Eventos mutuos entre los satélites de Júpiter - 2009

Año	M	D	h	m	s	Evento	T	Dur	dMag	%Ill	Sep	PA	MinD	T1 h	T1 m	T1 s	T2 h	T2 m	T2 s	T3 h	T3 m	T3 s	Tmax h	Tmax m	Tmax s	T4 h	T4 m	T4 s	T5 h	T5 m	T5 s	T6 h	T6 m	T6 s
2009	5	15	14	22	44	(I) occ (III)	P	168	0.0	96.6	26.2	67	1.042				14	21	20				14	22	44				14	24	8			
2009	5	15	21	23	47	(II) occ (III)	A	372	0.3	73.9	100.4	68	0.145				21	20	41	21	23	6	21	23	47	21	24	29	21	26	53			
2009	5	16	4	10	27	(IV) ecl (III)	E	759	0.2	85.2	165.9	68	1.151	4	4	7							4	10	27							4	16	46
2009	5	16	9	35	40	(II) occ (I)	P	225	0.4	70.0	60.8	249	0.293				9	33	48				9	35	40				9	37	33			
2009	5	16	18	43	43	(IV) ecl (I)	P	646	0.5	60.6	84.6	68	0.549	18	38	20	18	42	40				18	43	43				18	44	47	18	49	6
2009	5	17	10	55	47	(IV) ecl (I)	P	1219	0.7	53.1	9.0	245	0.373	10	45	38	10	51	4				10	55	47				11	0	30	11	5	56
2009	5	17	16	22	6	(I) occ (II)	P	286	0.6	58.5	91.1	248	0.100				16	19	43				16	22	6				16	24	29			
2009	5	17	21	10	7	(IV) ecl (I)	E	810	0.3	79.1	118.1	248	0.940	21	3	23							21	10	7							21	16	52
2009	5	18	15	45	3	(III) occ (I)	P	437	0.2	84.6	109.0	68	0.693				15	41	25				15	45	3				15	48	41			
2009	5	18	11	43	20	(III) occ (II)	T	450	0.3	73.9	148.6	68	0.223				11	39	35	11	42	41	11	43	20	11	43	59	11	47	5			
2009	5	19	22	41	58	(II) occ (I)	P	231	0.5	61.9	59.1	249	0.164				22	40	2				22	41	58				22	43	53			
2009	5	21	5	29	49	(I) occ (II)	T	293	0.6	57.5	94.1	248	0.010				5	27	22	5	29	38	5	29	49	5	30	0	5	32	16			
2009	5	23	11	47	48	(II) occ (I)	A	232	0.6	57.5	57.4	249	0.035				11	45	52	11	47	40	11	47	48	11	47	56	11	49	44			
2009	5	23	0	37	36	(II) occ (III)	P	333	0.2	79.8	94.8	68	0.507				0	34	50				0	37	36				0	40	22			
2009	5	24	18	37	8	(I) occ (II)	P	298	0.6	57.6	97.1	248	0.076				18	34	38				18	37	8				18	39	37			
2009	5	25	15	2	9	(III) occ (II)	T	476	0.3	73.9	158.1	68	0.112				14	58	12	15	1	13	15	2	9	15	3	6	15	6	7			
2009	5	25	19	2	13	(III) occ (I)	P	505	0.1	89.3	118.5	68	0.840				18	58	0				19	2	13				19	6	25			
2009	5	25	21	22	52	(III) ecl (IV)	E	393	0.0	98.8	72.2	251	1.820	21	19	35							21	22	52							21	26	8
2009	5	26	1	22	33	(I) ecl (IV)	E	496	0.4	68.9	38.7	254	0.633	1	18	25				1	21	43	1	22	33	1	23	24				1	26	41
2009	5	26	8	12	47	(III) occ (I)	P	1393	0.4	68.8	25.5	246	0.289				8	1	10				8	12	47				8	24	23			
2009	5	26	8	30	34	(II) ecl (IV)	E	186	0.0	99.9	22.1	59	1.590	8	29	1							8	30	34							8	32	6
2009	5	26	17	0	27	(III) occ (I)	P	642	0.1	93.3	121.2	248	0.961				16	55	6				17	0	27				17	5	48			
2009	5	27	0	53	14	(II) occ (I)	P	230	0.6	58.0	55.6	249	0.092				0	51	19				0	53	14				0	55	9			
2009	5	28	7	44	24	(I) occ (II)	P	302	0.5	61.2	100.2	248	0.155				7	41	53				7	44	24				7	46	55			
2009	5	29	16	50	32	(I) ecl (III)	E	74	0.0	100.0	34.0	250	1.555	16	49	55							16	50	32							16	51	9
2009	5	30	13	58	13	(II) occ (I)	P	223	0.5	64.7	53.8	249	0.217				13	56	21				13	58	13				14	0	4			
2009	5	30	3	47	38	(II) occ (III)	P	254	0.1	92.1	89.0	67	0.867				3	45	31				3	47	38				3	49	45			
2009	5	31	20	51	13	(I) occ (II)	P	304	0.5	65.4	103.2	248	0.229				20	48	41				20	51	13				20	53	45			
2009	6	1	18	11	52	(III) ecl (I)	E	296	0.0	98.9	103.3	68	1.333	18	9	24							18	11	52							18	14	19
2009	6	1	18	18	52	(III) occ (II)	P	470	0.3	76.1	167.6	68	0.414				18	14	57				18	18	52				18	22	47			
2009	6	1	22	48	44	(III) occ (I)	P	802	0.1	89.8	122.3	68	0.874				22	42	3				22	48	44				22	55	25			
2009	6	2	6	37	1	(III) occ (I)	P	1442	0.4	71.9	36.4	69	0.392				6	25	0				6	37	1				6	49	3			
2009	6	2	1	56	36	(IV) ecl (II)	P	2038	0.5	65.9	198.2	68	0.309	1	39	37	1	49	42				1	56	36				2	3	31	2	13	35
2009	6	3	3	2	46	(II) occ (I)	P	214	0.4	71.7	52.0	249	0.338				3	0	59				3	2	46				3	4	33			
2009	6	3	3	30	37	(IV) ecl (I)	A	481	0.3	74.8	44.1	249	0.161	3	26	37	3	29	20	3	29	43	3	30	37	3	31	31	3	31	54	3	34	38
2009	6	3	22	43	44	(IV) ecl (II)	P	848	0.5	63.8	193.6	248	0.491	22	36	40	22	42	21				22	43	44				22	45	7	22	50	48
2009	6	4	9	58	4	(I) occ (II)	P	305	0.4	69.2	106.2	248	0.297				9	55	31				9	58	4				10	0	36			
2009	6	4	11	40	8	(IV) ecl (III)	E	853	0.1	91.2	306.0	248	1.263	11	33	2							11	40	8							11	47	15
2009	6	5	19	33	26	(I) ecl (III)	E	216	0.0	98.8	47.8	249	1.333	19	31	38							19	33	26							19	35	14
2009	6	6	16	6	52	(II) occ (I)	P	201	0.3	78.1	50.1	249	0.457				16	5	11				16	6	52				16	8	32			
2009	6	6	6	54	14	(II) occ (III)	P	81	0.0	99.8	83.0	67	1.214				6	53	33				6	54	14				6	54	55			
2009	6	7	23	4	24	(I) occ (II)	P	306	0.3	72.5	109.1	248	0.358				23	1	51				23	4	24				23	6	57			
2009	6	8	21	33	41	(III) occ (II)	P	440	0.2	84.8	177.0	68	0.678				21	30	1				21	33	41				21	37	22			
2009	6	8	21	31	34	(III) ecl (I)	E	531	0.1	92.3	118.1	68	1.120	21	27	9							21	31	34							21	35	59
2009	6	9	10	32	21	(III) ecl (I)	P	1114	0.2	84.5	1.3	202	0.979	10	23	4	10	28	43				10	32	21				10	35	59	10	41	38
2009	6	9	19	32	17	(III) ecl (I)	P	859	0.2	80.0	123.5	248	0.940	19	25	7	19	30	41				19	32	17				19	33	53	19	39	26
2009	6	10	5	10	33	(II) occ (I)	P	186	0.2	83.9	48.3	249	0.571				5	9	0				5	10	33				5	12	6			
2009	6	10	7	29	24	(III) ecl (IV)	A	943	0.4	71.5	330.7	249	0.291	7	21	33	7	26	33	7	27	34	7	29	24	7	31	14	7	32	15	7	37	16
2009	6	10	14	37	54	(II) ecl (IV)	E	810	0.5	60.8	277.3	249	0.342	14	31	9	14	35	57	14	35	3	14	37	54	14	40	46	14	39	52	14	44	39
2009	6	11	12	10	47	(I) occ (II)	P	307	0.3	75.3	112.1	248	0.413				12	8	14				12	10	47				12	13	20			

2009	6	11	6 12 45	(I) ecl (IV)	E	486	0.5	60.9	149.3	250	0.401	6 8 42	6 11 43	6 11 17	6 12 45	6 14 12	6 13 46	6 16 48
2009	6	12	22 15 47	(I) ecl (III)	E	286	0.1	94.1	61.1	249	1.105	22 13 24			22 15 47			22 18 10
2009	6	13	18 13 47	(II) occ (I)	P	167	0.1	88.8	46.3	249	0.680		18 12 24		18 13 47		18 15 11	
2009	6	14	23 21 12	(I) ecl (II)	E	55	0.0	100.0	137.6	248	1.112	23 20 45			23 21 12			23 21 40
2009	6	15	1 16 39	(I) occ (II)	P	308	0.3	77.7	114.9	248	0.461		1 14 5		1 16 39		1 19 13	
2009	6	16	0 46 59	(III) occ (II)	P	393	0.1	91.6	186.1	68	0.900		0 43 42		0 46 59		0 50 15	
2009	6	16	1 29 43	(III) ecl (I)	P	1036	0.2	79.7	128.7	68	0.936	1 21 4	1 27 23		1 29 43		1 32 2	1 38 21
2009	6	16	8 45 59	(III) ecl (I)	P	1331	0.3	77.8	64.9	69	0.908	8 34 53	8 40 24		8 45 59		8 51 33	8 57 4
2009	6	16	23 16 30	(III) ecl (I)	P	641	0.5	65.2	129.8	248	0.798	23 11 9	23 14 21		23 16 30		23 18 39	23 21 51
2009	6	17	7 16 37	(II) occ (I)	P	146	0.1	92.9	44.4	249	0.783		7 15 24		7 16 37		7 17 50	
2009	6	18	14 22 37	(I) occ (II)	P	310	0.2	79.6	117.8	248	0.501		14 20 2		14 22 37		14 25 12	
2009	6	18	12 30 0	(I) ecl (II)	E	140	0.0	99.7	140.0	248	1.044	12 28 50			12 30 0			12 31 10
2009	6	19	5 11 27	(IV) ecl (II)	E	603	0.5	65.8	95.8	68	0.498	5 6 26			5 11 27			5 16 28
2009	6	19	8 32 48	(IV) ecl (I)	E	510	0.3	75.9	80.2	67	0.919	8 28 33			8 32 48			8 37 3
2009	6	19	23 21 19	(IV) ecl (III)	E	785	0.2	83.6	92.9	249	0.209	23 14 47	23 19 28	23 18 54	23 21 19	23 23 44	23 23 11	23 27 52
2009	6	20	0 58 13	(I) ecl (III)	E	335	0.2	85.2	74.0	249	0.874	0 55 25			0 58 13			1 1 0
2009	6	20	5 10 39	(IV) ecl (I)	P	2241	0.8	49.5	72.0	247	0.546	4 51 59	5 3 49		5 10 39		5 17 29	5 29 20
2009	6	20	9 36 43	(IV) ecl (I)	P	2116	0.7	50.5	123.9	248	0.441	9 19 5	9 30 24		9 36 43		9 43 3	9 54 21
2009	6	20	20 18 59	(II) occ (I)	P	121	0.0	96.2	42.4	249	0.880		20 17 58		20 18 59		20 19 59	
2009	6	22	3 28 4	(I) occ (II)	P	312	0.2	81.0	120.6	248	0.535		3 25 28		3 28 4		3 30 40	
2009	6	22	1 38 48	(I) ecl (II)	E	190	0.0	98.8	142.2	248	0.979	1 37 13			1 38 48			1 40 22
2009	6	23	3 58 12	(III) occ (II)	P	332	0.0	96.0	194.8	68	1.078		3 55 26		3 58 12		4 0 57	
2009	6	24	9 20 57	(II) occ (I)	P	90	0.0	98.5	40.4	249	0.970		9 20 12		9 20 57		9 21 42	
2009	6	24	2 32 10	(III) ecl (I)	P	564	0.8	45.8	128.4	248	0.627	2 27 29	2 29 52		2 32 10		2 34 29	2 36 52
2009	6	25	16 33 38	(I) occ (II)	P	317	0.2	82.0	123.3	248	0.560		16 31 0		16 33 38		16 36 17	
2009	6	25	14 48 6	(I) ecl (II)	E	230	0.0	97.0	144.3	248	0.916	14 46 11			14 48 6			14 50 1
2009	6	27	3 41 7	(I) ecl (III)	P	372	0.3	73.0	86.2	249	0.644	3 38 1	3 39 56		3 41 7		3 42 17	3 44 13
2009	6	27	22 22 28	(II) occ (I)	P	44	0.0	99.8	38.4	249	1.052		22 22 6		22 22 28		22 22 50	
2009	6	27	22 16 23	(II) ecl (IV)	E	563	0.4	72.2	158.8	250	0.241	22 11 42	22 15 19	22 14 7	22 16 23	22 18 40	22 17 28	22 21 5
2009	6	28	15 21 5	(I) ecl (IV)	E	490	0.2	83.7	5.7	340	0.898	15 17 1			15 21 5			15 25 10
2009	6	29	3 57 25	(I) ecl (II)	E	264	0.1	94.4	146.1	248	0.856	3 55 14			3 57 25			3 59 37
2009	6	29	5 38 41	(I) occ (II)	P	323	0.2	82.7	125.9	248	0.579		5 35 59		5 38 41		5 41 23	
2009	6	29	14 59 59	(III) ecl (IV)	A	1095	0.4	68.0	218.9	67	0.197	14 50 51	14 56 3	14 57 55	14 59 59	15 2 2	15 3 54	15 9 6
2009	6	30	7 8 12	(III) occ (II)	P	267	0.0	98.3	203.1	68	1.208		7 5 58		7 8 12		7 10 25	
2009	7	1	5 35 30	(III) ecl (I)	P	520	1.0	40.3	122.4	248	0.435	5 31 10	5 33 10		5 35 30		5 37 50	5 39 50
2009	7	2	18 43 58	(I) occ (II)	P	332	0.2	82.9	128.4	248	0.589		18 41 12		18 43 58		18 46 45	
2009	7	2	17 7 22	(I) ecl (II)	E	295	0.1	90.9	147.9	248	0.799	17 4 55			17 7 22			17 9 49
2009	7	4	6 24 58	(I) ecl (III)	A	402	0.5	63.3	97.5	249	0.419	6 21 37	6 23 20	6 24 4	6 24 58	6 25 52	6 26 36	6 28 19
2009	7	4	16 0 0	(II) ecl (III)	E	112	0.0	100.0	22.6	63	1.522	15 59 4			16 0 0			16 0 56
2009	7	5	9 22 19	(IV) ecl (III)	E	523	0.0	98.5	223.7	68	1.662	9 17 57			9 22 19			9 26 41
2009	7	6	6 17 21	(I) ecl (II)	P	323	0.2	86.6	149.3	248	0.745	6 14 40	6 17 17		6 17 21		6 17 25	6 20 3
2009	7	6	7 48 45	(I) occ (II)	P	343	0.2	82.8	130.8	248	0.593		7 45 54		7 48 45		7 51 37	
2009	7	6	14 15 34	(IV) ecl (II)	A	560	0.2	83.2	37.5	248	0.144	14 10 54	14 14 27	14 14 31	14 15 34	14 16 38	14 16 41	14 20 14
2009	7	6	17 38 16	(IV) ecl (I)	E	265	0.0	98.1	57.5	249	1.460	17 36 3			17 38 16			17 40 28
2009	7	7	10 16 26	(III) occ (II)	P	216	0.0	99.3	210.6	68	1.289		10 14 38		10 16 26		10 18 14	
2009	7	7	7 14 25	(III) ecl (II)	E	283	0.0	99.5	191.8	68	1.316	7 12 3			7 14 25			7 16 46
2009	7	8	12 9 49	(II) ecl (I)	E	85	0.0	99.9	56.2	249	1.134	12 9 6			12 9 49			12 10 31
2009	7	8	8 31 11	(III) ecl (I)	P	489	0.6	55.3	112.8	248	0.224	8 27 7	8 28 54		8 31 11		8 33 28	8 35 15
2009	7	9	20 53 54	(I) occ (II)	P	358	0.2	82.3	133.1	248	0.587		20 50 55		20 53 54		20 56 53	
2009	7	9	19 28 6	(I) ecl (II)	P	351	0.2	81.8	150.6	248	0.694	19 25 10	19 27 7		19 28 6		19 29 4	19 31 1
2009	7	11	9 10 30	(I) ecl (III)	A	428	0.5	64.9	107.9	249	0.203	9 6 57	9 8 36	9 9 16	9 10 30	9 11 45	9 12 25	9 14 4
2009	7	11	19 12 55	(II) ecl (III)	E	259	0.0	98.8	19.8	62	1.304	19 10 45			19 12 55			19 15 4
2009	7	12	1 15 49	(II) ecl (I)	E	132	0.0	99.2	52.5	249	1.047	1 14 43			1 15 49			1 16 55
2009	7	13	9 58 32	(I) occ (II)	P	374	0.2	81.5	135.2	248	0.575		9 55 25		9 58 32		10 1 39	
2009	7	13	8 38 52	(I) ecl (II)	P	378	0.3	76.7	151.5	248	0.645	8 35 43	8 37 29		8 38 52		8 40 15	8 42 1
2009	7	14	13 23 55	(III) occ (II)	P	214	0.0	99.4	217.1	68	1.322		13 22 8		13 23 55		13 25 42	
2009	7	14	10 46 28	(III) ecl (II)	E	520	0.1	90.4	203.6	68	1.057	10 42 8			10 46 28			10 50 48

2009	7	15	2	24	15	(III) ecl (IV)	E	584	0.1	90.5	41.9	257	1.419	2	19	23							2	24	15					2	29	7
2009	7	15	7	34	16	(II) ecl (IV)	E	533	0.4	71.3	11.3	35	0.622	7	29	49				7	32	38	7	34	16	7	35	54			7	38	42
2009	7	15	11	22	11	(III) ecl (I)	A	461	0.0	100.0	100.1	249	0.001	11	18	21	11	20	2	11	21	54	11	22	11	11	22	29	11	24	21	11	26	2
2009	7	15	14	21	51	(II) ecl (I)	E	164	0.0	97.5	48.5	250	0.961	14	20	29							14	21	51							14	23	13
2009	7	16	23	3	41	(I) occ (II)	P	394	0.2	80.3	137.2	248	0.554				23	0	24				23	3	41				23	6	58			
2009	7	16	21	50	34	(I) ecl (II)	P	405	0.4	71.6	152.2	248	0.601	21	47	12	21	48	52				21	50	34				21	52	17	21	53	56
2009	7	18	11	57	56	(I) ecl (III)	A	452	0.0	100.0	117.1	249	0.002	11	54	10	11	55	50	11	56	34	11	57	56	11	59	18	12	0	1	12	1	42
2009	7	18	22	25	30	(II) ecl (III)	E	336	0.1	94.5	17.7	61	1.077	22	22	42							22	25	30							22	28	18
2009	7	19	3	27	52	(II) ecl (I)	E	188	0.1	94.7	44.4	250	0.873	3	26	18							3	27	52							3	29	26
2009	7	20	12	8	23	(I) occ (II)	P	416	0.3	78.8	138.9	248	0.528				12	4	55				12	8	23				12	11	51			
2009	7	20	11	2	22	(I) ecl (II)	P	432	0.4	66.7	152.6	248	0.560	10	58	46	11	0	22				11	2	22				11	4	22	11	5	58
2009	7	21	16	31	22	(III) occ (II)	P	274	0.0	99.1	222.6	68	1.312				16	29	5				16	31	22				16	33	39			
2009	7	21	14	22	21	(III) ecl (II)	P	692	0.4	66.3	214.0	68	0.804	14	16	35	14	20	24				14	22	21				14	24	18	14	28	7
2009	7	22	16	33	53	(II) ecl (I)	E	207	0.1	90.5	40.1	250	0.786	16	32	10							16	33	53							16	35	37
2009	7	22	14	10	6	(III) ecl (I)	P	433	0.6	57.0	84.8	249	0.235	14	6	30	14	8	10				14	10	6				14	12	2	14	13	43
2009	7	23	23	10	57	(IV) ecl (II)	E	457	0.1	91.4	165.3	248	1.207	23	7	9							23	10	57							23	14	46
2009	7	24	0	15	20	(I) ecl (II)	P	461	0.5	62.1	152.7	248	0.524	0	11	30	0	13	4				0	15	20				0	17	37	0	19	11
2009	7	24	1	13	51	(I) occ (II)	P	443	0.3	76.9	140.5	248	0.492				1	10	9				1	13	51				1	17	32			
2009	7	24	17	7	50	(IV) ecl (III)	E	957	0.3	77.9	328.7	248	0.967	16	59	52							17	7	50							17	15	49
2009	7	25	14	48	28	(I) ecl (III)	A	478	0.5	64.9	124.9	249	0.182	14	44	30	14	46	15	14	47	7	14	48	28	14	49	50	14	50	42	14	52	27
2009	7	26	5	39	54	(II) ecl (I)	E	223	0.2	84.9	35.5	250	0.698	5	38	3							5	39	54							5	41	46
2009	7	26	1	38	12	(II) ecl (III)	E	388	0.2	86.4	16.1	60	0.842	1	34	58							1	38	12							1	41	26
2009	7	27	14	18	55	(I) occ (II)	P	471	0.3	74.8	141.8	249	0.452				14	15	0				14	18	55				14	22	51			
2009	7	27	13	28	29	(I) ecl (II)	P	491	0.6	57.9	152.4	249	0.491	13	24	24	13	25	57				13	28	29				13	31	2	13	32	35
2009	7	28	19	40	18	(III) occ (II)	P	381	0.0	98.0	226.8	69	1.262				19	37	8				19	40	18				19	43	29			
2009	7	28	18	3	40	(III) ecl (II)	P	848	1.2	33.4	222.5	69	0.558	17	56	35	17	59	40				18	3	40				18	7	39	18	10	44
2009	7	29	18	45	57	(II) ecl (I)	P	236	0.3	77.9	30.9	251	0.609	18	43	59	18	45	30				18	45	57				18	46	24	18	47	55
2009	7	29	16	55	59	(III) ecl (I)	P	402	0.9	45.3	67.2	249	0.477	16	52	38	16	54	24				16	55	59				16	57	34	16	59	20
2009	7	31	3	25	0	(I) occ (II)	P	504	0.4	72.2	143.0	249	0.402				3	20	48				3	25	0				3	29	12			
2009	7	31	2	43	6	(I) ecl (II)	P	525	0.7	54.2	151.8	249	0.464	2	38	43	2	40	17				2	43	6				2	45	55	2	47	28
2009	8	1	17	42	43	(I) ecl (III)	A	510	0.5	63.1	130.9	249	0.342	17	38	28	17	40	22	17	41	31	17	42	43	17	43	55	17	45	4	17	46	58
2009	8	2	7	52	0	(II) ecl (I)	P	246	0.4	70.0	26.0	251	0.521	7	49	57	7	51	15				7	52	0				7	52	45	7	54	3
2009	8	2	4	50	30	(II) ecl (III)	E	423	0.3	75.2	15.0	60	0.600	4	46	59	4	49	34	4	49	31	4	50	30	4	51	29	4	51	26	4	54	1
2009	8	3	16	30	53	(I) occ (II)	P	539	0.4	69.5	143.8	249	0.349				16	26	24				16	30	53				16	35	23			
2009	8	3	15	58	6	(I) ecl (II)	P	562	0.7	51.1	150.8	249	0.440	15	53	26	15	55	0				15	58	6				16	1	13	16	2	47
2009	8	4	22	53	2	(III) occ (II)	P	517	0.0	96.2	229.3	69	1.183				22	48	44				22	53	2				22	57	21			
2009	8	4	21	53	0	(III) ecl (II)	P	1012	0.7	52.9	228.1	69	0.316	21	44	34	21	47	31				21	53	0				21	58	30	22	1	27
2009	8	5	20	58	5	(II) ecl (I)	P	255	0.5	61.6	21.1	252	0.432	20	55	57	20	57	9				20	58	5				20	59	0	21	0	12
2009	8	5	19	40	46	(III) ecl (I)	P	366	0.6	55.7	47.8	250	0.721	19	37	43	19	39	48				19	40	46				19	41	44	19	43	49
2009	8	7	5	38	10	(I) occ (II)	P	581	0.4	66.3	144.4	249	0.287				5	33	20				5	38	10				5	43	0			
2009	8	7	5	15	4	(I) ecl (II)	P	605	0.8	48.8	149.3	249	0.424	5	10	2	5	11	38				5	15	4				5	18	30	5	20	7
2009	8	8	20	43	0	(I) ecl (III)	A	558	0.5	64.2	134.9	250	0.472	20	38	21	20	40	29	20	42	15	20	43	0	20	43	45	20	45	31	20	47	39
2009	8	9	10	4	9	(II) ecl (I)	P	261	0.7	53.0	16.0	253	0.344	10	1	58	10	3	6				10	4	9				10	5	12	10	6	20
2009	8	9	8	2	43	(II) ecl (III)	E	444	0.4	68.3	14.2	60	0.352	7	59	1	8	1	14	8	1	11	8	2	43	8	4	15	8	4	12	8	6	25
2009	8	10	18	45	31	(I) occ (II)	P	626	0.5	63.1	144.6	249	0.222				18	40	18				18	45	31				18	50	44			
2009	8	10	18	32	51	(I) ecl (II)	P	655	0.8	47.2	147.3	249	0.412	18	27	24	18	29	4				18	32	51				18	36	39	18	38	19
2009	8	12	1	53	19	(III) ecl (II)	T	1209	9.9	0.0	229.9	69	0.076	1	43	14	1	46	19	1	53	1	1	53	19	1	53	37	2	0	19	2	3	23
2009	8	12	2	11	18	(III) occ (II)	P	683	0.1	93.7	229.7	69	1.085				2	5	36				2	11	18				2	16	59			
2009	8	12	22	24	27	(III) ecl (I)	E	322	0.3	78.8	27.1	251	0.964	22	21	46							22	24	27							22	27	8
2009	8	12	23	10	16	(II) ecl (I)	A	266	0.8	47.2	11.0	255	0.255	23	8	3	23	9	8	23	9	50	23	10	16	23	10	42	23	11	24	23	12	29
2009	8	14	7	53	25	(I) ecl (II)	P	718	0.8	46.8	144.7	249	0.409	7	47	25	7	49	11				7	53	25				7	57	39	7	59	24
2009	8	14	7	54	46	(I) occ (II)	P	680	0.6	59.6	144.4	249	0.150				7	49	7				7	54	46				8	0	26			
2009	8	14	21	59	25	(I) occ (II)	P	1064	0.0	99.5	78.7	69	1.111				21	50	33				21	59	25				22	8	17			
2009	8	15	0	44	56	(I) occ (II)	P	2197	0.1	91.6	120.3	69	0.837				0	26	37				0	44	56				1	3	14			
2009	8	15	23	53	7	(I) ecl (III)	P	644	0.4	69.2	175.7	68	0.564	23	47	45	23	50	14				23	53	7				23	56	0	23	58	29
2009	8	16	11	14	57	(II) ecl (III)	E	454	0.2	81.5	13.5	61	0.098	11	11	10	11	13	16	11	13	14	11	14	57	11	16	41	11	16	38	11	18	44
2009	8	16	12	12	31	(II) occ (I)	P	56	0.0	99.6	7.2	258	1.118				12	12	3				12	12	31				12	12	58			

2009	8	16	12 16 24	(II) ecl (I)	A	270	0.7	52.6	5.9	260	0.167	12 14 9	12 15 12	12 15 49	12 16 24	12 16 58	12 17 35	12 18 39
2009	8	16	16 46 55	(I) ecl (III)	A	2791	0.4	70.6	86.9	68	0.187	16 23 39	16 29 40	16 40 59	16 46 55	16 52 51	17 4 10	17 10 11
2009	8	16	17 14 4	(I) occ (III)	P	2118	0.1	92.7	92.8	68	1.126		16 56 25		17 14 4		17 31 43	
2009	8	16	20 14 14	(I) occ (III)	P	512	0.0	99.9	131.2	68	1.500		20 9 58		20 14 14		20 18 30	
2009	8	16	20 45 47	(I) ecl (III)	P	2373	0.5	62.6	137.8	68	0.443	20 26 1	20 32 42		20 45 47		20 58 52	21 5 34
2009	8	17	21 4 32	(I) occ (II)	T	741	0.6	57.5	143.8	249	0.074		20 58 22	21 4 17	21 4 32	21 4 47	21 10 43	
2009	8	17	21 15 41	(I) ecl (II)	P	798	0.8	47.4	141.4	249	0.414	21 9 3	21 10 55		21 15 41		21 20 28	21 22 20
2009	8	18	14 36 12	(I) occ (II)	P	1307	0.1	87.4	130.6	69	0.729		14 25 18		14 36 12		14 47 5	
2009	8	18	14 58 52	(I) ecl (II)	E	799	0.0	98.0	135.8	69	0.894	14 52 13			14 58 52			15 5 31
2009	8	19	5 40 27	(III) occ (II)	P	896	0.1	91.1	227.5	69	0.986		5 32 59		5 40 27		5 47 55	
2009	8	19	6 13 17	(III) ecl (II)	P	1499	0.2	85.5	226.0	69	0.168	6 0 48	6 4 22		6 13 17		6 22 13	6 25 47
2009	8	20	1 10 52	(II) occ (I)	P	89	0.0	98.3	4.9	262	1.050		1 10 7		1 10 52		1 11 36	
2009	8	20	1 7 53	(III) ecl (I)	E	264	0.1	93.1	6.0	260	1.202	1 5 41			1 7 53			1 10 5
2009	8	20	1 22 34	(II) ecl (I)	A	272	0.3	74.3	1.3	311	0.078	1 20 18	1 21 21	1 21 56	1 22 34	1 23 12	1 23 48	1 24 50
2009	8	20	17 52 54	(III) ecl (II)	E	1096	0.0	97.3	218.4	249	1.137	17 43 46			17 52 54			18 2 2
2009	8	21	10 17 11	(I) occ (II)	T	818	0.6	57.5	142.7	249	0.010		10 10 22	10 16 41	10 17 11	10 17 42	10 24 1	
2009	8	21	10 42 44	(I) ecl (II)	P	910	0.8	49.8	137.0	249	0.430	10 35 9	10 37 14		10 42 44		10 48 14	10 50 19
2009	8	22	4 7 55	(I) occ (II)	P	1018	0.2	84.6	135.8	69	0.664		3 59 26		4 7 55		4 16 23	
2009	8	22	4 42 33	(I) ecl (II)	P	777	0.1	91.6	143.5	69	0.791	4 36 5	4 40 29		4 42 33		4 44 37	4 49 1
2009	8	23	3 22 36	(I) ecl (III)	P	845	0.4	71.6	133.0	250	0.601	3 15 33	3 18 40		3 22 36		3 26 32	3 29 39
2009	8	23	14 34 3	(I) ecl (III)	A	1496	0.2	82.0	14.1	62	0.150	14 21 35	14 24 34	14 30 49	14 34 3	14 37 17	14 43 31	14 46 31
2009	8	23	14 9 17	(II) occ (I)	P	112	0.0	96.4	2.7	273	0.975		14 8 21		14 9 17		14 10 13	
2009	8	23	14 28 45	(II) ecl (I)	A	273	0.0	100.0	4.6	56	0.009	14 26 29	14 27 31	14 28 6	14 28 45	14 29 24	14 29 59	14 31 1
2009	8	23	14 27 21	(II) ecl (III)	E	453	0.4	70.7	12.6	61	0.159	14 23 35	14 25 42	14 25 39	14 27 21	14 29 3	14 29 1	14 31 8
2009	8	23	15 30 57	(I) occ (III)	P	1190	0.2	82.4	26.8	65	0.780		15 21 2		15 30 57		15 40 52	
2009	8	24	23 31 19	(I) occ (II)	P	915	0.6	57.7	140.9	249	0.097		23 23 42		23 31 19		23 38 56	
2009	8	24	1 28 45	(I) ecl (III)	P	784	0.2	84.3	155.2	69	0.827	1 22 13	1 26 6		1 28 45		1 31 24	1 35 17
2009	8	25	0 14 17	(I) ecl (II)	P	1079	0.7	53.9	131.3	249	0.460	0 5 18	0 7 43		0 14 17		0 20 52	0 23 17
2009	8	25	17 29 21	(I) occ (II)	P	868	0.2	82.9	138.6	69	0.626		17 22 7		17 29 21		17 36 34	
2009	8	25	18 14 9	(I) ecl (II)	P	743	0.2	82.9	148.3	69	0.699	18 7 57	18 10 50		18 14 9		18 17 28	18 20 20
2009	8	26	9 26 57	(III) occ (II)	P	1211	0.1	88.9	221.4	69	0.906		9 16 52		9 26 57		9 37 3	
2009	8	26	11 12 25	(III) ecl (II)	P	2114	1.7	21.7	212.0	69	0.437	10 54 49	10 59 52		11 12 25		11 24 59	11 30 2
2009	8	27	1 1 33	(III) ecl (II)	E	416	0.0	100.0	36.3	69	1.243	0 58 4			1 1 33			1 5 1
2009	8	27	3 7 51	(II) occ (I)	P	132	0.1	94.0	1.1	336	0.896		3 6 45		3 7 51		3 8 57	
2009	8	27	3 34 58	(II) ecl (I)	A	272	0.5	64.9	9.6	63	0.097	3 32 43	3 33 45	3 34 21	3 34 58	3 35 36	3 36 12	3 37 14
2009	8	27	3 50 58	(III) ecl (I)	E	178	0.0	99.1	15.3	65	1.431	3 49 29			3 50 58			3 52 27
2009	8	27	22 49 3	(III) ecl (II)	E	772	0.0	97.0	226.9	250	1.145	22 42 37			22 49 3			22 55 29
2009	8	28	12 50 29	(I) occ (II)	P	1052	0.5	61.9	138.2	249	0.197		12 41 43		12 50 29		12 59 15	
2009	8	28	13 57 56	(I) ecl (II)	P	1411	0.5	61.5	122.8	249	0.517	13 46 10	13 49 21		13 57 56		14 6 30	14 9 41
2009	8	29	6 47 45	(I) occ (II)	P	763	0.2	81.7	140.3	70	0.598		6 41 23		6 47 45		6 54 6	
2009	8	29	7 41 22	(I) ecl (II)	P	709	0.3	72.8	151.7	70	0.609	7 35 28	7 37 44		7 41 22		7 45 1	7 47 17
2009	8	30	5 47 30	(I) occ (III)	P	407	0.0	98.3	143.1	250	1.368		5 44 7		5 47 30		5 50 54	
2009	8	30	7 57 42	(I) ecl (III)	P	2044	0.4	67.4	116.1	250	0.525	7 40 40	7 46 50		7 57 42		8 8 34	8 14 44
2009	8	30	12 27 12	(I) ecl (III)	A	2486	0.5	64.6	58.0	251	0.280	12 6 29	12 11 57	12 22 55	12 27 12	12 31 29	12 42 28	12 47 55
2009	8	30	14 34 51	(I) occ (III)	P	1270	0.3	77.7	29.9	253	0.632		14 24 16		14 34 51		14 45 25	
2009	8	30	16 6 35	(II) occ (I)	P	148	0.1	91.1	2.5	46	0.814		16 5 22		16 6 35		16 7 49	
2009	8	30	16 41 14	(II) ecl (I)	A	270	0.8	49.6	14.6	66	0.184	16 38 59	16 40 2	16 40 40	16 41 14	16 41 47	16 42 25	16 43 28
2009	8	30	17 40 12	(II) ecl (III)	E	440	0.4	68.7	11.4	61	0.419	17 36 32	17 38 49	17 38 46	17 40 12	17 41 38	17 41 35	17 43 52
2009	8	31	5 0 34	(I) ecl (III)	E	451	0.0	96.6	157.0	69	1.152	4 56 49			5 0 34			5 4 20
2009	9	1	4 30 3*	(I) ecl (II)	E	1372	0.0	99.2	102.0	250	0.922	4 18 37			4 30 3			4 41 29
2009	9	1	2 13 53	(I) occ (II)	P	1261	0.4	67.4	134.2	250	0.305		2 3 22		2 13 53		2 24 24	
2009	9	1	4 8 38	(I) ecl (II)	P	2609	0.3	75.4	107.3	250	0.628	3 46 54	3 53 30		4 8 38		4 23 47	4 30 23
2009	9	1	7 0 35	(I) ecl (II)	E	1632	0.0	98.9	63.2	249	0.909	6 46 59			7 0 35			7 14 11
2009	9	1	20 1 53	(I) occ (II)	P	688	0.2	81.1	141.0	70	0.583		19 56 9		20 1 53		20 7 37	
2009	9	1	21 3 48	(I) ecl (II)	P	680	0.5	62.0	154.1	70	0.523	20 58 8	21 0 3		21 3 48		21 7 32	21 9 27
2009	9	2	13 54 21	(III) occ (II)	P	1901	0.1	88.4	207.3	70	0.885		13 38 30		13 54 21		14 10 11	
2009	9	3	5 5 34	(II) occ (I)	P	161	0.1	87.8	4.8	58	0.730		5 4 13		5 5 34		5 6 54	

2009	9	3	5 47 31	(II) ecl (I)	A	266	0.8	48.6	19.4	67	0.271	5 45 18	5 46 24	5 47 7	5 47 31	5 47 55	5 48 39	5 49 44
2009	9	4	3 6 58	(III) ecl (II)	E	565	0.0	98.3	226.4	250	1.199	3 2 15			3 6 58			3 11 40
2009	9	4	15 50 29	(I) occ (II)	P	1714	0.3	74.5	127.4	250	0.443		15 36 12		15 50 29		16 4 46	
2009	9	4	20 30 10	(I) occ (II)	P	859	0.0	99.0	57.5	249	1.064		20 23 1		20 30 10		20 37 20	
2009	9	5	9 15 13	(I) occ (II)	P	626	0.2	80.8	141.2	70	0.572		9 10 0		9 15 13		9 20 26	
2009	9	5	10 24 35	(I) ecl (II)	P	651	0.7	50.3	155.6	70	0.435	10 19 10	10 20 52		10 24 35		10 28 19	10 30 1
2009	9	6	18 4 47	(II) occ (I)	P	172	0.2	84.2	7.1	62	0.644		18 3 21		18 4 47		18 6 13	
2009	9	6	18 53 52	(II) ecl (I)	P	262	0.7	54.2	24.1	68	0.357	18 51 41	18 52 49		18 53 52		18 54 54	18 56 2
2009	9	6	19 13 53	(II) occ (III)	P	197	0.1	95.3	12.3	257	1.127		19 12 14		19 13 53		19 15 31	
2009	9	6	20 53 5	(II) ecl (III)	E	413	0.3	78.9	9.8	61	0.681	20 49 38	20 52 34	20 52 26	20 53 5	20 53 43	20 53 35	20 56 31
2009	9	7	8 12 0	(I) ecl (III)	E	160	0.0	100.0	153.7	69	1.467	8 10 40			8 12 0			8 13 20
2009	9	8	6 46 11*	(I) occ (II)	P	3207	0.1	95.5	101.4	250	0.928		6 19 27		6 46 11		7 12 54	
2009	9	8	7 31 43	(I) occ (II)	P	4533	0.1	93.5	90.1	250	0.869		6 53 56		7 31 43		8 9 30	
2009	9	8	22 26 7	(I) occ (II)	P	577	0.2	80.8	140.9	70	0.570		22 21 19		22 26 7		22 30 56	
2009	9	8	23 42 37	(I) ecl (II)	P	626	1.0	38.4	156.6	70	0.350	23 37 24	23 38 57		23 42 37		23 46 16	23 47 50
2009	9	10	7 4 17	(II) occ (I)	P	182	0.2	80.4	9.4	64	0.560		7 2 46		7 4 17		7 5 48	
2009	9	10	8 0 13	(II) ecl (I)	P	255	0.5	62.5	28.7	68	0.442	7 58 5	7 59 18		8 0 13		8 1 8	8 2 20
2009	9	11	7 7 4	(III) ecl (II)	E	367	0.0	99.6	221.0	250	1.287	7 4 0			7 7 4			7 10 8
2009	9	12	11 36 58	(I) occ (II)	P	535	0.2	81.0	140.2	70	0.570		11 32 31		11 36 58		11 41 26	
2009	9	12	12 59 55	(I) ecl (II)	P	601	1.5	26.2	157.0	70	0.262	12 54 54	12 56 21		12 59 55		13 3 28	13 4 55
2009	9	13	20 4 7	(II) occ (I)	P	189	0.3	76.5	11.7	66	0.477		20 2 32		20 4 7		20 5 41	
2009	9	13	21 6 38	(II) ecl (I)	P	247	0.4	70.5	33.1	68	0.527	21 4 34	21 5 53		21 6 38		21 7 22	21 8 41
2009	9	13	21 59 58	(II) occ (III)	P	265	0.2	87.0	20.2	253	0.821		21 57 45		21 59 58		22 2 10	
2009	9	14	0 6 23	(II) ecl (III)	E	369	0.1	90.2	7.4	60	0.943	0 3 18			0 6 23			0 9 27
2009	9	16	0 46 16	(I) occ (II)	P	499	0.2	81.4	139.1	70	0.574		0 42 7		0 46 16		0 50 26	
2009	9	16	2 15 20	(I) ecl (II)	P	578	1.3	30.4	157.0	70	0.175	2 10 31	2 11 54		2 15 20		2 18 46	2 20 9
2009	9	17	9 4 16	(II) occ (I)	P	196	0.3	72.6	14.1	67	0.397		9 2 38		9 4 16		9 5 54	
2009	9	17	10 13 4	(II) ecl (I)	P	237	0.3	77.9	37.3	69	0.611	10 11 5	10 12 37		10 13 4		10 13 31	10 15 2
2009	9	19	13 55 47	(I) occ (II)	P	467	0.2	81.9	137.8	70	0.579		13 51 54		13 55 47		13 59 41	
2009	9	19	15 30 22	(I) ecl (II)	P	554	0.7	52.9	156.5	70	0.086	15 25 45	15 27 5		15 30 22		15 33 40	15 34 59
2009	9	20	22 4 50	(II) occ (I)	P	201	0.4	68.7	16.4	67	0.320		22 3 10		22 4 50		22 6 31	
2009	9	20	23 19 35	(II) ecl (I)	E	226	0.2	84.4	41.3	69	0.693	23 17 42			23 19 35			23 21 27
2009	9	21	0 48 25	(II) occ (III)	P	302	0.3	78.2	27.9	252	0.534		0 45 54		0 48 25		0 50 56	
2009	9	21	3 19 34	(II) ecl (III)	E	300	0.0	97.2	4.5	56	1.205	3 17 4			3 19 34			3 22 4
2009	9	23	3 4 16	(I) occ (II)	P	439	0.2	82.5	136.1	70	0.587		3 0 37		3 4 16		3 7 56	
2009	9	23	4 44 2	(I) ecl (II)	A	531	0.0	100.0	155.8	70	0.002	4 39 36	4 40 54	4 43 40	4 44 2	4 44 24	4 47 10	4 48 28
2009	9	24	11 5 46	(II) occ (I)	P	205	0.5	65.0	18.7	68	0.248		11 4 4		11 5 46		11 7 29	
2009	9	24	12 26 6	(II) ecl (I)	E	212	0.1	89.7	45.0	69	0.775	12 24 20			12 26 6			12 27 52
2009	9	25	11 11 41	(III) occ (II)	P	249	0.0	99.4	215.9	250	1.288		11 9 37		11 11 41		11 13 46	
2009	9	26	16 13 10	(I) occ (II)	P	414	0.2	83.0	134.3	70	0.593		16 9 43		16 13 10		16 16 36	
2009	9	26	17 57 31	(I) ecl (II)	A	507	0.6	57.0	154.7	70	0.093	17 53 17	17 54 34	17 57 29	17 57 31	17 57 33	18 0 27	18 1 44
2009	9	28	0 7 9	(II) occ (I)	P	207	0.5	61.6	21.0	68	0.182		0 5 25		0 7 9		0 8 52	
2009	9	28	1 32 41	(II) ecl (I)	E	195	0.1	93.8	48.6	69	0.856	1 31 4			1 32 41			1 34 19
2009	9	28	3 39 58	(II) occ (III)	A	322	0.3	73.9	35.6	252	0.279		3 37 17	3 39 34	3 39 58	3 40 23	3 42 39	
2009	9	28	6 32 57	(II) ecl (III)	E	176	0.0	99.8	1.2	16	1.466	6 31 29			6 32 57			6 34 25
2009	9	30	5 21 21	(I) occ (II)	P	391	0.2	83.6	132.3	71	0.600		5 18 5		5 21 21		5 24 36	
2009	9	30	7 9 56	(I) ecl (II)	P	483	1.2	32.1	153.3	70	0.184	7 5 55	7 7 12		7 9 56		7 12 41	7 13 58
2009	10	1	13 8 55	(II) occ (I)	P	210	0.6	58.8	23.2	69	0.121		13 7 11		13 8 55		13 10 40	
2009	10	1	14 39 18	(II) ecl (I)	E	175	0.0	96.7	51.9	70	0.936	14 37 50			14 39 18			14 40 45
2009	10	2	14 32 20	(III) occ (II)	P	399	0.0	96.4	209.6	250	1.109		14 29 0		14 32 20		14 35 40	
2009	10	3	18 30 1	(I) occ (II)	P	371	0.2	84.1	130.1	71	0.604		18 26 55		18 30 1		18 33 6	
2009	10	3	20 22 17	(I) ecl (II)	P	457	1.4	28.5	151.7	71	0.277	20 18 28	20 19 46		20 22 17		20 24 48	20 26 6
2009	10	5	2 11 10	(II) occ (I)	A	211	0.6	57.5	25.5	69	0.067		2 9 25	2 11 6	2 11 10	2 11 15	2 12 56	
2009	10	5	3 45 59	(II) ecl (I)	E	150	0.0	98.6	55.1	70	1.014	3 44 44			3 45 59			3 47 14
2009	10	5	6 34 53	(II) occ (III)	A	331	0.3	73.9	43.1	251	0.066		6 32 8	6 34 12	6 34 53	6 35 34	6 37 39	
2009	10	5	17 15 15	(I) occ (III)	P	112	0.0	99.4	87.3	70	1.332		17 14 19		17 15 15		17 16 11	
2009	10	7	7 38 8	(I) occ (II)	P	354	0.2	84.6	127.8	71	0.608		7 35 11		7 38 8		7 41 5	

2009 10 7 9 33 45	(I) ecl (II)	P	431	1.0	41.2	149.8	71	0.370	9 30 9	9 31 29		9 33 45		9 36 0	9 37 20
2009 10 8 15 13 51	(II) occ (I)	A	212	0.6	57.5	27.7	69	0.019		15 12 5	15 13 43	15 13 51	15 13 59	15 15 37	
2009 10 8 16 52 42	(II) ecl (I)	E	116	0.0	99.6	58.0	70	1.091	16 51 44			16 52 42			16 53 40
2009 10 8 17 50 13	(III) occ (I)	P	168	0.0	97.5	74.1	70	1.211		17 48 49		17 50 13		17 51 36	
2009 10 9 17 53 5	(III) occ (II)	P	459	0.1	92.6	202.4	250	0.945		17 49 16		17 53 5		17 56 55	
2009 10 10 20 46 48	(I) occ (II)	P	339	0.2	84.9	125.3	71	0.608		20 43 59		20 46 48		20 49 38	
2009 10 10 22 45 12	(I) ecl (II)	P	403	0.7	54.0	147.8	71	0.465	22 41 50	22 43 15		22 45 12		22 47 9	22 48 33
2009 10 12 4 17 0	(II) occ (I)	A	213	0.6	57.5	29.9	69	0.021		4 15 13	4 16 52	4 17 0	4 17 7	4 18 46	
2009 10 12 5 59 28	(II) ecl (I)	E	64	0.0	100.0	60.7	70	1.166	5 58 57			5 59 28			6 0 0
2009 10 12 9 33 27	(II) occ (III)	A	333	0.3	73.9	50.4	251	0.096		9 30 40	9 32 46	9 33 27	9 34 7	9 36 13	
2009 10 12 19 53 47	(I) occ (III)	P	150	0.0	98.2	73.5	70	1.234		19 52 32		19 53 47		19 55 2	
2009 10 14 9 55 5	(I) occ (II)	P	325	0.2	85.1	122.8	71	0.605		9 52 23		9 55 5		9 57 48	
2009 10 14 11 55 56	(I) ecl (II)	P	373	0.4	66.2	145.6	71	0.561	11 52 49	11 54 21		11 55 56		11 57 30	11 59 2
2009 10 15 17 20 35	(II) occ (I)	A	213	0.6	57.5	32.1	69	0.053		17 18 48	17 20 29	17 20 35	17 20 40	17 22 21	
2009 10 15 20 29 40	(III) occ (I)	P	238	0.1	93.5	84.7	70	1.028		20 27 41		20 29 40		20 31 38	
2009 10 16 21 13 54	(III) occ (II)	P	481	0.1	88.7	194.4	250	0.804		21 9 53		21 13 54		21 17 54	
2009 10 17 23 3 57	(I) occ (II)	P	314	0.2	85.1	120.1	71	0.599		23 1 20		23 3 57		23 6 34	
2009 10 18 1 6 42	(I) ecl (II)	P	340	0.3	77.4	143.1	71	0.658	1 3 52	1 5 38		1 6 42		1 7 45	1 9 32
2009 10 19 6 24 39	(II) occ (I)	P	214	0.6	57.5	34.3	69	0.079		6 22 52		6 24 39		6 26 26	
2009 10 19 12 36 0	(II) occ (III)	A	333	0.3	73.9	57.6	251	0.205		12 33 14	12 35 27	12 36 0	12 36 33	12 38 47	
2009 10 19 22 33 27	(I) occ (III)	P	165	0.0	97.3	59.1	70	1.162		22 32 5		22 33 27		22 34 49	
2009 10 21 12 12 30	(I) occ (II)	P	305	0.2	85.0	117.5	71	0.589		12 9 58		12 12 30		12 15 3	
2009 10 21 14 16 51	(I) ecl (II)	E	303	0.2	86.9	140.6	71	0.756	14 14 19			14 16 51			14 19 22
2009 10 22 19 29 9	(II) occ (I)	P	215	0.6	58.1	36.4	69	0.097		19 27 22		19 29 9		19 30 57	
2009 10 22 23 14 48	(III) occ (I)	P	294	0.1	89.5	94.5	70	0.880		23 12 21		23 14 48		23 17 15	
2009 10 24 0 35 43	(III) occ (II)	P	484	0.2	85.4	186.0	250	0.689		0 31 41		0 35 43		0 39 45	
2009 10 25 1 21 37	(I) occ (II)	P	297	0.2	84.6	114.7	71	0.575		1 19 8		1 21 37		1 24 5	
2009 10 25 3 27 1	(I) ecl (II)	E	261	0.1	93.8	137.9	71	0.855	3 24 51			3 27 1			3 29 11
2009 10 26 8 34 9	(II) occ (I)	P	216	0.6	58.6	38.5	69	0.108		8 32 22		8 34 9		8 35 57	
2009 10 26 15 42 13	(II) occ (III)	A	333	0.3	73.9	64.6	251	0.261		15 39 26	15 41 49	15 42 13	15 42 37	15 44 59	
2009 10 27 1 14 10	(I) occ (III)	P	166	0.0	96.9	44.6	69	1.119		1 12 47		1 14 10		1 15 33	
2009 10 28 14 30 31	(I) occ (II)	P	292	0.2	84.0	111.9	71	0.556		14 28 5		14 30 31		14 32 57	
2009 10 28 16 36 41	(I) ecl (II)	E	210	0.0	97.9	135.2	70	0.955	16 34 56			16 36 41			16 38 26
2009 10 29 21 39 34	(II) occ (I)	P	217	0.6	58.8	40.6	69	0.112		21 37 46		21 39 34		21 41 22	
2009 10 30 2 7 8	(III) occ (I)	P	352	0.2	86.2	103.2	70	0.765		2 4 11		2 7 8		2 10 4	
2009 10 30 20 14 33	(III) ecl (I)	E	654	0.0	99.5	61.1	250	1.294	20 9 6			20 14 33			20 20 0
2009 10 31 3 58 58	(III) occ (II)	P	474	0.2	83.0	177.2	250	0.608		3 55 1		3 58 58		4 2 55	

2009 11 1 3 39 56	(I) occ (II)	P	287	0.2	83.0	109.0	71	0.533		3 37 33		3 39 56		3 42 20	
2009 11 1 5 46 22	(I) ecl (II)	E	140	0.0	99.7	132.3	70	1.056	5 45 12			5 46 22			5 47 32
2009 11 2 10 45 28	(II) occ (I)	P	218	0.6	58.7	42.6	69	0.109		10 43 39		10 45 28		10 47 17	
2009 11 2 18 52 23	(II) occ (III)	A	337	0.3	73.9	71.4	251	0.264		18 49 34	18 52 0	18 52 23	18 52 45	18 55 11	
2009 11 3 3 56 33	(I) occ (III)	P	155	0.0	97.3	29.9	69	1.111		3 55 15		3 56 33		3 57 50	
2009 11 4 16 49 14	(I) occ (II)	P	284	0.2	81.8	106.1	70	0.505		16 46 52		16 49 14		16 51 36	
2009 11 5 23 51 46	(II) occ (I)	P	220	0.6	58.4	44.6	69	0.099		23 49 56		23 51 46		23 53 36	
2009 11 6 5 9 35	(III) occ (I)	P	428	0.2	83.4	110.4	70	0.674		5 6 1		5 9 35		5 13 9	
2009 11 6 18 31 25	(III) ecl (I)	E	577	0.0	99.6	1.8	87	1.301	18 26 36			18 31 25			18 36 13
2009 11 7 7 23 51	(III) occ (II)	P	457	0.2	81.8	168.1	250	0.563		7 20 3		7 23 51		7 27 40	
2009 11 8 5 58 58	(I) occ (II)	P	283	0.2	80.3	103.2	70	0.471		5 56 36		5 58 58		6 1 19	
2009 11 9 12 58 33	(II) occ (I)	P	222	0.6	57.8	46.6	69	0.083		12 56 42		12 58 33		13 0 23	
2009 11 9 22 5 45	(II) occ (III)	A	345	0.3	73.9	78.0	250	0.217		22 2 53	22 5 15	22 5 45	22 6 16	22 8 38	
2009 11 10 6 40 15	(I) occ (III)	P	128	0.0	98.5	15.4	68	1.137		6 39 11		6 40 15		6 41 19	
2009 11 11 19 8 37	(I) occ (II)	P	282	0.3	78.3	100.3	70	0.433		19 6 16		19 8 37		19 10 58	
2009 11 13 2 5 42	(II) occ (I)	A	224	0.6	57.5	48.6	69	0.061		2 3 50	2 5 38	2 5 42	2 5 47	2 7 34	
2009 11 13 8 28 37	(III) occ (I)	P	559	0.2	80.7	115.2	70	0.593		8 23 58		8 28 37		8 33 17	
2009 11 13 22 33 12	(III) occ (I)	T	1484	0.4	67.7	34.1	249	0.136		22 20 51	22 31 24	22 33 12	22 35 1	22 45 34	
2009 11 14 6 21 22	(III) occ (I)	P	929	0.2	81.3	115.8	250	0.605		6 13 38		6 21 22		6 29 7	
2009 11 14 10 50 45	(III) occ (II)	P	433	0.2	82.0	158.9	250	0.556		10 47 8		10 50 45		10 54 22	

2009	11	15	8	18	41	(I) occ (II)	P	281	0.3	76.0	97.4	70	0.389	8 16 20		8 18 41		8 21 2
2009	11	16	15	13	19	(II) occ (I)	A	226	0.6	57.5	50.5	69	0.034	15 11 26	15 13 11	15 13 19	15 13 26	15 15 12
2009	11	17	9	25	46	(I) occ (III)	P	66	0.0	99.8	1.3	40	1.195	9 25 13		9 25 46		9 26 19
2009	11	17	1	22	34	(II) occ (III)	A	355	0.3	73.9	84.3	250	0.124	1 19 37	1 21 53	1 22 34	1 23 16	1 25 32
2009	11	18	21	28	43	(I) occ (II)	P	281	0.3	73.3	94.5	70	0.341	21 26 23		21 28 43		21 31 4
2009	11	20	4	21	19	(II) occ (I)	A	229	0.6	57.5	52.4	69	0.002	4 19 24	4 21 10	4 21 19	4 21 27	4 23 13
2009	11	20	12	22	38	(III) occ (I)	P	925	0.3	77.1	114.8	70	0.493	12 14 56		12 22 38		12 30 21
2009	11	20	20	45	42	(III) occ (I)	T	1436	0.4	67.7	29.1	71	0.129	20 33 44	20 43 55	20 45 42	20 47 29	20 57 40
2009	11	21	10	19	52	(III) occ (I)	P	469	0.1	90.7	112.0	250	0.834	10 15 58		10 19 52		10 23 47
2009	11	21	14	18	48	(III) occ (II)	P	403	0.2	83.8	149.6	250	0.590	14 15 26		14 18 48		14 22 10
2009	11	22	10	39	7	(I) occ (II)	P	281	0.4	70.1	91.5	70	0.286	10 36 47		10 39 7		10 41 28
2009	11	23	17	29	44	(II) occ (I)	A	231	0.6	57.5	54.3	69	0.036	17 27 49	17 29 36	17 29 44	17 29 51	17 31 39
2009	11	24	4	42	40	(II) occ (III)	A	365	0.3	73.9	90.3	250	0.011	4 39 38	4 41 54	4 42 40	4 43 26	4 45 42
2009	11	25	23	49	29	(I) occ (II)	P	281	0.4	66.4	88.6	70	0.227	23 47 9		23 49 29		23 51 50
2009	11	27	6	38	32	(II) occ (I)	P	232	0.6	57.7	56.2	69	0.077	6 36 36		6 38 32		6 40 29
2009	11	28	13	45	49	(III) occ (I)	P	231	0.0	98.0	102.6	250	1.053	13 43 54		13 45 49		13 47 45
2009	11	28	17	48	28	(III) occ (II)	P	363	0.1	87.3	140.4	249	0.665	17 45 26		17 48 28		17 51 29
2009	11	29	13	0	11	(I) occ (II)	P	279	0.5	62.4	85.7	70	0.162	12 57 51		13 0 11		13 2 30
2009	11	30	19	47	43	(II) occ (I)	P	234	0.6	60.0	58.0	69	0.122	19 45 46		19 47 43		19 49 40
2009	12	1	8	6	2	(II) occ (III)	A	368	0.3	73.9	96.2	250	0.182	8 2 58	8 5 26	8 6 2	8 6 39	8 9 7
2009	12	3	2	10	51	(I) occ (II)	P	277	0.6	58.4	82.8	70	0.092	2 8 33		2 10 51		2 13 10
2009	12	4	8	57	17	(II) occ (I)	P	234	0.5	63.1	59.8	69	0.171	8 55 20		8 57 17		8 59 14
2009	12	5	21	19	0	(III) occ (II)	P	304	0.1	92.3	131.2	249	0.783	21 16 28		21 19 0		21 21 32
2009	12	6	15	21	49	(I) occ (II)	T	274	0.6	57.5	79.9	69	0.017	15 19 33	15 21 39	15 21 49	15 21 59	15 24 6
2009	12	7	22	7	12	(II) occ (I)	P	234	0.4	66.7	61.6	69	0.223	22 5 15		22 7 12		22 9 9
2009	12	8	11	32	49	(II) occ (III)	P	359	0.3	76.8	101.9	249	0.384	11 29 50		11 32 49		11 35 48
2009	12	10	4	32	47	(I) occ (II)	T	268	0.6	57.5	77.1	69	0.063	4 30 33	4 32 44	4 32 47	4 32 50	4 35 1
2009	12	11	11	17	29	(II) occ (I)	P	232	0.4	70.5	63.3	68	0.277	11 15 33		11 17 29		11 19 26
2009	12	13	17	43	58	(I) occ (II)	P	261	0.5	61.9	74.2	69	0.149	17 41 48		17 43 58		17 46 8
2009	12	13	0	50	36	(III) occ (II)	P	201	0.0	97.7	122.1	249	0.942	0 48 55		0 50 36		0 52 16
2009	12	15	0	28	7	(II) occ (I)	P	229	0.3	74.4	65.0	68	0.333	0 26 13		0 28 7		0 30 2
2009	12	15	15	2	28	(II) occ (III)	P	324	0.2	86.3	107.4	249	0.610	14 59 46		15 2 28		15 5 10
2009	12	17	6	55	10	(I) occ (II)	P	250	0.4	68.1	71.4	69	0.239	6 53 5		6 55 10		6 57 16
2009	12	18	13	39	7	(II) occ (I)	P	224	0.3	78.4	66.7	68	0.391	13 37 15		13 39 7		13 40 59
2009	12	20	20	6	34	(I) occ (II)	P	236	0.3	74.8	68.6	69	0.334	20 4 36		20 6 34		20 8 32
2009	12	22	2	50	25	(II) occ (I)	P	217	0.2	82.4	68.4	68	0.451	2 48 37		2 50 25		2 52 14
2009	12	22	18	35	19	(II) occ (III)	P	235	0.0	95.9	112.8	249	0.856	18 33 21		18 35 19		18 37 16
2009	12	24	9	18	0	(I) occ (II)	P	217	0.2	81.5	65.9	68	0.434	9 16 12		9 18 0		9 19 48
2009	12	25	16	2	6	(II) occ (I)	P	207	0.2	86.4	70.1	68	0.511	16 0 23		16 2 6		16 3 50
2009	12	27	22	29	33	(I) occ (II)	P	191	0.1	88.1	63.1	68	0.538	22 27 57		22 29 33		22 31 8
2009	12	29	5	14	4	(II) occ (I)	P	193	0.1	90.1	71.7	68	0.572	5 12 28		5 14 4		5 15 41

Referencias:
Año M D h m s: año, mes, día, hora, minutos y segundos en Tiempo Universal (UT); **Evento**: satélites (**I**: Io, **II**: Europa, **III**: Ganymede, **IV**: Callisto) y evento, **occ** para ocultación y **ecl** para eclipse; **T**: tipo de evento, **E** para eclipse penumbral, **P** para eclipse u ocultación parcial, **T** para eclipse u ocultación total, **A** para eclipse u ocultación anular; **Dur**: duración del evento en segundos; **dMag**: pérdida de magnitud, 9.99 indica una ocultación total. **%Ill**: la iluminación en el máximo del eclipse u ocultación como porcentaje de solo satélite completamente iluminado (eclipses) o de ambos satélites juntos (ocultación); **Sep**: distancia en arcosegundos desde el satélite ocultado o eclipsado hasta el centro del planeta; **PA**: ángulo de posición de los satélites eclipsados u ocultados respecto del planeta; **MinD**: la separación mínima en arcosegundos entre los centros de los satélites o entre el satélite y la sombra. **T1** y **T6**: para eclipses, comienzo y final del contacto con la penumbra; **T2** y **T5**: comienzo y final del contacto externo con la umbra o limbo; **T3** y **T4**: cominezo y final de la totalidad o anularidad; **Tmax**: mitad del evento.

Más información: http://www.surastronomico.com/noticias_ver.php?id=134&id_not=503