

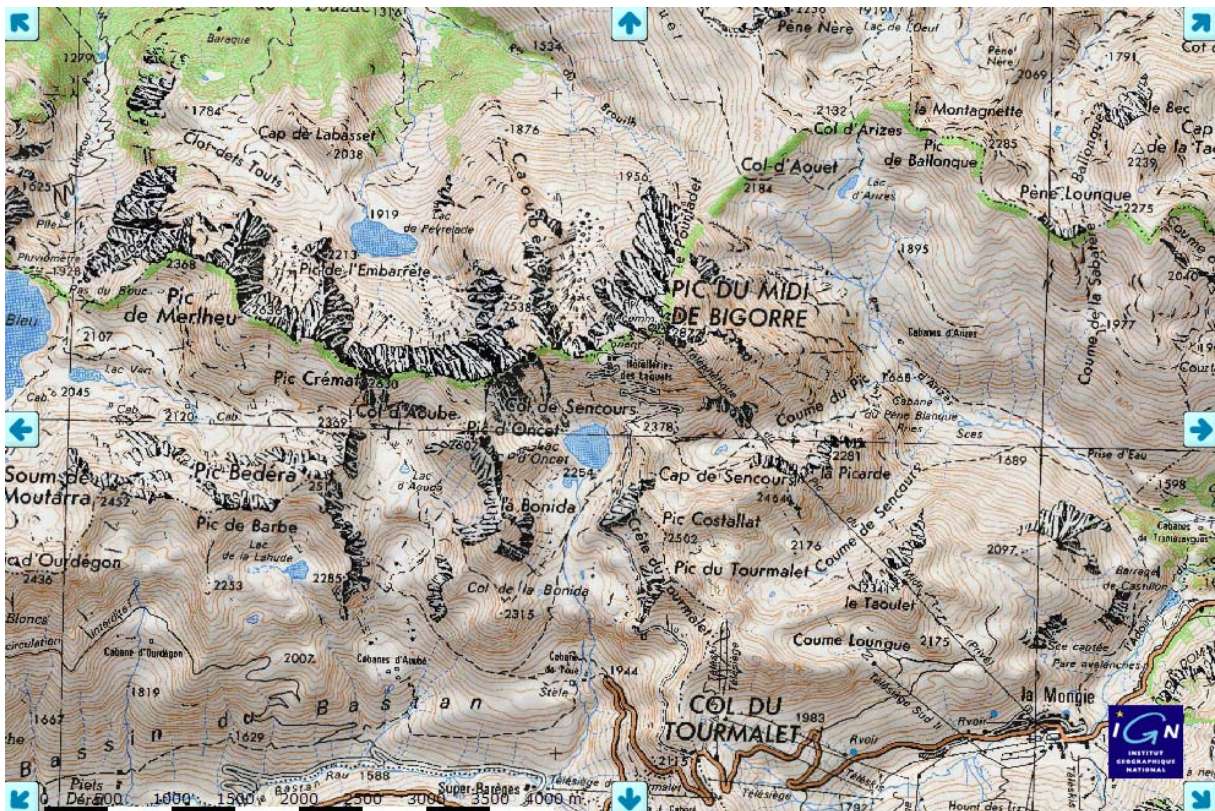
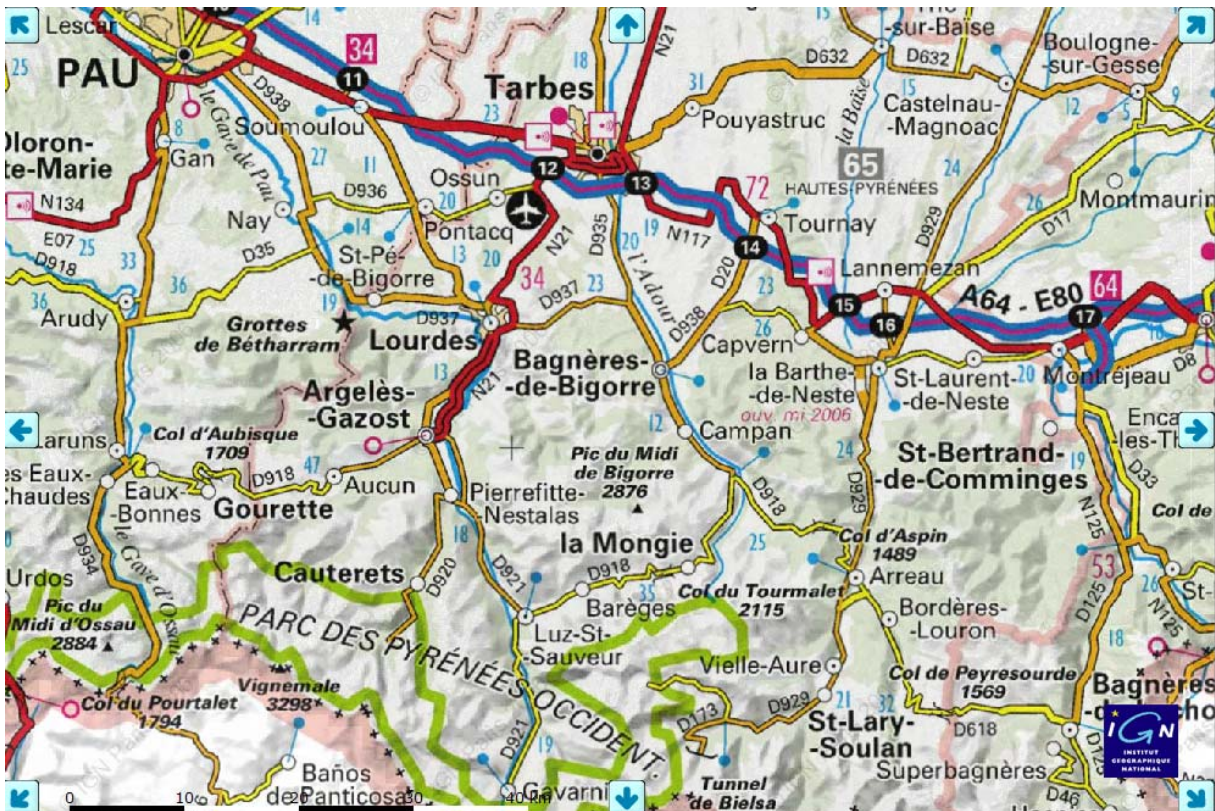
# Ephémérides pour la Mission Uranoscope 2 au Pic du Midi (4 – 9 Juin 2007)

Pic du Midi,  
France

Lon: +0d08m34.0s / 00.1429 E  
Lat: +42d56m11.0s / 42.9362 N  
Alt: 2877m

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# 1 Plan





## 2 Jupiter

Night of Monday 4 June 2007		
Time	Object	Event
4h04m12s	JD	2454255.586245 JDE: 2454255.587001
22h42.1m	<a href="#">Jupiter</a>	Transit of Great Red Spot
1h00.1m	<a href="#">Jupiter-Moon Io</a>	Eclipse Begin (5.3 mag)
3h12.6m	<a href="#">Jupiter-Moon Io</a>	Occultation Reappearance (5.3 mag)
Night of Tuesday 5 June 2007		
22h19.3m	<a href="#">Jupiter-Moon Io</a>	Shadow Begin (5.3 mag)
22h20.0m	<a href="#">Jupiter-Moon Io</a>	Transit Begin (5.3 mag)
0h30.7m	<a href="#">Jupiter-Moon Io</a>	Transit End (5.3 mag)
0h31.1m	<a href="#">Jupiter-Moon Io</a>	Shadow End (5.3 mag)
Night of Wednesday 6 June 2007		
21h39.9m	<a href="#">Jupiter-Moon Io</a>	Eclipse End (5.3 mag)
0h20.2m	<a href="#">Jupiter</a>	Transit of Great Red Spot
1h52.7m	<a href="#">Jupiter-Moon Europa</a>	Occultation Disappearance (5.9 mag)
4h30.3m	<a href="#">Jupiter-Moon Europa</a>	Eclipse End (5.9 mag)
Night of Thursday 7 June 2007		
0h21.1m	<a href="#">Jupiter-Moon Europa</a>	Eastern Elongation (5.9 mag)
4h25.0m	<a href="#">Jupiter-Moon Io</a>	Western Elongation (5.3 mag)
Night of Friday 8 June 2007		
22h32.7m	<a href="#">Jupiter-Moon Europa</a>	Transit End (5.9 mag)
22h42.5m	<a href="#">Jupiter-Moon Europa</a>	Shadow End (5.9 mag)
1h38.3m	<a href="#">Jupiter-Moon Io</a>	Eastern Elongation (5.3 mag)
1h58.2m	<a href="#">Jupiter</a>	Transit of Great Red Spot

### Occultation d'étoile par Jupiter le 5 Juin (Après le coucher de Jupiter)

Star	RA(1950)	Dec(1950)	V	UT Date	UT Time	SpT
266120	16:51:38.971	-21:47:58.56	8.40	2007-06-05	10:54:16	B5

Julian Date	(")	(")	(km/s)	Sun Trn	Immersion (UT JD)
2454256.954356	19.83	22.8	n 16.6	179 163	10:26:35 2454256.935125

Emersion (UT JD)  
11:21:52 2454256.973520

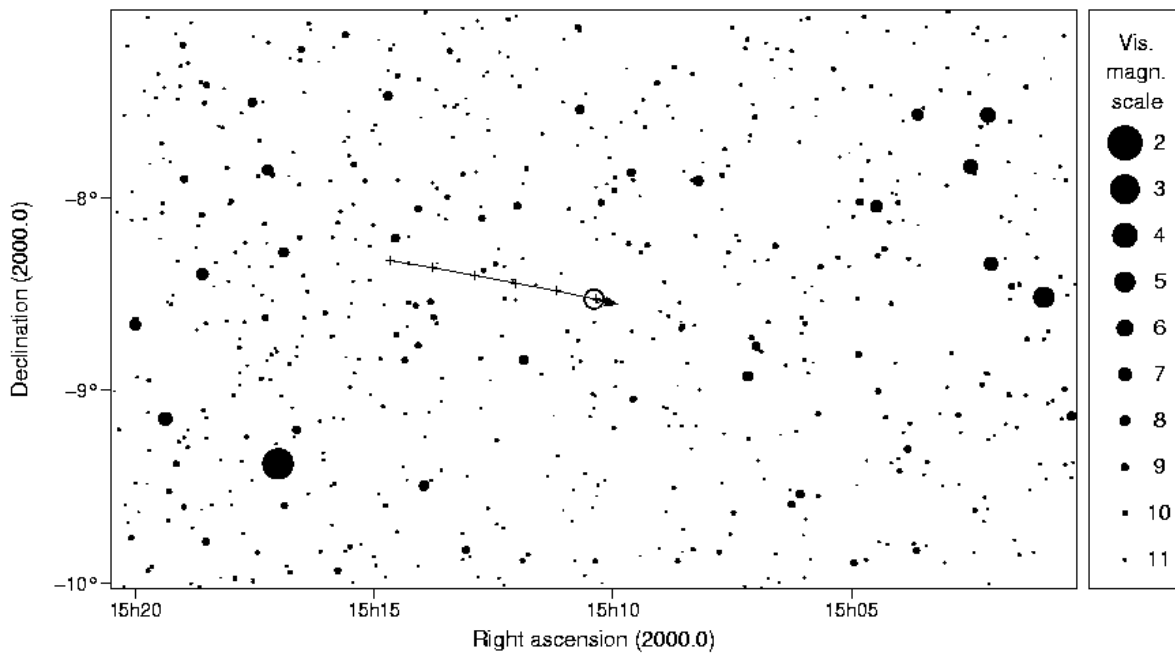
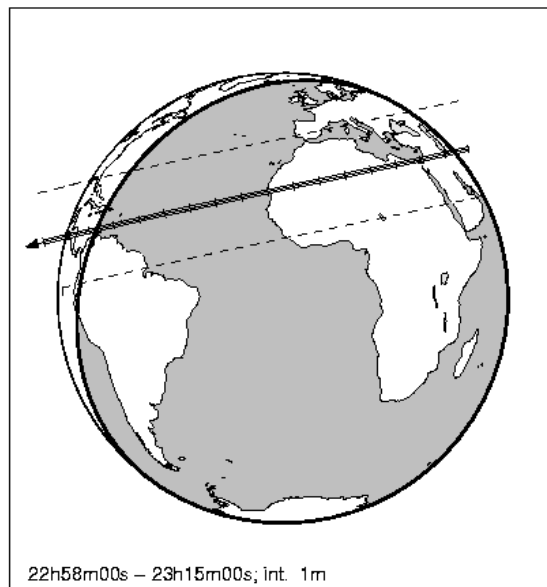
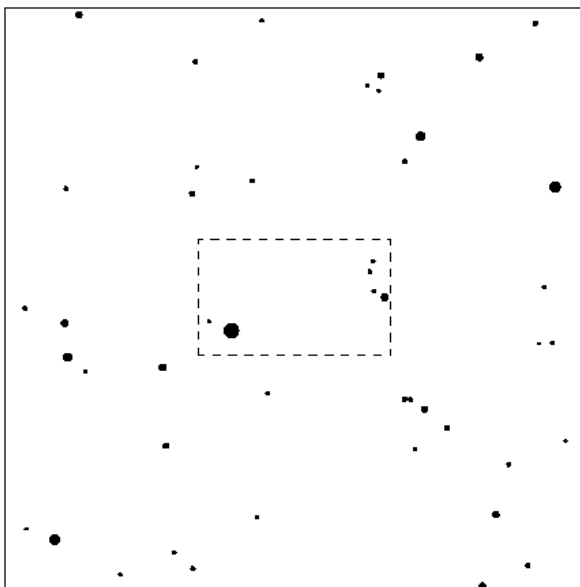
### 3 Astéroides

<http://mpocc.astro.cz/2007>

## 751 Faïna – UCAC2 28741059

2007 jun 5 23<sup>h</sup> 6.3<sup>m</sup> U.T.

<b>Planet :</b>		<b>Star :</b>	<b>Source cat. UCAC2</b>
V. mag. = 13.04	Diam. = 115.0 km = 0.08"	$\alpha = 15^h 10^m 23.432^s$	$\delta = -8^\circ 31' 40.78''$
$\mu = 31.21''/h$	$\pi = 4.59''$ Ref. = EG2004-174	V. mag. = 11.95	Ph. mag. = 0.00
$\Delta m = 1.4$	Max. dur. = 9.5s	Sun : 151°	Moon : 86° , 76%



A07 06066.ps : 2006-04-19 21:26:00

2456

Edwin Goffin, Hoboken, Belgium

**(22) KALLIOPE**

[http://www.imcce.fr/page.php?nav=fr/observateur/campagnes\\_obs/kalliope/](http://www.imcce.fr/page.php?nav=fr/observateur/campagnes_obs/kalliope/)

Date	Event	Begin (UTC)	End (UTC)	Δt h:m	Δmag	Phase
2007-06-02	1O2	08 <sup>h</sup> 48 <sup>m</sup>	10 <sup>h</sup> 38 <sup>m</sup>	01:50	0.040	13.98














**(617) PATROCLUS**

[http://www.imcce.fr/page.php?nav=fr/observateur/campagnes\\_obs/patroclus/](http://www.imcce.fr/page.php?nav=fr/observateur/campagnes_obs/patroclus/)




2007-06-04	2E1	2007-06-04 06:30	2007-06-04 07:45	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2O1	2007-06-04 07:00	2007-06-04 12:00				
2007-06-06	1E2	2007-06-06 10:30	2007-06-06 11:30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	1O2	2007-06-06 10:45	2007-06-06 15:45				
2007-06-08	2O1	2007-06-08 13:45	2007-06-08 18:45	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2007-06-10	1O2	2007-06-10 17:30	2007-06-10 22:15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Décalage probable de 5h

## 4 Lune et étoiles

Night of Monday 4 June 2007		
Time	Object	Event
2.9h	 <a href="#">Moon</a>	Close to SAO 189055, XZ 28118, 8.2mag Separation=2.01 deg, PA=343.1, h=16.7
3h07.1m	 <a href="#">Moon</a>	Emersion of SAO 189084, XZ 28161, <b>8.5mag</b> PA=291.2, h=16.4 (dark limb)
3h26.7m	 <a href="#">Moon</a>	Immersion of SAO 189132, XZ 28219, <b>7.8mag</b> Position Angle=90.7, Altitude h=17.9 (bright limb)
4h42.9m	 <a href="#">Moon</a>	Emersion of SAO 189132, XZ 28219, <b>7.8mag</b> PA=227.5, h=22.6 (dark limb)
Night of Tuesday 5 June 2007		
Time	Object	Event
1h29.6m	 <a href="#">Moon</a>	Emersion of SAO 190037, XZ 29319, <b>8.2mag</b> PA=200.3, h=-0.1 (dark limb)
Night of Wednesday 6 June 2007		
Time	Object	Event
2h24.4m	 <a href="#">Moon</a>	Emersion of SAO 164808, XZ 30281, <b>7.7mag</b> PA=303.2, h=5.1 (dark limb)
2h53.5m	 <a href="#">Moon</a>	Emersion of SAO 164817, XZ 30292, <b>7.6mag</b> PA=244.4, h=9.7 (dark limb)
3h14.1m	 <a href="#">Moon</a>	Emersion of SAO 164828, XZ 30308, <b>9.0mag</b> PA=220.8, h=12.7 (dark limb)
5h40.5m	 <a href="#">Moon</a>	Emersion of lot Aqr, SAO 164861 (Close double star), <b>4.3mag</b> PA=197.6, h=30.1 (dark limb)
Night of Thursday 7 June 2007		
Time	Object	Event
4h12.0m	 <a href="#">Moon</a>	Immersion of SAO 146387, XZ 31096, <b>7.9mag</b> Position Angle=16.8, Altitude h=19.4 (bright limb)
5h05.3m	 <a href="#">Moon</a>	Emersion of SAO 146387, XZ 31096, <b>7.9mag</b> PA=277.7, h=27.3 (dark limb)
5h05.4m	 <a href="#">Moon</a>	Emersion of SAO 146393, XZ 31104 (Double star, separation >10"), <b>8.0mag</b> PA=202.1, h=27.0 (dark limb)
Night of Friday 8 June 2007		
Time	Object	Event
3h31.2m	 <a href="#">Moon</a>	Emersion of SAO 146852, XZ 31842, <b>8.3mag</b> PA=248.5, h=9.5 (dark limb)

## 5 Météores

Tuesday 5 June 2007		
Time	Object	Event
6h	 <a href="#">Meteor Max</a>	<b>June Lyrdis</b> ZHR=7.0 Velocity=37.2km/s Radiant: RA=17.3h Dec=40.0° (J2000) (in constellation <b>Hercules/Her</b> )
Wednesday 6 June 2007		
Time	Object	Event
2h	 <a href="#">Meteor</a>	Beta Taurids (active until 19.7., Vir) broad maximum
Friday 8 June 2007		
Time	Object	Event
2h	 <a href="#">Meteor Max</a>	<b>Arietids</b> ZHR=52.7 Velocity=12.5km/s Radiant: RA=21.0h Dec=57.8° (J2000) (in constellation <b>Cepheus/Cep</b> )



## 6 Pheura07 Uranus

<http://www.imcce.fr/cgi-bin/pheura07.cgi>

DATE OF MAXIMUM(TT)						PHENOMENA	FLUX	DIST to	RIGHT ASC.	DECLINATION	HOUR	AZIMUTH ELEV.	AZIMUTH ELEV.							
YR	MT	D	H	M	S				S	(UR)	H	M	S	DEG	'	"	H	DEG	DEG	DEG
2007	6	3	3	48	46.	5 O 1 c	0	0.000	3.4	23	19	0.03	- 5	14	48.7	-10.47	-48.6	29.1	-128.0	-5.9
2007	6	5	3	7	49.	5 E 1 c	0	0.000	3.8	23	19	7.03	- 5	14	9.1	-0.22	-56.2	24.3	-136.0	-11.3

COORDINATES OF THE OBSERVATORY : LONGITUDE = - 0H 0M 34S; LATITUDE = +42° 56' 11" ;  
 ALTITUDE = 2890 METERS ( Pic du Midi )

DATE OF MAXIMUM(TT)						PHENOMENA	FLUX	DIST to	RIGHT ASC.	DECLINATION	HOUR	AZIMUTH ELEV.	AZIMUTH ELEV.							
YR	MT	D	H	M	S				S	(UR)	H	M	S	DEG	'	"	H	DEG	DEG	DEG
2007	6	3	3	48	46.	5 O 1 c	0	0.000	3.4	23	19	0.03	- 5	14	48.7	-10.47	-48.6	29.1	-128.0	-5.9
2007	6	5	3	7	49.	5 E 1 c	0	0.000	3.8	23	19	7.03	- 5	14	9.1	-0.22	-56.2	24.3	-136.0	-11.3

## 7 Objets de Meissier

Conditions de visibilité : 00.00 < RA < 23.59

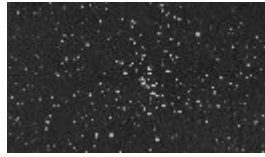
Link	M#	NGC#	Con	Type	ra	dec	B	D	d
<a href="#">M48</a>	048	2548	Hya	1 08	13.8	-05 48	5.5	54.0	1.5
<a href="#">M44</a>	044	2632	Cnc	1 08	40.1	+19 59	3.7	95.0	0.577
<a href="#">M67</a>	067	2682	Cnc	1 08	50.4	+11 49	6.1	30.0	2.7
<a href="#">M81</a>	081	3031	UMa	5 09	55.6	+69 04	6.9	21x10	12000
<a href="#">M82</a>	082	3034	UMa	7 09	55.8	+69 41	8.4	9x4	12000
<a href="#">M95</a>	095	3351	Leo	5 10	44.0	+11 42	9.7	4.4x3.3	38000
<a href="#">M96</a>	096	3368	Leo	5 10	46.8	+11 49	9.2	6x4	38000
<a href="#">M105</a>	105	3379	Leo	6 10	47.8	+12 35	9.3	2.0	38000
<a href="#">M108</a>	108	3556	UMa	5 11	11.5	+55 40	10.0	8x1	45000
<a href="#">M97</a>	097	3587	UMa	3 11	14.8	+55 01	9.9	3.4x3.3	2.6
<a href="#">M65</a>	065	3623	Leo	5 11	18.9	+13 05	9.3	8x1.5	35000
<a href="#">M66</a>	066	3627	Leo	5 11	20.2	+12 59	8.9	8x2.5	35000
<a href="#">M109</a>	109	3992	UMa	5 11	57.6	+53 23	9.8	7x4	55000
<a href="#">M98</a>	098	4192	Com	5 12	13.8	+14 54	10.1	9.5x3.2	60000
<a href="#">M99</a>	099	4254	Com	5 12	18.8	+14 25	9.9	5.4x4.8	60000
<a href="#">M106</a>	106	4258	CVn	5 12	19.0	+47 18	8.4	19x8	25000
<a href="#">M61</a>	061	4303	Vir	5 12	21.9	+04 28	9.7	6x5.5	60000
<a href="#">M40</a>	040	Win4	UMa	C 12	22.4	+58 05	8.4	0.8	0.51
<a href="#">M100</a>	100	4321	Com	5 12	22.9	+15 49	9.3	7x6	60000
<a href="#">M84</a>	084	4374	Vir	8 12	25.1	+12 53	9.1	5.0	60000
<a href="#">M85</a>	085	4382	Com	8 12	25.4	+18 11	9.1	7.1x5.2	60000
<a href="#">M86</a>	086	4406	Vir	8 12	26.2	+12 57	8.9	7.5x5.5	60000
<a href="#">M49</a>	049	4472	Vir	6 12	29.8	+08 00	8.4	9x7.5	60000
<a href="#">M87</a>	087	4486	Vir	6 12	30.8	+12 24	8.6	7.0	60000
<a href="#">M88</a>	088	4501	Com	5 12	32.0	+14 25	9.6	7x4	60000
<a href="#">M91</a>	091	4548	Com	5 12	35.4	+14 30	10.2	5.4x4.4	60000
<a href="#">M89</a>	089	4552	Vir	6 12	35.7	+12 33	9.8	4.0	60000
<a href="#">M90</a>	090	4569	Vir	5 12	36.8	+13 10	9.5	9.5x4.5	60000
<a href="#">M58</a>	058	4579	Vir	5 12	37.7	+11 49	9.7	5.5x4.5	60000
<a href="#">M68</a>	068	4590	Hya	2 12	39.5	-26 45	7.8	12.0	33.3
<a href="#">M104</a>	104	4594	Vir	5 12	40.0	-11 37	8.0	9x4	50000
<a href="#">M59</a>	059	4621	Vir	6 12	42.0	+11 39	9.6	5x3.5	60000
<a href="#">M60</a>	060	4649	Vir	6 12	43.7	+11 33	8.8	7x6	60000
<a href="#">M94</a>	094	4736	CVn	5 12	50.9	+41 07	8.2	7x3	14500
<a href="#">M64</a>	064	4826	Com	5 12	56.7	+21 41	8.5	9.3x5.4	19000
<a href="#">M53</a>	053	5024	Com	2 13	12.9	+18 10	7.6	12.6	59.7
<a href="#">M63</a>	063	5055	CVn	5 13	15.8	+42 02	8.6	10x6	37000
<a href="#">M51</a>	051	5194	CVn	5 13	29.9	+47 12	8.4	11x7	37000
<a href="#">M83</a>	083	5236	Hya	5 13	37.0	-29 52	7.6	11x10	15000
<a href="#">M3</a>	003	5272	CVn	2 13	42.2	+28 23	6.2	16.2	33.9
<a href="#">M101</a>	101	5457	UMa	5 14	03.2	+54 21	7.9	22.0	27000
<a href="#">M102?</a>	102?	5866	Dra	8 15	06.5	+55 46	9.9	5.2x2.3	40000
<a href="#">M5</a>	005	5904	Ser	2 15	18.6	+02 05	5.6	17.4	24.5
<a href="#">M80</a>	080	6093	Sco	2 16	17.0	-22 59	7.3	8.9	32.6
<a href="#">M4</a>	004	6121	Sco	2 16	23.6	-26 32	5.6	26.3	7.2
<a href="#">M107</a>	107	6171	Oph	2 16	32.5	-13 03	7.9	10.0	20.9
<a href="#">M13</a>	013	6205	Her	2 16	41.7	+36 28	5.8	16.6	25.1
<a href="#">M12</a>	012	6218	Oph	2 16	47.2	-01 57	6.7	14.5	16.0
<a href="#">M10</a>	010	6254	Oph	2 16	57.1	-04 06	6.6	15.1	14.4
<a href="#">M62</a>	062	6266	Oph	2 17	01.2	-30 07	6.5	14.1	22.5
<a href="#">M19</a>	019	6273	Oph	2 17	02.6	-26 16	6.8	13.5	28.4
<a href="#">M92</a>	092	6341	Her	2 17	17.1	+43 08	6.4	11.2	26.7
<a href="#">M9</a>	009	6333	Oph	2 17	19.2	-18 31	7.7	9.3	26.7
<a href="#">M14</a>	014	6402	Oph	2 17	37.6	-03 15	7.6	11.7	29.0

Mission Uranoscope 2

<a href="#">M6</a>	006	6405	Sco	1	17	40.1	-32	13	4.2	25.0	1.6
<a href="#">M7</a>	007	6475	Sco	1	17	53.9	-34	49	3.3	80.0	0.8
<a href="#">M23</a>	023	6494	Sgr	1	17	56.8	-19	01	6.9	27.0	2.15
<a href="#">M20</a>	020	6514	Sgr	4	18	02.6	-23	02	9.0	28.0	5.2
<a href="#">M8</a>	008	6523	Sgr	4	18	03.8	-24	23	6.0	90x40	5.2
<a href="#">M21</a>	021	6531	Sgr	1	18	04.6	-22	30	6.5	13.0	4.25
<a href="#">M24</a>	024	>6603	Sgr	B	18	16.9	-18	29	4.6	90	10
<a href="#">M16</a>	016	6611	Ser	1	18	18.8	-13	47	6.4	7.0	7
<a href="#">M18</a>	018	6613	Sgr	1	18	19.9	-17	08	7.5	9.0	4.9
<a href="#">M17</a>	017	6618	Sgr	4	18	20.8	-16	11	7.0	11.0	5
<a href="#">M28</a>	028	6626	Sgr	2	18	24.5	-24	52	6.8	11.2	18.6
<a href="#">M69</a>	069	6637	Sgr	2	18	31.4	-32	21	7.6	7.1	28.0
<a href="#">M25</a>	025	I4725	Sgr	1	18	31.6	-19	15	6.5	40.0	2
<a href="#">M22</a>	022	6656	Sgr	2	18	36.4	-23	54	5.1	24.0	10.4
<a href="#">M70</a>	070	6681	Sgr	2	18	43.2	-32	18	7.9	7.8	29.4
<a href="#">M26</a>	026	6694	Sct	1	18	45.2	-09	24	8.0	15.0	5
<a href="#">M11</a>	011	6705	Sct	1	18	51.1	-06	16	6.3	14.0	6
<a href="#">M57</a>	057	6720	Lyr	3	18	53.6	+33	02	8.8	1.4x1.0	2.3
<a href="#">M54</a>	054	6715	Sgr	2	18	55.1	-30	29	7.6	9.1	88.7
<a href="#">M56</a>	056	6779	Lyr	2	19	16.6	+30	11	8.3	7.1	32.9
<a href="#">M55</a>	055	6809	Sgr	2	19	40.0	-30	58	6.3	19.0	17.6
<a href="#">M71</a>	071	6838	Sge	2	19	53.8	+18	47	8.2	7.2	12.7
<a href="#">M27</a>	027	6853	Vul	3	19	59.6	+22	43	7.4	8.0x5.7	1.25
<a href="#">M75</a>	075	6864	Sgr	2	20	06.1	-21	55	8.5	6.0	61.3
<a href="#">M29</a>	029	6913	Cyg	1	20	23.9	+38	32	7.1	7.0	4.0
<a href="#">M72</a>	072	6981	Aqr	2	20	53.5	-12	32	9.3	5.9	55.4
<a href="#">M73</a>	073	6994	Aqr	A	20	58.9	-12	38	9.0	2.8	2.0
<a href="#">M15</a>	015	7078	Peg	2	21	30.0	+12	10	6.2	12.3	33.6
<a href="#">M39</a>	039	7092	Cyg	1	21	32.2	+48	26	4.6	32.0	0.825
<a href="#">M2</a>	002	7089	Aqr	2	21	33.5	-00	49	6.5	12.9	37.5
<a href="#">M30</a>	030	7099	Cap	2	21	40.4	-23	11	7.2	11.0	26.1
<a href="#">M52</a>	052	7654	Cas	1	23	24.2	+61	35	7.3	13.0	5.0

## M48

## Hya



Type :	Open Cluster
Ra (hh :mm :ss)	8:13:48
Dec (d°,dd)	-5,80
Dimension (')	54.0
Magnitude	5,5
Distance (k.AI)	1,5

## M44

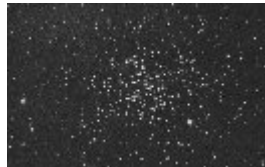
## Cnc



Type :	Open Cluster
Ra (hh :mm :ss)	8:40:06
Dec (d°,dd)	19,98
Dimension (')	95.0
Magnitude	3,7
Distance (k.AI)	0,577

## M67

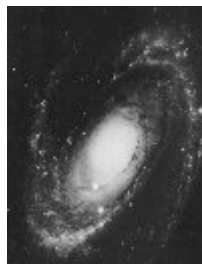
## Cnc



Type :	Open Cluster
Ra (hh :mm :ss)	8:50:24
Dec (d°,dd)	11,82
Dimension (')	30.0
Magnitude	6,1
Distance (k.AI)	2,7

## M81

## UMa



Type :	Spiral Galaxy
Ra (hh :mm :ss)	9:55:36
Dec (d°,dd)	69,07
Dimension (')	21x10
Magnitude	6,9
Distance (k.AI)	12000

## M82



Type :

**UMa**

Irregular Galaxy

Ra (hh :mm :ss)  
Dec (d°,dd)

9:55:48  
69,68

Dimension (')  
Magnitude  
Distance (k.Al)

9x4  
8,4  
12000

## M95



Type :

**Leo**

Spiral Galaxy

Ra (hh :mm :ss)  
Dec (d°,dd)

10:44:00  
11,70

Dimension (')  
Magnitude  
Distance (k.Al)

4.4x3.3  
9,7  
38000

## M96



Type :

**Leo**

Spiral Galaxy

Ra (hh :mm :ss)  
Dec (d°,dd)

10:46:48  
11,82

Dimension (')  
Magnitude  
Distance (k.Al)

6x4  
9,2  
38000

## M105



Type :

**Leo**

Elliptical Galaxy

Ra (hh :mm :ss)  
Dec (d°,dd)

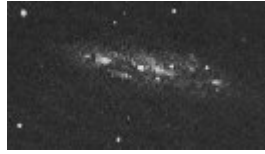
10:47:48  
12,58

Dimension (')  
Magnitude  
Distance (k.Al)

2.0  
9,3  
38000

## M108

## UMa



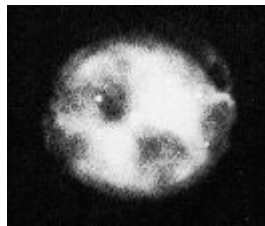
Type : Spiral Galaxy

Ra (hh :mm :ss) 11:11:30  
 Dec (d°,dd) 55,67

Dimension (') 8x1  
 Magnitude 10  
 Distance (k.AI) 45000

## M97

## UMa



Type : Planetary Nebula

Ra (hh :mm :ss) 11:14:48  
 Dec (d°,dd) 55,02

Dimension (') 3.4x3.3  
 Magnitude 9,9  
 Distance (k.AI) 2,6

## M65

## Leo



Type : Spiral Galaxy

Ra (hh :mm :ss) 11:18:54  
 Dec (d°,dd) 13,08

Dimension (') 8x1.5  
 Magnitude 9,3  
 Distance (k.AI) 35000

## M66

## Leo



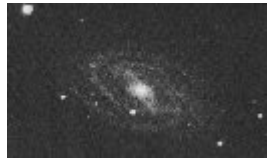
Type : Spiral Galaxy

Ra (hh :mm :ss) 11:20:12  
 Dec (d°,dd) 12,98

Dimension (') 8x2.5  
 Magnitude 8,9  
 Distance (k.AI) 35000

## M109

**UMa**



Type : Spiral Galaxy

Ra (hh :mm :ss) 11:57:36  
 Dec (d°,dd) 53,38

Dimension (') 7x4  
 Magnitude 9,8  
 Distance (k.AI) 55000

## M98

**Com**



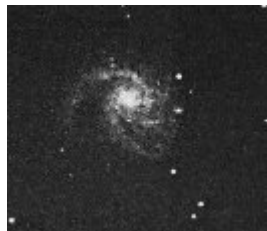
Type : Spiral Galaxy

Ra (hh :mm :ss) 12:13:48  
 Dec (d°,dd) 14,90

Dimension (') 9.5x3.2  
 Magnitude 10,1  
 Distance (k.AI) 60000

## M99

**Com**



Type : Spiral Galaxy

Ra (hh :mm :ss) 12:18:48  
 Dec (d°,dd) 14,42

Dimension (') 5.4x4.8  
 Magnitude 9,9  
 Distance (k.AI) 60000

## M106

**CVn**



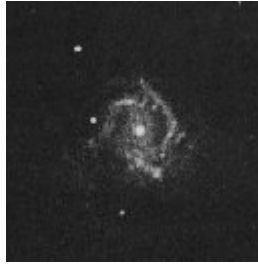
Type : Spiral Galaxy

Ra (hh :mm :ss) 12:19:00  
 Dec (d°,dd) 47,30

Dimension (') 19x8  
 Magnitude 8,4  
 Distance (k.AI) 25000

## M61

**Vir**



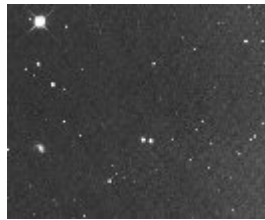
Type : Spiral Galaxy

Ra (hh :mm :ss) 12:21:54  
Dec (d°,dd) 4,47

Dimension (') 6x5.5  
Magnitude 9,7  
Distance (k.AI) 60000

## M40

**UMa**



Type : Binary star

Ra (hh :mm :ss) 12:22:24  
Dec (d°,dd) 58,08

Dimension (') 0.8  
Magnitude 8,4  
Distance (k.AI) 0,51

## M100

**Com**



Type : Spiral Galaxy

Ra (hh :mm :ss) 12:22:54  
Dec (d°,dd) 15,82

Dimension (') 7x6  
Magnitude 9,3  
Distance (k.AI) 60000

## M84

**Vir**



Type : Lenticular (S0) Gala

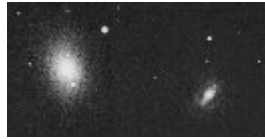
Ra (hh :mm :ss) 12:25:06  
Dec (d°,dd) 12,88

Dimension (') 5.0  
Magnitude 9,1  
Distance (k.AI) 60000



## M85

**Com**



Type : Lenticular (S0) Gala

Ra (hh :mm :ss) 12:25:24  
 Dec (d°,dd) 18,18

Dimension (') 7.1x5.2  
 Magnitude 9,1  
 Distance (k.AI) 60000

## M86

**Vir**



Type : Lenticular (S0) Gala

Ra (hh :mm :ss) 12:26:12  
 Dec (d°,dd) 12,95

Dimension (') 7.5x5.5  
 Magnitude 8,9  
 Distance (k.AI) 60000

## M49

**Vir**



Type : Elliptical Galaxy

Ra (hh :mm :ss) 12:29:48  
 Dec (d°,dd) 8,00

Dimension (') 9x7.5  
 Magnitude 8,4  
 Distance (k.AI) 60000

## M87

**Vir**



Type : Elliptical Galaxy

Ra (hh :mm :ss) 12:30:48  
 Dec (d°,dd) 12,40

Dimension (') 7.0  
 Magnitude 8,6  
 Distance (k.AI) 60000

## M88

**Com**



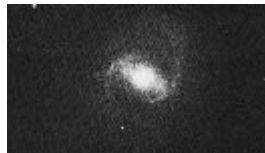
Type : Spiral Galaxy

Ra (hh :mm :ss) 12:32:00  
Dec (d°,dd) 14,42

Dimension (') 7x4  
Magnitude 9,6  
Distance (k.AI) 60000

## M91

**Com**



Type : Spiral Galaxy

Ra (hh :mm :ss) 12:35:24  
Dec (d°,dd) 14,50

Dimension (') 5.4x4.4  
Magnitude 10,2  
Distance (k.AI) 60000

## M89

**Vir**



Type : Elliptical Galaxy

Ra (hh :mm :ss) 12:35:42  
Dec (d°,dd) 12,55

Dimension (') 4.0  
Magnitude 9,8  
Distance (k.AI) 60000

## M90

**Vir**



Type : Spiral Galaxy

Ra (hh :mm :ss) 12:36:48  
Dec (d°,dd) 13,17

Dimension (') 9.5x4.5  
Magnitude 9,5  
Distance (k.AI) 60000

**M58**

**Vir**



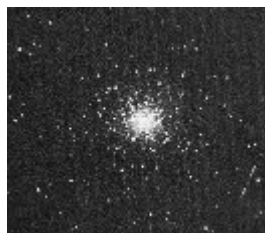
Type : Spiral Galaxy

Ra (hh :mm :ss) 12:37:42  
 Dec (d°,dd) 11,82

Dimension (') 5.5x4.5  
 Magnitude 9,7  
 Distance (k.AI) 60000

**M68**

**Hya**



Type : Globular Cluster

Ra (hh :mm :ss) 12:39:30  
 Dec (d°,dd) -26,75

Dimension (') 12.0  
 Magnitude 7,8  
 Distance (k.AI) 33,3

**M104**

**Vir**



Type : Spiral Galaxy

Ra (hh :mm :ss) 12:40:00  
 Dec (d°,dd) -11,62

Dimension (') 9x4  
 Magnitude 8  
 Distance (k.AI) 50000

**M59**

**Vir**



Type : Elliptical Galaxy

Ra (hh :mm :ss) 12:42:00  
 Dec (d°,dd) 11,65

Dimension (') 5x3.5  
 Magnitude 9,6  
 Distance (k.AI) 60000

## M60

**Vir**



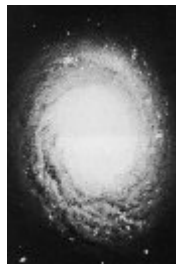
Type : Elliptical Galaxy

Ra (hh :mm :ss) 12:43:42  
Dec (d°,dd) 11,55

Dimension (') 7x6  
Magnitude 8,8  
Distance (k.AI) 60000

## M94

**CVn**



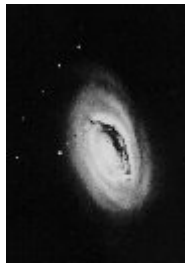
Type : Spiral Galaxy

Ra (hh :mm :ss) 12:50:54  
Dec (d°,dd) 41,12

Dimension (') 7x3  
Magnitude 8,2  
Distance (k.AI) 14500

## M64

**Com**



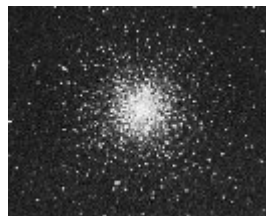
Type : Spiral Galaxy

Ra (hh :mm :ss) 12:56:42  
Dec (d°,dd) 21,68

Dimension (') 9.3x5.4  
Magnitude 8,5  
Distance (k.AI) 19000

## M53

**Com**



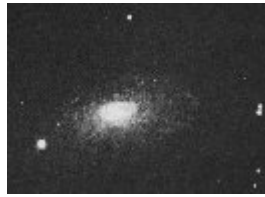
Type : Globular Cluster

Ra (hh :mm :ss) 13:12:54  
Dec (d°,dd) 18,17

Dimension (') 12.6  
Magnitude 7,6  
Distance (k.AI) 59,7

## M63

**CVn**



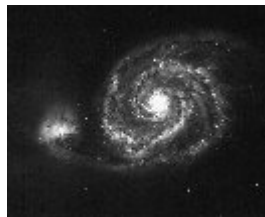
Type : Spiral Galaxy

Ra (hh :mm :ss) 13:15:48  
 Dec (d°,dd) 42,03

Dimension (') 10x6  
 Magnitude 8,6  
 Distance (k.AI) 37000

## M51

**CVn**



Type : Spiral Galaxy

Ra (hh :mm :ss) 13:29:54  
 Dec (d°,dd) 47,20

Dimension (') 11x7  
 Magnitude 8,4  
 Distance (k.AI) 37000

## M83

**Hya**



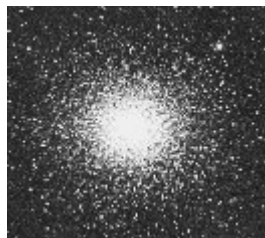
Type : Spiral Galaxy

Ra (hh :mm :ss) 13:37:00  
 Dec (d°,dd) -29,87

Dimension (') 11x10  
 Magnitude 7,6  
 Distance (k.AI) 15000

## M3

**CVn**



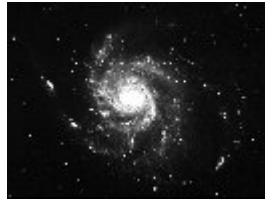
Type : Globular Cluster

Ra (hh :mm :ss) 13:42:12  
 Dec (d°,dd) 28,38

Dimension (') 16.2  
 Magnitude 6,2  
 Distance (k.AI) 33,9

## M101

### UMa



Type :	Spiral Galaxy
Ra (hh :mm :ss)	14:03:12
Dec (d°,dd)	54,35
Dimension (')	22.0
Magnitude	7,9
Distance (k.AI)	27000

## M102?

### Dra



Type :	Lenticular (S0) Gala
Ra (hh :mm :ss)	15:06:30
Dec (d°,dd)	55,77
Dimension (')	5.2x2.3
Magnitude	9,9
Distance (k.AI)	40000

## M5

### Ser



Type :	Globular Cluster
Ra (hh :mm :ss)	15:18:36
Dec (d°,dd)	2,08
Dimension (')	17.4
Magnitude	5,6
Distance (k.AI)	24,5

## M80

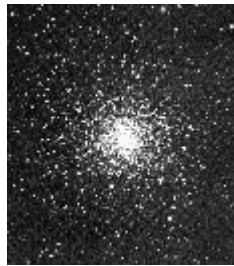
### Sco



Type :	Globular Cluster
Ra (hh :mm :ss)	16:17:00
Dec (d°,dd)	-22,98
Dimension (')	8.9
Magnitude	7,3
Distance (k.AI)	32,6

## M4

**Sco**



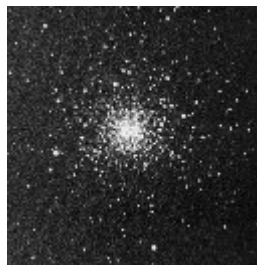
Type : Globular Cluster

Ra (hh :mm :ss) 16:23:36  
 Dec (d°,dd) -26,53

Dimension (') 26.3  
 Magnitude 5,6  
 Distance (k.AI) 7,2

## M107

**Oph**



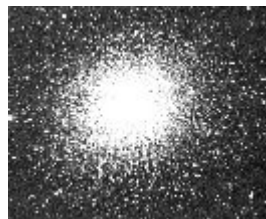
Type : Globular Cluster

Ra (hh :mm :ss) 16:32:30  
 Dec (d°,dd) -13,05

Dimension (') 10.0  
 Magnitude 7,9  
 Distance (k.AI) 20,9

## M13

**Her**



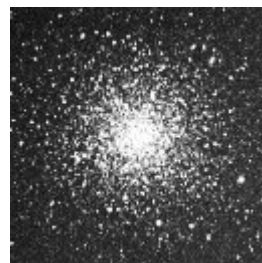
Type : Globular Cluster

Ra (hh :mm :ss) 16:41:42  
 Dec (d°,dd) 36,47

Dimension (') 16.6  
 Magnitude 5,8  
 Distance (k.AI) 25,1

## M12

**Oph**



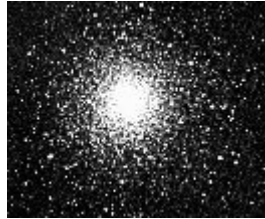
Type : Globular Cluster

Ra (hh :mm :ss) 16:47:12  
 Dec (d°,dd) -1,95

Dimension (') 14.5  
 Magnitude 6,7  
 Distance (k.AI) 16

## M10

**Oph**



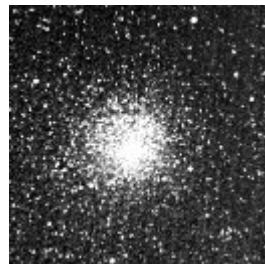
Type : Globular Cluster

Ra (hh :mm :ss) 16:57:06  
 Dec (d°,dd) -4,10

Dimension (') 15.1  
 Magnitude 6,6  
 Distance (k.AI) 14,4

## M62

**Oph**



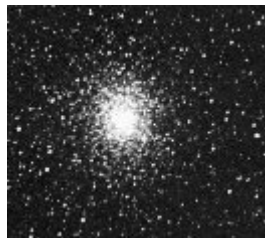
Type : Globular Cluster

Ra (hh :mm :ss) 17:01:12  
 Dec (d°,dd) -30,12

Dimension (') 14.1  
 Magnitude 6,5  
 Distance (k.AI) 22,5

## M19

**Oph**



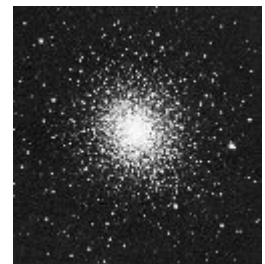
Type : Globular Cluster

Ra (hh :mm :ss) 17:02:36  
 Dec (d°,dd) -26,27

Dimension (') 13.5  
 Magnitude 6,8  
 Distance (k.AI) 28,4

## M92

**Her**



Type : Globular Cluster

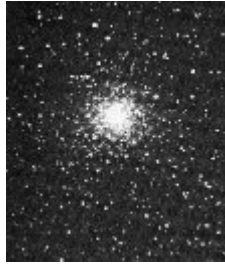
Ra (hh :mm :ss) 17:17:06  
 Dec (d°,dd) 43,13

Dimension (') 11.2  
 Magnitude 6,4  
 Distance (k.AI) 26,7



## M9

**Oph**



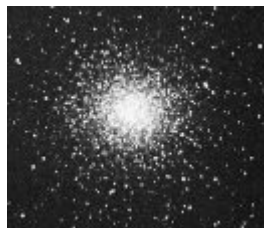
Type : Globular Cluster

Ra (hh :mm :ss) 17:19:12  
 Dec (d°,dd) -18,52

Dimension (') 9.3  
 Magnitude 7,7  
 Distance (k.AI) 26,7

## M14

**Oph**



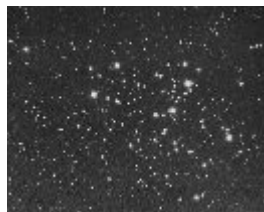
Type : Globular Cluster

Ra (hh :mm :ss) 17:37:36  
 Dec (d°,dd) -3,25

Dimension (') 11.7  
 Magnitude 7,6  
 Distance (k.AI) 29

## M6

**Sco**



Type : Open Cluster

Ra (hh :mm :ss) 17:40:06  
 Dec (d°,dd) -32,22

Dimension (') 25.0  
 Magnitude 4,2  
 Distance (k.AI) 1,6

## M7

**Sco**



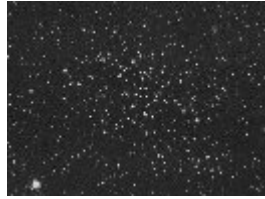
Type : Open Cluster

Ra (hh :mm :ss) 17:53:54  
 Dec (d°,dd) -34,82

Dimension (') 80.0  
 Magnitude 3,3  
 Distance (k.AI) 0,8

## M23

**Sgr**



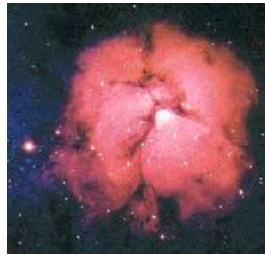
Type : Open Cluster

Ra (hh :mm :ss) 17:56:48  
 Dec (d°,dd) -19,02

Dimension (') 27.0  
 Magnitude 6,9  
 Distance (k.AI) 2,15

## M20

**Sgr**



Type : Diffuse Nebula

Ra (hh :mm :ss) 18:02:36  
 Dec (d°,dd) -23,03

Dimension (') 28.0  
 Magnitude 9  
 Distance (k.AI) 5,2

## M8

**Sgr**



Type : Diffuse Nebula

Ra (hh :mm :ss) 18:03:48  
 Dec (d°,dd) -24,38

Dimension (') 90x40  
 Magnitude 6  
 Distance (k.AI) 5,2

## M21

**Sgr**



Type : Open Cluster

Ra (hh :mm :ss) 18:04:36  
 Dec (d°,dd) -22,50

Dimension (') 13.0  
 Magnitude 6,5  
 Distance (k.AI) 4,25

## M24

**Sgr**



Type : Milky Way Patch

Ra (hh :mm :ss) 18:16:54  
 Dec (d°,dd) -18,48

Dimension (') 90  
 Magnitude 4,6  
 Distance (k.AI) 10

## M16

**Ser**



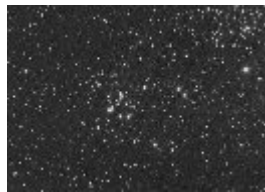
Type : Open Cluster

Ra (hh :mm :ss) 18:18:48  
 Dec (d°,dd) -13,78

Dimension (') 7.0  
 Magnitude 6,4  
 Distance (k.AI) 7

## M18

**Sgr**



Type : Open Cluster

Ra (hh :mm :ss) 18:19:54  
 Dec (d°,dd) -17,13

Dimension (') 9.0  
 Magnitude 7,5  
 Distance (k.AI) 4,9

## M17

**Sgr**



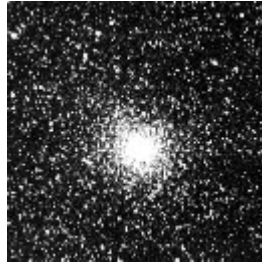
Type : Diffuse Nebula

Ra (hh :mm :ss) 18:20:48  
 Dec (d°,dd) -16,18

Dimension (') 11.0  
 Magnitude 7  
 Distance (k.AI) 5

## M28

**Sgr**



Type : Globular Cluster

Ra (hh :mm :ss) 18:24:30  
 Dec (d°,dd) -24,87

Dimension (') 11.2  
 Magnitude 6,8  
 Distance (k.AI) 18,6

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## M69

**Sgr**



Type : Globular Cluster

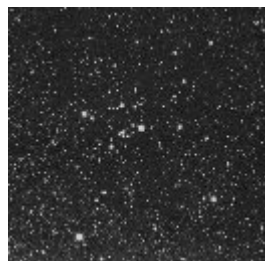
Ra (hh :mm :ss) 18:31:24  
 Dec (d°,dd) -32,35

Dimension (') 7.1  
 Magnitude 7,6  
 Distance (k.AI) 28

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## M25

**Sgr**



Type : Open Cluster

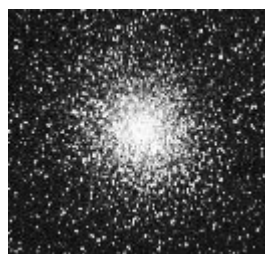
Ra (hh :mm :ss) 18:31:36  
 Dec (d°,dd) -19,25

Dimension (') 40.0  
 Magnitude 6,5  
 Distance (k.AI) 2

---

## M22

**Sgr**



Type : Globular Cluster

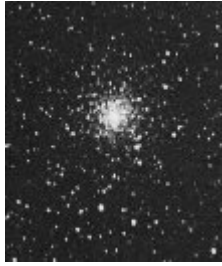
Ra (hh :mm :ss) 18:36:24  
 Dec (d°,dd) -23,90

Dimension (') 24.0  
 Magnitude 5,1  
 Distance (k.AI) 10,4

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## M70

**Sgr**



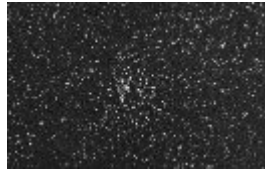
Type : Globular Cluster

Ra (hh :mm :ss) 18:43:12  
 Dec (d°,dd) -32,30

Dimension (') 7.8  
 Magnitude 7,9  
 Distance (k.AI) 29,4

## M26

**Sct**



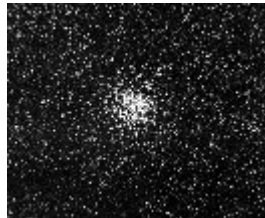
Type : Open Cluster

Ra (hh :mm :ss) 18:45:12  
 Dec (d°,dd) -9,40

Dimension (') 15.0  
 Magnitude 8  
 Distance (k.AI) 5

## M11

**Sct**



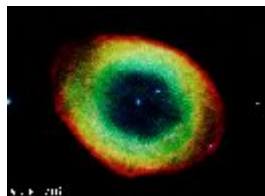
Type : Open Cluster

Ra (hh :mm :ss) 18:51:06  
 Dec (d°,dd) -6,27

Dimension (') 14.0  
 Magnitude 6,3  
 Distance (k.AI) 6

## M57

**Lyr**



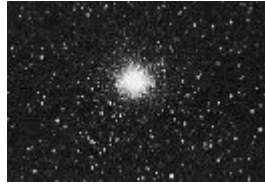
Type : Planetary Nebula

Ra (hh :mm :ss) 18:53:36  
 Dec (d°,dd) 33,03

Dimension (') 1.4x1.0  
 Magnitude 8,8  
 Distance (k.AI) 2,3

## M54

**Sgr**



Type : Globular Cluster

Ra (hh :mm :ss) 18:55:06  
 Dec (d°,dd) -30,48

Dimension (') 9.1  
 Magnitude 7,6  
 Distance (k.AI) 88,7

## M56

**Lyr**



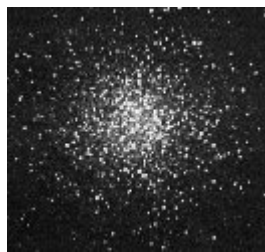
Type : Globular Cluster

Ra (hh :mm :ss) 19:16:36  
 Dec (d°,dd) 30,18

Dimension (') 7.1  
 Magnitude 8,3  
 Distance (k.AI) 32,9

## M55

**Sgr**



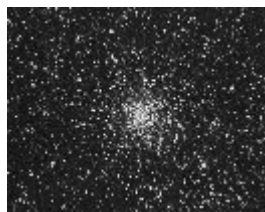
Type : Globular Cluster

Ra (hh :mm :ss) 19:40:00  
 Dec (d°,dd) -30,97

Dimension (') 19.0  
 Magnitude 6,3  
 Distance (k.AI) 17,6

## M71

**Sge**



Type : Globular Cluster

Ra (hh :mm :ss) 19:53:48  
 Dec (d°,dd) 18,78

Dimension (') 7.2  
 Magnitude 8,2  
 Distance (k.AI) 12,7

## M27

## Vul



Type :	Planetary Nebula
Ra (hh :mm :ss)	19:59:36
Dec (d°,dd)	22,72
Dimension (')	8.0x5.7
Magnitude	7,4
Distance (k.AI)	1,25

## M75

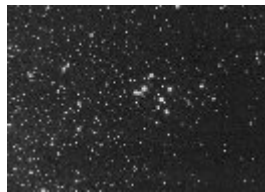
## Sgr



Type :	Globular Cluster
Ra (hh :mm :ss)	20:06:06
Dec (d°,dd)	-21,92
Dimension (')	6.0
Magnitude	8,5
Distance (k.AI)	61,3

## M29

## Cyg



Type :	Open Cluster
Ra (hh :mm :ss)	20:23:54
Dec (d°,dd)	38,53
Dimension (')	7.0
Magnitude	7,1
Distance (k.AI)	4

## M72

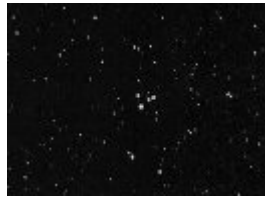
## Aqr



Type :	Globular Cluster
Ra (hh :mm :ss)	20:53:30
Dec (d°,dd)	-12,53
Dimension (')	5.9
Magnitude	9,3
Distance (k.AI)	55,4

## M73

**Aqr**



Type : System of 4 stars or Asterism

Ra (hh :mm :ss) 20:58:54  
 Dec (d°,dd) -12,63

Dimension (') 2.8  
 Magnitude 9  
 Distance (k.AI) 2

## M15

**Peg**



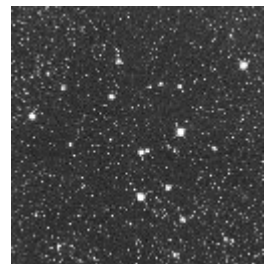
Type : Globular Cluster

Ra (hh :mm :ss) 21:30:00  
 Dec (d°,dd) 12,17

Dimension (') 12.3  
 Magnitude 6,2  
 Distance (k.AI) 33,6

## M39

**Cyg**



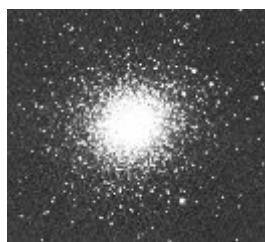
Type : Open Cluster

Ra (hh :mm :ss) 21:32:12  
 Dec (d°,dd) 48,43

Dimension (') 32.0  
 Magnitude 4,6  
 Distance (k.AI) 0,825

## M2

**Aqr**



Type : Globular Cluster

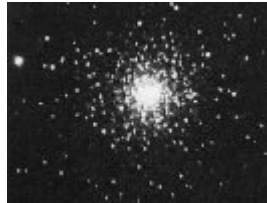
Ra (hh :mm :ss) 21:33:30  
 Dec (d°,dd) 0,00

Dimension (') 12.9  
 Magnitude 6,5  
 Distance (k.AI) 37,5



## M30

### Cap

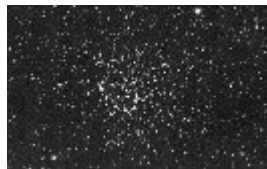


Type :	Globular Cluster
Ra (hh :mm :ss)	21:40:24
Dec (d°,dd)	-23,18
Dimension (')	11.0
Magnitude	7,2
Distance (k.AI)	26,1

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## M52

### Cas













Type :	Open Cluster
Ra (hh :mm :ss)	23:24:12
Dec (d°,dd)	61,58
Dimension (')	13.0
Magnitude	7,3
Distance (k.AI)	5

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## 8 ISS





























Night of Monday 4 June 2007		
Time	Object	Event
23h26m55s	<a href="#">ISS</a>	<b>Appears</b> 23h22m06s 2.2m az:236.2d SW <b>Transit</b> 23h26m55s -2.1m az:326.7d NNW h:86.9d dist:339.7km alt:342.1km <b>Disappears</b> 23h31m47s 2.1m az: 56.9d ENE Time uncertainty of about 1.1 minutes
1h02m09s	<a href="#">ISS</a>	<b>Appears</b> 0h57m38s 2.6m az:276.3d W <b>Transit</b> 1h02m09s 1.7m az:345.0d NNW h:19.0d dist:886.8km alt:344.1km <b>Disappears</b> 1h06m40s 2.6m az: 53.7d NE Time uncertainty of about 1.1 minutes
4h13m21s	<a href="#">ISS</a>	<b>Appears</b> 4h08m36s 2.2m az:306.7d NW <b>Transit</b> 4h13m21s 0.5m az: 24.4d NNE h:32.5d dist:598.5km alt:343.1km <b>Disappears</b> 4h18m04s 2.6m az:102.2d ESE Time uncertainty of about 1.1 minutes
5h48m12s	<a href="#">ISS</a>	<b>Appears</b> 5h43m33s 1.8m az:295.6d WNW <b>Transit</b> 5h48m12s -1.1m az:221.8d SW h:28.2d dist:661.7km alt:340.6km <b>Disappears</b> 5h52m49s 2.0m az:147.6d SSE Time uncertainty of about 1.1 minutes
5h49m10.14s	<a href="#">ISS</a>	<b>Close to Moon.</b> Separation=0.992° Position Angle=156.5° Angular Velocity=27.9"/s Angular diameter=23.7" size=73.0m x 44.5m x 27.5m Satellite at Azimuth=185.5° S Altitude= 22.5° Distance=780.9 km <b>Magnitude=-0.6mag</b> Satellite apparently moves to clock-face direction 8:21 o'clock <a href="#">Centerline</a> , <a href="#">Closest Point</a> → <a href="#">Map</a> : Longitude= 0°05'55" W Latitude=+42°46'27" <b>Distance=26.68 km</b> Azimuth=227.6° SW Path direction: 137.4° SE ground speed: 8.127 km/s width: 16.1 km max. duration: 1.1 s Time uncertainty of about 1.1 minutes
Night of Tuesday 5 June 2007		
22h11m48s	<a href="#">ISS</a>	<b>Appears</b> 22h07m13s 2.0m az:210.2d SSW <b>Transit</b> 22h11m48s -1.0m az:137.6d SE h:25.7d dist:708.3km alt:340.3km <b>Disappears</b> 22h16m25s 1.8m az: 65.2d ENE Time uncertainty of about 1.2 minutes
23h46m37s	<a href="#">ISS</a>	<b>Appears</b> 23h41m53s 2.5m az:256.1d WSW <b>Transit</b> 23h46m37s 0.3m az:334.8d NNW h:34.5d dist:570.8km alt:342.8km <b>Disappears</b> 23h51m23s 2.2m az: 53.5d NE Time uncertainty of about 1.2 minutes
2h57m48s	<a href="#">ISS</a>	<b>Appears</b> 2h53m18s 2.6m az:306.1d NW <b>Transit</b> 2h57m48s 1.8m az: 14.2d NNE h:18.4d dist:905.5km alt:344.0km <b>Disappears</b> 3h02m18s 2.6m az: 82.3d E Time uncertainty of about 1.2 minutes
4h33m04s	<a href="#">ISS</a>	<b>Appears</b> 4h28m12s 2.1m az:303.5d WNW <b>Transit</b> 4h33m04s -1.9m az: 32.8d NNE h:79.3d dist:344.7km alt:341.9km <b>Disappears</b> 4h37m53s 2.2m az:121.9d ESE Time uncertainty of about 1.3 minutes









<b>Night of Wednesday 6 June 2007</b>		
 22h31m14s	<a href="#"><u>ISS</u></a>	<b>Appears</b> 22h26m26s 2.3m az:232.8d SW <b>Transit</b> 22h31m14s -2.1m az:145.2d SE h:78.9d dist:344.3km alt:341.0km <b>Disappears</b> 22h36m06s 1.9m az: 57.8d ENE Time uncertainty of about 1.4 minutes
 0h06m24s	<a href="#"><u>ISS</u></a>	<b>Appears</b> 0h01m52s 2.9m az:273.7d W <b>Transit</b> 0h06m24s 1.7m az:343.6d NNW h:20.2d dist:849.5km alt:343.4km <b>Disappears</b> 0h10m58s 2.3m az: 53.3d NE Time uncertainty of about 1.4 minutes
 3h17m37s	<a href="#"><u>ISS</u></a>	<b>Appears</b> 3h12m54s 2.5m az:306.9d NW <b>Transit</b> 3h17m37s 0.6m az: 23.0d NNE h:29.2d dist:648.4km alt:343.1km <b>Disappears</b> 3h22m18s 2.4m az: 99.1d E Time uncertainty of about 1.4 minutes
 4h52m31s	<a href="#"><u>ISS</u></a>	<b>Appears</b> 4h47m48s 1.9m az:297.1d WNW <b>Transit</b> 4h52m31s -1.4m az:220.5d SW h:33.5d dist:580.5km alt:340.8km <b>Disappears</b> 4h57m12s 1.9m az:143.8d SE Time uncertainty of about 1.4 minutes
<b>Night of Thursday 7 June 2007</b>		
 22h50m47s	<a href="#"><u>ISS</u></a>	<b>Appears</b> 22h46m02s 2.8m az:253.0d WSW <b>Transit</b> 22h50m47s 0.1m az:333.4d NNW h:39.1d dist:518.8km alt:341.8km <b>Disappears</b> 22h55m34s 2.0m az: 53.8d NE Time uncertainty of about 1.5 minutes
 0h26m14s	<a href="#"><u>ISS</u></a>	<b>Appears</b> 0h21m52s 3.2m az:288.3d WNW <b>Transit</b> 0h26m14s 2.2m az:352.6d N h:15.2d dist:1022.4km alt:343.7km <b>Disappears</b> 0h30m36s 2.4m az: 57.0d ENE Time uncertainty of about 1.6 minutes
 2h01m55s	<a href="#"><u>ISS</u></a>	<b>Appears</b> 1h57m27s 3.0m az:305.6d NW <b>Transit</b> 2h01m55s 1.8m az: 12.7d NNE h:17.5d dist:938.0km alt:343.7km <b>Disappears</b> 2h02m56s 1.5m az: 39.8d NE h:14.9d Time uncertainty of about 1.6 minutes
 3h33m59s	<a href="#"><u>ISS</u></a>	<b>Appears</b> 3h32m21s 2.3m az:304.3d NW <b>Disappears</b> 3h33m59s 1.5m az:306.6d NW h:7.6d Time uncertainty of about 1.6 minutes
<b>Night of Friday 8 June 2007</b>		
 23h10m24s	<a href="#"><u>ISS</u></a>	<b>Appears</b> 23h05m50s 3.2m az:271.0d W <b>Transit</b> 23h10m24s 1.6m az:342.0d NNW h:21.6d dist:807.7km alt:342.4km <b>Disappears</b> 23h14m59s 2.1m az: 53.1d NE Time uncertainty of about 1.7 minutes
 2h20m16s	<a href="#"><u>ISS</u></a>	<b>Appears</b> 2h16m55s 2.9m az:307.0d NW <b>Disappears</b> 2h20m16s 1.4m az:338.0d NNW h:18.5d Time uncertainty of about 1.7 minutes





## 9Iridium

### Night Of Monday 4 June 2007

Time	Object	Event
21h56m46s	 <a href="#">Iridium 57</a>	<b>Magnitude=-3.5mag</b> Azimuth= 70.4° ENE altitude= 67.2° in constellation Bootes RA=14h56.6m Dec=+46°20' distance=841km Flare angle=0.84° to flare center: distance=13.4km, azimuth=267.7° W
23h31m14s	 <a href="#">Iridium 7</a>	<b>Magnitude= 3.0mag</b> <b>Azimuth= 50.4° NE altitude= 31.1° in constellation Cygnus</b> <b>RA=20h21.2m Dec=+48°43' distance=1338km</b> <b>Flare angle=2.39° to flare center: distance=93.1km, azimuth= 65.1° ENE</b>
3h15m41s	 <a href="#">Iridium 83</a>	<b>Magnitude= 2.7mag</b> <b>Azimuth=305.6° NW altitude= 24.0° in constellation Ursa Major</b> <b>RA=11h48.8m Dec=+41°45' distance=1572km</b> <b>Flare angle=2.26° to flare center: distance=159.8km, azimuth=115.8° ESE</b>
3h24m30s	 <a href="#">Iridium 86</a>	<b>Magnitude=-1.2mag</b> Azimuth=307.0° NW altitude= 19.4° in constellation Ursa Major RA=11h34.2m Dec=+39°56' distance=1770km Flare angle=1.05° to flare center: distance=85.3km, azimuth=299.0° WNW
4h53m33s	 <a href="#">Iridium 82</a>	<b>Magnitude=-2.7mag</b> Azimuth=275.7° W altitude= 52.2° in constellation Hercules RA=16h32.1m Dec=+35°39' distance=961km Flare angle=0.99° to flare center: distance=20.6km, azimuth=269.7° W
5h11m44s	 <a href="#">Iridium 75</a>	<b>Magnitude= 3.4mag</b> Azimuth= 27.0° NNE altitude= 5.3° in constellation Auriga RA= 5h24.4m Dec=+45°25' distance=2734km Flare angle=2.13° (Flare center not on earth)
5h15m09s	 <a href="#">Iridium 70</a>	<b>Magnitude= 2.5mag</b> <b>Azimuth= 93.1° E altitude= 21.2° in constellation Pisces</b> <b>RA= 0h57.1m Dec=+12°03' distance=1680km</b> <b>Flare angle=2.17° to flare center: distance=155.8km, azimuth= 92.2° E</b>
5h24m20s	 <a href="#">Iridium 62</a>	<b>Magnitude=-3.2mag</b> Azimuth= 95.0° E altitude= 25.8° in constellation Pisces RA= 0h47.3m Dec=+13°51' distance=1497km Flare angle=0.62° to flare center: distance=38.3km, azimuth=273.3° W
7h57m09s	 <a href="#">Iridium 26</a>	<b>Daytime Magnitude=-5.2mag</b> <b>Azimuth= 50.1° NE altitude= 38.0° in constellation Perseus</b> <b>RA= 4h11.2m Dec=+52°07' distance=1173km</b> <b>Flare angle=0.36° to flare center: distance=11.5km, azimuth=246.9° WSW</b>
11h33m36s	 <a href="#">Iridium 19</a>	<b>Daytime Magnitude=-5.7mag</b> <b>Azimuth=113.4° ESE altitude= 18.2° in constellation Monoceros</b> <b>RA= 6h31.4m Dec= -3°38' distance=1818km</b> <b>Flare angle=0.08° to flare center: distance=8.6km, azimuth=293.0° WNW</b>
<b>Night of Tuesday 5 June 2007</b>		
18h22m09s	 <a href="#">Iridium 74</a>	<b>Daytime Magnitude=-7.2mag</b> <b>Azimuth=262.5° W altitude= 47.5° in constellation Gemini</b> <b>RA= 6h05.0m Dec=+25°57' distance=980km</b> <b>Flare angle=0.02° to flare center: distance=0.4km, azimuth=271.1° W</b>
21h50m34s	 <a href="#">Iridium 60</a>	<b>Magnitude=-3.8mag</b> Azimuth= 72.3° ENE altitude= 67.0° in constellation Bootes RA=14h55.0m Dec=+45°33' distance=842km

		Flare angle=0.76° to flare center: distance=12.0km, azimuth= 87.8° E
 23h34m37s	 <a href="#">Iridium 61</a>	<b>Magnitude= 1.6mag</b> Azimuth= 50.6° NE altitude= 37.9° in constellation Cygnus RA=19h50.8m Dec=+51°42' distance=1178km Flare angle=2.14° to flare center: distance=69.7km, azimuth=249.4° WSW
 3h18m19s	 <a href="#">Iridium 52</a>	<b>Magnitude=-5.7mag</b> Azimuth=308.2° NW altitude= 19.6° in constellation Ursa Major RA=11h29.1m Dec=+40°55' distance=1760km Flare angle=0.12° to flare center: distance=10.0km, azimuth=119.9° ESE
 3h27m05s	 <a href="#">Iridium 53</a>	<b>Magnitude= 4.9mag</b> Azimuth=310.1° NW altitude= 15.7° in constellation Ursa Major RA=11h16.0m Dec=+39°40' distance=1967km Flare angle=2.57° to flare center: distance=248.8km, azimuth=303.1° WNW
 4h47m29s	 <a href="#">Iridium 18</a>	<b>Magnitude=-4.0mag</b> Azimuth=277.4° W altitude= 52.8° in constellation Hercules RA=16h30.8m Dec=+36°50' distance=953km Flare angle=0.65° to flare center: distance=13.7km, azimuth= 90.3° E
 5h18m13s	 <a href="#">Iridium 65</a>	<b>Magnitude=-4.5mag</b> Azimuth= 96.4° E altitude= 25.5° in constellation Pisces RA= 0h42.8m Dec=+12°37' distance=1510km Flare angle=0.39° to flare center: distance=23.2km, azimuth= 94.6° E
<b>Night Of Wednesday 6 June 2007</b>		
 19h59m31s	 <a href="#">Iridium 23</a>	<b>Daytime Flare from MMA1 (Right antenna) Magnitude=-7.0mag</b> <b>Azimuth=242.0° WSW altitude= 78.1° in constellation Leo Minor</b> <b>RA=10h06.9m Dec=+36°36' distance=798km</b> <b>Flare angle=0.23° to flare center: distance=3.3km, azimuth=271.6° W</b>
 21h44m31s	 <a href="#">Iridium 29</a>	<b>Magnitude= 3.3mag</b> Azimuth= 74.3° ENE altitude= 66.4° in constellation Bootes RA=14h55.6m Dec=+44°42' distance=845km Flare angle=2.60° to flare center: distance=40.8km, azimuth= 87.9° E
 23h28m32s	 <a href="#">Iridium 35</a>	<b>Magnitude=-2.9mag</b> Azimuth= 52.0° NE altitude= 38.0° in constellation Cygnus RA=19h44.8m Dec=+50°49' distance=1175km Flare angle=0.81° to flare center: distance=25.4km, azimuth=250.1° WSW
 3h12m12s	 <a href="#">Iridium 10</a>	<b>Magnitude=-1.3mag</b> Azimuth=310.0° NW altitude= 19.0° in constellation Ursa Major RA=11h18.7m Dec=+41°49' distance=1788km Flare angle=1.00° to flare center: distance=95.1km, azimuth=121.7° ESE
 3h20m57s	 <a href="#">Iridium 54</a>	<b>Magnitude= 0.8mag</b> Azimuth=311.7° NW altitude= 15.4° in constellation Ursa Major RA=11h07.3m Dec=+40°33' distance=1984km Flare angle=1.60° to flare center: distance=168.5km, azimuth=304.6° NW
 4h41m17s	 <a href="#">Iridium 39</a>	<b>Magnitude= 1.2mag</b> Azimuth=279.1° W altitude= 53.3° in constellation Hercules RA=16h28.3m Dec=+37°59' distance=949km Flare angle=2.17° to flare center: distance=46.1km, azimuth= 90.6° E
 5h11m59s	 <a href="#">Iridium 68</a>	<b>Magnitude=-0.1mag</b> Azimuth= 97.7° E altitude= 24.8° in constellation Pisces RA= 0h39.3m Dec=+11°20' distance=1534km Flare angle=1.49° to flare center: distance=88.3km, azimuth= 95.9° E
 5h21m12s	 <a href="#">Iridium 21</a>	<b>Magnitude= 1.4mag</b> <b>Azimuth= 99.5° E altitude= 30.1° in constellation Pisces</b> <b>RA= 0h28.1m Dec=+13°41' distance=1363km</b> <b>Flare angle=2.02° to flare center: distance=103.4km, azimuth=276.4° W</b>
 7h45m03s	 <a href="#">Iridium 45</a>	<b>Magnitude=-5.4mag</b> <b>Azimuth= 47.4° NE altitude= 35.8° in constellation Camelopardalis</b>

		RA= 4h25.7m Dec=+53°09' distance=1219km Flare angle=0.33° to flare center: distance=11.3km, azimuth=243.9° WSW
<b>Night Of Thursday 7 June 2007</b>		
23h22m29s	 <a href="#">Iridium 6</a>	Flare from MMA1 (Right antenna) <b>Magnitude=-2.8mag</b> Azimuth= 53.2° NE altitude= 37.7° in constellation Cygnus RA=19h42.0m Dec=+49°45' distance=1182km Flare angle=0.83° to flare center: distance=25.7km, azimuth= 70.5° ENE
3h06m01s	 <a href="#">Iridium 13</a>	Flare from MMA2 (Left antenna) <b>Magnitude= 2.1mag</b> Azimuth=311.4° NW altitude= 18.9° in constellation Ursa Major RA=11h10.9m Dec=+42°44' distance=1796km Flare angle=2.05° to flare center: distance=212.3km, azimuth=123.1° ESE; → <a href="#">MapIt</a> longitude=2.285° E latitude=+41.872° (WGS84) Satellite above: longitude=16.238° W latitude=+50.969° height above Earth=787.2km distance to satellite=1796.4km Time uncertainty of about 1.2 seconds
3h14m44s	 <a href="#">Iridium 83</a>	Flare from MMA2 (Left antenna) <b>Magnitude=-2.2mag</b> Azimuth=313.5° NW altitude= 14.8° in constellation Ursa Major RA=10h56.2m Dec=+41°26' distance=2018km Flare angle=0.68° to flare center: distance=80.5km, azimuth=306.6° NW ; → <a href="#">MapIt</a> longitude=0.655° W latitude=+43.365° (WGS84) Satellite above: longitude=18.721° W latitude=+52.460° height above Earth=787.6km distance to satellite=2017.9km Time uncertainty of about 1.2 seconds
5h05m51s	 <a href="#">Iridium 75</a>	Flare from MMA0 (Front antenna) <b>Magnitude= 4.0mag</b> Azimuth= 99.1° E altitude= 24.3° in constellation Pisces RA= 0h35.3m Dec=+10°01' distance=1555km Flare angle=2.51° to flare center: distance=147.5km, azimuth= 97.2° E ; → <a href="#">MapIt</a> longitude=1.931° E latitude=+42.756° (WGS84) Satellite above: longitude=14.938° E latitude=+40.140° height above Earth=782.4km distance to satellite=1554.5km
5h15m04s	 <a href="#">Iridium 70</a>	Flare from MMA0 (Front antenna) <b>Magnitude=-2.5mag</b> Azimuth=100.8° E altitude= 29.3° in constellation Pisces RA= 0h25.3m Dec=+12°23' distance=1384km Flare angle=0.81° to flare center: distance=40.9km, azimuth=277.5° W ; → <a href="#">MapIt</a> longitude=0.355° W latitude=+42.984° (WGS84) Satellite above: longitude=12.686° E latitude=+40.418° height above Earth=782.5km distance to satellite=1383.8km
<b>Night of Friday 8 June 2007</b>		
18h11m14s	 <a href="#">Iridium 66</a>	Daytime Flare from MMA1 (Right antenna) <b>Magnitude=-6.4mag</b> Azimuth=265.5° W altitude= 42.1° in constellation Taurus RA= 5h41.1m Dec=+24°30' distance=1097km Flare angle=0.20° to flare center: distance=5.7km, azimuth=272.3° W ; → <a href="#">MapIt</a> longitude=0.073° E latitude=+42.938° (WGS84) Satellite above: longitude=8.626° W latitude=+42.090° height above Earth=785.3km distance to satellite=1097.4km
23h16m26s	 <a href="#">Iridium 4</a>	Flare from MMA1 (Right antenna) <b>Magnitude= 0.8mag</b> Azimuth= 54.6° NE altitude= 38.2° in constellation Cygnus RA=19h34.3m Dec=+49°01' distance=1171km Flare angle=1.93° to flare center: distance=57.4km, azimuth= 71.4° ENE;
3h08m27s	 <a href="#">Iridium 56</a>	<b>Magnitude=-3.8mag</b> Azimuth=314.8° NW altitude= 14.8° in constellation Ursa Major RA=10h49.0m Dec=+42°17' distance=2019km Flare angle=0.39° to flare center: distance=51.0km, azimuth=127.9° SE

3h17m06s	 <a href="#">Iridium 52</a>	<b>Magnitude= 2.2mag</b> <b>Azimuth=317.6° NW altitude= 11.1° in constellation Ursa Major</b> <b>RA=10h33.6m Dec=+41°23' distance=2263km</b> <b>Flare angle=1.92° to flare center: distance=281.7km, azimuth=311.5° NW</b>
5h07m59s	 <a href="#">Iridium 74</a>	<b>Magnitude=-0.6mag</b> <b>Azimuth=101.9° ESE altitude= 27.6° in constellation Pisces</b> <b>RA= 0h24.5m Dec=+10°25' distance=1391km</b> <b>Flare angle=1.38° to flare center: distance=68.3km, azimuth= 98.9° E</b>
5h08m59s	 <a href="#">Iridium 64</a>	<b>Magnitude=-6.2mag</b> <b>Azimuth=102.4° ESE altitude= 29.0° in constellation Pisces</b> <b>RA= 0h20.0m Dec=+11°09' distance=1392km</b> <b>Flare angle=0.12° to flare center: distance=5.9km, azimuth= 98.9° E ;</b>
9h42m51s	 <a href="#">Iridium 96</a>	<b>Daytime Magnitude=-5.1mag</b> <b>Azimuth= 82.5° E altitude= 45.6° in constellation Auriga</b> <b>RA= 4h38.2m Dec=+33°38' distance=905km</b> <b>Flare angle=0.47° to flare center: distance=10.3km, azimuth=267.4° W</b>