

# SWISS EPHEMERIS for the year 1998

## JANUARY 1998

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Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
T 1	6 41 47	10°21'26	9°59	18°29	3°R24	10°46	22°15	13°45	7°7	28°57	6°46	12°R20	13°44	1°54	15°31
F 2	6 45 43	11°22'36	24° 8	19° 7	3°10	11°33	22°27	13°47	7°10	28°59	6°48	12°16	13°40	2° 1	15°37
S 3	6 49 40	12°23'46	8°19	19°50	2°54	12°20	22°40	13°49	7°14	29° 1	6°50	12°D15	13°37	2° 7	15°43
S 4	6 53 36	13°24'56	22°30	20°39	2°35	13° 8	22°53	13°51	7°17	29° 3	6°52	12°15	13°34	2°14	15°49
M 5	6 57 33	14°26'06	6°39	21°32	2°14	13°55	23° 5	13°53	7°20	29° 5	6°54	12°16	13°31	2°21	15°55
T 6	7 1 29	15°27'16	20°44	22°28	1°50	14°42	23°18	13°55	7°24	29° 8	6°56	12°R16	13°28	2°27	16° 0
W 7	7 5 26	16°28'25	4°44	23°28	1°24	15°30	23°31	13°57	7°27	29°10	6°58	12°14	13°24	2°34	16° 6
T 8	7 9 22	17°29'33	18°39	24°32	0°57	16°17	23°44	14° 0	7°30	29°12	7° 0	12°10	13°21	2°41	16°12
F 9	7 13 19	18°30'41	2°18	25°38	0°27	17° 4	23°57	14° 2	7°34	29°14	7° 2	12° 4	13°18	2°47	16°17
S 10	7 17 16	19°31'49	16° 8	26°46	29°56	17°51	24°10	14° 5	7°37	29°17	7° 4	11°56	13°15	2°54	16°23
S 11	7 21 12	20°32'56	29°36	27°57	29°23	18°39	24°23	14° 8	7°40	29°19	7° 5	11°47	13°12	3° 1	16°28
M 12	7 25 9	21°34'03	12°51	29° 9	28°49	19°26	24°37	14°10	7°44	29°21	7° 7	11°37	13° 9	3° 7	16°33
T 13	7 29 5	22°35'10	25°51	0°24	28°14	20°13	24°50	14°13	7°47	29°23	7° 9	11°29	13° 5	3°14	16°38
W 14	7 33 2	23°36'16	8°35	1°40	27°38	21° 1	25° 3	14°16	7°51	29°26	7°11	11°22	13° 2	3°21	16°43
T 15	7 36 58	24°37'22	21° 3	2°58	27° 2	21°48	25°16	14°19	7°54	29°28	7°13	11°18	12°59	3°27	16°48
F 16	7 40 55	25°38'28	3°17	4°16	26°25	22°35	25°30	14°23	7°57	29°30	7°14	11°16	12°56	3°34	16°53
S 17	7 44 51	26°39'33	15°18	5°37	25°48	23°23	25°43	14°26	8° 1	29°32	7°16	11°D15	12°53	3°41	16°58
S 18	7 48 48	27°40'38	27°11	6°58	25°11	24°10	25°57	14°29	8° 4	29°35	7°18	11°16	12°50	3°47	17° 3
M 19	7 52 45	28°41'43	8°59	8°20	24°35	24°57	26°11	14°33	8° 8	29°37	7°19	11°18	12°46	3°54	17° 7
T 20	7 56 41	29°42'47	9°44	9°44	23°59	25°45	26°24	14°36	8°11	29°39	7°21	11°19	12°43	4° 1	17°12
W 21	8 0 38	0°43'51	2°42	11° 8	23°24	26°32	26°38	14°40	8°15	29°42	7°23	11°R20	12°40	4° 7	17°16
T 22	8 4 34	1°44'54	14°48	12°33	22°51	27°19	26°52	14°44	8°18	29°44	7°24	11°19	12°37	4°14	17°21
F 23	8 8 31	2°45'57	27°10	13°59	22°19	28° 7	27° 5	14°48	8°22	29°46	7°26	11°16	12°34	4°21	17°25
S 24	8 12 27	3°47'00	9°52	15°26	21°48	28°54	27°19	14°52	8°25	29°48	7°27	11°12	12°30	4°27	17°29
S 25	8 16 24	4°48'03	22°56	16°53	21°19	29°41	27°33	14°56	8°29	29°51	7°29	11° 6	12°27	4°34	17°33
M 26	8 20 20	5°49'04	6°25	18°22	20°52	0°29	27°47	15° 0	8°32	29°53	7°30	11° 0	12°24	4°41	17°37
T 27	8 24 17	6°50'05	20°18	19°51	20°28	1°16	28° 1	15° 4	8°36	29°55	7°32	10°54	12°21	4°47	17°41
W 28	8 28 14	7°51'05	4°30	21°21	20° 5	2° 3	28°15	15° 8	8°39	29°57	7°33	10°49	12°18	4°54	17°45
T 29	8 32 10	8°52'05	18°58	22°51	19°44	2°51	28°29	15°13	8°43	0° 0	7°35	10°46	12°15	5° 1	17°48
F 30	8 36 7	9°53'03	3°35	24°22	19°26	3°38	28°43	15°17	8°46	0° 2	7°36	10°44	12°11	5° 7	17°52
S 31	8 40 3	10°54'00	18°14	25°54	19°21	4°25	28°57	15°22	8°50	0° 4	7°37	10°D44	12°10	5°14	17°55

Delta T = 62.97 sec.

## FEBRUARY 1998

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Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
S 1	8 44 0	11°54'56	2°49	27°27	18°R57	5°13	29°11	15°26	8°53	0° 6	7°39	10°45	12°10	5°20	17°59
M 2	8 47 56	12°55'51	17°16	29° 0	18°47	6° 0	29°25	15°31	8°57	0° 9	7°40	10°47	12° 2	5°27	18° 2
T 3	8 51 53	13°56'44	1°32	0°34	18°38	6°47	29°39	15°36	9° 0	0°11	7°41	10°48	11°59	5°34	18° 5
W 4	8 55 49	14°57'36	15°33	2° 9	18°32	7°34	29°54	15°41	9° 4	0°13	7°42	10°R49	11°56	5°40	18° 8
T 5	8 59 46	15°58'26	29°21	3°45	18°29	8°22	0° 8	15°46	9° 7	0°15	7°44	10°48	11°52	5°47	18°11
F 6	9 3 43	16°59'15	12°15	5°21	18°D28	9° 9	0°22	15°51	9°11	0°18	7°45	10°46	11°49	5°54	18°14
S 7	9 7 39	18° 0'03	26°11	6°58	18°30	9°56	0°36	15°56	9°14	0°20	7°46	10°43	11°46	6° 0	18°16
S 8	9 11 36	19° 0'49	9°16	8°36	18°33	10°43	0°51	16° 1	9°18	0°22	7°47	10°40	11°43	6° 7	18°19
M 9	9 15 32	20° 1'34	22° 6	10°14	18°40	11°30	1° 5	16° 6	9°21	0°24	7°48	10°37	11°40	6°14	18°21
T 10	9 19 29	21° 2'17	4°14	11°53	18°48	12°17	1°19	16°12	9°25	0°26	7°49	10°34	11°36	6°20	18°24
W 11	9 23 25	22° 2'59	17°10	13°34	18°59	13° 5	1°34	16°17	9°28	0°28	7°50	10°31	11°33	6°27	18°26
T 12	9 27 22	23° 3'40	29°25	15°15	19°12	13°52	1°48	16°23	9°32	0°31	7°51	10°30	11°30	6°34	18°28
F 13	9 31 18	24° 4'19	11°29	16°56	19°27	14°39	2° 2	16°28	9°35	0°33	7°52	10°D30	11°27	6°40	18°30
S 14	9 35 15	25° 4'57	23°26	18°39	19°44	15°26	2°17	16°34	9°38	0°35	7°53	10°30	11°24	6°47	18°32
S 15	9 39 12	26° 5'33	5°17	20°22	20° 3	16°13	2°31	16°40	9°42	0°37	7°54	10°31	11°21	6°54	18°34
M 16	9 43 8	27° 6'09	17° 5	22° 7	20°24	17° 0	2°45	16°45	9°45	0°39	7°54	10°32	11°17	7° 0	18°35
T 17	9 47 5	28° 6'43	28°54	23°52	20°46	17°47	3° 0	16°51	9°49	0°41	7°55	10°34	11°14	7° 7	18°37
W 18	9 51 1	29° 7'15	10°49	25°38	21°11	18°34	3°14	16°57	9°52	0°43	7°56	10°35	11°11	7°14	18°38
T 19	9 54 58	0° 7'47	22°53	27°25	21°37	19°21	3°29	17° 3	9°55	0°45	7°57	10°35	11° 8	7°20	18°40
F 20	9 58 54	1° 8'17	5°12	29°13	22° 5	20° 8	3°43	17° 9	9°59	0°47	7°57	10°R35	11° 5	7°27	18°41
S 21	10 2 51	2° 8'46	17°49	1° 2	22°35	20°54	3°58	17°15	10° 2	0°49	7°58	10°35	11° 2	7°34	18°42
S 22	10 6 47	3° 9'14	0°30	2°52	23° 6	21°41	4°12	17°21	10° 5	0°51	7°59	10°34	10°58	7°40	18°43
M 23	10 10 44	4° 9'40	14°16	4°42	23°39	22°28	4°27	17°27	10° 9	0°53	7°59	10°34	10°55	7°47	18°44
T 24	10 14 41	5°10'05	28° 8	6°34	24°13	23°15	4°41	17°34	10°12	0°55	8° 0	10°33	10°52	7°54	18°45
W 25	10 18 37	6°10'29	12°26	8°26	24°48	24° 2	4°56	17°40	10°15	0°57	8° 0	10°32	10°49	8° 0	18°45
T 26	10 22 34	7°10'50	27° 6	10°19	25°25	24°48	5°10	17°46	10°18	0°59	8° 1	10°32	10°46	8° 7	18°46
F 27	10 26 30	8°11'11	12° 1	12°12	26° 3	25°35	5°24	17°53	10°22	1° 1	8° 1	10°D32	10°42	8°14	18°46
S 28	10 30 27	9°11'29	27° 3	14° 6	26°42	26°22	5°39	17°59	10°25	1° 3	8° 2	10°32	10°39	8°20	18°47

Delta T = 63.02 sec.

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# SWISS EPHEMERIS for the year 1998

MARCH 1998

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Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
S 1	10 34 23	10°11'45	12°12'4	16°11'1	27°23'23	27°11'9	5°53'	18°11'6	10°28'28	1°55'5	8°27'2	10°R32	10°11'36	8°27'27	18°11'47
M 2	10 38 20	11°12'00	26°56'	17°56'	28°4'	27°55'	6°8'	18°12'	10°31'	1°7'	8°2'	10°11'32	10°33'	8°34'	18°R47
T 3	10 42 16	12°12'13	11°18'31	19°51'	28°47'	28°42'	6°22'	18°19'	10°34'	1°9'	8°3'	10°32'	10°30'	8°40'	18°47
W 4	10 46 13	13°12'23	25°46'	21°46'	29°30'	29°28'	6°37'	18°25'	10°37'	1°10'	8°3'	10°32'	10°27'	8°47'	18°47
T 5	10 50 10	14°12'32	9°11'39	23°41'	0°14'14	0°11'15	6°51'	18°32'	10°40'	1°12'	8°3'	10°D32	10°23'	8°54'	18°46
F 6	10 54 6	15°12'38	23°9'	25°35'	1°0'	1°1'	7°5'	18°39'	10°43'	1°14'	8°3'	10°32'	10°20'	9°0'	18°46
S 7	10 58 3	16°12'42	6°17'	27°28'	1°46'	1°48'	7°20'	18°46'	10°47'	1°16'	8°3'	10°32'	10°17'	9°7'	18°46
S 8	11 1 59	17°12'44	19°7'	29°21'	2°33'	2°34'	7°34'	18°52'	10°50'	1°17'	8°4'	10°33'	10°14'	9°14'	18°45
M 9	11 5 56	18°12'44	1°11'41	1°11'11	3°21'	3°21'	7°48'	18°59'	10°52'	1°19'	8°4'	10°33'	10°11'	9°20'	18°44
T 10	11 9 52	19°12'42	14°1'	3°0'	4°10'	4°7'	8°3'	19°6'	10°55'	1°21'	8°4'	10°34'	10°7'	9°27'	18°43
W 11	11 13 49	20°12'38	26°11'	4°47'	5°0'	4°53'	8°17'	19°13'	10°58'	1°23'	8°R4	10°35'	10°4'	9°34'	18°42
T 12	11 17 45	21°12'32	8°11'13	6°30'	5°50'	5°40'	8°31'	19°20'	11°1'	1°24'	8°4'	10°R35	10°1'	9°40'	18°41
F 13	11 21 42	22°12'23	20°8'	8°10'	6°41'	6°26'	8°46'	19°27'	11°4'	1°26'	8°4'	10°35'	9°58'	9°47'	18°40
S 14	11 25 38	23°12'13	1°11'59	9°46'	7°33'	7°12'	9°0'	19°34'	11°7'	1°27'	8°4'	10°34'	9°55'	9°54'	18°39
S 15	11 29 35	24°12'01	13°49'	11°18'	8°26'	7°58'	9°14'	19°41'	11°10'	1°29'	8°4'	10°33'	9°52'	10°0'	18°38
M 16	11 33 32	25°11'47	25°38'	12°45'	9°19'	8°44'	9°28'	19°48'	11°12'	1°30'	8°3'	10°31'	9°48'	10°7'	18°36
T 17	11 37 28	26°11'31	7°11'30	14°7'	10°12'	9°30'	9°43'	19°56'	11°15'	1°32'	8°3'	10°28'	9°45'	10°14'	18°35
W 18	11 41 25	27°11'13	19°27'	15°22'	11°7'	10°16'	9°57'	20°3'	11°18'	1°33'	8°3'	10°26'	9°42'	10°20'	18°33
T 19	11 45 21	28°10'54	1°11'33	16°32'	12°1'	11°2'	10°11'	20°10'	11°21'	1°35'	8°3'	10°23'	9°39'	10°27'	18°31
F 20	11 49 18	29°10'33	13°51'	17°34'	12°57'	11°48'	10°25'	20°17'	11°23'	1°36'	8°2'	10°22'	9°36'	10°34'	18°29
S 21	11 53 14	0°11'10	26°25'	18°30'	13°53'	12°34'	10°39'	20°25'	11°26'	1°38'	8°2'	10°D21	9°33'	10°40'	18°27
S 22	11 57 11	1°9'45	9°11'39	19°19'	14°49'	13°20'	10°53'	20°32'	11°28'	1°39'	8°2'	10°21'	9°29'	10°47'	18°25
M 23	12 1 7	2°9'19	22°37'	20°0'	15°46'	14°6'	11°7'	20°39'	11°31'	1°41'	8°1'	10°22'	9°26'	10°54'	18°23
T 24	12 5 4	3°8'51	6°11'20	20°33'	16°44'	14°52'	11°21'	20°47'	11°33'	1°42'	8°1'	10°24'	9°23'	11°0'	18°21
W 25	12 9 1	4°8'21	20°30'	20°59'	17°42'	15°37'	11°35'	20°54'	11°36'	1°43'	8°1'	10°25'	9°20'	11°7'	18°19
T 26	12 12 57	5°7'49	5°11'5	21°17'	18°40'	16°23'	11°49'	21°1'	11°38'	1°44'	8°0'	10°R26	9°17'	11°14'	18°16
F 27	12 16 54	6°7'15	20°1'	21°27'	19°39'	17°9'	12°3'	21°9'	11°41'	1°46'	8°0'	10°26'	9°13'	11°20'	18°14
S 28	12 20 50	7°6'40	5°11'12	21°R30	20°38'	17°54'	12°16'	21°16'	11°43'	1°47'	7°59'	10°24'	9°10'	11°27'	18°11
S 29	12 24 47	8°6'02	20°27'	21°25'	21°37'	18°40'	12°30'	21°24'	11°45'	1°48'	7°58'	10°21'	9°7'	11°34'	18°8
M 30	12 28 43	9°5'22	5°11'36	21°12'	22°37'	19°26'	12°44'	21°31'	11°48'	1°49'	7°58'	10°18'	9°4'	11°40'	18°5
T 31	12 32 40	10°11'41	20°11'30	20°11'53	23°11'37	20°11'11	12°11'58	21°11'39	11°11'50	1°11'50	7°11'57	10°11'39	9°11'1	11°11'47	18°11'2

Delta T = 63.06 sec.

APRIL 1998

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Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
W 1	12 36 36	11°11'36	5°11'1	20°R28	24°11'38	20°11'57	13°11'11	21°11'46	11°11'52	1°11'51	7°R57	10°R9	8°11'58	11°11'54	17°R59
T 2	12 40 33	12°3'10	19°6'	19°11'57	25°39'	21°42'	13°25'	21°54'	11°54'	1°53'	7°11'56	10°11'6	8°54'	12°0'	17°11'56
F 3	12 44 30	13°2'21	2°11'43	19°22'	26°40'	22°27'	13°38'	22°1'	11°56'	1°54'	7°55'	10°4'	8°51'	12°7'	17°53
S 4	12 48 26	14°1'30	15°52'	18°42'	27°41'	23°13'	13°52'	22°9'	11°58'	1°55'	7°54'	10°D4	8°48'	12°14'	17°50
S 5	12 52 23	15°0'37	28°38'	17°58'	28°43'	23°58'	14°5'	22°16'	12°1'	1°56'	7°54'	10°4'	8°45'	12°20'	17°47
M 6	12 56 19	15°59'41	11°11'12	17°13'	29°45'	24°43'	14°19'	22°24'	12°2'	1°56'	7°53'	10°6'	8°42'	12°27'	17°43
T 7	13 0 16	16°58'43	23°16'	16°26'	0°11'48	25°28'	14°32'	22°32'	12°4'	1°57'	7°52'	10°8'	8°39'	12°34'	17°40
W 8	13 4 12	17°57'43	5°11'16	15°38'	1°50'	26°13'	14°45'	22°39'	12°6'	1°58'	7°51'	10°R9	8°35'	12°40'	17°36
T 9	13 8 9	18°56'40	17°9'	14°51'	2°53'	26°58'	14°58'	22°47'	12°8'	1°59'	7°50'	10°9'	8°32'	12°47'	17°33
F 10	13 12 5	19°55'36	28°59'	14°5'	3°57'	27°43'	15°12'	22°54'	12°10'	2°0'	7°49'	10°7'	8°29'	12°54'	17°29
S 11	13 16 2	20°54'29	10°11'47	13°21'	5°0'	28°28'	15°25'	23°2'	12°12'	2°1'	7°48'	10°3'	8°26'	13°0'	17°25
S 12	13 19 58	21°53'20	22°37'	12°40'	6°4'	29°13'	15°38'	23°9'	12°14'	2°1'	7°47'	9°57'	8°23'	13°7'	17°22
M 13	13 23 55	22°52'09	4°11'30	12°3'	7°8'	29°58'	15°51'	23°17'	12°15'	2°2'	7°46'	9°50'	8°19'	13°14'	17°18
T 14	13 27 52	23°50'56	16°28'	11°29'	8°12'	0°11'43	16°4'	23°25'	12°17'	2°3'	7°45'	9°42'	8°16'	13°20'	17°14
W 15	13 31 48	24°49'42	28°33'	11°0'	9°16'	1°28'	16°16'	23°32'	12°18'	2°4'	7°44'	9°33'	8°13'	13°27'	17°10
T 16	13 35 45	25°48'25	10°11'46	10°35'	10°21'	2°12'	16°29'	23°40'	12°20'	2°4'	7°43'	9°25'	8°10'	13°34'	17°6
F 17	13 39 41	26°47'07	23°9'	10°16'	11°26'	2°57'	16°42'	23°47'	12°22'	2°5'	7°42'	9°19'	8°7'	13°40'	17°2
S 18	13 43 38	27°45'47	5°11'46	10°1'	12°31'	3°42'	16°55'	23°55'	12°23'	2°5'	7°41'	9°15'	8°4'	13°47'	16°58
S 19	13 47 34	28°44'26	18°39'	9°52'	13°36'	4°26'	17°7'	24°3'	12°24'	2°6'	7°40'	9°12'	8°0'	13°54'	16°54
M 20	13 51 31	29°43'03	1°11'50	9°D48	14°41'	5°11'	17°20'	24°10'	12°26'	2°6'	7°39'	9°D12	7°57'	14°0'	16°49
T 21	13 55 27	0°11'41'38	15°24'	9°49'	15°47'	5°55'	17°32'	24°18'	12°27'	2°7'	7°37'	9°12'	7°54'	14°7'	16°45
W 22	13 59 24	1°40'11	29°21'	9°55'	16°53'	6°39'	17°44'	24°25'	12°28'	2°7'	7°36'	9°13'	7°51'	14°14'	16°41
T 23	14 3 21	2°38'43	13°11'43	10°6'	17°58'	7°24'	17°57'	24°33'	12°30'	2°8'	7°35'	9°R14	7°48'	14°20'	16°37
F 24	14 7 17	3°37'13	28°27'	10°21'	19°5'	8°8'	18°9'	24°40'	12°31'	2°8'	7°34'	9°12'	7°44'	14°27'	16°32
S 25	14 11 14	4°35'41	13°11'28	10°42'	20°11'	8°52'	18°21'	24°48'	12°32'	2°8'	7°32'	9°8'	7°41'	14°34'	16°28
S 26	14 15 10	5°34'08	28°38'	11°7'	21°17'	9°37'	18°33'	24°56'	12°33'	2°9'	7°31'	9°2'	7°38'	14°40'	16°23
M 27	14 19 7	6°32'33	13°11'49	11°36'	22°24'	10°21'	18°45'	25°3'	12°34'	2°9'	7°30'	8°54'	7°35'	14°47'	16°19
T 28	14 23 3	7°30'56	28°49'	12°9'	23°30'	11°5'	18°57'	25°11'	12°35'	2°9'	7°28'	8°45'	7°32'	14°54'	16°14
W 29	14 27 0	8°29'17	13°11'29	12°46'	24°37'	11°49'	19°9'	25°18'	12°36'	2°9'	7°27'	8°36'	7°29'	15°0'	16°10
T 30	14 30 56	9°27'37	27°11'42	13°11'27	25°11'44	12°11'33	19°11'21	25°11'26	12°11'37	2°11'26	7°11'26	8°11'29	7°11'25	15°11'2	16°11'5

Delta T = 63.11 sec.

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# SWISS EPHEMERIS for the year 1998

MAY 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
F 1	14 34 53	10 <sup>h</sup> 25'54"	11 <sup>h</sup> 27'	14 <sup>h</sup> 12'	26 <sup>h</sup> 51'	13 <sup>h</sup> 17'	19 <sup>h</sup> 32'	25 <sup>h</sup> 33'	12 <sup>h</sup> 38'	2 <sup>h</sup> 10'	7 <sup>h</sup> 24'	8 <sup>h</sup> 23'	7 <sup>h</sup> 22'	15 <sup>h</sup> 14'	16 <sup>h</sup> 18'
S 2	14 38 50	11 <sup>h</sup> 24'09"	24 <sup>h</sup> 42'	15° 0'	27° 59'	14° 1'	19° 44'	25° 40'	12° 39'	2° 10'	7 <sup>h</sup> 23'	8 <sup>h</sup> 20'	7° 19'	15° 20'	15 <sup>h</sup> 56'
S 3	14 42 46	12° 22'22"	7 <sup>h</sup> 23'	15° 52'	29° 6'	14° 45'	19° 55'	25° 48'	12° 39'	2° 10'	7° 21'	8° D18'	7° 16'	15° 27'	15° 52'
M 4	14 46 43	13° 20'33"	19° 58'	16° 47'	0° 13'	15° 28'	20° 7'	25° 55'	12° 40'	2° R10'	7° 20'	8° 18'	7° 13'	15° 34'	15° 47'
T 5	14 50 39	14° 18'42"	2 <sup>h</sup> 7'	17° 45'	1° 21'	16° 12'	20° 18'	26° 3'	12° 41'	2° 10'	7° 18'	8° R19'	7° 10'	15° 40'	15° 43'
W 6	14 54 36	15° 16'49"	14° 5'	18° 45'	2° 29'	16° 56'	20° 29'	26° 10'	12° 41'	2° 10'	7° 17'	8° 19'	7° 6'	15° 47'	15° 38'
T 7	14 58 32	16° 14'54"	25° 55'	19° 49'	3° 36'	17° 40'	20° 40'	26° 17'	12° 42'	2° 10'	7° 15'	8° 17'	7° 3'	15° 54'	15° 34'
F 8	15 2 29	17° 12'58"	7 <sup>h</sup> 24'	20° 56'	4° 44'	18° 23'	20° 51'	26° 25'	12° 42'	2° 10'	7° 14'	8° 14'	7° 0'	16° 0'	15° 29'
S 9	15 6 25	18° 10'59"	19° 31'	22° 5'	5° 52'	19° 7'	21° 2'	26° 32'	12° 43'	2° 9'	7° 12'	8° 7'	6° 57'	16° 7'	15° 25'
S 10	15 10 22	19° 8'59"	1 <sup>h</sup> 24'	23° 17'	7° 0'	19° 50'	21° 13'	26° 39'	12° 43'	2° 9'	7° 11'	7° 58'	6° 54'	16° 14'	15° 20'
M 11	15 14 19	20° 6'57"	13° 24'	24° 31'	8° 9'	20° 34'	21° 23'	26° 46'	12° 44'	2° 9'	7° 9'	7° 47'	6° 50'	16° 20'	15° 15'
T 12	15 18 15	21° 4'53"	25° 31'	25° 48'	9° 17'	21° 17'	21° 34'	26° 53'	12° 44'	2° 9'	7° 8'	7° 34'	6° 47'	16° 27'	15° 11'
W 13	15 22 12	22° 2'48"	7 <sup>h</sup> 24'	27° 7'	10° 25'	22° 0'	21° 44'	27° 1'	12° 44'	2° 9'	7° 6'	7° 21'	6° 44'	16° 34'	15° 6'
T 14	15 26 8	23° 0'42"	20° 13'	28° 28'	11° 34'	22° 43'	21° 55'	27° 8'	12° 44'	2° 8'	7° 5'	7° 9'	6° 41'	16° 40'	15° 2'
F 15	15 30 5	23° 58'34"	2 <sup>h</sup> 35'	29° 52'	12° 42'	23° 27'	22° 5'	27° 15'	12° 44'	2° 8'	7° 3'	6° 59'	6° 38'	16° 47'	14° 57'
S 16	15 34 1	24° 56'25"	15° 37'	1 <sup>h</sup> 19'	13° 51'	24° 10'	22° 15'	27° 22'	12° 45'	2° 8'	7° 2'	6° 51'	6° 35'	16° 54'	14° 53'
S 17	15 37 58	25° 54'14"	28° 38'	2° 47'	15° 0'	24° 53'	22° 25'	27° 29'	12° 45'	2° 7'	7° 0'	6° 46'	6° 31'	17° 0'	14° 49'
M 18	15 41 54	26° 52'03"	11 <sup>h</sup> 23'	4° 18'	16° 9'	25° 36'	22° 35'	27° 36'	12° R45'	2° 7'	6° 58'	6° 44'	6° 28'	17° 7'	14° 44'
T 19	15 45 51	27° 49'50"	25° 24'	5° 51'	17° 18'	26° 19'	22° 45'	27° 43'	12° 45'	2° 6'	6° 57'	6° D43'	6° 25'	17° 14'	14° 40'
W 20	15 49 48	28° 47'36"	9 <sup>h</sup> 13'	7° 26'	18° 27'	27° 2'	22° 55'	27° 50'	12° 44'	2° 6'	6° 55'	6° R43'	6° 22'	17° 20'	14° 36'
T 21	15 53 44	29° 45'21"	23° 21'	9° 3'	19° 36'	27° 45'	23° 4'	27° 57'	12° 44'	2° 5'	6° 53'	6° 43'	6° 19'	17° 27'	14° 31'
F 22	15 57 41	0 <sup>h</sup> 14'30"	7 <sup>h</sup> 48'	10° 43'	20° 45'	28° 28'	23° 14'	28° 3'	12° 44'	2° 5'	6° 52'	6° 40'	6° 16'	17° 34'	14° 27'
S 23	16 1 37	1° 40'48"	22° 31'	12° 25'	21° 54'	29° 11'	23° 23'	28° 10'	12° 44'	2° 4'	6° 50'	6° 35'	6° 12'	17° 41'	14° 23'
S 24	16 5 34	2° 38'29"	7 <sup>h</sup> 23'	14° 9'	23° 4'	29° 53'	23° 32'	28° 17'	12° 44'	2° 4'	6° 49'	6° 28'	6° 9'	17° 47'	14° 19'
M 25	16 9 30	3° 36'10"	22° 19'	15° 55'	24° 13'	0 <sup>h</sup> 13'	23° 41'	28° 24'	12° 43'	2° 3'	6° 47'	6° 18'	6° 6'	17° 54'	14° 15'
T 26	16 13 27	4° 33'50"	7 <sup>h</sup> 11'	17° 43'	25° 23'	1° 19'	23° 50'	28° 30'	12° 43'	2° 2'	6° 45'	6° 7'	6° 3'	18° 1'	14° 10'
W 27	16 17 23	5° 31'28"	21° 41'	19° 34'	26° 32'	2° 1'	23° 59'	28° 37'	12° 42'	2° 2'	6° 44'	5° 55'	6° 0'	18° 7'	14° 6'
T 28	16 21 20	6° 29'05"	5 <sup>h</sup> 23'	21° 27'	27° 42'	2° 44'	24° 8'	28° 44'	12° 42'	2° 1'	6° 42'	5° 45'	5° 56'	18° 14'	14° 2'
F 29	16 25 17	7° 26'41"	19° 38'	23° 22'	28° 52'	3° 26'	24° 17'	28° 50'	12° 41'	2° 0'	6° 40'	5° 37'	5° 53'	18° 21'	13° 59'
S 30	16 29 13	8° 24'15"	2 <sup>h</sup> 26'	25° 19'	0° 8'	4° 9'	24° 25'	28° 57'	12° 41'	1° 59'	6° 39'	5° 32'	5° 50'	18° 27'	13° 55'
S 31	16 33 10	9 <sup>h</sup> 21'48"	15 <sup>h</sup> 24'	27 <sup>h</sup> 18'	1 <sup>h</sup> 11'	4 <sup>h</sup> 51'	24 <sup>h</sup> 33'	29 <sup>h</sup> 3'	12 <sup>h</sup> 40'	1 <sup>h</sup> 59'	6 <sup>h</sup> 37'	5 <sup>h</sup> 29'	5 <sup>h</sup> 47'	18 <sup>h</sup> 34'	13 <sup>h</sup> 51'

Delta T = 63.15 sec.

JUNE 1998

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Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
M 1	16 37 6	10 <sup>h</sup> 19'20"	28 <sup>h</sup> 21'	29 <sup>h</sup> 19'	2 <sup>h</sup> 21'	5 <sup>h</sup> 13'	24 <sup>h</sup> 41'	29 <sup>h</sup> 9'	12 <sup>h</sup> 40'	1 <sup>h</sup> 58'	6° R35'	5° R28'	5 <sup>h</sup> 44'	18 <sup>h</sup> 41'	13° R47'
T 2	16 41 3	11° 16'50"	10 <sup>h</sup> 28'	1 <sup>h</sup> 22'	3° 31'	6° 16'	24° 49'	29° 16'	12° 39'	1 <sup>h</sup> 57'	6° 34'	5° 28'	5° 41'	18° 47'	13 <sup>h</sup> 43'
W 3	16 44 59	12° 14'19"	22° 27'	3° 26'	4° 41'	6° 58'	24° 57'	29° 22'	12° 38'	1° 56'	6° 32'	5° 28'	5° 37'	18° 54'	13° 40'
T 4	16 48 56	13° 11'47"	4 <sup>h</sup> 18'	5° 33'	5° 51'	7° 40'	25° 5'	29° 28'	12° 37'	1° 55'	6° 31'	5° 26'	5° 34'	19° 1'	13° 36'
F 5	16 52 52	14° 9'13"	16° 7'	7° 40'	7° 1'	8° 23'	25° 13'	29° 34'	12° 36'	1° 54'	6° 29'	5° 23'	5° 31'	19° 7'	13° 33'
S 6	16 56 49	15° 6'39"	27° 58'	9° 50'	8° 11'	9° 5'	25° 20'	29° 40'	12° 36'	1° 53'	6° 27'	5° 17'	5° 28'	19° 14'	13° 29'
S 7	17 0 46	16° 4'03"	9 <sup>h</sup> 56'	12° 0'	9° 21'	9° 47'	25° 28'	29° 47'	12° 35'	1° 52'	6° 26'	5° 8'	5° 25'	19° 21'	13° 26'
M 8	17 4 42	17° 1'26"	22° 3'	14° 11'	10° 32'	10° 29'	25° 35'	29° 53'	12° 34'	1° 51'	6° 24'	4° 57'	5° 21'	19° 27'	13° 23'
T 9	17 8 39	17° 58'48"	4 <sup>h</sup> 21'	16° 23'	11° 42'	11° 11'	25° 42'	29° 58'	12° 33'	1° 50'	6° 23'	4° 45'	5° 18'	19° 34'	13° 20'
W 10	17 12 35	18° 56'10"	16° 51'	18° 35'	12° 52'	11° 53'	25° 49'	0 <sup>h</sup> 8'	12° 31'	1° 49'	6° 21'	4° 32'	5° 15'	19° 41'	13° 16'
T 11	17 16 32	19° 53'30"	29° 33'	20° 47'	14° 3'	12° 34'	25° 55'	0° 10'	12° 30'	1° 48'	6° 19'	4° 20'	5° 12'	19° 47'	13° 13'
F 12	17 20 28	20° 50'50"	12 <sup>h</sup> 28'	22° 58'	15° 13'	13° 16'	26° 2'	0° 16'	12° 29'	1° 47'	6° 18'	4° 10'	5° 9'	19° 54'	13° 11'
S 13	17 24 25	21° 48'10"	25° 34'	25° 10'	16° 24'	13° 58'	26° 8'	0° 22'	12° 28'	1° 46'	6° 16'	4° 2'	5° 6'	20° 1'	13° 8'
S 14	17 28 21	22° 45'28"	8 <sup>h</sup> 51'	27° 21'	17° 34'	14° 40'	26° 15'	0° 27'	12° 27'	1° 45'	6° 15'	3° 58'	5° 2'	20° 8'	13° 5'
M 15	17 32 18	23° 42'47"	22° 20'	29° 30'	18° 45'	15° 21'	26° 21'	0° 33'	12° 25'	1° 44'	6° 13'	3° 55'	4° 59'	20° 14'	13° 2'
T 16	17 36 15	24° 40'04"	5 <sup>h</sup> 59'	1 <sup>h</sup> 39'	19° 56'	16° 3'	26° 27'	0° 38'	12° 24'	1° 42'	6° 12'	3° D55'	4° 56'	20° 21'	13° 0'
W 17	17 40 11	25° 37'22"	19° 51'	3° 46'	21° 6'	16° 44'	26° 32'	0° 44'	12° 23'	1° 41'	6° 10'	3° R55'	4° 53'	20° 28'	12° 57'
T 18	17 44 8	26° 34'39"	3 <sup>h</sup> 54'	5° 51'	22° 17'	17° 26'	26° 38'	0° 49'	12° 21'	1° 40'	6° 9'	3° 55'	4° 50'	20° 34'	12° 55'
F 19	17 48 4	27° 31'56"	18° 8'	7° 55'	23° 28'	18° 7'	26° 43'	0° 55'	12° 20'	1° 39'	6° 7'	3° 54'	4° 47'	20° 41'	12° 52'
S 20	17 52 1	28° 29'13"	2 <sup>h</sup> 32'	9° 57'	24° 39'	18° 49'	26° 49'	1° 0'	12° 18'	1° 37'	6° 6'	3° 50'	4° 43'	20° 48'	12° 50'
S 21	17 55 57	29° 26'29"	17° 2	11° 57'	25° 50'	19° 30'	26° 54'	1° 5'	12° 17'	1° 36'	6° 4'	3° 44'	4° 40'	20° 54'	12° 48'
M 22	17 59 54	0 <sup>h</sup> 23'46"	1 <sup>h</sup> 33'	13° 55'	27° 1'	20° 11'	26° 59'	1° 10'	12° 15'	1° 35'	6° 3'	3° 35'	4° 37'	21° 1'	12° 46'
T 23	18 3 50	1° 21'02"	15° 58'	15° 51'	28° 12'	20° 53'	27° 4'	1° 15'	12° 14'	1° 34'	6° 1'	3° 26'	4° 34'	21° 8'	12° 44'
W 24	18 7 47	2° 18'18"	0 <sup>h</sup> 12'	17° 45'	29° 23'	21° 34'	27° 8'	1° 20'	12° 12'	1° 32'	6° 0'	3° 16'	4° 31'	21° 14'	12° 42'
T 25	18 11 44	3° 15'33"	14° 9'	19° 37'	0 <sup>h</sup> 13'	22° 15'	27° 13'	1° 25'	12° 11'	1° 31'	5° 58'	3° 8'	4° 27'	21° 21'	12° 40'
F 26	18 15 40	4° 12'48"	27° 44'	21° 26'	1° 45'	22° 56'	27° 17'	1° 30'	12° 9'	1° 29'	5° 57'	3° 1'	4° 24'	21° 28'	12° 38'
S 27	18 19 37	5° 10'03"	10 <sup>h</sup> 27'	23° 13'	2° 57'	23° 37'	27° 21'	1° 35'	12° 7'	1° 28'	5° 56'	2° 57'	4° 21'	21° 34'	12° 37'
S 28	18 23 33	6° 7'17"	23° 46'	24° 59'	4° 8'	24° 18'	27° 25'	1° 39'	12° 5'	1° 27'	5° 54'	2° 54'	4° 18'	21° 41'	12° 35'
M 29	18 27 30	7° 4'31"	6 <sup>h</sup> 15'	26° 41'	5° 19'	24° 59'	27° 29'	1° 44'	12° 4'	1° 25'	5° 53'	2° D54'	4° 15'	21° 48'	12° 34'
T 30	18 31 26	8° 2'14"	18 <sup>h</sup> 27'	28° 22'	6 <sup>h</sup> 13'	25° 14'	27° 32'	1 <sup>h</sup> 48'	12° 2'	1 <sup>h</sup> 24'	5° 52'	2 <sup>h</sup> 55'	4 <sup>h</sup> 12'	21° 55'	12 <sup>h</sup> 32'

Delta T = 63.20 sec.

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# SWISS EPHEMERIS for the year 1998

JULY 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
W 1	18 35 23	8°58'57	0°27	0°1	7°42	26°21	27°35	1°53	12°R 0	1°R22	5°R50	2°R56	4°R 8	22°1	12°R31
T 2	18 39 19	9°56'09	12°20	1°37	8°53	27°2	27°39	1°57	11°58	1°21	5°49	2°R56	4° 5	22° 8	12°R30
F 3	18 43 16	10°53'21	24°11	3°11	10° 5	27°43	27°42	2° 1	11°56	1°19	5°48	2°55	4° 2	22°15	12°29
S 4	18 47 13	11°50'33	6°11	4°42	11°16	28°23	27°44	2° 6	11°54	1°18	5°46	2°52	3°59	22°21	12°28
S 5	18 51 9	12°47'44	18° 6	6°12	12°28	29° 4	27°47	2°10	11°52	1°16	5°45	2°47	3°56	22°28	12°28
M 6	18 55 6	13°44'56	0°19	7°39	13°39	29°45	27°49	2°14	11°50	1°15	5°44	2°40	3°53	22°35	12°27
T 7	18 59 2	14°42'07	12°45	9° 4	14°51	0°25	27°52	2°18	11°48	1°13	5°43	2°32	3°49	22°41	12°26
W 8	19 2 59	15°39'18	25°28	10°26	16° 3	1° 6	27°54	2°21	11°46	1°12	5°42	2°24	3°46	22°48	12°26
T 9	19 6 55	16°36'29	8°26	11°47	17°14	1°46	27°56	2°25	11°44	1°10	5°40	2°17	3°43	22°55	12°25
F 10	19 10 52	17°33'40	21°41	13° 4	18°26	2°27	27°57	2°29	11°42	1° 9	5°39	2°10	3°40	23° 1	12°25
S 11	19 14 49	18°30'52	5°29	14°19	19°38	3° 7	27°59	2°32	11°40	1° 7	5°38	2° 5	3°37	23° 8	12°25
S 12	19 18 45	19°28'03	18°50	15°32	20°50	3°48	28° 0	2°36	11°38	1° 5	5°37	2° 3	3°33	23°15	12°D25
M13	19 22 42	20°25'15	2°41	16°42	22° 2	4°28	28° 1	2°39	11°35	1° 4	5°36	2°D 2	3°30	23°21	12°25
T 14	19 26 38	21°22'27	16°40	17°50	23°14	5° 8	28° 2	2°43	11°33	1° 2	5°35	2° 3	3°27	23°28	12°25
W15	19 30 35	22°19'40	0°44	18°54	24°26	5°49	28° 3	2°46	11°31	1° 1	5°34	2° 4	3°24	23°35	12°25
T 16	19 34 31	23°16'54	14°53	19°56	25°38	6°29	28° 3	2°49	11°29	0°59	5°33	2° 5	3°21	23°42	12°26
F 17	19 38 28	24°14'08	29° 5	20°55	26°50	7° 9	28° 3	2°52	11°27	0°57	5°32	2°R 5	3°18	23°48	12°26
S 18	19 42 24	25°11'23	13°17	21°51	28° 2	7°49	28°R 4	2°55	11°24	0°56	5°31	2° 4	3°14	23°55	12°27
S 19	19 46 21	26° 8'38	27°28	22°43	29°14	8°29	28° 4	2°58	11°22	0°54	5°30	2° 1	3°11	24° 2	12°27
M20	19 50 17	27° 5'55	11°34	23°33	0°26	9° 9	28° 3	3° 1	11°20	0°53	5°30	1°57	3° 8	24° 8	12°28
T 21	19 54 14	28° 3'12	25°33	24°19	1°38	9°49	28° 3	3° 3	11°17	0°51	5°29	1°52	3° 5	24°15	12°29
W22	19 58 11	29° 0'29	9°20	25° 1	2°51	10°29	28° 2	3° 6	11°15	0°49	5°28	1°47	3° 2	24°22	12°30
T 23	20 2 7	29°57'48	22°53	25°40	4° 3	11° 9	28° 1	3° 8	11°13	0°48	5°27	1°42	2°59	24°28	12°31
F 24	20 6 4	0°15'07	6°11	26°15	5°16	11°49	28° 0	3°11	11°10	0°46	5°26	1°39	2°55	24°35	12°32
S 25	20 10 0	1°52'26	19° 7	26°46	6°28	12°29	27°59	3°13	11° 8	0°44	5°26	1°37	2°52	24°42	12°34
S 26	20 13 57	2°49'46	1°48	27°12	7°40	13° 8	27°57	3°15	11° 6	0°43	5°25	1°D36	2°49	24°48	12°35
M27	20 17 53	3°47'07	14°12	27°34	8°53	13°48	27°56	3°17	11° 3	0°41	5°24	1°37	2°46	24°55	12°37
T 28	20 21 50	4°44'28	26°22	27°52	10° 5	14°28	27°54	3°19	11° 1	0°40	5°24	1°38	2°43	25° 2	12°38
W29	20 25 47	5°41'49	8°22	28° 5	11°18	15° 7	27°52	3°21	10°59	0°38	5°23	1°40	2°39	25° 9	12°40
T 30	20 29 43	6°39'11	20°15	28°13	12°31	15°47	27°50	3°23	10°56	0°36	5°23	1°41	2°36	25°15	12°42
F 31	20 33 40	7°13'34	2°11	28°R16	13°43	16°27	27°47	3°25	10°54	0°35	5°22	1°R42	2°33	25°22	12°44

Delta T = 63.24 sec.

AUGUST 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
S 1	20 37 36	8°13'57	14°11	28°R14	14°56	17°26	27°R45	3°26	10°R51	0°R33	5°R22	1°R42	2°R30	25°29	12°R46
S 2	20 41 33	9°31'21	26° 3	28°11	16° 9	17°46	27°42	3°28	10°49	0°32	5°21	1°41	2°27	25°35	12°48
M 3	20 45 29	10°28'45	8°17	27°54	17°22	18°25	27°39	3°29	10°47	0°30	5°21	1°39	2°24	25°42	12°50
T 4	20 49 26	11°26'10	20°48	27°37	18°34	19° 4	27°36	3°30	10°44	0°28	5°20	1°37	2°20	25°49	12°53
W 5	20 53 22	12°23'36	3°37	27°14	19°47	19°44	27°32	3°32	10°42	0°27	5°20	1°34	2°17	25°55	12°55
T 6	20 57 19	13°21'03	16°46	26°46	21° 0	20°23	27°29	3°33	10°40	0°25	5°20	1°31	2°14	26° 2	12°58
F 7	21 1 16	14°18'30	0°16	26°14	22°13	21° 2	27°25	3°34	10°37	0°24	5°19	1°29	2°11	26° 9	13° 0
S 8	21 5 12	15°15'58	14° 6	25°38	23°26	21°41	27°21	3°35	10°35	0°22	5°19	1°28	2° 8	26°16	13° 3
S 9	21 9 9	16°13'28	28°11	24°57	24°39	22°21	27°17	3°35	10°32	0°20	5°19	1°D27	2° 5	26°22	13° 6
M10	21 13 5	17°10'58	12°28	24°13	25°52	23° 0	27°13	3°36	10°30	0°19	5°18	1°27	2° 1	26°29	13° 9
T 11	21 17 2	18° 8'30	26°53	23°27	27° 5	23°39	27° 8	3°36	10°28	0°17	5°18	1°28	1°58	26°36	13°12
W12	21 20 58	19° 6'03	11°21	22°39	28°18	24°18	27° 4	3°37	10°25	0°16	5°18	1°29	1°55	26°42	13°15
T 13	21 24 55	20° 3'37	25°46	21°50	29°32	24°57	26°59	3°37	10°23	0°14	5°18	1°30	1°52	26°49	13°18
F 14	21 28 51	21° 1'13	10°16	21° 0	0°45	25°36	26°54	3°38	10°21	0°13	5°18	1°31	1°49	26°56	13°21
S 15	21 32 48	21°58'51	24°17	20°12	1°58	26°15	26°49	3°38	10°18	0°11	5°18	1°R31	1°45	27° 2	13°25
S 16	21 36 44	22°56'30	8°17	19°25	3°11	26°54	26°44	3°R38	10°16	0°10	5°D18	1°30	1°42	27° 9	13°28
M17	21 40 41	23°54'10	22° 5	18°41	4°25	27°33	26°38	3°38	10°14	0° 8	5°18	1°30	1°39	27°16	13°32
T 18	21 44 38	24°51'53	5°41	18° 1	5°38	28°11	26°33	3°37	10°11	0° 7	5°18	1°29	1°36	27°22	13°36
W19	21 48 34	25°49'36	19° 2	17°25	6°52	28°50	26°27	3°37	10° 9	0° 6	5°18	1°28	1°33	27°29	13°39
T 20	21 52 31	26°47'22	2°10	16°54	8° 5	29°29	26°21	3°37	10° 7	0° 4	5°18	1°28	1°30	27°36	13°43
F 21	21 56 27	27°45'08	15° 4	16°30	9°19	0°11	26°15	3°36	10° 4	0° 3	5°18	1°27	1°26	27°43	13°47
S 22	22 0 24	28°42'56	27°44	16°12	10°32	0°46	26° 9	3°36	10° 2	0° 1	5°18	1°D27	1°23	27°49	13°51
S 23	22 4 20	29°40'46	10°10	16° 1	11°46	1°25	26° 3	3°35	10° 0	0° 0	5°19	1°27	1°20	27°56	13°56
M24	22 8 17	0°38'37	22°25	15°D58	13° 0	2° 4	25°56	3°34	9°58	29°59	5°19	1°27	1°17	28° 3	14° 0
T 25	22 12 13	1°36'29	4°30	16° 2	14°13	2°42	25°50	3°33	9°56	29°57	5°19	1°R27	1°14	28° 9	14° 4
W26	22 16 10	2°34'22	16°27	16°14	15°27	3°21	25°43	3°32	9°53	29°56	5°19	1°27	1°11	28°16	14° 9
T 27	22 20 7	3°32'17	28°19	16°35	16°41	3°59	25°36	3°31	9°51	29°55	5°20	1°27	1° 7	28°23	14°13
F 28	22 24 3	4°30'13	10°11	17° 3	17°54	4°37	25°29	3°30	9°49	29°53	5°20	1°27	1° 4	28°29	14°18
S 29	22 28 0	5°28'11	22° 3	17°39	19° 8	5°16	25°22	3°29	9°47	29°52	5°20	1°27	1° 1	28°36	14°22
S 30	22 31 56	6°26'10	4°11	18°23	20°22	5°54	25°15	3°27	9°45	29°51	5°21	1°D26	0°58	28°43	14°27
M31	22 35 53	7°24'10	16°16	19°14	21°13	6°13	25°8	3°26	9°43	29°50	5°21	1°D27	0°55	28°50	14°32

Delta T = 63.28 sec.

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# SWISS EPHEMERIS for the year 1998

SEPTEMBER 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
T 1	22 39 49	8 <sup>h</sup> 22'12"	28 <sup>h</sup> 45'	20 <sup>h</sup> 13'	22 <sup>h</sup> 50'	7 <sup>h</sup> 11'	25 <sup>h</sup> R 1	3 <sup>h</sup> R24	9 <sup>h</sup> R41	29 <sup>h</sup> R49	5 <sup>h</sup> 22'	1 <sup>h</sup> 27'	0 <sup>h</sup> 51'	28 <sup>h</sup> 56'	14 <sup>h</sup> 37'
W 2	22 43 46	9 <sup>h</sup> 20'14"	11 <sup>h</sup> 33'	21 <sup>h</sup> 18'	24 <sup>h</sup> 4'	7 <sup>h</sup> 49'	24 <sup>h</sup> 53'	3 <sup>h</sup> 22'	9 <sup>h</sup> 39'	29 <sup>h</sup> 47'	5 <sup>h</sup> 22'	1 <sup>h</sup> 28'	0 <sup>h</sup> 48'	29 <sup>h</sup> 3'	14 <sup>h</sup> 42'
T 3	22 47 42	10 <sup>h</sup> 18'19"	24 <sup>h</sup> 45'	22 <sup>h</sup> 31'	25 <sup>h</sup> 18'	8 <sup>h</sup> 27'	24 <sup>h</sup> 46'	3 <sup>h</sup> 20'	9 <sup>h</sup> 37'	29 <sup>h</sup> 46'	5 <sup>h</sup> 23'	1 <sup>h</sup> 28'	0 <sup>h</sup> 45'	29 <sup>h</sup> 10'	14 <sup>h</sup> 47'
F 4	22 51 39	11 <sup>h</sup> 16'25"	8 <sup>h</sup> 21'	23 <sup>h</sup> 49'	26 <sup>h</sup> 32'	9 <sup>h</sup> 5'	24 <sup>h</sup> 38'	3 <sup>h</sup> 18'	9 <sup>h</sup> 35'	29 <sup>h</sup> 45'	5 <sup>h</sup> 24'	1 <sup>h</sup> 29'	0 <sup>h</sup> 42'	29 <sup>h</sup> 16'	14 <sup>h</sup> 52'
S 5	22 55 36	12 <sup>h</sup> 14'32"	22 <sup>h</sup> 22'	25 <sup>h</sup> 12'	27 <sup>h</sup> 46'	9 <sup>h</sup> 43'	24 <sup>h</sup> 31'	3 <sup>h</sup> 16'	9 <sup>h</sup> 33'	29 <sup>h</sup> 44'	5 <sup>h</sup> 24'	1 <sup>h</sup> 30'	0 <sup>h</sup> 39'	29 <sup>h</sup> 23'	14 <sup>h</sup> 57'
S 6	22 59 32	13 <sup>h</sup> 12'41"	6 <sup>h</sup> 45'	26 <sup>h</sup> 41'	29 <sup>h</sup> 0'	10 <sup>h</sup> 21'	24 <sup>h</sup> 23'	3 <sup>h</sup> 14'	9 <sup>h</sup> 31'	29 <sup>h</sup> 43'	5 <sup>h</sup> 25'	1 <sup>h</sup> R30	0 <sup>h</sup> 36'	29 <sup>h</sup> 30'	15 <sup>h</sup> 2'
M 7	23  3 29	14 <sup>h</sup> 10'51"	21 <sup>h</sup> 26'	28 <sup>h</sup> 14'	0 <sup>h</sup> 14'	10 <sup>h</sup> 59'	24 <sup>h</sup> 15'	3 <sup>h</sup> 12'	9 <sup>h</sup> 30'	29 <sup>h</sup> 42'	5 <sup>h</sup> 26'	1 <sup>h</sup> 29'	0 <sup>h</sup> 32'	29 <sup>h</sup> 37'	15 <sup>h</sup> 8'
T 8	23  7 25	15 <sup>h</sup> 9'04"	6 <sup>h</sup> 17'	29 <sup>h</sup> 52'	1 <sup>h</sup> 28'	11 <sup>h</sup> 37'	24 <sup>h</sup> 8'	3 <sup>h</sup> 10'	9 <sup>h</sup> 28'	29 <sup>h</sup> 41'	5 <sup>h</sup> 26'	1 <sup>h</sup> 28'	0 <sup>h</sup> 29'	29 <sup>h</sup> 43'	15 <sup>h</sup> 13'
W 9	23 11 22	16 <sup>h</sup> 7'18"	21 <sup>h</sup> 10'	1 <sup>h</sup> 33'	2 <sup>h</sup> 43'	12 <sup>h</sup> 15'	24 <sup>h</sup> 0'	3 <sup>h</sup> 7'	9 <sup>h</sup> 26'	29 <sup>h</sup> 40'	5 <sup>h</sup> 27'	1 <sup>h</sup> 26'	0 <sup>h</sup> 26'	29 <sup>h</sup> 50'	15 <sup>h</sup> 19'
T 10	23 15 18	17 <sup>h</sup> 5'34"	5 <sup>h</sup> 59'	3 <sup>h</sup> 17'	3 <sup>h</sup> 57'	12 <sup>h</sup> 53'	23 <sup>h</sup> 52'	3 <sup>h</sup> 5'	9 <sup>h</sup> 24'	29 <sup>h</sup> 39'	5 <sup>h</sup> 28'	1 <sup>h</sup> 24'	0 <sup>h</sup> 23'	29 <sup>h</sup> 57'	15 <sup>h</sup> 24'
F 11	23 19 15	18 <sup>h</sup> 3'52"	20 <sup>h</sup> 36'	5 <sup>h</sup> 3'	5 <sup>h</sup> 11'	13 <sup>h</sup> 31'	23 <sup>h</sup> 44'	3 <sup>h</sup> 2'	9 <sup>h</sup> 23'	29 <sup>h</sup> 38'	5 <sup>h</sup> 29'	1 <sup>h</sup> 23'	0 <sup>h</sup> 20'	0 <sup>h</sup> 11 3'	15 <sup>h</sup> 30'
S 12	23 23 11	19 <sup>h</sup> 2'13"	4 <sup>h</sup> 11'57"	6 <sup>h</sup> 52'	6 <sup>h</sup> 25'	14 <sup>h</sup> 9'	23 <sup>h</sup> 36'	3 <sup>h</sup> 0'	9 <sup>h</sup> 21'	29 <sup>h</sup> 37'	5 <sup>h</sup> 30'	1 <sup>h</sup> 22'	0 <sup>h</sup> 16'	0 <sup>h</sup> 10'	15 <sup>h</sup> 36'
S 13	23 27  8	20 <sup>h</sup> 0'35"	18 <sup>h</sup> 57'	8 <sup>h</sup> 42'	7 <sup>h</sup> 40'	14 <sup>h</sup> 47'	23 <sup>h</sup> 28'	2 <sup>h</sup> 57'	9 <sup>h</sup> 19'	29 <sup>h</sup> 36'	5 <sup>h</sup> 31'	1 <sup>h</sup> D21	0 <sup>h</sup> 13'	0 <sup>h</sup> 17'	15 <sup>h</sup> 42'
M14	23 31  5	20 <sup>h</sup> 59'00"	2 <sup>h</sup> 38'	10 <sup>h</sup> 33'	8 <sup>h</sup> 54'	15 <sup>h</sup> 24'	23 <sup>h</sup> 20'	2 <sup>h</sup> 54'	9 <sup>h</sup> 18'	29 <sup>h</sup> 35'	5 <sup>h</sup> 31'	1 <sup>h</sup> 21'	0 <sup>h</sup> 10'	0 <sup>h</sup> 23'	15 <sup>h</sup> 47'
T 15	23 35  1	21 <sup>h</sup> 57'27"	15 <sup>h</sup> 59'	12 <sup>h</sup> 25'	10 <sup>h</sup> 8'	16 <sup>h</sup> 2'	23 <sup>h</sup> 12'	2 <sup>h</sup> 51'	9 <sup>h</sup> 16'	29 <sup>h</sup> 34'	5 <sup>h</sup> 32'	1 <sup>h</sup> 22'	0 <sup>h</sup> 7'	0 <sup>h</sup> 30'	15 <sup>h</sup> 53'
W16	23 38 58	22 <sup>h</sup> 55'56"	29 <sup>h</sup> 2'	14 <sup>h</sup> 18'	11 <sup>h</sup> 23'	16 <sup>h</sup> 40'	23 <sup>h</sup> 4'	2 <sup>h</sup> 48'	9 <sup>h</sup> 15'	29 <sup>h</sup> 34'	5 <sup>h</sup> 33'	1 <sup>h</sup> 24'	0 <sup>h</sup> 4'	0 <sup>h</sup> 37'	15 <sup>h</sup> 59'
T 17	23 42 54	23 <sup>h</sup> 54'27"	11 <sup>h</sup> 14'	16 <sup>h</sup> 11'	12 <sup>h</sup> 37'	17 <sup>h</sup> 17'	22 <sup>h</sup> 56'	2 <sup>h</sup> 45'	9 <sup>h</sup> 13'	29 <sup>h</sup> 33'	5 <sup>h</sup> 34'	1 <sup>h</sup> 25'	0 <sup>h</sup> 1'	0 <sup>h</sup> 44'	16 <sup>h</sup> 5'
F 18	23 46 51	24 <sup>h</sup> 53'00"	24 <sup>h</sup> 23'	18 <sup>h</sup> 4'	13 <sup>h</sup> 52'	17 <sup>h</sup> 55'	22 <sup>h</sup> 48'	2 <sup>h</sup> 42'	9 <sup>h</sup> 12'	29 <sup>h</sup> 32'	5 <sup>h</sup> 36'	1 <sup>h</sup> 26'	29 <sup>h</sup> 57'	0 <sup>h</sup> 50'	16 <sup>h</sup> 12'
S 19	23 50 47	25 <sup>h</sup> 51'35"	6 <sup>h</sup> 14'45"	19 <sup>h</sup> 57'	15 <sup>h</sup> 6'	18 <sup>h</sup> 32'	22 <sup>h</sup> 40'	2 <sup>h</sup> 39'	9 <sup>h</sup> 10'	29 <sup>h</sup> 31'	5 <sup>h</sup> 37'	1 <sup>h</sup> R26	29 <sup>h</sup> 54'	0 <sup>h</sup> 57'	16 <sup>h</sup> 18'
S 20	23 54 44	26 <sup>h</sup> 50'12"	18 <sup>h</sup> 57'	21 <sup>h</sup> 49'	16 <sup>h</sup> 21'	19 <sup>h</sup> 10'	22 <sup>h</sup> 32'	2 <sup>h</sup> 35'	9 <sup>h</sup> 9'	29 <sup>h</sup> 31'	5 <sup>h</sup> 38'	1 <sup>h</sup> 25'	29 <sup>h</sup> 51'	1 <sup>h</sup> 4'	16 <sup>h</sup> 24'
M21	23 58 40	27 <sup>h</sup> 48'51"	1 <sup>h</sup> 2'	23 <sup>h</sup> 41'	17 <sup>h</sup> 35'	19 <sup>h</sup> 47'	22 <sup>h</sup> 24'	2 <sup>h</sup> 32'	9 <sup>h</sup> 7'	29 <sup>h</sup> 30'	5 <sup>h</sup> 39'	1 <sup>h</sup> 23'	29 <sup>h</sup> 48'	1 <sup>h</sup> 10'	16 <sup>h</sup> 30'
T 22	0  2 37	28 <sup>h</sup> 47'32"	13 <sup>h</sup> 0'	25 <sup>h</sup> 33'	18 <sup>h</sup> 50'	20 <sup>h</sup> 25'	22 <sup>h</sup> 17'	2 <sup>h</sup> 28'	9 <sup>h</sup> 6'	29 <sup>h</sup> 29'	5 <sup>h</sup> 40'	1 <sup>h</sup> 19'	29 <sup>h</sup> 45'	1 <sup>h</sup> 17'	16 <sup>h</sup> 37'
W23	0  6 33	29 <sup>h</sup> 46'15"	24 <sup>h</sup> 53'	27 <sup>h</sup> 23'	20 <sup>h</sup> 5'	21 <sup>h</sup> 2'	22 <sup>h</sup> 9'	2 <sup>h</sup> 25'	9 <sup>h</sup> 5'	29 <sup>h</sup> 29'	5 <sup>h</sup> 41'	1 <sup>h</sup> 14'	29 <sup>h</sup> 42'	1 <sup>h</sup> 24'	16 <sup>h</sup> 43'
T 24	0 10 30	0 <sup>h</sup> 45'00"	6 <sup>h</sup> 14'44"	29 <sup>h</sup> 13'	21 <sup>h</sup> 19'	21 <sup>h</sup> 40'	22 <sup>h</sup> 1'	2 <sup>h</sup> 21'	9 <sup>h</sup> 4'	29 <sup>h</sup> 28'	5 <sup>h</sup> 43'	1 <sup>h</sup> 9'	29 <sup>h</sup> 38'	1 <sup>h</sup> 30'	16 <sup>h</sup> 50'
F 25	0 14 27	1 <sup>h</sup> 43'46"	18 <sup>h</sup> 34'	1 <sup>h</sup> 3'	22 <sup>h</sup> 34'	22 <sup>h</sup> 17'	21 <sup>h</sup> 53'	2 <sup>h</sup> 17'	9 <sup>h</sup> 3'	29 <sup>h</sup> 28'	5 <sup>h</sup> 44'	1 <sup>h</sup> 4'	29 <sup>h</sup> 35'	1 <sup>h</sup> 37'	16 <sup>h</sup> 56'
S 26	0 18 23	2 <sup>h</sup> 42'35"	0 <sup>h</sup> 28'	2 <sup>h</sup> 51'	23 <sup>h</sup> 49'	22 <sup>h</sup> 54'	21 <sup>h</sup> 45'	2 <sup>h</sup> 14'	9 <sup>h</sup> 1'	29 <sup>h</sup> 27'	5 <sup>h</sup> 45'	0 <sup>h</sup> 59'	29 <sup>h</sup> 32'	1 <sup>h</sup> 44'	17 <sup>h</sup> 3'
S 27	0 22 20	3 <sup>h</sup> 41'25"	12 <sup>h</sup> 27'	4 <sup>h</sup> 39'	25 <sup>h</sup> 3'	23 <sup>h</sup> 31'	21 <sup>h</sup> 38'	2 <sup>h</sup> 10'	9 <sup>h</sup> 0'	29 <sup>h</sup> 27'	5 <sup>h</sup> 46'	0 <sup>h</sup> 56'	29 <sup>h</sup> 29'	1 <sup>h</sup> 51'	17 <sup>h</sup> 10'
M28	0 26 16	4 <sup>h</sup> 40'17"	24 <sup>h</sup> 37'	6 <sup>h</sup> 25'	26 <sup>h</sup> 18'	24 <sup>h</sup> 8'	21 <sup>h</sup> 30'	2 <sup>h</sup> 6'	8 <sup>h</sup> 59'	29 <sup>h</sup> 26'	5 <sup>h</sup> 48'	0 <sup>h</sup> 54'	29 <sup>h</sup> 26'	1 <sup>h</sup> 57'	17 <sup>h</sup> 16'
T 29	0 30 13	5 <sup>h</sup> 39'10"	7 <sup>h</sup> 3 1'	8 <sup>h</sup> 11'	27 <sup>h</sup> 33'	24 <sup>h</sup> 46'	21 <sup>h</sup> 23'	2 <sup>h</sup> 2'	8 <sup>h</sup> 58'	29 <sup>h</sup> 26'	5 <sup>h</sup> 49'	0 <sup>h</sup> D53	29 <sup>h</sup> 22'	2 <sup>h</sup> 4'	17 <sup>h</sup> 23'
W30	0 34  9	6 <sup>h</sup> 38'06"	19 <sup>h</sup> 34'3	9 <sup>h</sup> 56'	28 <sup>h</sup> 48'	25 <sup>h</sup> 12'3	21 <sup>h</sup> 15'	1 <sup>h</sup> 58'	8 <sup>h</sup> 57'	29 <sup>h</sup> 25'	5 <sup>h</sup> 51'	0 <sup>h</sup> 54'	29 <sup>h</sup> 19'	2 <sup>h</sup> 11'	17 <sup>h</sup> 30'

Delta T = 63.32 sec.

OCTOBER 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
T 1	0 38  6	7 <sup>h</sup> 37'03"	2 <sup>h</sup> 49'	11 <sup>h</sup> 40'	0 <sup>h</sup> 2'	26 <sup>h</sup> 10'	21 <sup>h</sup> R 8	1 <sup>h</sup> R54	8 <sup>h</sup> R57	29 <sup>h</sup> R25	5 <sup>h</sup> 52'	0 <sup>h</sup> 55'	29 <sup>h</sup> 16'	2 <sup>h</sup> 17'	17 <sup>h</sup> 37'
F 2	0 42  2	8 <sup>h</sup> 36'02"	16 <sup>h</sup> 22'	13 <sup>h</sup> 23'	1 <sup>h</sup> 17'	26 <sup>h</sup> 37'	21 <sup>h</sup> 0'	1 <sup>h</sup> 50'	8 <sup>h</sup> 56'	29 <sup>h</sup> 25'	5 <sup>h</sup> 53'	0 <sup>h</sup> 57'	29 <sup>h</sup> 13'	2 <sup>h</sup> 24'	17 <sup>h</sup> 44'
S 3	0 45 59	9 <sup>h</sup> 35'03"	0 <sup>h</sup> 22'	15 <sup>h</sup> 6'	2 <sup>h</sup> 32'	27 <sup>h</sup> 14'	20 <sup>h</sup> 53'	1 <sup>h</sup> 45'	8 <sup>h</sup> 55'	29 <sup>h</sup> 24'	5 <sup>h</sup> 55'	0 <sup>h</sup> R57	29 <sup>h</sup> 10'	2 <sup>h</sup> 31'	17 <sup>h</sup> 51'
S 4	0 49 56	10 <sup>h</sup> 34'05"	14 <sup>h</sup> 49'	16 <sup>h</sup> 47'	3 <sup>h</sup> 47'	27 <sup>h</sup> 50'	20 <sup>h</sup> 46'	1 <sup>h</sup> 41'	8 <sup>h</sup> 54'	29 <sup>h</sup> 24'	5 <sup>h</sup> 56'	0 <sup>h</sup> 57'	29 <sup>h</sup> 7'	2 <sup>h</sup> 38'	17 <sup>h</sup> 58'
M 5	0 53 52	11 <sup>h</sup> 33'09"	29 <sup>h</sup> 40'	18 <sup>h</sup> 28'	5 <sup>h</sup> 2'	28 <sup>h</sup> 27'	20 <sup>h</sup> 39'	1 <sup>h</sup> 37'	8 <sup>h</sup> 53'	29 <sup>h</sup> 24'	5 <sup>h</sup> 58'	0 <sup>h</sup> 54'	29 <sup>h</sup> 3'	2 <sup>h</sup> 44'	18 <sup>h</sup> 5'
T 6	0 57 49	12 <sup>h</sup> 32'16"	14 <sup>h</sup> 47'	20 <sup>h</sup> 7'	6 <sup>h</sup> 17'	29 <sup>h</sup> 4'	20 <sup>h</sup> 32'	1 <sup>h</sup> 32'	8 <sup>h</sup> 53'	29 <sup>h</sup> 24'	6 <sup>h</sup> 0'	0 <sup>h</sup> 50'	29 <sup>h</sup> 0'	2 <sup>h</sup> 51'	18 <sup>h</sup> 12'
W 7	1  1 45	13 <sup>h</sup> 31'24"	0 <sup>h</sup> 2'	21 <sup>h</sup> 46'	7 <sup>h</sup> 32'	29 <sup>h</sup> 41'	20 <sup>h</sup> 26'	1 <sup>h</sup> 28'	8 <sup>h</sup> 52'	29 <sup>h</sup> 23'	6 <sup>h</sup> 1'	0 <sup>h</sup> 44'	28 <sup>h</sup> 57'	2 <sup>h</sup> 58'	18 <sup>h</sup> 19'
T 8	1  5 42	14 <sup>h</sup> 30'34"	15 <sup>h</sup> 13'	23 <sup>h</sup> 24'	8 <sup>h</sup> 46'	0 <sup>h</sup> 18'	20 <sup>h</sup> 19'	1 <sup>h</sup> 24'	8 <sup>h</sup> 52'	29 <sup>h</sup> 23'	6 <sup>h</sup> 3'	0 <sup>h</sup> 37'	28 <sup>h</sup> 54'	3 <sup>h</sup> 4'	18 <sup>h</sup> 26'
F 9	1  9 38	15 <sup>h</sup> 29'47"	0 <sup>h</sup> 11'10"	25 <sup>h</sup> 2'	10 <sup>h</sup> 1'	0 <sup>h</sup> 54'	20 <sup>h</sup> 12'	1 <sup>h</sup> 19'	8 <sup>h</sup> 51'	29 <sup>h</sup> 23'	6 <sup>h</sup> 4'	0 <sup>h</sup> 31'	28 <sup>h</sup> 51'	3 <sup>h</sup> 11'	18 <sup>h</sup> 34'
S 10	1 13 35	16 <sup>h</sup> 29'02"	14 <sup>h</sup> 46'	26 <sup>h</sup> 38'	11 <sup>h</sup> 16'	1 <sup>h</sup> 31'	20 <sup>h</sup> 6'	1 <sup>h</sup> 15'	8 <sup>h</sup> 51'	29 <sup>h</sup> 23'	6 <sup>h</sup> 6'	0 <sup>h</sup> 26'	28 <sup>h</sup> 47'	3 <sup>h</sup> 18'	18 <sup>h</sup> 41'
S 11	1 17 31	17 <sup>h</sup> 28'20"	28 <sup>h</sup> 57'	28 <sup>h</sup> 14'	12 <sup>h</sup> 31'	2 <sup>h</sup> 8'	20 <sup>h</sup> 0'	1 <sup>h</sup> 10'	8 <sup>h</sup> 50'	29 <sup>h</sup> 23'	6 <sup>h</sup> 8'	0 <sup>h</sup> 22'	28 <sup>h</sup> 44'	3 <sup>h</sup> 24'	18 <sup>h</sup> 48'
M12	1 21 28	18 <sup>h</sup> 27'39"	12 <sup>h</sup> 54'	29 <sup>h</sup> 49'	13 <sup>h</sup> 46'	2 <sup>h</sup> 44'	19 <sup>h</sup> 54'	1 <sup>h</sup> 5'	8 <sup>h</sup> 50'	29 <sup>h</sup> D23	6 <sup>h</sup> 10'	0 <sup>h</sup> D20	28 <sup>h</sup> 41'	3 <sup>h</sup> 31'	18 <sup>h</sup> 55'
T 13	1 25 25	19 <sup>h</sup> 27'01"	25 <sup>h</sup> 58'	1 <sup>h</sup> 14'24"	15 <sup>h</sup> 1'	3 <sup>h</sup> 21'	19 <sup>h</sup> 48'	1 <sup>h</sup> 1'	8 <sup>h</sup> 49'	29 <sup>h</sup> 23'	6 <sup>h</sup> 11'	0 <sup>h</sup> 20'	28 <sup>h</sup> 38'	3 <sup>h</sup> 38'	19 <sup>h</sup> 3'
W14	1 29 21	20 <sup>h</sup> 26'26"	8 <sup>h</sup> 15'3	2 <sup>h</sup> 57'	16 <sup>h</sup> 16'	3 <sup>h</sup> 57'	19 <sup>h</sup> 42'	0 <sup>h</sup> 56'	8 <sup>h</sup> 49'	29 <sup>h</sup> 23'	6 <sup>h</sup> 13'	0 <sup>h</sup> 21'	28 <sup>h</sup> 35'	3 <sup>h</sup> 45'	19 <sup>h</sup> 10'
T 15	1 33 18	21 <sup>h</sup> 25'52"	21 <sup>h</sup> 29'	4 <sup>h</sup> 30'	17 <sup>h</sup> 32'	4 <sup>h</sup> 33'	19 <sup>h</sup> 36'	0 <sup>h</sup> 51'	8 <sup>h</sup> 49'	29 <sup>h</sup> 23'	6 <sup>h</sup> 15'	0 <sup>h</sup> 23'	28 <sup>h</sup> 32'	3 <sup>h</sup> 51'	19 <sup>h</sup> 18'
F 16	1 37 14	22 <sup>h</sup> 25'21"	3 <sup>h</sup> 14'49"	6 <sup>h</sup> 3'	18 <sup>h</sup> 47'	5 <sup>h</sup> 10'	19 <sup>h</sup> 31'	0 <sup>h</sup> 47'	8 <sup>h</sup> 49'	29 <sup>h</sup> 23'	6 <sup>h</sup> 17'	0 <sup>h</sup> R23	28 <sup>h</sup> 28'	3 <sup>h</sup> 58'	19 <sup>h</sup> 25'
S 17	1 41 11	23 <sup>h</sup> 24'52"	15 <sup>h</sup> 58'	7 <sup>h</sup> 34'	20 <sup>h</sup> 2'	5 <sup>h</sup> 46'	19 <sup>h</sup> 25'	0 <sup>h</sup> 42'	8 <sup>h</sup> 49'	29 <sup>h</sup> 24'	6 <sup>h</sup> 18'	0 <sup>h</sup> 21'	28 <sup>h</sup> 25'	4 <sup>h</sup> 5'	19 <sup>h</sup> 33'
S 18	1 45  7	24 <sup>h</sup> 24'26"	27 <sup>h</sup> 59'	9 <sup>h</sup> 5'	21 <sup>h</sup> 17'	6 <sup>h</sup> 22'	19 <sup>h</sup> 20'	0 <sup>h</sup> 37'	8 <sup>h</sup> 49'	29 <sup>h</sup> 24'	6 <sup>h</sup> 20'	0 <sup>h</sup> 18'	28 <sup>h</sup> 22'	4 <sup>h</sup> 11'	19 <sup>h</sup> 4

# SWISS EPHEMERIS for the year 1998

## NOVEMBER 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
S 1	2 40 19	8♂21'33	23♂1	29♂7	8♂49	14♂45	18°R26	29°R30	8♂53	29♂30	6♂48	28°R55	27♂38	5♂45	21♂29
M 2	2 44 16	9°21'33	7♂46	0♂26	10° 5	15°20	18♂23	29°Y26	8°54	29°31	6°51	28♂50	27°34	5°52	21°37
T 3	2 48 12	10°21'35	22°52	1°44	11°20	15°55	18°21	29°21	8°54	29°31	6°53	28°43	27°31	5°59	21°45
W 4	2 52 9	11°21'39	8♂11	3° 1	12°35	16°31	18°19	29°16	8°55	29°32	6°55	28°33	27°28	6° 6	21°53
T 5	2 56 5	12°21'45	23°32	4°17	13°50	17° 6	18°17	29°12	8°56	29°33	6°57	28°23	27°25	6°12	22° 1
F 6	3 0 2	13°21'52	8♂43	5°31	15° 5	17°41	18°16	29° 7	8°57	29°34	6°59	28°12	27°22	6°19	22° 9
S 7	3 3 58	14°22'02	23°33	6°43	16°21	18°16	18°14	29° 3	8°58	29°35	7° 1	28° 3	27°19	6°26	22°17
S 8	3 7 55	15°22'14	7♂57	7°53	17°36	18°52	18°13	28°58	8°59	29°36	7° 4	27°56	27°15	6°32	22°25
M 9	3 11 51	16°22'27	21°50	9° 2	18°51	19°27	18°12	28°54	9° 0	29°37	7° 6	27°51	27°12	6°39	22°33
T 10	3 15 48	17°22'43	5♂13	10° 7	20° 7	20° 2	18°11	28°49	9° 1	29°38	7° 8	27°49	27° 9	6°46	22°41
W 11	3 19 45	18°23'00	18° 9	11°10	21°22	20°37	18°10	28°45	9° 2	29°39	7°10	27°D49	27° 6	6°53	22°49
T 12	3 23 41	19°23'20	0♂43	12°10	22°37	21°11	18°10	28°41	9° 3	29°40	7°13	27°R49	27° 3	6°59	22°57
F 13	3 27 38	20°23'42	12°59	13° 7	23°52	21°46	18°10	28°36	9° 5	29°41	7°15	27°48	26°59	7° 6	23° 5
S 14	3 31 34	21°24'05	25° 2	13°59	25° 8	22°21	18°D10	28°32	9° 6	29°42	7°17	27°45	26°56	7°13	23°13
S 15	3 35 31	22°24'30	6♂58	14°48	26°23	22°56	18°10	28°28	9° 7	29°43	7°19	27°40	26°53	7°19	23°21
M 16	3 39 27	23°24'57	18°49	15°31	27°38	23°30	18°10	28°24	9° 9	29°44	7°22	27°32	26°50	7°26	23°29
T 17	3 43 24	24°25'26	0♂39	16° 9	28°54	24° 5	18°11	28°20	9°10	29°45	7°24	27°21	26°47	7°33	23°37
W 18	3 47 20	25°25'57	12°30	16°41	0♂9	24°39	18°12	28°16	9°12	29°46	7°26	27° 7	26°44	7°40	23°45
T 19	3 51 17	26°26'29	24°25	17° 6	1°24	25°14	18°13	28°12	9°13	29°48	7°29	26°52	26°40	7°46	23°53
F 20	3 55 14	27°27'03	6♂24	17°23	2°40	25°48	18°14	28° 8	9°15	29°49	7°31	26°37	26°37	7°53	24° 1
S 21	3 59 10	28°27'38	18°28	17°R32	3°55	26°22	18°15	28° 4	9°16	29°50	7°33	26°23	26°34	8° 0	24° 9
S 22	4 3 7	29°28'15	0♂38	17°32	5°10	26°56	18°17	28° 0	9°18	29°51	7°36	26°11	26°31	8° 6	24°17
M 23	4 7 3	0♂28'53	12°57	17°22	6°26	27°30	18°19	27°57	9°20	29°53	7°38	26° 2	26°28	8°13	24°25
T 24	4 11 0	1°29'32	25°25	17° 2	7°41	28° 4	18°21	27°53	9°22	29°54	7°40	25°56	26°25	8°20	24°33
W 25	4 14 56	2°30'12	8♂6	16°31	8°56	28°38	18°23	27°50	9°23	29°56	7°43	25°53	26°21	8°27	24°41
T 26	4 18 53	3°30'54	21° 3	15°49	10°12	29°12	18°26	27°46	9°25	29°57	7°45	25°53	26°18	8°33	24°49
F 27	4 22 49	4°31'36	4♂20	14°57	11°27	29°46	18°28	27°43	9°27	29°58	7°47	25°53	26°15	8°40	24°57
S 28	4 26 46	5°32'20	17°59	13°55	12°43	0♂19	18°31	27°40	9°29	0♂0	7°50	25°52	26°12	8°47	25° 5
S 29	4 30 43	6°33'04	2♂2	12°45	13°58	0°53	18°34	27°36	9°31	0° 1	7°52	25°50	26° 9	8°53	25°13
M 30	4 34 39	7♂33'50	16°Y30	11♂28	15♂13	1♂26	18♂38	27°Y33	9♂33	0♂3	7♂54	25♂46	26♂5	9♂0	25♂21

Delta T = 63.40 sec.

## DECEMBER 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
T 1	4 38 36	8♂34'36	1♂19	10°R 7	16♂29	2♂0	18♂41	27°R30	9♂35	0♂5	7♂57	25°R38	26♂2	9♂7	25♂29
W 2	4 42 32	9°35'24	16°24	8♂44	17°44	2°33	18°45	27°Y27	9°37	0° 6	7°59	25♂29	25°59	9°14	25°37
T 3	4 46 29	10°36'12	1♂35	7°22	18°59	3° 6	18°48	27°24	9°39	0° 8	8° 1	25°18	25°56	9°20	25°45
F 4	4 50 25	11°37'02	16°42	6° 5	20°14	3°40	18°52	27°22	9°42	0° 9	8° 4	25° 6	25°53	9°27	25°52
S 5	4 54 22	12°37'53	1♂33	4°54	21°30	4°13	18°57	27°19	9°44	0°11	8° 6	24°56	25°50	9°34	26° 0
S 6	4 58 18	13°38'45	16° 2	3°51	22°45	4°46	19° 1	27°17	9°46	0°13	8° 8	24°49	25°46	9°40	26° 8
M 7	5 2 15	14°39'38	0♂3	2°58	24° 0	5°18	19° 6	27°14	9°48	0°14	8°11	24°44	25°43	9°47	26°16
T 8	5 6 12	15°40'32	13°34	2°16	25°16	5°51	19°10	27°12	9°51	0°16	8°13	24°41	25°40	9°54	26°24
W 9	5 10 8	16°41'28	26°37	1°46	26°31	6°24	19°15	27° 9	9°53	0°18	8°15	24°D41	25°37	10° 1	26°31
T 10	5 14 5	17°42'25	9♂15	1°27	27°46	6°56	19°21	27° 7	9°56	0°20	8°18	24°41	25°34	10° 7	26°39
F 11	5 18 1	18°43'23	21°34	1°D19	29° 2	7°29	19°26	27° 5	9°58	0°22	8°20	24°R41	25°30	10°14	26°47
S 12	5 21 58	19°44'22	3♂39	1°21	0♂17	8° 1	19°31	27° 3	10° 1	0°23	8°22	24°40	25°27	10°21	26°54
S 13	5 25 54	20°45'22	15°34	1°33	1°32	8°33	19°37	27° 1	10° 3	0°25	8°25	24°37	25°24	10°27	27° 2
M 14	5 29 51	21°46'23	27°24	1°54	2°48	9° 6	19°43	27° 0	10° 6	0°27	8°27	24°31	25°21	10°34	27° 9
T 15	5 33 47	22°47'26	9♂14	2°23	4° 3	9°38	19°49	26°58	10° 8	0°29	8°29	24°23	25°18	10°41	27°17
W 16	5 37 44	23°48'29	21° 8	2°59	5°18	10°10	19°55	26°56	10°11	0°31	8°32	24°12	25°15	10°48	27°24
T 17	5 41 41	24°49'33	3♂7	3°42	6°34	10°41	20° 2	26°55	10°14	0°33	8°34	24° 1	25°11	10°54	27°32
F 18	5 45 37	25°50'38	15°13	4°30	7°49	11°13	20° 8	26°54	10°16	0°35	8°36	23°49	25° 8	11° 1	27°39
S 19	5 49 34	26°51'43	27°28	5°23	9° 4	11°45	20°15	26°52	10°19	0°37	8°39	23°37	25° 5	11° 8	27°46
S 20	5 53 30	27°52'50	9♂53	6°21	10°20	12°16	20°22	26°51	10°22	0°39	8°41	23°28	25° 2	11°15	27°54
M 21	5 57 27	28°53'56	22°27	7°23	11°35	12°47	20°29	26°50	10°25	0°41	8°43	23°21	24°59	11°21	28° 1
T 22	6 1 23	29°55'03	5♂11	8°28	12°50	13°19	20°36	26°49	10°27	0°43	8°45	23°17	24°56	11°28	28° 8
W 23	6 5 20	0♂56'11	18° 6	9°36	14° 6	13°50	20°43	26°49	10°30	0°45	8°47	23°D15	24°52	11°35	28°15
T 24	6 9 17	1°57'18	1♂14	10°46	15°21	14°21	20°51	26°48	10°33	0°47	8°50	23°15	24°49	11°41	28°23
F 25	6 13 13	2°58'26	14°37	11°59	16°36	14°51	20°58	26°47	10°36	0°49	8°52	23°16	24°46	11°48	28°30
S 26	6 17 10	3°59'34	28°15	13°15	17°52	15°22	21° 6	26°47	10°39	0°51	8°54	23°R17	24°43	11°55	28°37
S 27	6 21 6	5° 0'42	12°Y10	14°31	19° 7	15°53	21°14	26°46	10°42	0°53	8°56	23°17	24°40	12° 2	28°44
M 28	6 25 3	6° 1'49	26°22	15°50	20°22	16°23	21°22	26°46	10°45	0°55	8°58	23°15	24°36	12° 8	28°51
T 29	6 28 59	7° 2'57	10♂49	17°10	21°37	16°53	21°31	26°46	10°48	0°57	9° 1	23°11	24°33	12°15	28°58
W 30	6 32 56	8° 4'05	25°29	18°31	22°53	17°23	21°39	26°D46	10°51	0°59	9° 3	23° 6	24°30	12°22	29° 4
T 31	6 36 52	9♂5'13	10♂14	19♂53	24♂8	17♂53	21♂48	26°Y46	10♂54	1♂1	9♂5	22♂59	24♂27	12♂28	29♂11

Delta T = 63.43 sec.

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