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Eclipse Prediction in Mesopotamia

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In this table, dates of eclipses which were (at least partly) visible in Babylon are indicated in bold.⁴¹ There is no distinction between dates of eclipses not visible because they occurred during the daytime, and those dates when there was no umbral eclipse. Dates of eclipse possibilities for which we have a record in an NMAT source are underlined, and those where we have an explicit statement of the five month interval are in italics (a number of other five month intervals are implicitly determined by the dates of the recorded eclipses). The layout of the five month intervals between groups of eclipses is illustrated by the empty rows in the table.⁴² It should be noted that this distribution of the eclipse possibilities comes naturally from the observable eclipses in the very first column of the table. If one assumes that the first eclipse in a group is the first eclipse that is visible after an interval of $6n - 1$ months from the preceding visible eclipse, and that the two groups containing only seven eclipse possibilities do not come immediately after one another, then there is no option but to choose the distribution given here.

Table 2. Distribution of lunar eclipse possibilities over the Late Babylonian period

	1	2	3	4	5	6
1	<u>-746 Feb 6</u>	-728 Feb 17	-710 Feb 27	-692 Mar 10	-674 Mar 21	-656 Mar 31
2	-746 Aug 2	-728 Aug 12	-710 Aug 23	-692 Sep 3	-674 Sep 14	-656 Sep 24
3	<u>-745 Jan 26</u>	-727 Feb 5	-709 Feb 16	-691 Feb 27	-673 Mar 10	-655 Mar 20
4	<u>-745 Jul 22</u>	-727 Aug 2	-709 Aug 13	-691 Aug 23	-673 Sep 4	-655 Sep 14
5	<u>-744 Jan 15</u>	-726 Jan 25	-708 Feb 6	-690 Feb 16	-672 Feb 27	-654 Mar 10
6	<u>-744 Jul 11</u>	-726 Jul 22	-708 Aug 1	-690 Aug 12	-672 Aug 23	-654 Sep 3
7	-743 Jan 3	-725 Jan 15	-707 Jan 25	-689 Feb 6	-671 Feb 16	-653 Feb 27
8	-743 Jun 30	-725 Jul 11	-707 Jul 21	-689 Aug 2	-671 Aug 12	-653 Aug 23
9	-743 Nov 25	-725 Dec 6	-707 Dec 16	-689 Dec 28	-670 Jan 7	-652 Jan 19
10	-742 May 20	-724 May 31	-706 Jun 11	-688 Jun 21	-670 Jul 2	-652 Jul 13
11	-742 Nov 14	-724 Nov 25	-706 Dec 6	-688 Dec 16	-670 Dec 28	-651 Jan 7
12	-741 May 10	-723 May 20	-705 May 31	-687 Jun 11	-669 Jun 22	<u>-651 Jul 2</u>
13	-741 Nov 3	-723 Nov 14	-705 Nov 25	-687 Dec 5	-669 Dec 17	<u>-651 Dec 27</u>
14	-740 Apr 28	-722 May 10	-704 May 20	-686 May 31	-668 Jun 11	-650 Jun 22
15	-740 Oct 22	-722 Nov 3	-704 Nov 13	-686 Nov 24	-668 Dec 5	-650 Dec 16
16	-739 Mar 20	-721 Mar 31	-703 Apr 10	<u>-685 Apr 22</u>	<u>-667 May 2</u>	<u>-649 May 13</u>
17	-739 Sep 12	-721 Sep 23	-703 Oct 3	<u>-685 Oct 15</u>	<u>-667 Oct 25</u>	<u>-649 Nov 6</u>
18	-738 Mar 9	-720 Mar 19	-702 Mar 31	-684 Apr 10	-666 Apr 21	-648 May 2
19	-738 Sep 1	-720 Sep 12	-702 Sep 23	-684 Oct 3	-666 Oct 15	-648 Oct 25
20	-737 Feb 26	-719 Mar 9	<u>-701 Mar 20</u>	<u>-683 Mar 30</u>	-665 Apr 10	-647 Apr 21
21	-737 Aug 22	-719 Sep 1	-701 Sep 13	-683 Sep 23	-665 Oct 4	-647 Oct 15
22	-736 Feb 15	-718 Feb 26	-700 Mar 8	-682 Mar 19	-664 Mar 29	-646 Apr 10
23	-736 Aug 11	-718 Aug 22	-700 Sep 1	-682 Sep 13	-664 Sep 23	-646 Oct 4
24	-735 Jan 5	-717 Jan 16	-699 Jan 27	-681 Feb 7	-663 Feb 17	-645 Mar 1
25	-735 Jul 1	-717 Jul 13	-699 Jul 23	-681 Aug 3	-663 Aug 14	-645 Aug 25
26	-735 Dec 25	-716 Jan 6	-698 Jan 16	-680 Jan 28	-662 Feb 7	-644 Feb 18
27	-734 Jun 21	-716 Jul 1	-698 Jul 12	-680 Jul 22	-662 Aug 3	-644 Aug 13
28	-734 Dec 15	-716 Dec 25	-697 Jan 6	-679 Jan 16	-661 Jan 28	-643 Feb 7
29	-733 Jun 10	-715 Jun 20	-697 Jul 1	-679 Jul 11	-661 Jul 23	-643 Aug 2
30	-733 Dec 5	-715 Dec 15	-697 Dec 26	-678 Jan 6	-660 Jan 17	-642 Jan 27
31	-732 Apr 30	-714 May 11	-696 May 21	-678 Jun 2	-660 Jun 12	-642 Jun 23
32	-732 Oct 24	-714 Nov 4	-696 Nov 15	-678 Nov 26	-660 Dec 6	-642 Dec 18
33	-731 Apr 19	-713 May 1	-695 May 11	-677 May 22	-659 Jun 2	-641 Jun 13
34	-731 Oct 13	-713 Oct 24	-695 Nov 4	-677 Nov 15	-659 Nov 25	-641 Dec 7
35	-730 Apr 9	<u>-712 Apr 19</u>	<u>-694 May 1</u>	<u>-676 May 11</u>	-658 May 22	-640 Jun 2
36	-730 Oct 2	<u>-712 Oct 13</u>	-694 Oct 24	-676 Nov 3	-658 Nov 15	-640 Nov 25
37	-729 Mar 30	-711 Apr 9	-693 Apr 20	-675 Apr 30	-657 May 12	-639 May 22
38	-729 Sep 22	-711 Oct 2	-693 Oct 13	-675 Oct 24	-657 Nov 4	-639 Nov 15

Table 2. (Cont.)

	7	8	9	10	11	12
1	-638 Apr 11	-620 Apr 22	<u>-602 May 3</u>	-584 May 13	-566 May 25	-548 Jun 4
2	-638 Oct 6	-620 Oct 16	<u>-602 Oct 26</u>	-584 Nov 7	-566 Nov 18	-548 Nov 29
3	-637 Apr 1	-619 Apr 11	<u>-601 Apr 22</u>	-583 May 2	-565 May 14	-547 May 24
4	-637 Sep 25	-619 Oct 6	<u>-601 Oct 17</u>	-583 Oct 27	-565 Nov 8	-547 Nov 18
5	-636 Mar 20	-618 Mar 31	<u>-600 Apr 11</u>	-582 Apr 22	-564 May 2	-546 May 14
6	-636 Sep 13	-618 Sep 25	<u>-600 Oct 5</u>	-582 Oct 16	-564 Oct 27	-546 Nov 7
7	-635 Mar 10	-617 Mar 21	<u>-599 Mar 31</u>	-581 Apr 12	-563 Apr 22	-545 May 3
8	-635 Sep 2	-617 Sep 14	<u>-599 Sep 24</u>	-581 Oct 5	-563 Oct 16	-545 Oct 27
9	-634 Jan 29	-616 Feb 9	<u>-598 Feb 20</u>	-580 Mar 2	<u>-562 Mar 13</u>	-544 Mar 24
10	-634 Jul 24	-616 Aug 3	<u>-598 Aug 15</u>	-580 Aug 25	<u>-562 Sep 5</u>	-544 Sep 16
11	-633 Jan 18	-615 Jan 29	-597 Feb 9	-579 Feb 19	<u>-561 Mar 3</u>	-543 Mar 13
12	-633 Jul 14	-615 Jul 24	-579 Aug 4	<u>-579 Aug 15</u>	-561 Aug 26	-543 Sep 5
13	-632 Jan 7	-614 Jan 18	-596 Jan 29	<u>-578 Feb 8</u>	-560 Feb 20	-542 Mar 2
14	-632 Jul 2	-614 Jul 14	-595 Jul 24	<u>-578 Aug 4</u>	-560 Aug 15	-542 Aug 26
15	-632 Dec 26	-613 Jan 7	-595 Jan 17	<u>-577 Jan 28</u>	-559 Feb 8	-541 Feb 19
16	<u>-631 May 24</u>	-613 Jun 4	-595 Jun 14	<u>-577 Jun 25</u>	-559 Jul 9	-541 Jul 17
17	-631 Nov 16	-613 Nov 27	-595 Dec 8	<u>-577 Dec 19</u>	-559 Dec 29	-540 Jan 10
18	-630 May 13	-612 May 23	-594 Jun 3	<u>-576 Jun 14</u>	-558 Jun 25	-540 Jul 5
19	-630 Nov 5	-612 Nov 16	<u>-594 Nov 27</u>	<u>-576 Dec 8</u>	-558 Dec 19	-540 Dec 29
20	-629 May 2	-611 May 12	<u>-593 May 23</u>	<u>-575 Jun 3</u>	-557 Jun 14	-539 Jun 24
21	-629 Oct 26	<u>-611 Nov 5</u>	<u>-593 Nov 17</u>	-575 Nov 27	-557 Dec 9	-539 Dec 19
22	-628 Apr 20	-610 May 1	<u>-592 May 12</u>	-574 May 23	-556 Jun 2	-538 Jun 13
23	-628 Oct 15	-610 Oct 26	<u>-592 Nov 5</u>	-574 Nov 17	-556 Nov 27	-538 Dec 8
24	-627 Mar 11	-609 Mar 22	<u>-591 Apr 2</u>	-573 Apr 13	-555 Apr 23	-537 May 5
25	-627 Sep 4	<u>-609 Sep 16</u>	<u>-591 Sep 26</u>	-573 Oct 7	-555 Oct 17	-537 Oct 29
26	-626 Mar 1	-608 Mar 11	<u>-590 Mar 22</u>	-572 Apr 2	-554 Apr 13	<u>-536 Apr 23</u>
27	-626 Aug 24	-608 Sep 4	-590 Sep 15	<u>-572 Sep 25</u>	<u>-554 Oct 6</u>	<u>-536 Oct 17</u>
28	-625 Feb 18	<u>-607 Mar 1</u>	<u>-589 Mar 12</u>	<u>-571 Mar 22</u>	-553 Apr 3	-535 Apr 13
29	-625 Aug 13	-607 Aug 24	<u>-589 Sep 4</u>	-571 Sep 14	-553 Sep 26	-535 Oct 6
30	-624 Feb 8	-606 Feb 18	<u>-588 Feb 29</u>	-570 Mar 12	-552 Mar 22	-534 Apr 2
31	-624 Jul 4	-606 Jul 15	<u>-588 Jul 25</u>	-570 Aug 5	-552 Aug 16	-534 Aug 27
32	-624 Dec 28	-605 Jan 8	<u>-587 Jan 19</u>	-569 Jan 30	-551 Feb 9	-533 Feb 21
33	-623 Jun 23	-605 Jul 5	<u>-587 Jul 15</u>	-569 Jul 26	-551 Aug 6	-533 Aug 17
34	-623 Dec 17	-605 Dec 28	<u>-586 Jan 8</u>	-568 Jan 19	-550 Jan 29	-532 Feb 10
35	-622 Jun 13	-604 Jun 23	<u>-586 Jul 4</u>	-568 Jul 15	-550 Jul 26	-532 Aug 5
36	-622 Dec 6	-604 Dec 17	-586 Dec 28	-567 Jan 7	-549 Jan 19	-531 Jan 29
37	-621 Jun 2	<u>-603 Jun 13</u>	-585 Jun 24	<u>-567 Jul 4</u>	-549 Jul 15	-531 Jul 26
38	-621 Nov 26	<u>-603 Dec 6</u>	-585 Dec 18	<u>-567 Dec 28</u>	-548 Jan 8	-530 Jan 19

Table 2. (Cont.)

	13	14	15	16	17	18
1	-530 Jun 15	-512 Jun 25	-494 Jul 7	-476 Jul 17	-458 Jul 28	-440 Aug 7
2	-530 Dec 10	-512 Dec 20	-493 Jan 1	-475 Jan 11	-457 Jan 22	-439 Feb 2
3	-529 Jun 4	-511 Jun 15	-493 Jun 26	-475 Jul 6	-457 Jul 17	-439 Jul 28
4	-529 Nov 29	-511 Dec 10	-493 Dec 21	-475 Dec 31	-456 Jan 12	-438 Jan 22
5	-528 May 24	-510 Jun 4	-492 Jun 14	-474 Jun 26	-456 Jul 6	-438 Jul 17
6	-528 Nov 17	-510 Nov 29	-492 Dec 9	-474 Dec 20	-456 Dec 31	-437 Jan 11
7	-527 May 14	-509 May 25	-491 Jun 4	-473 Jun 15	-455 Jun 26	-437 Jul 7
8	<u>-527 Nov 6</u>	-509 Nov 18	-491 Nov 28	-473 Dec 9	-455 Dec 20	-437 Dec 31
9	<u>-526 Apr 4</u>	-508 Apr 14	-490 Apr 25	-472 May 6	-454 May 17	-436 May 27
10	<u>-526 Sep 27</u>	-508 Oct 7	-490 Oct 19	-472 Oct 29	-454 Nov 9	-436 Nov 20
11	<u>-525 Mar 24</u>	-507 Apr 3	-489 Apr 15	-471 Apr 25	-453 May 6	-435 May 17
12	-525 Sep 17	-507 Sep 27	-489 Oct 8	-471 Oct 19	-453 Oct 30	-435 Nov 9
13	-524 Mar 12	-506 Mar 24	-488 Apr 3	-470 Apr 14	-452 Apr 24	-434 May 6
14	-524 Sep 5	-506 Sep 17	-488 Sep 27	-470 Oct 8	-452 Oct 19	-434 Oct 30
15	-523 Mar 1	-505 Mar 13	-487 Mar 23	-469 Apr 3	-451 Apr 13	-433 Apr 25
16	-523 Jul 27	-505 Aug 8	-487 Aug 18	-469 Aug 29	-451 Sep 9	-433 Sep 20
17	-522 Jan 20	-504 Jan 31	-486 Feb 11	-468 Feb 22	-450 Mar 4	-432 Mar 15
18	-522 Jul 16	-504 Jul 27	-486 Aug 7	-468 Aug 17	-450 Aug 29	-432 Sep 8
19	-521 Jan 10	-503 Jan 20	-485 Jan 31	-467 Feb 11	-449 Feb 22	-431 Mar 4
20	-521 Jul 5	-503 Jul 16	-485 Jul 27	-467 Aug 6	-449 Aug 18	-431 Aug 28
21	-521 Dec 30	-502 Jan 10	-484 Jan 21	-466 Jan 31	-448 Feb 12	-430 Feb 22
22	-520 Jun 24	-502 Jul 5	-484 Jul 15	-466 Jul 27	-448 Aug 6	-430 Aug 17
23	-520 Dec 19	-502 Dec 30	-483 Jan 10	-465 Jan 21	-447 Jan 31	-429 Feb 12
24	-519 May 15	-501 May 26	-483 Jun 5	-465 Jun 17	-447 Jun 27	-429 Jul 8
25	-519 Nov 8	-501 Nov 19	-483 Nov 30	-465 Dec 11	-447 Dec 22	-428 Jan 2
26	-518 May 5	-500 May 15	-482 May 26	-464 Jun 5	-446 Jun 17	-428 Jun 27
27	<u>-518 Oct 28</u>	-500 Nov 7	-482 Nov 19	-464 Nov 29	-446 Dec 11	-428 Dec 21
28	-517 Apr 24	-499 May 4	-481 May 16	-463 May 26	-445 Jun 6	-427 Jun 17
29	-517 Oct 17	-499 Oct 28	-481 Nov 8	-463 Nov 18	-445 Nov 30	-427 Dec 10
30	-516 Apr 13	-498 Apr 24	-480 May 4	-462 May 15	-444 May 26	-426 Jun 6
31	-516 Sep 7	-498 Sep 18	-480 Sep 28	-462 Oct 10	-444 Oct 20	-426 Oct 31
32	-515 Mar 3	-497 Mar 14	-479 Mar 25	-461 Apr 5	-443 Apr 15	-425 Apr 26
33	-515 Aug 27	-497 Sep 8	-479 Sep 18	-461 Sep 29	-443 Oct 10	-425 Oct 21
34	-514 Feb 20	-496 Mar 2	-478 Mar 14	-460 Mar 24	-442 Apr 4	-424 Apr 15
35	-514 Aug 17	-496 Aug 27	-478 Sep 7	-460 Sep 18	-442 Sep 29	-424 Oct 9
36	-513 Feb 9	-495 Feb 20	-477 Mar 3	-459 Mar 13	-441 Mar 25	-423 Apr 4
37	-513 Aug 8	-495 Aug 16	-477 Aug 28	-459 Sep 7	-441 Sep 18	-423 Sep 28
38	-512 Jan 30	-494 Feb 9	-476 Feb 21	-458 Mar 3	-440 Mar 13	-422 Mar 25

Table 2. (Cont.)

	19	20	21	22	23	24
1	<u>-422 Aug 19</u>	-404 Aug 29	-386 Sep 9	-368 Sep 20	-350 Oct 1	-332 Oct 11
2	<u>-421 Feb 13</u>	-403 Feb 23	-385 Mar 7	-367 Mar 17	-349 Mar 28	-331 Apr 8
3	-421 Aug 8	-403 Aug 18	-385 Aug 30	-367 Sep 9	-349 Sep 20	-331 Oct 1
4	<u>-420 Feb 2</u>	<u>-402 Feb 13</u>	-384 Feb 24	<u>-366 Mar 6</u>	<u>-348 Mar 17</u>	-330 Mar 28
5	<u>-420 Jul 28</u>	-402 Aug 8	-384 Aug 18	-366 Aug 30	-348 Sep 9	-330 Sep 20
6	-419 Jan 21	-401 Feb 2	-383 Feb 12	<u>-365 Feb 23</u>	-347 Mar 6	-329 Mar 17
7	-419 Jul 17	-401 Jul 29	-383 Aug 8	-365 Aug 19	-347 Aug 30	-329 Sep 10
8	-418 Jan 10	-400 Jan 22	-382 Feb 1	-364 Feb 12	-346 Feb 23	-328 Mar 5
9	-418 Jun 8	-400 Jun 18	<u>-382 Jun 29</u>	-364 Jul 9	-346 Jul 21	-328 Jul 31
10	-418 Dec 1	-400 Dec 11	<u>-382 Dec 23</u>	-363 Jan 2	-345 Jan 14	<u>-327 Jan 24</u>
11	-417 May 28	-399 Jun 7	<u>-381 Jun 18</u>	<u>-363 Jun 29</u>	-345 Jul 10	<u>-327 Jul 20</u>
12	<u>-417 Nov 21</u>	-399 Dec 1	<u>-381 Dec 12</u>	<u>-363 Dec 23</u>	-344 Jan 3	-326 Jan 14
13	-416 May 16	-398 May 27	-380 Jun 6	<u>-362 Jun 18</u>	-344 Jun 28	<u>-326 Jul 9</u>
14	-416 Nov 9	-398 Nov 21	-380 Dec 1	<u>-362 Dec 12</u>	-344 Dec 23	-325 Jan 3
15	-415 May 5	-397 May 16	-379 May 17	<u>-361 Jun 7</u>	-343 Jun 17	-325 Jun 28
16	-415 Sep 30	<u>-397 Oct 12</u>	<u>-379 Oct 22</u>	-361 Nov 2	-343 Nov 13	-325 Nov 24
17	<u>-414 Mar 26</u>	-396 Apr 5	<u>-378 Apr 17</u>	-360 Apr 27	-342 May 8	<u>-324 May 19</u>
18	-414 Sep 19	-396 Sep 30	<u>-378 Oct 11</u>	-360 Oct 21	-342 Nov 2	-324 Nov 12
19	<u>-413 Mar 16</u>	<u>-395 Mar 26</u>	<u>-377 Apr 6</u>	<u>-359 Apr 17</u>	-341 Apr 28	-323 May 8
20	-413 Sep 8	-395 Sep 19	-377 Sep 30	-359 Oct 10	-341 Oct 22	-323 Nov 1
21	-412 Mar 4	-394 Mar 16	-376 Mar 26	-358 Apr 6	-340 Apr 17	-322 Apr 28
22	-412 Aug 28	-394 Sep 8	-376 Sep 18	-358 Sep 30	-340 Oct 10	-322 Oct 21
23	-411 Feb 22	-393 Mar 5	-375 Mar 15	-357 Mar 27	-339 Apr 6	<u>-321 Apr 17</u>
24	-411 Jul 19	-393 Jul 30	-375 Aug 9	-357 Aug 21	-339 Aug 31*	-321 Sep 11*
25	-410 Jan 12	-392 Jan 23	-374 Feb 3	<u>-356 Feb 14</u>	-338 Feb 24	-320 Mar 7
26	-410 Jul 8	-392 Jul 19	-374 Jul 30	-356 Aug 9	-338 Aug 21	-320 Aug 31
27	-409 Jan 1	-391 Jan 12	-373 Jan 23	-355 Feb 2	-337 Feb 14	-319 Feb 24
28	<u>-409 Jun 28</u>	-391 Jul 8	-373 Jul 20	-355 Jul 30	-337 Aug 10	-319 Aug 20
29	<u>-409 Dec 22</u>	-390 Jan 1	-372 Jan 12	-354 Jan 23	-336 Feb 3	-318 Feb 13
30	<u>-408 Jun 16</u>	-390 Jun 28	-372 Jul 8	-354 Jul 19	-336 Jul 29	-318 Aug 10
31	<u>-408 Nov 11</u>	-390 Nov 22	-372 Dec 2	-354 Dec 14	-336 Dec 24	-317 Jan 5
32	<u>-407 May 7</u>	-389 May 18	-371 May 28	-353 Jun 9	-335 Jun 19	-317 Jun 30
33	<u>-407 Oct 31</u>	-389 Nov 12	-371 Nov 22	-353 Dec 3	-335 Dec 14	-317 Dec 25
34	-406 Apr 26	-388 May 6	-370 May 17	-352 May 28	-334 Jun 8	-316 Jun 18
35	<u>-406 Oct 21</u>	<u>-388 Oct 31</u>	<u>-370 Nov 11</u>	<u>-352 Nov 22</u>	<u>-334 Dec 3</u>	<u>-316 Dec 13</u>
36	<u>-405 Apr 15</u>	-387 Apr 26	-369 May 7	-351 May 17	<u>-333 May 29</u>	-315 Jun 8
37	<u>-405 Oct 10</u>	-387 Oct 20	-369 Oct 31	-351 Nov 11	-333 Nov 22	-315 Dec 2
38	-404 Apr 4	-386 Apr 15	-368 Apr 26	-350 May 7	-332 May 17	-314 May 29

Table 2. (Cont.)

	25	26	27	28	29	30
				-260 Dec 23	-241 Jan 4	-223 Jan 14
1	-314 Oct 23	-296 Nov 2	<u>-278 Nov 13</u>			
2	-313 Apr 19	-295 Apr 29	<u>-277 May 11</u>	-259 May 21	<u>-241 Jun 1</u>	-223 Jun 11
3	-313 Oct 12	-295 Oct 22	<u>-277 Nov 3</u>	-259 Nov 13	-241 Nov 25	-223 Dec 5
4	-312 Apr 7	-294 Apr 18	-276 Apr 29	-258 May 10	-240 May 20	-222 Jun 1
5	-312 Oct 1	-294 Oct 12	-276 Oct 22	-258 Nov 3	-240 Nov 13	-222 Nov 25
6	-311 Mar 27	-293 Apr 8	-275 Apr 18	-257 Apr 29	-239 May 9	-221 May 21
7	-311 Sep 20	-293 Oct 2	-275 Oct 12	-257 Oct 23	<u>-239 Nov 3</u>	-221 Nov 14
8	-310 Mar 16	-292 Mar 27	-274 Apr 7	-256 Apr 17	-238 Apr 28	-220 May 9
				-256 Oct 12	-238 Oct 23	-220 Nov 3
9	-310 Aug 11	-292 Aug 22	-274 Sep 2			
10	-309 Feb 4	-291 Feb 15	-273 Feb 26	-255 Mar 8	-237 Mar 20	-219 Mar 30
11	-309 Jul 31	<u>-291 Aug 11</u>	-273 Aug 22	-255 Sep 1	-237 Sep 14	-219 Sep 23
12	-308 Jan 25	-290 Feb 4	-272 Feb 16	-254 Feb 26	-236 Mar 8	-218 Mar 20
13	-308 Jul 20	-290 Jul 31	-272 Aug 10	-254 Aug 21	-236 Sep 1	-218 Sep 12
14	-307 Jan 14	-289 Jan 25	-271 Feb 4	-253 Feb 16	-235 Feb 26	-217 Mar 9
15	-307 Jul 9	-289 Jul 20	-271 Jul 30	-253 Aug 11	-235 Aug 21	-217 Sep 1
				-252 Feb 5	-234 Feb 15	-216 Feb 27
16	-307 Dec 4	-289 Dec 16	-271 Dec 26	-252 Jul 30	-234 Aug 11	-216 Aug 21
17	-306 May 30	-288 Jun 9	-270 Jun 21			
18	-306 Nov 23	-288 Dec 4	-270 Dec 15	-252 Dec 25	-233 Jan 6	-215 Jan 16
19	-305 May 20	-287 May 30	-269 Jun 10	-251 Jun 21	-233 Jul 2	-215 Jul 12
20	-305 Nov 12	-287 Nov 23	-269 Dec 4	-251 Dec 14	-233 Dec 26	<u>-214 Jan 5</u>
21	-304 May 8	-286 May 20	-268 May 30	-250 Jun 10	-232 Jun 20	-214 Jul 4
22	-304 Nov 1	-286 Nov 12	-268 Nov 22	-250 Dec 4	<u>-232 Dec 14</u>	-214 Dec 25
23	-303 Apr 28	-285 May 9	-267 May 19	-249 May 30	-231 Jun 10	-213 Jun 21
				-249 Nov 23	-231 Dec 4	-213 Dec 15
24	-303 Sep 22	-285 Oct 3*	-267 Oct 13			
25	-302 Mar 18	-284 Mar 28	-266 Apr 9	<u>-248 Apr 19</u>	<u>-230 Apr 30</u>	-212 May 10
26	-302 Sep 11	-284 Sep 22	-266 Oct 3	<u>-248 Oct 13</u>	-230 Oct 25	-212 Nov 4
27	<u>-301 Mar 7</u>	-283 Mar 17	-265 Mar 29	-247 Apr 8	-229 Apr 19	-211 Apr 30
28	-301 Sep 1	-283 Sep 11	-265 Sep 22	-247 Oct 3	-229 Oct 14	-211 Oct 24
29	-300 Feb 25	-282 Mar 7	-264 Mar 17	-246 Mar 29	-228 Apr 8	-210 Apr 19
30	-300 Aug 20	-282 Aug 31	-264 Sep 11	<u>-246 Sep 22</u>	-228 Oct 2	-210 Oct 14
				-245 Mar 18	-227 Mar 29	-209 Apr 9
31	-299 Jan 15	-281 Jan 26*	-263 Feb 6	<u>-245 Sep 11</u>	-227 Sep 21	-209 Oct 3
32	-299 Jul 10	-281 Jul 22	-263 Aug 1			
33	-298 Jan 4	<u>-280 Jan 16</u>	-262 Jan 26	-244 Feb 7	-226 Feb 17	-208 Feb 28
34	-298 Jun 30	-280 Jul 10	-262 Jul 21	-244 Aug 1	-226 Aug 12	-208 Aug 22
35	-298 Dec 25	-279 Jan 4	-261 Jan 15	-243 Jan 26	<u>-225 Feb 6</u>	-207 Feb 16
36	-297 Jun 19	-279 Jun 30	-261 Jul 11	-243 Jul 21	-225 Aug 2	-207 Aug 12
37	-297 Dec 14	<u>-279 Dec 24</u>	-260 Jan 4	-242 Jan 15	-224 Jan 26	-206 Feb 5
38	-296 Jun 8	-278 Jun 19	-260 Jun 30	-242 Jul 11	-224 Jul 21	-206 Aug 2

Table 2. (Cont.)

	31	32	33	34	35	36
1	-205 Jan 25	-187 Feb 5	<u>-169 Feb 16</u>	-151 Feb 26	<u>-133 Mar 10</u>	-115 Mar 20
2	-205 Jul 22	-187 Aug 1	-169 Aug 13	<u>-151 Aug 23</u>	<u>-133 Sep 3</u>	-115 Sep 14
3	-205 Dec 16	-187 Dec 27	<u>-168 Jan 7</u>	-150 Jan 17	<u>-132 Jan 29</u>	-114 Feb 8
4	-204 Jun 11	-186 Jun 22	-168 Jul 2	-150 Jul 14	<u>-132 Jul 24</u>	-114 Aug 4
5	-204 Dec 5	-186 Dec 16	-168 Dec 27	-149 Jan 7	-131 Jan 17	-113 Jan 29
6	-203 May 31	<u>-185 Jun 11</u>	<u>-167 Jun 21</u>	<u>-149 Jul 3</u>	-131 Jul 13	<u>-113 Jul 24</u>
7	-203 Nov 25	<u>-185 Dec 6</u>	-167 Dec 16	-149 Dec 28	-130 Jan 7	-112 Jan 18
8	-202 May 20	-184 May 30	-166 Jun 11	-148 Jun 21	-130 Jul 2	-112 Jul 13
9	-202 Nov 14	-184 Nov 24	-166 Dec 6	-148 Dec 16	-130 Dec 27	-111 Jan 7
						<u>-111 Jul 2</u>
10	-201 Apr 10	-183 Apr 21	-165 May 2	-147 May 12	<u>-129 May 24</u>	
11	-201 Oct 4	<u>-183 Oct 15</u>	-165 Oct 26	-147 Nov 5	-129 Nov 17	-111 Nov 27
12	-200 Mar 30	<u>-182 Apr 10</u>	-164 Apr 21	-146 May 2	-128 May 12	-110 May 24
13	-200 Sep 22	<u>-182 Oct 4</u>	-164 Oct 14	-146 Oct 25	<u>-128 Nov 5</u>	<u>-110 Nov 16</u>
14	<u>-199 Mar 20</u>	-181 Mar 31	-163 Apr 10	-145 Apr 22	-127 May 2	-109 May 13
15	-199 Sep 12	-181 Sep 23	-163 Oct 3	-145 Oct 15	-127 Oct 25	<u>-109 Nov 5</u>
16	-198 Mar 9	-180 Mar 19	-162 Mar 31	-144 Apr 10	-126 Apr 21	-108 May 1
17	-198 Sep 1	-180 Sep 12	<u>-162 Sep 23</u>	-144 Oct 3	-126 Oct 15	-108 Oct 25
18	-197 Jan 27	-179 Feb 7	<u>-161 Feb 18</u>	-143 Feb 28	<u>-125 Mar 11</u>	-107 Mar 22
19	-197 Jul 24	-179 Aug 3	<u>-161 Aug 14</u>	-143 Aug 25	-125 Sep 5	-107 Sep 15
20	-196 Jan 16	-178 Jan 27	<u>-160 Feb 7</u>	-142 Feb 17	-124 Feb 29	<u>-106 Mar 11</u>
21	-196 Jul 12	-178 Jul 23	-160 Aug 3	-142 Aug 14	-124 Aug 24	-106 Sep 5
22	-195 Jan 5	-177 Jan 16	<u>-159 Jan 26</u>	-141 Feb 7	-123 Feb 17	-105 Feb 28
23	-195 Jul 1	<u>-177 Jul 12</u>	<u>-159 Jul 23</u>	-141 Aug 3	-123 Aug 13	-105 Aug 25
24	-195 Dec 25	-176 Jan 6	-158 Jan 16	-140 Jan 27	<u>-122 Feb 7</u>	-104 Feb 18
25	<u>-194 Jun 20</u>	-176 Jul 1	<u>-158 Jul 12</u>	<u>-140 Jul 22</u>	-122 Aug 2	-104 Aug 13
26	<u>-194 Nov 15</u>	-176 Nov 26	<u>-158 Dec 7</u>	<u>-140 Dec 18</u>	<u>-122 Dec 29</u>	-103 Jan 8
27	<u>-193 May 11</u>	-175 May 21	-157 Jun 2	-139 Jun 12	-121 Jun 23	-103 Jul 3
28	-193 Nov 5	-175 Nov 15	-157 Nov 26	-139 Dec 7	-121 Dec 18	-103 Dec 29
29	-192 Apr 30	-174 May 11	-156 May 21	-138 Jun 2	-120 Jun 12	<u>-102 Jun 23</u>
30	-192 Oct 24	-174 Nov 4	-156 Nov 15	-138 Nov 26	-120 Dec 6	-102 Dec 18
31	<u>-191 Apr 19</u>	-173 May 1	-155 May 11	<u>-137 May 22</u>	<u>-119 Jun 2</u>	-101 Jun 13
32	-191 Oct 13	-173 Oct 24	-155 Nov 4	<u>-137 Nov 15</u>	-119 Nov 15	-101 Dec 7
						-100 Jun 1
33	<u>-190 Mar 10</u>	<u>-172 Mar 21</u>	-154 Apr 1	-136 Apr 11	-118 Apr 23	
34	-190 Sep 3	-172 Sep 13	-154 Sep 24	<u>-136 Oct 5</u>	<u>-118 Oct 16</u>	-100 Oct 26
35	-189 Feb 28	-171 Mar 10	-153 Mar 21	-135 Apr 1	<u>-117 Apr 12</u>	-99 Apr 22
36	-189 Aug 23	-171 Sep 3	-153 Sep 14	-135 Sep 24	-117 Oct 6	-99 Oct 16
37	<u>-188 Feb 17</u>	-170 Feb 27	-152 Mar 9	-134 Mar 21	-116 Mar 31	-98 Apr 11
38	-188 Aug 12	-170 Aug 23	-152 Sep 3	-134 Sep 14	-116 Sep 24	-98 Oct 6

Table 2. (Cont.)

	37	38	39	40	41	42
1	<u>-97 Mar 31</u>	<u>-79 Apr 11</u>	-61 Apr 22	-43 May 2	-25 May 14	-7 May 24
2	-97 Sep 25	<u>-79 Oct 5</u>	-61 Oct 17	-43 Oct 27	-25 Nov 7	-7 Nov 18
3	-96 Feb 19	-78 Mar 2	-60 Mar 12	-42 Mar 23	-24 Apr 3	<u>-6 Apr 14</u>
4	<u>-96 Aug 14</u>	-78 Aug 26	-60 Sep 5	-42 Sep 16	-24 Sep 27	<u>-6 Oct 8</u>
5	<u>-95 Feb 8</u>	-77 Feb 19	-59 Mar 2	-41 Mar 13	-23 Mar 23	<u>-5 Apr 4</u>
6	<u>-95 Aug 4</u>	-77 Aug 15	-59 Aug 25	-41 Sep 5	-23 Sep 16	-5 Sep 27
7	-94 Jan 29	<u>-76 Feb 9</u>	-58 Feb 19	-40 Mar 2	-22 Mar 13	-4 Mar 23
8	-94 Jul 24	-76 Aug 3	-58 Aug 14	-40 Aug 25	-22 Sep 5	-4 Sep 15
9	-93 Jan 18	-75 Jan 28	-57 Feb 9	-39 Feb 19	-21 Mar 2	-3 Mar 13
10	<u>-93 Jul 13</u>	<u>-75 Jul 24</u>	-57 Aug 2	-39 Aug 14	-21 Aug 26	-3 Sep 5
11	-93 Dec 8	<u>-75 Dec 19</u>	-57 Dec 30	-38 Jan 9	-20 Jan 21	-2 Jan 27
12	-92 Jun 3	-74 Jun 14	-56 Jun 24	-38 Jul 6	-20 Jul 16	-2 Jul 27
13	-92 Nov 26	-74 Dec 8	-56 Dec 18	-38 Dec 29	-19 Jan 9	-1 Jan 20
14	-91 May 23	-73 Jun 4	-55 Jun 14	-37 Jun 25	-19 Jul 6	-1 Jul 17
15	-91 Nov 16	-73 Nov 27	-55 Dec 7	-37 Dec 19	-19 Dec 29	0 Jan 10
16	-90 May 13	-72 May 23	-54 Jun 3	-36 Jun 13	-18 Jun 25	0 Jul 5
17	<u>-90 Nov 5</u>	<u>-72 Nov 16</u>	-54 Nov 27	-36 Dec 7	-18 Dec 19	0 Dec 29
18	-89 Apr 2	-71 Apr 12	-53 Apr 24	-35 May 4	-17 May 15	+1 May 25
19	-89 Sep 27	-71 Oct 7	-53 Oct 18	-35 Oct 29	-17 Nov 9	+1 Nov 19
20	-88 Mar 21	-70 Apr 2	-52 Apr 12	-34 Apr 23	-16 May 4	+2 May 15
21	<u>-88 Sep 15</u>	-70 Sep 26	-52 Oct 7	-34 Oct 18	-16 Oct 28	+2 Nov 9
22	<u>-87 Mar 11</u>	-69 Mar 22	-51 Apr 1	-33 Apr 13	-15 Apr 23	+3 May 4
23	-87 Sep 4	-69 Sep 15	-51 Sep 26	-33 Oct 7	-15 Oct 15	+3 Oct 29
24	<u>-86 Mar 1</u>	-68 Mar 11	-50 Mar 26	-32 Apr 2	-14 Apr 13	+4 Apr 23
25	<u>-86 Aug 24</u>	<u>-68 Sep 3</u>	-50 Sep 15	-32 Sep 25	-14 Oct 6	+4 Oct 17
26	-85 Jan 20	-67 Jan 30	-49 Feb 10	-31 Feb 21	-13 Mar 4	+5 Mar 14
27	-85 Jul 15	-67 Jul 25	-49 Aug 5	-31 Aug 16	-13 Aug 27	+5 Sep 6
28	-84 Jan 9	-66 Jan 19	-48 Jan 31	-30 Feb 10	-12 Feb 21	+6 Mar 3
29	-84 Jul 3	-66 Jul 15	-48 Jul 25	-30 Aug 5	-12 Aug 16	+6 Aug 27
30	-84 Dec 28	<u>-65 Jan 8</u>	-47 Jan 19	-29 Jan 30	-11 Feb 9	+7 Feb 20
31	-83 Jun 23	-65 Jul 4	-47 Jul 15	-29 Jul 26	<u>-11 Aug 5</u>	+7 Aug 17
32	-83 Dec 17	-65 Dec 28	-46 Jan 8	-28 Jan 19	-10 Jan 29	+8 Feb 10
33	-82 Jun 13	<u>-64 Jun 23</u>	-46 Jul 4	-28 Jul 15	-10 Jul 26	+8 Aug 5
34	-82 Nov 7	<u>-64 Nov 17</u>	-46 Nov 28	-28 Dec 9	-10 Dec 20	+8 Dec 31
35	-81 May 3	-63 May 14	-45 May 25	-27 Jun 4	-9 Jun 16	+9 Jun 26
36	-81 Oct 27	-63 Nov 7	-45 Nov 18	-27 Nov 28	-9 Dec 10	+9 Dec 20
37	<u>-80 Apr 21</u>	-62 May 3	-44 May 13	-26 May 24	-8 Jun 4	+10 Jun 15
38	-80 Oct 16	-62 Oct 27	-44 Nov 7	-26 Nov 18	-8 Nov 28	+10 Dec 10