

Edwin Goffin and Pawel Maksym

Asteroidal Occultation Predictions 2007
Specification prepared for observers from Poland

Edwin Goffin i Paweł Maksym

Efemerydy Zakryć Asteroidalnych 2007
Specyfikacja przygotowana dla obserwatorów z Polski

Polish Association of Amateur Astronomers
Department of Position and Occultations

Polskie Towarzystwo Miłośników Astronomii
Seksja Obserwacji Pozycji i Zakryć

As every year we wont present asteroidal events list visible from area of Republic of Poland. Visible mean, that star which will be occulted, will be visible above the horizon in Poland in event time (path in Europe).

Selected, graphical predictions for Poland will be accessible on our official forum - <http://astro-forum.org/Forum/index.php?showforum=81>

Star catalogs used for ephemeris - FK6 I (Wielen 1999) & III (Wielen 2000), HIP (ESA 1997), TYC 2 (Hog 2000) - without Hipparcosa, UCAC2 (UCAC - Zacharias 2004) - only stars brighter than or equal 12 mag. Predictions obtained for 1455 objects bigger than 40 km, some Kuiper Belt, Centaurs ect. are also included. Source for objects diameter were Data base asteroid II (Binzel 1989) and base counted with the use of the occultations (D. Dunham 1997). For unknown arc diameter presented equation was used:

$\log D = 3.52 - 0.20M$

D - arc size, M - absolute mag

We hope that, that the future event will be fruitful and many positive observation will be done.

Jak co roku pragniemy zaprezentować listę zjawisk asteroidalnych widocznych z terenu Rzeczypospolitej Polskiej. Widocznych, to znaczy takich gdzie zakrywana gwiazda będzie, w czasie zjawiska, nad horyzontem a (pas na terenie Europy).

Poszczególne, graficzne, wyselekcjonowane dla Polski efemerydy będą dostępne na naszym oficjalnym dziale forum - <http://astro-forum.org/Forum/index.php?showforum=81> .

W efemerydach użyto katalogów gwiazd - FK6 I (Wielen 1999) i III (Wielen 2000), HIP (ESA 1997), TYC 2 (Hog 2000) - bez gwiazd Hipparcosa, USAC2 (USAC - Zacharias 2004) - tylko gwiazdy < lub = 12 mag. W sumie 3380063 gwiazd.

Efemerydy wyliczono dla 1455 obiektów większych niż 40 km w tym obiekty Pasa Kuipera, Centaury itp. Średnice obiektów zostały pobrane z tzw. Baza danych asteroid II (Binzel 1989) oraz bazy wyliczonej zakryciami (D. Dunham 1997). Gdy średnica katowa nie była znana wyliczano ją wzorem:

$\log D = 3.52 - 0.20M$

, gdzie:

D to rozmiary katowe, M to absolutne magnitudo.

Mamy nadzieję, że przyszłe zjawiska owocne i zostanie wykonanych wiele pozytywnych obserwacji.

List of the event

Lista zjawisk

Events with favourable conditions of observation in Poland are bolded.

Zjawiska zachodzące w sprzyjających warunkach dla obserwatorów z Polski zostały pogrubione.

Mon.	Day	h	m	No.	Name	Star no.	mag	m drop	dur.[sec]
Jan	01	01	58.6	547	Praxedis	UCAC2 30155537	11.80	1.6	6.8
Jan	04	21	06.5	144	Vibilia	TYC 1888-00747-1	9.60	1.8	15.6
Jan	04	22	54.7	795	Fini	TYC 2337-01500-1	11.03	3.7	19.3
Jan	07	05	25.4	952	Caia	TYC 5546-00854-1	10.96	4.8	4.6
Jan	07	17	50.7	309	Fraternitas	TYC 1817-01615-1	10.96	4.1	10.9
Jan	07	23	13.9	491	Carina	TYC 4819-01907-1	11.40	1.9	7.8
Jan	07	23	17.0	2621	Goto	UCAC2 39446278	11.79	3.3	4.5
Jan	09	03	21.4	123	Brunhild	TYC 1397-01645-1	11.03	1.7	5.7
Jan	09	05	10.0	675	Ludmilla	UCAC2 29278490	11.96	1.2	15.7
Jan	09	19	49.3	221	Eos	UCAC2 36635091	11.62	1.1	7.5
Jan	10	20	36.5	1024	Hale	TYC 2416-01207-1	11.03	3.7	4.6
Jan	12	03	01.2	805	Hormuthia	TYC 4941-01182-1	11.13	4.7	9.2
Jan	13	23	04.3	393	Lampetia	TYC 0153-02281-1	11.71	2.2	6.2
Jan	14	01	01.1	161	Athor	TYC 2417-00790-1	10.04	3.1	4.6
Jan	14	19	52.0	498	Tokio	TYC 1884-01139-1	11.68	1.7	6.5
Jan	18	18	31.2	426	Hippo	TYC 2847-01242-1	11.98	1.8	12.2
Jan	19	00	51.2	694	Ekard	TYC 4892-00011-1	11.64	2.9	6.3
Jan	19	04	17.2	1266	Tone	TYC 2926-00505-1	11.81	3.0	5.6
Jan	21	17	32.1	1390	Abastumani	UCAC2 46524969	11.89	3.2	17.8
Jan	28	20	05.4	419	Aurelia	UCAC2 38407618	11.97	1.7	11.3
Jan	29	22	15.5	1911	Schubart	TYC 1393-00543-1	10.83	3.9	6.5
Jan	29	23	43.3	70	Panopaea	TYC 1231-00944-1	10.99	2.5	11.7
Jan	30	19	29.4	87	Sylvia	TYC 2467-00132-1	11.19	1.5	19.0
Feb	01	17	32.3	143	Adria	TYC 1775-00110-1	10.74	3.9	6.0
Feb	05	22	22.6	282	Clorinde	UCAC2 36998557	11.55	2.1	4.0
Feb	05	22	47.2	161	Athor	UCAC2 44281163	11.70	2.1	11.2
Feb	09	22	02.7	1004	Belopolskya	TYC 1381-01447-1	10.89	4.3	6.0
Feb	11	19	47.9	356	Liguria	TYC 1791-00912-1	11.01	1.7	6.7
Feb	12	02	55.7	140	Siwa	TYC 1895-01841-1	11.90	1.9	12.1
Feb	16	05	49.9	2208	Pushkin	UCAC2 32543945	11.90	4.7	6.8

Feb	20	19	53.4	2025	Nortia	UCAC2 42201612	11.94	4.5	9.3
Feb	23	18	41.9	491	Carina	TYC 0152-01386-1	11.17	2.6	10.1
Feb	27	18	54.9	389	Industria	UCAC2 39968314	11.31	2.0	4.1
Mar	04	20	09.9	494	Virtus	TYC 2403-01283-1	8.90	5.8	8.4
Mar	04	23	01.1		2001HY65	TYC 4953-00316-1	11.90	10.5	8.2
Mar	05	02	01.1	2219	Mannucci	TYC 0869-00918-1	11.57	4.3	3.2
Mar	06	22	17.0	2621	Goto	UCAC2 40478056	11.02	5.2	4.0
Mar	07	19	15.1	1579	Herrick	UCAC2 36438710	11.56	4.4	6.4
Mar	09	20	30.2	389	Industria	HIP 19417	9.93	3.3	3.4
Mar	09	23	46.7	1082	Pirola	TYC 1402-01111-1	9.39	6.6	4.0
Mar	13	19	08.6	1072	Malva	TYC 2454-00643-1	9.17	6.1	8.6
Mar	16	02	41.3	113	Amalthea	TYC 6237-00633-1	11.50	1.5	3.0
Mar	18	22	06.7	42	Isis	UCAC2 41689535	11.62	1.6	10.1
Mar	19	00	45.3	742	Edisona	TYC 2486-00622-1	10.95	4.2	11.3
Mar	22	01	34.5	247	Eukrate	UCAC2 46695161	11.72	1.2	8.9
Mar	23	20	54.4	46	Hestia	TYC 1254-00427-1	11.65	2.1	3.9
Apr	03	00	13.6	965	Angelica	UCAC2 46825097	11.83	2.6	4.1
Apr	05	21	01.6	488	Kreusa	UCAC2 41157396	10.94	2.5	5.8
Apr	07	17	50.2	954	Li	UCAC2 39644289	11.00	5.4	3.1
Apr	14	18	25.0	142	Polana	TYC 0263-00785-1	11.22	2.2	12.2
Apr	16	22	37.0	297	Caecilia	TYC 5530-00985-1	11.92	2.7	3.3
Apr	16	23	13.0	50	Virginia	TYC 6185-00923-1	10.81	3.4	4.4
Apr	18	23	01.3	479	Caprera	TYC 5015-00309-1	11.38	3.3	5.9
Apr	21	22	42.5	17	Thetis	TYC 1407-00130-1	10.22	2.4	9.9
May	05	22	28.9	252	Clementina	UCAC2 27321015	9.70	4.5	7.8
May	18	22	20.1	1177	Gonnessia	HIP 76293	8.14	5.9	6.6
May	21	19	53.8	303	Josephina	TYC 0837-00779-1	11.71	2.9	7.7
Jun	14	00	15.8	676	Melitta	HIP 95228	8.14	5.5	11.1
Jun	22	20	35.4	182	Elsa	TYC 6843-02174-1	12.20	1.0	3.5
Jul	05	00	22.2	482	Petrina	TYC 5131-00253-1	8.90	3.9	5.1
Jul	11	23	11.5	482	Petrina	UCAC2 31567987	11.65	1.4	4.9
Jul	12	21	47.2	676	Melitta	TYC 5707-01189-1	11.66	1.8	7.3
Jul	13	00	07.1	654	Zelinda	TYC 0564-00169-1	11.29	2.1	13.0
Jul	16	00	14.6	225	Henrietta	TYC 1065-02122-1	11.67	1.2	15.7
Jul	20	02	20.5	2517	Orma	TYC 6341-00053-1	11.98	3.7	4.4
Jul	20	02	51.0	482	Petrina	TYC 5129-00321-1	11.60	1.5	4.9
Jul	24	01	06.9	137	Meliboea	TYC 0464-02162-1	9.07	2.5	18.3
Jul	27	19	26.5	1315	Bronislaw	UCAC2 27928226	11.89	2.3	5.7
Jul	28	02	37.8	102	Miriam	TYC 0619-00290-1	10.85	2.3	6.0

Jul	31	02	44.6	718	Erida	HIP 1917	9.08	6.4	26.4
Aug	03	01	20.4	482	Petrina	TYC 5132-01307-1	11.54	1.7	5.4
Aug	05	22	23.3	445	Edna	TYC 2255-00885-1	10.90	3.0	7.5
Aug	08	20	21.3	113	Amalthea	UCAC2 24376837	11.54	1.3	7.7
Aug	08	20	43.3	2920	Automedon	TYC 1088-00906-1	11.33	4.6	7.5
Aug	11	21	59.7	1030	Vitja	UCAC2 30391221	11.86	3.7	8.4
Aug	13	22	06.1	260	Huberta	TYC 5737-00001-1	10.73	3.0	10.3
Aug	25	20	28.4	1149	Volga	TYC 6192-00236-1	11.63	4.7	3.1
Aug	27	18	48.3	130	Elektra	UCAC2 31525121	11.76	1.6	11.2
Aug	27	19	40.9	589	Croatia	UCAC2 28217225	11.73	3.3	7.0
Sep	03	21	53.1	1345	Potomac	UCAC2 25671514	11.83	4.4	5.4
Sep	10	20	53.5	654	Zelinda	TYC 0539-00499-1	9.42	3.4	11.1
Sep	11	22	46.3	713	Luscinia	TYC 5193-00551-1	9.58	3.8	13.1
Sep	13	03	42.6	120	Lachesis	UCAC2 41665217	11.39	2.3	21.8
Sep	16	01	10.0	1330	Spiridonia	HIP 116124	9.11	5.8	3.8
Sep	18	23	43.2	558	Carmen	UCAC2 33164619	11.80	2.1	9.4
Sep	21	01	50.0	663	Gerlinde	UCAC2 38215341	11.31	3.8	6.5
Sep	21	20	30.6	934	Thuringia	TYC 1753-02175-1	11.56	1.9	7.2
Sep	24	19	34.1	489	Comacina	TYC 5611-00652-1	11.85	2.6	4.5
Sep	26	22	59.3	239	Adrastea	TYC 5232-00502-1	11.57	2.4	6.4
Oct	01	01	43.7	98	Ianthe	TYC 1778-01327-1	11.58	2.0	10.7
Oct	02	23	27.0	493	Griseldis	TYC 0606-00941-1	11.78	2.2	4.4
Oct	07	23	16.2		2003WL7	TYC 1791-00940-1	11.78	8.9	3.9
Oct	12	03	38.0	940	Kordula	TYC 0043-00062-1	11.29	2.5	3.8
Oct	13	01	29.9	409	Aspasia	TYC 1349-01375-1	10.63	2.2	10.8
Oct	13	21	33.5	301	Bavaria	TYC 0664-00942-1	10.22	4.4	7.3
Oct	14	01	06.5	444	Gyptis	TYC 0694-01184-1	10.21	1.8	30.4
Oct	19	18	46.8	2235	Vittore	UCAC2 31237677	11.56	5.7	3.6
Oct	22	20	26.9	239	Adrastea	TYC 5804-00013-1	10.56	3.8	12.4
Oct	24	03	39.6	731	Sorga	TYC 0630-00383-1	11.31	2.1	3.8
Oct	30	23	58.6	558	Carmen	UCAC2 31798538	11.99	1.5	5.1

Nov	02	17	19.3	195	Eurykleia	UCAC2 21206784	11.86	3.0	3.7
Nov	04	23	33.3	371	Bohemia	TYC 1874-00745-1	11.45	2.2	11.4
Nov	05	20	28.4	584	Semiramis	TYC 2353-00176-1	9.33	1.6	8.1
Nov	08	00	38.9	329	Svea	UCAC2 31985164	11.54	2.3	9.0
Nov	12	19	02.6	40	Harmonia	TYC 6355-01269-1	10.75	1.1	5.2
Nov	15	21	30.4	408	Fama	UCAC2 29936828	11.89	3.1	3.0
Nov	16	02	27.9	1369	Ostanina	UCAC2 32648680	11.83	3.6	3.1
Nov	16	04	14.5	780	Armenia	TYC 0260-00830-1	11.70	3.5	4.3
Nov	17	22	58.7	1109	Tata	TYC 1864-01205-1	11.97	3.7	7.0
Nov	19	01	13.8	2376	Martynov	UCAC2 40669650	11.74	4.3	6.6
Nov	20	19	02.9	167	Urda	TYC 0654-00057-1	8.99	4.3	3.4
Nov	23	21	11.4	201	Penelope	TYC 1328-01870-1	10.73	2.1	8.5
Nov	23	23	40.5	329	Svea	TYC 4753-01273-1	10.64	2.9	7.3
Nov	26	03	16.6	201	Penelope	TYC 1328-01937-1	10.72	2.0	7.9
Nov	27	20	08.1	1456	Saldanha	UCAC2 42370573	11.96	3.5	3.5
Dec	01	02	20.1	1285	Julietta	TYC 1404-01186-1	10.24	5.6	14.2
Dec	01	03	41.5	444	Gyptis	TYC 0666-00574-1	10.95	0.9	15.5
Dec	03	21	23.8	381	Myrrha	UCAC2 35704655	11.46	2.2	9.4
Dec	05	03	06.0	356	Liguria	TYC 4951-00072-1	11.97	1.9	4.7
Dec	05	06	07.7	2376	Martynov	TYC 1884-00109-1	11.02	4.7	3.6
Dec	06	21	16.2	351	Yrsa	UCAC238395180	11.83	1.0	4.4
Dec	09	04	50.6	409	Aspasia	TYC 0770-01302-1	11.15	1.1	17.2
Dec	09	19	22.3	671	Carnegia	UCAC2 44116937	11.73	2.6	5.7
Dec	09	22	29.3	105	Artemis	UCAC2 29943970	11.54	2.1	16.5
Dec	14	20	22.6	464	Megaira	TYC 5265-00758-1	10.76	3.2	4.7
Dec	15	06	44.4	441	Bathilde	TYC 4925-01297-1	11.26	2.5	4.3
Dec	15	21	43.5	1456	Saldanha	UCAC2 42017821	11.71	3.7	3.4
Dec	17	01	04.3	146	Lucina	TYC 1882-00850-1	10.16	2.2	10.1
Dec	18	05	13.4	219	Thusnelda	HIP 38140	6.68	6.6	4.4
Dec	23	21	29.7	25	Phocaea	TYC 5396-00055-1	11.33	1.5	5.4
Dec	24	01	19.0	198	Ampella	TYC 1783-00860-1	10.04	1.7	11.9
Dec	28	22	36.3	891	Gunhild	TYC 0070-01267-1	11.48	3.0	6.5
Dec	31	17	39.9	207	Hedda	TYC 1819-01354-1	11.60	1.9	8.7

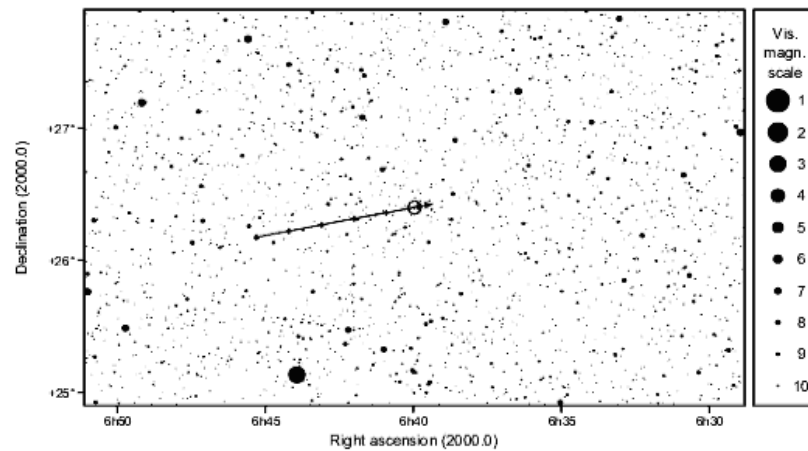
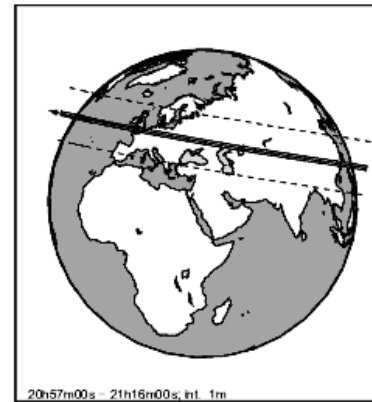
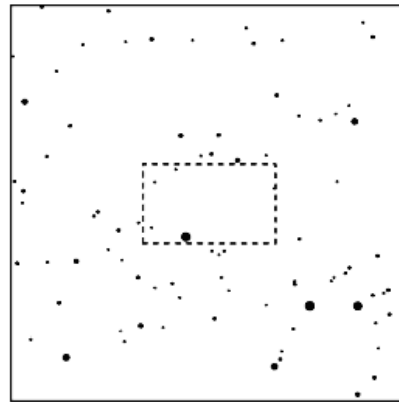
Selected graphical predictions

Wybrane efemerydy graficzne

144 Vibia – TYC 1888–00747–1

2007 jan 4 21^h 6.5^m U.T.

Planet :			Star :	Source cat. TYC2
V. mag. = 11.11	Diam. = 178.0 km = 0.16"		$\alpha = 6^{\text{h}}39^{\text{m}}57.296^{\text{s}}$	$\delta = +26^{\circ}23'48.21''$
$\mu = 36.81''/\text{a}$	$\varpi = 5.72''$	Ref. = EG2004	V. mag. = 9.60	Ph. mag. = 9.80
$\Delta = 1.8$	Max. dur. = 15.6s		Sun : 173°	Moon : 21°, 98%



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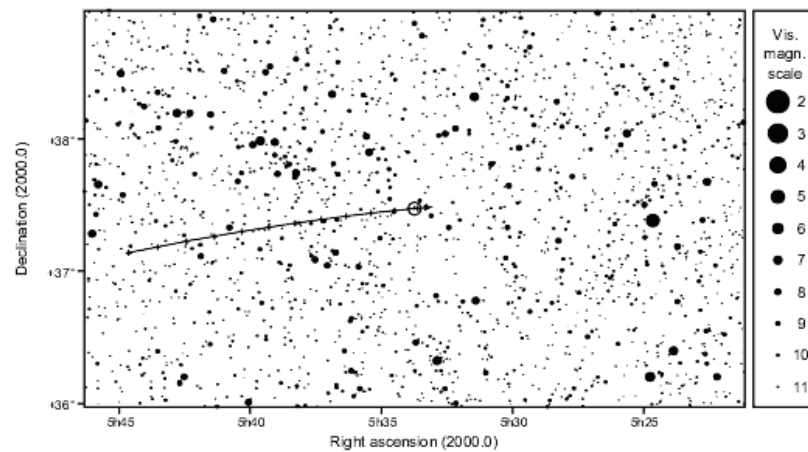
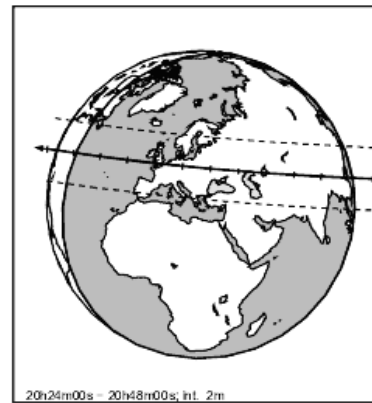
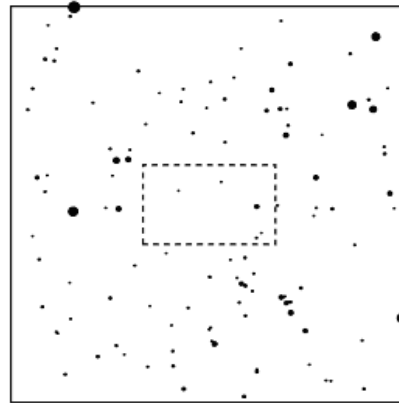
817

Robert Goffin, Boboken, Belgium

1024 Hale – TYC 2416-01207-1

2007 jan 10 20^h36.5^m U.T.

Planet :	Star :	Source cat. TYC2
V. mag. = 14.67 Diam. = 43.2 km = 0.03"	$\alpha = 5^{\text{h}}33^{\text{m}}44.313^{\text{s}}$	$\delta = +37^{\circ}28'27.48''$
$\mu = 26.04''/\text{y}$ $\varpi = 4.91''$ Ref. = MPO77283	V. mag. = 11.03	Ph. mag. = 11.08
$i\text{m} = 3.7$ Max. dur. = 4.6s	Sun : 151°	Moon : 108° , 56%



A07_01115.pa : 2006-04-19 21:26:24

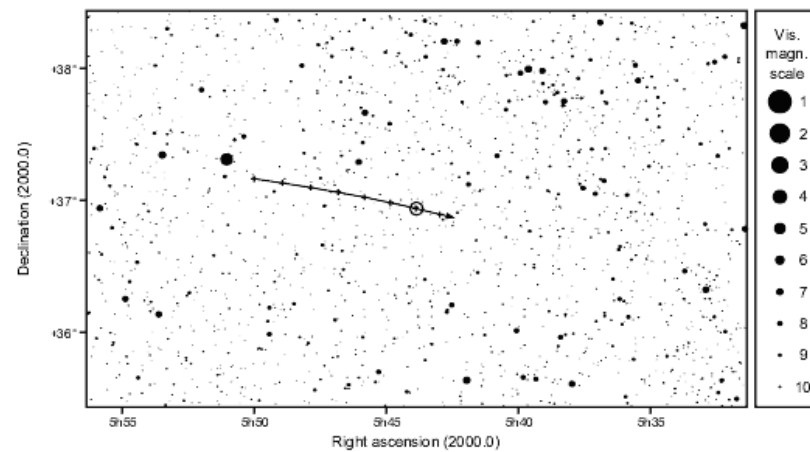
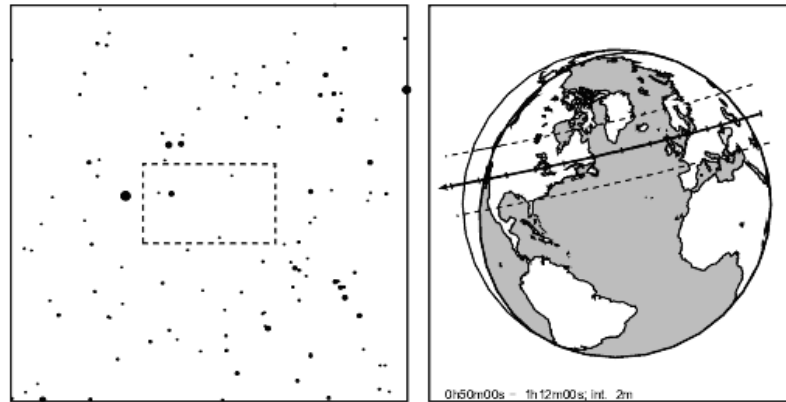
2893

Robis Goffin, Hoboken, Belgium

161 Athor – TYC 2417-00790-1

2007 jan 14 1^h 1.1^m U.T.

Planet :	Star :	Source cat. TYC2
V. mag. = 13.12	Diam. = 45.7 km = 0.04"	□ = 5 ^h 43 ^m 50.933 ^s □ = +36°55'54.15"
□ = 28.72"/h	□ = 5.10" Ref. = EG2005	V. mag. = 10.04 Ph. mag. = 11.50
□m = 3.1	Max. dur. = 4.6s	Sun : 150° Moon : 144° , 27%



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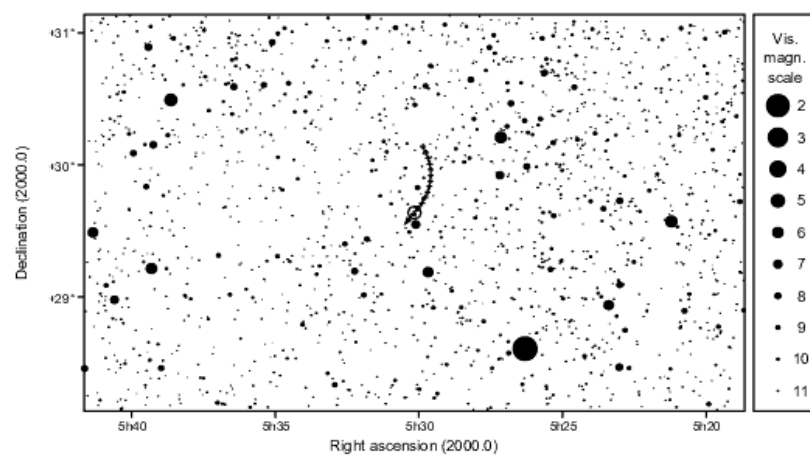
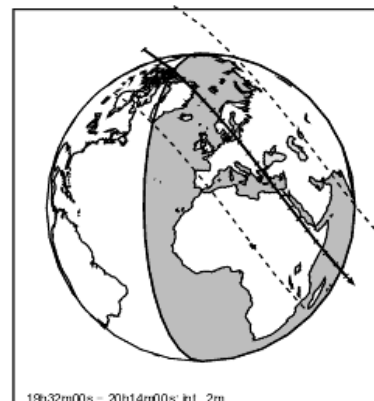
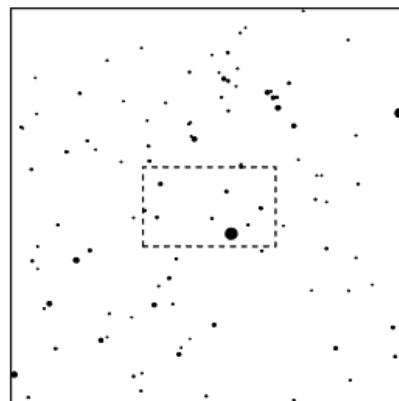
871

Robert Goffin, Hoboken, Belgium

2025 Nortia – UCAC2 42201612

2007 feb 20 19^h53.4^m U.T.

Planet :		Star :	Source cat. UCAC2
V. mag. = 16.45	Diam. = 45.0 km = 0.02"	$\square = 5^{\text{h}}30^{\text{m}}08.977^{\text{s}}$	$\square = +29^{\circ}38'16.54''$
$\square = 8.02''/\text{h}$	$\square = 2.92''$ Ref. = MPO2607	V. mag. = 11.94	Ph. mag. = 0.00
$\square \text{m} = 4.5$	Max. dur. = 9.3s	Sun : 111°	Moon : 68°, 14%



A07_02.083.ps : 2006-04-19 21:26:45

33.28

Robin Goffin, Hoboken, Belgium

494 Virtus – TYC 2403-01283-1

2007 mar 4 20^h 9.9^m U.T.

Planet :

V. mag. = 14.65 Diam. = 89.1 km = 0.04"

□ = 18.54"/h □ = 3.10" Ref. = EG2005-160

□m = 5.8

Max. dur. = 8.4s

Star :

□ = 5^h25^m18.659^s

V. mag. = 8.90

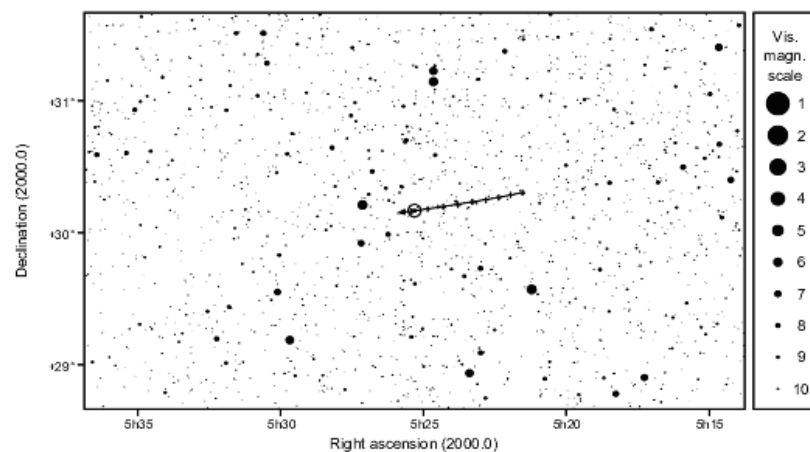
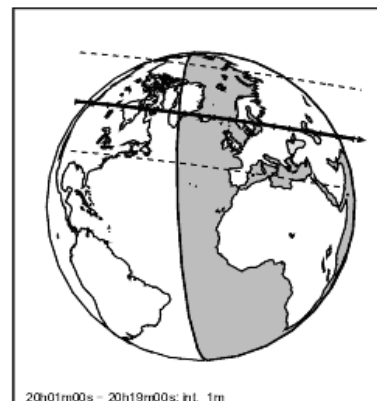
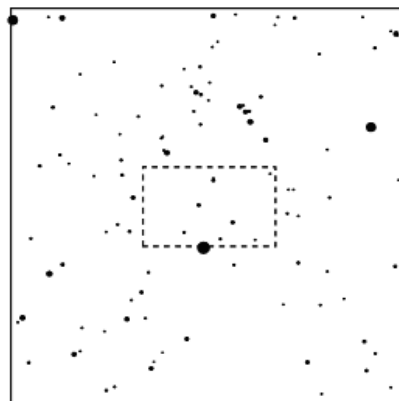
Sun : 98°

Source cat. TYC2

□ = +30°10'00.48"

Ph. mag. = 8.96

Moon : 91°, 99%



A07_03 063.pa : 2006-04-19 21:25:31

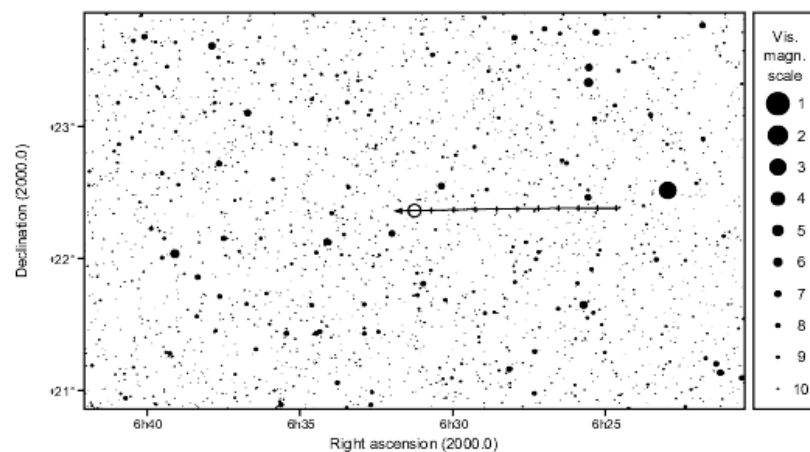
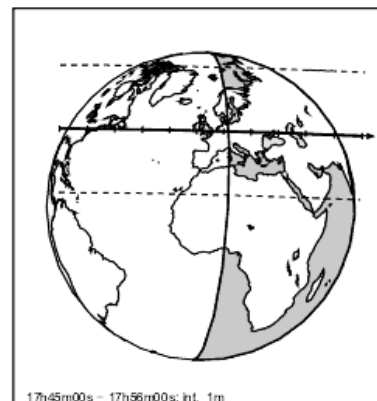
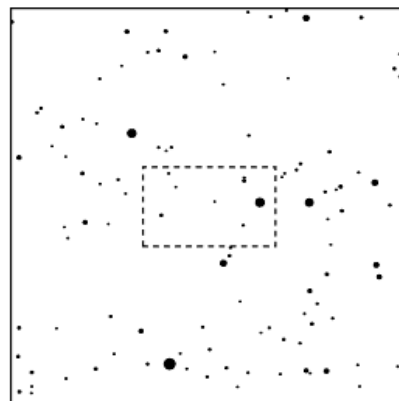
1895

Béla Goffin, Hoboken, Belgium

954 Li – UCAC2 39644289

2007 apr 7 17^h50.2^m U.T.

Planet :	Star :	Source cat. UCAC2
V. mag. = 16.40 Diam. = 59.7 km = 0.02"	α = 6 ^h 31 ^m 14.939 ^s	δ = +22°21'31.30"
μ = 25.82"/h ϖ = 2.41" Ref. = EG2003-049	V. mag. = 11.00	Ph. mag. = 0.00
i m = 5.4 Max. dur. = 3.1s	Sun : 79°	Moon : 155° , 79%



A07_04080.ps : 2006-04-19 21:26:21

2811

Robin Goffin, Hoboken, Belgium

1330 Spiridonia – HIP 116124

2007 sep 16 1^h10.0^m U.T.

Planet :

V. mag. = 14.92 Diam. = 58.0 km = 0.03"

□ = 31.33"/h □ = 3.66" Ref. = MPO73855

□m = 5.8

Max. dur. = 3.8s

Star :

□ = 23^h31^m46.401^s

V. mag. = 9.11

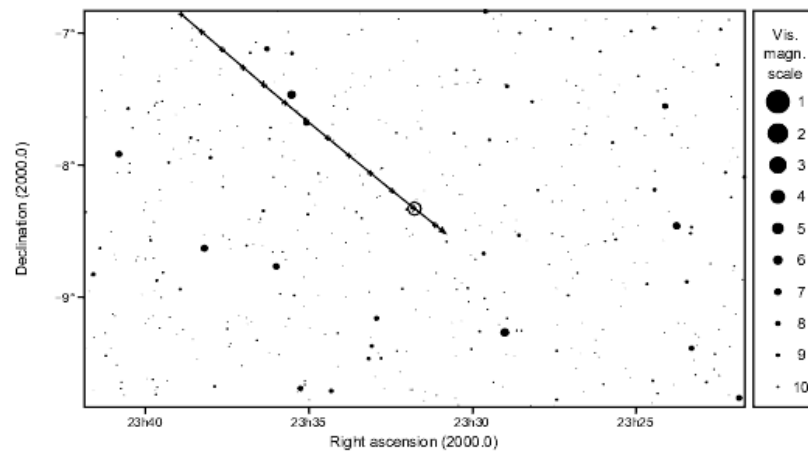
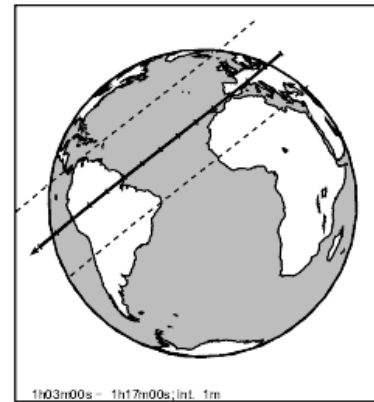
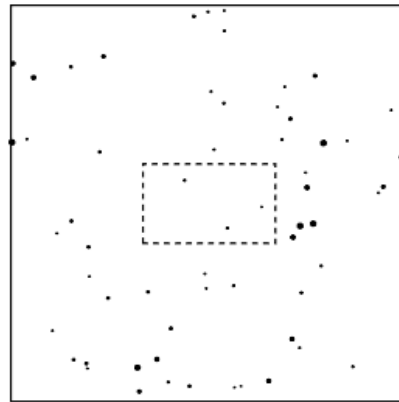
Sun : 174°

Source cat. HIP

□ = - 8° 19' 43.24"

Ph. mag. = 9.62

Moon : 127° , 18%



A07_09 089.pa : 2006-04-19 21:26:37

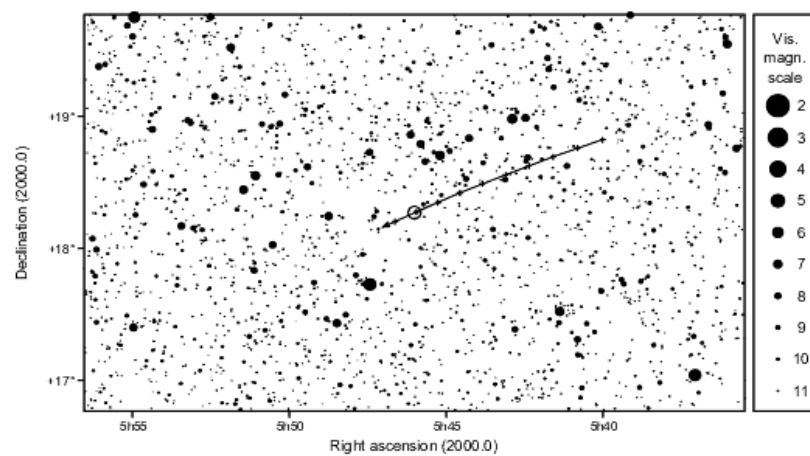
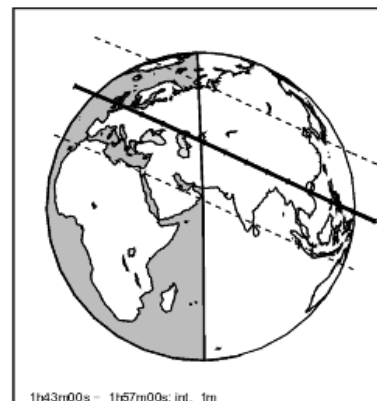
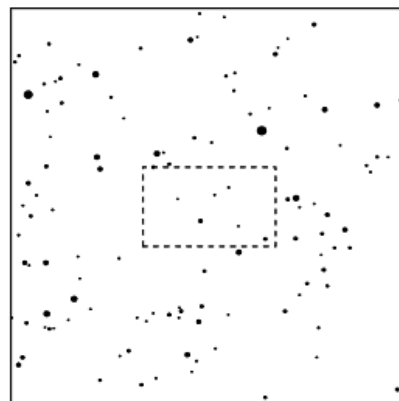
3157

Robert Goffin, Boboken, Belgium

663 Gerlinde – UCAC2 38215341

2007 sep 21 1^h50.0^m U.T.

Planet :	Star :	Source cat. UCAC2
V. mag. = 15.07	Diam. = 104.0 km = 0.05"	$\square = 5^{\text{h}}46^{\text{m}}00.769^{\text{s}}$
$\square = 26.52^{\circ}/\text{h}$	$\square = 2.92''$ Ref. = EG2005-076	$\square = +18^{\circ}16'16.16''$
$\square \text{m} = 3.8$	Max. dur. = 6.5s	V. mag. = 11.31
		Ph. mag. = 0.00
		Sun : 90°
		Moon : 161° , 64%



A07_09 065.pr : 2006-04-19 21:25:51

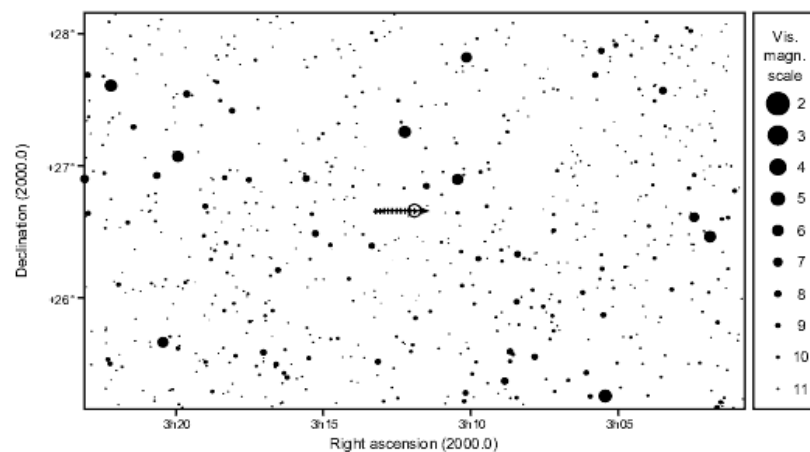
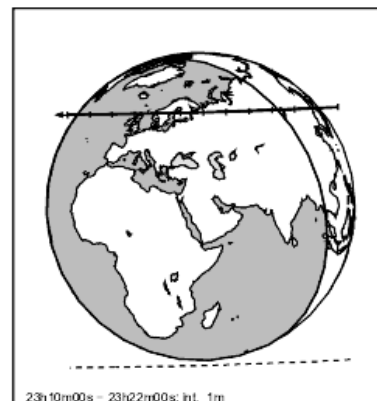
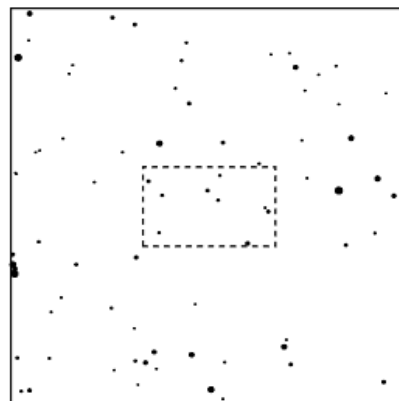
22.69

Robin Goffin, Hoboken, Belgium

2003WL7 – TYC 1791-00940-1

2007 oct 7 23^h16.2^m U.T.

Planet :		Star :	Source cat. TYC2
V. mag. = 20.68	Diam. = 60.3 km = 0.01"	$\alpha = 3^{\text{h}}11^{\text{m}}54.719^{\text{s}}$	$\delta = +26^{\circ}39'34.37''$
$\mu = 5.38''/\text{h}$	$\varpi = 0.61''$ Ref. = MPO97691	V. mag. = 11.78	Ph. mag. = 12.28
$\Delta = 8.9$	Max. dur. = 3.9s	Sun : 140°	Moon : 105° , 10%



A07_10102.pa : 2006-04-19 21:26:54

3535

Robert Goffin, Boboken, Belgium

198 Ampella – TYC 1783-00860-1

2007 dec 24 1^h19.0^m U.T.

Planet :

V. mag. = 11.54 Diam. = 58.7 km = 0.06"

□ = 18.36"/h □ = 6.62" Ref. = MPC30889

□m = 1.7

Max. dur. = 11.9s

Star :

□ = 3^h08^m02.393^s

V. mag. = 10.04

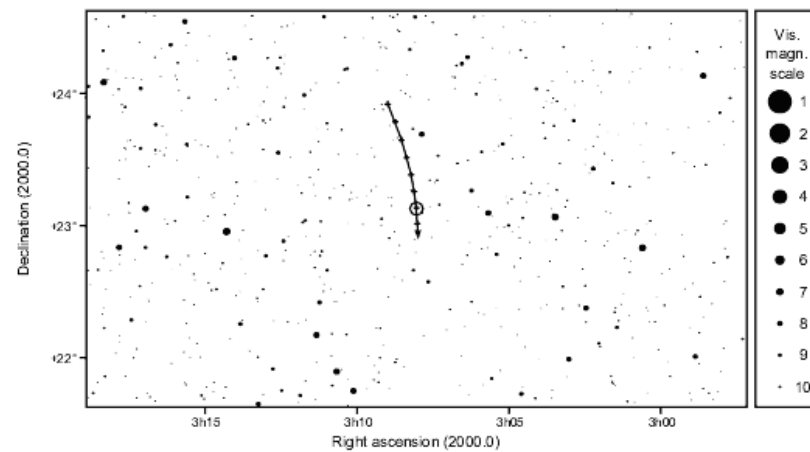
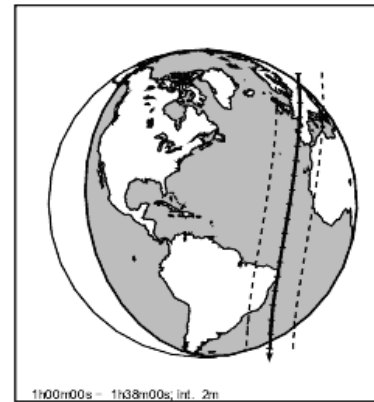
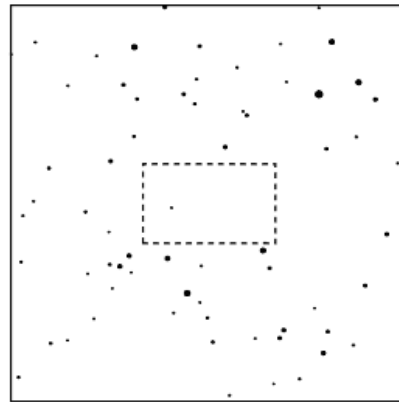
Sun : 138°

Source cat. TYC2

□ = +23°07'33.31"

Ph. mag. = 10.42

Moon : 41° , 100%



A07_12 034.pa : 2006-04-19 21:24:37

1051

Robert Goffin, Hoboken, Belgium