (Yesod mispar, p. 140).

28. Sefer Keli ha-nehošet (III)

The year 4908 AM [= 1148 CE] is given by the star list on the rete: see Sefer Keli ha-nehošet III/MS, f. 67a. This agrees with the fact that this version refers to Sefer Re³šit hokmah in the future tense (Keli ha-nehošet III/MS, f. 65b). See Sela, Abraham Ibn Ezra, pp. 30-31. The place follows from the fact that Ibn Ezra was living in Béziers in 1148.

29. Sefer Re³šit hokmah (I)

The place and date of composition are indicated in a colophon: תשלם תשלם (completed in the month of Tammuz, 4908 AM [=June 1148 CE], in the city of Béziers); see Sefer Re³ *šit hokmah* I/MS, f. 30 (in Re³ *šit hokmah* I, ed. Cantera, Hebrew section, lxxvi:25; there is a misprint in the incomplete colophon; cf. English section, p. 235). This year appears also in the body of the text: ibid., x:19. See also Levy, Astrological Works, pp. 11–13. Ibn Ezra probably wrote his entire astrological encyclopedia in a sequence, so that the next six works were all composed between June and November 1148.

30. Sefer ha-Ţe^camim (I)

The date of composition, 4908 AM [=1148 CE], is indicated twice in the work itself ($Te^{c}amim$ I/MS, ff. 28a, 31a). $Te^{c}amim$ I must have been completed between June and November 1148, in Béziers. This may be inferred from the fact that it was composed immediately after Re^{2} in hokmah I and that it refers in the future tense to Sefer ha-^cOlam I ($Te^{c}amim$ I/MS, ff. 35b, 38a). See Nos. 29 and 35; see also Fleischer, "Introduction," in $Te^{c}amim$ I, ed. Fleischer, esp. pp. 5–22.

31. Sefer ha-Moladot (I)

Several cross-references indicate that this work was composed after Re^{2} sit hokmah I and $Te^{c}amim$ I, but before Sefer ha-Mivharim I and Sefer ha-Še²elot I, and consequently in 1148 in Béziers: (a) anticipatory references to Sefer ha-Moladot in Re^{2} sit hokmah I (ed. Cantera, Hebrew section, xliv:2; lvii:16) and Sefer ha- $Te^{c}amim$ I ($Te^{c}amim$ I/MS, ff. 28b, 36a, 37b); (b) retrospective references to Sefer ha-Moladot in Sefer ha-Moladot in Sefer ha-Moladot in Sefer ha-Mivharim I (Mivharim I/MS, ff. 108b, 109a) and Sefer ha-Še²elot I (Še²elot I/MS, ff. 63a, 63b); (c) references in the past tense in Sefer ha-Moladot I/MS, ff. 48a, 49a, 50a, 50b, 53b, 55a, 58b, 59b, 61a); (d) future-tense references in Sefer ha-Moladot I to Sefer ha-Mivharim and to Sefer ha-Še²elot (Moladot I/MS, ff. 53b, 56a).

32. Sefer ha-Me^oorot

Cross-references indicate that this work was composed after $Re^{2}šit$ hokmah but before Sefer ha-Še²elot I, and hence in 1148 at Béziers: (a) Sefer ha-Še²elot refers to Sefer ha-Me²orot in the past tense (Še²elot I/ MS, f. 66a); (b) Sefer ha-Me²orot in turn refers to Sefer Re²šit hokmah in the past tense (Me²orot/MS, f. 125b).

33. Sefer ha-Mivharim (I)

Cross-references indicate that this work was composed after Re³šit hokmah I and Sefer ha-Moladot I, but before Sefer ha-^cOlam I, and hence in 1148 at Béziers: (a) Sefer ha-Moladot I refers to Sefer ha-Mivharim in the future tense (Moladot I/MS, f. 53b); (b) Sefer ha-^cOlam I refers to Sefer ha-Mivharim in the past tense (Olam, I/MS, f. 83a); (c) Sefer ha-Mivharim I refers to both Sefer ha-Moladot and to Re³šit hokmah in the past tense (Mivharim I/MS, ff. 108a, 109a, 110a).

34. Sefer ha-Še³elot (I)

Cross-references indicate that Sefer ha-Še²elot I was composed after Re²šit hokmah I, Te^camim I, Sefer ha-Moladot I, and Sefer ha-Me²orot and hence most likely in 1148 in Béziers: (a) Sefer ha-Še²elot I refers in the past tense to Re²šit hokmah (Še²elot I/MS, ff. 62b, 63a, 67b, 68a, 70a), Sefer ha-Te^camim (ff. 63a, 63b), Sefer ha-Moladot (ff. 63a, 63b), and Sefer ha-Me²orot (f. 66a); (b) Sefer ha-Moladot I refers to Sefer ha-Še²elot in the future tense (Moladot I/MS, f. 56a).

35. Sefer ha- ^cOlam (I)

A colophon (^cOlam I [MS MBS], f. 10a) indicates that this work was completed in Marheshvan 4909 AM [= November 1148 CE]. The date of composition is given again in the body of the text as 4908 AM [= 1148 CE; see ^cOlam I (MS BNF), f. 82b]. The work (^cOlam I (MS BNF), f. 81b) uses latitude 42° 39'-the latitude of Béziers-in the description of an astronomical observation.

36. Luhot (II)

See above, No. 18. The date follows from what we know about Ibn Ezra's travels.

37. Sefer ha-cIbbur (II)

Joseph b. Eliezer mentions the name of this lost work and its place of composition in *Safenat pa^cneah*, ed. Herzog, I, p. 142. The date follows from what we know about Ibn Ezra's travels.

38. Šaloš še⁵elot

The three questions were put to Ibn Ezra by David ben Joseph of Narbonne, presumably when he was in that town; the date of composition follows indirectly. See *Three Queries*, ed. Luzzato; Fleischer, "France," p. 356; Sela, *Abraham Ibn Ezra*, pp. 44–49.

39. Sefer ha- ^cOlam (II)

Sefer ha-'Olam II refers in the past tense to Re'sit hokmah, Sefer ha-Te^camim, Sefer ha-Moladot, and Keli ha-nehošet (Colam II (MS BNF), ff. 198b, 200a), all of them probably written in 1148 in Béziers. That it was written after 1148 is confirmed by the mention of the stations of Ibn Ezra's travels: a list of all the cities through which he passed in Italy (Rome, Pisa, Lucca, Mantua, and Verona), as well as one city in southern France (Marseilles) (Colam II (MS BNF), f. 198a; Colam II (MS MBS), ff. 88b-89a); Pisa and Lucca are also mentioned as cities in which Ibn Ezra made astronomical observations for astrological purposes. The years 4902 AM [= 1142 CE] and 4908 AM [= 1148 CE] are mentioned as chronological points of reference for certain astrological calculations performed in the past (^cOlam II [MS MBS], f. 91a-91b; cf. Olam II [MS BNF], f. 199a). From all this it follows that Sefer ha-^cOlam II was composed after 1148. The absence of references to any place in northern France or to any date after 1148 suggests that Ibn Ezra composed this work while still in the Midi. The terminus ante quem is 1154, because Sefer ha-Te^camim II, which was written in that year in Rouen, refers to Sefer ha-'Olam in the past tense (Te'amim II/ MS, f. 35b-36a). See No. 42 below.

40. Sefer Re³šit hokmah (II)

The existence of this lost work, as well as its date and place of composition, is inferred from the fact that Sefer ha-Te^camim II, written in 1154 in Rouen (see No. 42 below), states that its intention is "to lay the foundation for Sefer Re³sit hokmah" (Te^camim II, ed. N. Ben Menachem, p. 1). This cannot refer to Sefer Re³sit hokmah as we know it, however, for it offer explicit quotations (on which it comments) that are not to be found in that work (or, for that matter, in any other of Ibn Ezra's extant Hebrew works). The conclusion is that just as Sefer ha-Te^camim I is a commentary on Re³sit hokmah I, so Sefer ha-Te^camim</sup> II is a commentary on a lost Re³sit hokmah II. Retrospective references

to Re³šit hokmah in Še³elot II (Še³elot II/MS, ff. 4b, 5a, 6a, 7b) seem to allude to Re³šit hokmah II. See No. 45 below.

41. Luhot (III)

Sefer ha- Te^{c} amim II includes several past-tense references to Sefer ha-Luhot and Sefer Ma^caseh ha-luhot (Te^{c} amim II/MS, ff. 27b, 29b, 36b, 38b, 39a). In the same work Ibn Ezra notes that he was asked to write these astronomical tables by the patron who commissioned Sefer Te^{c} amim II (Te^{c} amim II/MS, f. 39a). Sefer Mišpeței ha-mazzalot and Sefer ha- $Še^{-}$ elot II also refer in the past to Sefer ha-Luhot (Mišpeței hamazzalot/MS, f. 15b; $Še^{-}$ elot II/MS, ff. 7a, 8b); these are probably references to Sefer ha-Luhot III. The date and place of composition of Sefer ha-Luhot III follow from what we know about Sefer ha- Te^{c} amim II, Sefer Mišpeței ha-mazzalot, and Sefer ha- $Še^{-}$ elot II. See Nos. 42, 43, and 45 below.

42. Sefer ha-Ţe^camim (II)

The date of Sefer ha-Te^camim II may be inferred from the difference between the two correction values given in the two versions of Sefer ha-Te^camim for finding the location of the "bright degrees," the "dark degrees," and the "pits" (these are specific degrees in the zodiacal belt endowed with specific astrological qualities). According to Ibn Ezra, these locations change constantly with respect to the equinoxes, but not with respect to the zodiacal constellations. Consequently, if one wishes to locate them on the basis of astronomical tables, a correction is necessary, which takes into account the precession of the fixed stars, for which Ibn Ezra posits, in both versions of Sefer ha-Te^camim, the rate of 1° in 70 years, i.e., 51" a year. Now in parallel passages of Te^camim I and II he gives different correction values: in Te^camim I the value given is 8°, whereas in Te^camim II it is 8° 5' (Te^camim I/MS, f. 31; Te^camim</sup> II/MS, f. 39a). We assume that this difference corresponds to the precession of the fixed stars in the interval between the composition of the

two versions. Since Ibn Ezra, as noted, assumes a motion of 51" a year, the difference of 5' corresponds to roughly six years. It follows that Sefer ha-Te^camim II was written about six years after Sefer ha-Te^camim I, i.e., around 1154. See above, No. 30. As for the place, $Te^{c}amim$ II/MS, f. 31b, specifies 50° as the latitude of an astronomical observation, which corresponds approximately to the region of Rouen, where we indeed know Ibn Ezra was living in 1154. See also $Te^{c}amim$ II, ed. Ben Menahem, pp. III–XIX; on Ibn Ezra's sojourn in Rouen, see Golb, Jews of Rouen, pp. 45–66.

43. Sefer Mišpeței ha-mazzalot

The place of composition can be inferred from the mention in *Mišpeței* ha-mazzalot of an astronomical observation made with an astrolabe at latitude 50.5°, which is approximately that of Rouen (Sefer Mišpeței hamazzalot/MS, f. 16a). Mišpeței ha-mazzalot refers in the future tense to Sefer ha-Moladot (f. 25a), which is in all likelihood the lost Sefer ha-Moladot II, and in the past tense to Sefer ha-Luhot (f. 15b), which is in all likelihood the lost Luhot III. On the basis of this, the date follows from what we know about Ibn Ezra's travels. See <u>Te^camim</sup> I</u>, ed. Fleischer, esp. pp. 19–22; Steinschneider, "Abraham Ibn Esra," p. 496; Sela, Abraham Ibn Ezra, pp. 69–74; Smithuis, Ibn Ezra the Astrologer, chap. 2; No. 41 above and No. 44 below.

44. Sefer ha-Moladot (II)

The existence of this lost work, as well as its date and place of composition, is indicated by an anticipatory reference to Sefer ha-Moladot in Sefer ha- \underline{Te}^c amim II (\underline{Te}^c amim II/MS, f. 36a), written in 1154 in Rouen (see above, No. 42). A retrospective reference to Sefer ha-Moladot in Sefer ha- \underline{Se}^c elot (\underline{Se}^c elot II/MS, f. 2a-b) probably refers to the second version of the work. See No. 45 below.

45. Sefer ha-Še³elot (II)

Sefer ha-Še²elot II refers in the past tense to Sefer Re²šit hokmah (Še²elot II/MS, ff. 4b, 5a, 6a, 7b), Sefer ha-Moladot (f. 2a-b), and Sefer ha-'Olam (f. 4b). A terminological detail provides a probable terminus post quem, allowing us to assume, with some caution, that these retrospective references are to the second versions of these three works. Whereas in the works written in Béziers in 1148 Ibn Ezra systematically referred to Ptolemy using the Arabic form Batalmivūs, in two works composed in Rouen (Mispetei ha-mazzalot and Te^camim II) he employed the Hebrew form Talmay. Because this is also the form used in this version of Sefer ha-Še²elot, we may assume that it was composed in or very soon after 1154, in Rouen. See also No. 61 below. Note, however, that this onomastic distinction is not unequivocal: whereas Sefer ha-cIbbur I, written in 1146 in Verona, uses the Hebrew form Talmay ('Ibbur, pp. 8a, 9a), the second commentary on Amos (5:8 [Minor Prophets, p. 214]), written in Rouen, has Batalmiyūs, while in the translation designated Tacamei luhot al-Muthani (al-Muthannā's Commentary, p. 148), executed in England in 1160, both the Hebrew and Arabic forms are found. Yet although the use of the two versions of the name is not entirely consistent, Ibn Ezra seems to have favored the Hebrew form in later years.

46. Tractatus de astrolabio

The Latin text explicitly mentions a person named *Abraham* dictating the text to a disciple ("Ut ait philosophorum sibi contemporaneorum Abraham magister noster egregius quo dictante et hanc dispositionem astrolabii conscripsimus ..." [*Astrolabio*/MS, f. 40^r]). On the basis of striking similarities with the Hebrew versions of *Keli ha-nehošet*, it is plausible that Ibn Ezra was the author of this Latin text (*Astrolabio*, "Introduction," pp. 2–7; Sela, *Abraham Ibn Ezra*, pp. 31–36). The text gives England as the place of an astronomical observation ("si quis fuerit in Anglia cum sol fuerit a parte capricorni et uenus a sole remotissima"

[Astrolabio/MS, f. 40^v]). On this basis, Millás Vallicrosa suggested London as the place of composition (Astrolabio, "Introduction," pp. 3-4). However, this evidence is not persuasive, since England is mentioned in this passage as the equivalent to the remotest part of the ecumene, and similar references to England may be found in Sefer Keli ha-nehošet II (Keli ha-nehošet II/MS, f. 44b) and Sefer ha-'Ibbur I ('Ibbur, pp. 8-9), which were composed in northern Italy. Three passages-one in Liber de rationibus tabularum II and the other two in Liber de nativitatibusrefer the reader to a completed book on the astrolabe written by the same author for additional information about topics related to casting horoscopes. They turn out to correspond to parts of the Latin text on the astrolabe attributed to Ibn Ezra. The first passage-mentioning the ease with which it is possible to calculate the horosocopic houses with an astrolabe ("Nos vero in astrolabio docuimus facile distinguere domus" [Rationibus tabularum, p.160:23])-corresponds to a whole chapter of *de Astrolabio* which teaches the use of the astrolabe for the calculation of the horoscopic houses ("De distinctione domorum," Astrolabio, pp. 17–18). The second-mentioning a mixed methodology for the astrological procedure of "ducus," i.e., prorogation or direction ("Si feceris ductus cum ascensionibus terre vel cum ascensionibus circuli recti vel mixtis secundum quod in Astrolabio docuimus" [Nativitatibus, f. a8^r]), also has its counterpart in another passage of *de Astrolabio* ("Ductus bifarii sunt, et est unus modus cum gradibus equalibus ... alteri modo que est secundum latitudinem terre" [Astrolabio, p. 25]). The third passage-referring to the correction of the houses according to the latitude of the country ("In primis ergo secundum tabulas probationum oriente invento domos quoque secundum terre latitudinem coequa. Secundum artem a nobis in Astrolabio traditam" [Nativitatibus, f. a^{3r})-corresponds to various passages in *de Astrolabio* (Astrolabio, pp. 22, 25). This evidence strongly suggest that de Astrolabio, attributed to Ibn Ezra, was written in Rouen, and that its terminus ante quem is 1154, the date of composition of Liber de Nativitatibus and Liber de

rationibus tabularum II. Smithuis, however, is of the opinion that these passages allude to a lost version of *de Astrolabio* (Smithuis, "Science in Normandy and England," pp. 47–48).

47. Liber de rationibus tabularum (II)

The date of composition is stated explicitly (*Liber de rationibus tabularum*, p. 78): "anno 1154 ab incarnacione Domini, quo hanc edicionem fecimus." On the basis of what is known about Ibn Ezra's whereabouts at this period, Golb has inferred that the work was written in Rouen (Golb, *Jews of Rouen*, pp. 57–59). But two passages in the body of the text referring to astronomical observations indicate that it was composed in Angers. One passage names the city explicitly ("et secundum horam eclipsis solis quam Burdegali probavi, indicavi longitudinem Andegavis esse 23 graduum, et eius differenciam ad Pisam 36 minuta hore" [p. 88]); the other cites latitude 46°, which corresponds approximately to the region of Angers ("Exemplum: Ponatur caput arietis oriens in terra cuius latitude 46" [p. 160]). See *Liber de rationibus tabularum*, ed. Millás Vallicrosa, "Introduction,", pp. 11–19; Sela, *Abraham Ibn Ezra*, pp. 22–27.

48. Liber de nativitatibus

The year 1154 is mentioned as that of a conjunction of Saturn and Jupiter (*Liber de nativitatibus*, p. $3c^{v}$); this is presumably the approximate date of composition. This inference is in keeping with a reference in the past tense to the *Liber de rationibus tabularum* (p. $3a^{r}$). See above, No. 47. The place of composition follows from what we know about Ibn Ezra's travels. See Steinschneider, "Abraham Ibn Esra," p. 497; Golb, *Jews of Rouen*, p. 57; Sela, *Abraham Ibn Ezra*, pp. 62–64; Smithuis, *Ibn Ezra the Astrologer*, chapter 4.

49. Sefer Yesod mispar

This treatise, a study of the Hebrew letters used as numerals, refers

retrospectively to Sefer ha-Šem, written in 1148 in Béziers (Yesod mispar, p. 140) and to the commentary on Isaiah, written at Lucca (p. 151). A plausible terminus ante quem is given by a reference in the past tense in the second commentary on Daniel (6:4), written in 1155 (see Yesod mispar, pp. 167-168). That Yesod mispar was written in Rouen is also indicated by the fact that it includes a reference to "R. Marinus" (p. 151). Whereas this is the sole designation for the grammarian Jonah Ibn Ianah in the works Ibn Ezra wrote in Rouen (see, inter alia, the commentaries on Hos. 2:14, Joel 1:17, and Amos 3:15, and the second commentaries on Gen. 3:8, Ex. 1:10, Ps. 1:10, Dan. 2:8, and Esth. 6:8), he is systematically referred to as "R. Jonah" in the works written in Italy (e.g., the commentaries on Eccles. 9:12, Ruth 3:16, Job 4:1, Isa. 5:14, Gen. 3:8 (II), Lev. 6:14, Num. 7:72, Deut. 12:2). See Friedlander, Essays, pp. 150-51; but Simon (Four Approaches, pp. 149-50) rejects Friedlander's methodology for distinguishing between Ibn Ezra's works written in Italy and France.

50. Commentary on Esther (II)

According to Friedlander (*Essays*, pp. 185–86), the text printed by Zedner is the second version of the commentary, composed in France. See also Golb, *Jews of Rouen*, p. 55. The *terminus ante quem* is given by a reference to the commentary on Esther in the commentary on Daniel (2:49). See also Walfish, "Two Commentaries," pp. 323–42, esp. p. 324, and No. 2 above. The place of composition follows from what we know about Ibn Ezra's travels.

51. (Long) Commentary on Daniel (II)

According to the colophon, the commentary was completed in Marheshvan 4916 AM [= October, 1155] in RDWM, RDWS, or DRWS (רדום, רדום, a Hebrew toponym that has been persuasively identified by N. Golb as Rouen (Golb, *Jews of Rouen*, pp. 45– 52). See also Friedlander, *Essays*, p. 194. For Rouen as the place

of composition, see also the comment on Dan. 1:1. This commentary refers in the past tense to the commentaries on Esther (2:49) and Deuteronomy (12:7), to Sefer ha-Mispar (6:4) and to Sefer ha-Šem (7:14). The second commentary on Genesis (12:9) in turn refers in the past tense to the commentary on Daniel. See Nos. 17, 27, and 52. This version of the commentary on Daniel is the one printed in the standard Miqra³ ot gedolot.

52. (Long) Commentary on Genesis (II)

The terminus post quem follows from the fact that the second commentary on Genesis (grammatical section, on 12:9) refers to the commentary on Daniel in the past tense. The terminus ante quem is given by the fact that the long commentary on Exodus (32:16) and the standard commentary (II) on Psalms (136:6) refer to the commentary on Genesis in the past tense. (Given the temporal proximity we assume the reference is to this commentary.) See also Friedlander, Essays, pp. 160–61.

53. Commentary on Psalms (II)

A colophon states that this work was composed on 14 Elul 4916 AM [= September 1, 1156] at RDWM=Rouen. See Friedlander, *Essays*, pp. 169-74; Ochs, "Die Wiederherstellung," p. 197; Golb, *Jews of Rouen*, p. 52; Simon, *Four Approaches*, pp. 146-47. The commentary refers to *Sefer ha-Šem* (9:1, 80:20) and to the commentary on Genesis (136:6) in the past tense. This is the version of the commentary on Psalms printed in the standard *Miqra³ot gedolot*.

54. Commentary on Song of Songs (II)

This version of the commentary-the second-is distinct from the first version, published in Mathews' edition, which was composed in Italy. See above, No. 8; Friedlander, *Essays*, pp. 181-82; Golb, *Jews of Rouen*, p. 55. The *terminus post quem* is given by a past-tense reference in this

commentary (6:5) to the commentary on Daniel (see above, No. 51). The *terminus ante quem* is given by past-tense references to it in the commentaries on Zechariah (2:14; see below, No. 56) and Joel (4:13). This is the version of the commentary on *Song of Songs* printed in the standard *Miqra*³ot gedolot.

55. (Long) Commentary on Exodus (II)

Rouen as the place of composition is indicated in the commentary itself (on Ex. 12:2): הנה בין ירושלים ובין העיר הזאת ששמה רדום יותר מג׳ שעות (Now between Jerusalem and this city, whose name is Rouen, there are three hours.); see Commentary on Exodus ha-Keter, p. 78; Golb, Jews of Rouen, fig. 10 (following p. 84). The date follows from what we know about Ibn Ezra's travels and is confirmed by the terminus post quem, which follows from retrospective references in this commentary to Sefer ha-Šem (12:6) and to the commentaries on Psalms (20:8), Genesis (32:16) and Daniel (32:32). The colophon in one manuscript (BNF, MS héb. 176) gives 5913 AM [=1153 CE] as the year in which this commentary was completed, but this is incompatible with the data presented above; hence the colophon, written in a different hand than the commentary itself, seems to be unreliable (although accepted by Simon, Four Approaches, pp. 146-47). See Fleischer, "France," p. 46; Golb, Jews of Rouen, pp. 23 n. 68, and p. 52.

56. Commentary on the Minor Prophets (II)

According to a colophon, this work was completed on Rosh Hodesh Tevet, 4917 A.M [= December 16, 1156 CE] in Rouen. See Friedlander, *Essays*, pp. 166–68; Golb, *Jews of Rouen*, p. 24; *Commentary on Minor Prophets*, ed. Simon, "Introduction," p. 11. This series of commentaries includes references in the past tense to the commentaries on Psalms (Hab. 3:1), on Song of Songs (Zech. 2:14, Joel 4:13), and on Daniel

(Zech. 11:15). This is the version of the commentary on Minor Prophets printed in the standard *Miqra^oot gedolot*.

57. Commentary on Genesis (III)

Two fragments of this commentary survive, covering sections of the weekly portions of Wayyišlah (Gen. 35:1-26) and Wayhi (Gen. 47:28-49:10). The colophons of both fragments state that the commentary was taken down in London by R. Joseph b. Jacob of Maudeville in his own words, but that their substance is Ibn Ezra's. For the first fragment see Friedlander, *Essays*, p. 204 and pp. 65-68 (Hebrew section); for the second fragment see Mondschein, שיטה שלישיה, pp. 167-79 and *Commentary on Genesis ha-Keter*, pp. 163-76. Ibn Ezra dedicated the monograph Sefer Yesod mora³ to R. Joseph b. Jacob of Maudeville, his patron and disciple. See No. 58 below.

58. Sefer Yesod mora?

Whereas the colophon of one manuscript (Oxford, Bodleian Library 1254) states that this work was composed in London (לונדריש) within four weeks in Tammuz-Av 4918 AM [=June-July 1158], the colophon of another manuscript (Parma 2217 [De Rossi 314]) states that it was composed in a place that is probably London (ששנדירש), but a year later, in Tammuz-Av 4919 AM [=June-July 1159]. This monograph was dedicated to R. Joseph b. Jacob of Maudeville (see above, No. 57). See Yesod Mora, ed. Cohen and Simon, pp. 16–17, 23; Friedlander, "Ibn Ezra in England," pp. 48–52; Fleischer, England, pp. 75–76, 107–111.

59. ³Iggeret ha-šabbat

"Friday midnight, the fourteenth day of the month of Tevet of the year 4919" (i.e., Dec. 6, 1158) is indicated in the opening sentence as the time of Ibn Ezra's dream that triggered the composition of ³Iggeret ha-Šabbat. Ibn Ezra adds that he was "in one of the cities of

the island called Angleterre, which is situated in the seventh among the climates of the inhabited part of the earth" (³Iggeret ha-Šabbat, ed. Friedlander, p. 61). See Fleischer, "England," pp. 129-33, 160-66; Friedlander, "Ibn Ezra in England," pp. 52-60; Sela, Abraham Ibn Ezra, pp. 49-57.

60. Ța^camei luhot al-Muthani

The year 1160 is indicated in the introduction to the work; the place follows from the assumption that Ibn Ezra did not leave England after writing ³Iggeret ha-Šabbat. See Al-Muthannā's Commentary, ed. Goldstein, pp. 300-302. See also Steinschneider, "Abraham Ibn Esra," p. 497; Sela, Abraham Ibn Ezra, pp. 75-78.

1. Sefer ha-Mivharim (II)

The dating of Sefer ha-Mivharim II is difficult because there are no cross-references between it and Ibn Ezra's other works. However, the fact that it consistently uses the Hebrew form *Talmay* rather than the Arabic form *Bațalmiyūs* for Ptolemy seems to indicate that it was composed in Rouen. See above, No. 45.

62. Sefer ha-Moladot (III), Tequfot (ha-šanim), Sefer ha-Mivharim (III), Sefer ha-Še³elot (III)

Four Latin treatises (*Liber nativitatum*, *Liber revolucionum*, *Liber eleccionum*, and *Liber interrogacionum*) have recently been identified by R. Smithuis as translations of lost Hebrew astrological works by Ibn Ezra. According to her, the Hebrew originals of all four were composed after 1148. See Smithuis, *Ibn Ezra the Astrologer*, chap. 2, esp. pp. 163-68; eadem, "New Discoveries."

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BNF: Paris, Bibliothèque nationale de France

IMHM: Institute for Microfilmed Hebrew Manuscripts, Jewish National and University Library, Jerusalem.

MCI: Mantua, Comunità Israelitica

MBS: Munich, Bayerische Staatsbibliothek

VAV: Vatican, Biblioteca Apostolica Vaticana

WŽIH: Warsaw, Żydowski Instytut Historyczny

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