

## Observation Plan for the month of June 2017

### Moon

<b>New</b>	<b>1<sup>st</sup> Quarter</b>	<b>Full Moon</b>	<b>Last Quarter</b>
<b>25/6/17</b>	<b>3/6/17</b>	<b>10/6/17</b>	<b>19/6/17</b>

### Planets

<b>Planet</b>	<b>Magnitude</b>	<b>Comments</b>
<b>Mercury</b>	<b>N/a</b>	<b>Not visible this month (at greatest Western elongation on 17/6/17)</b>
<b>Venus</b>	<b>-4.3</b>	<b>Rising about 90 minutes before Sunrise</b>
<b>Mars</b>	<b>+1.6</b>	<b>Setting in Taurus by about 23:00</b>
<b>Jupiter</b>	<b>-2.2</b>	<b>Visible all night in Virgo</b>
<b>Saturn</b>	<b>+0.2</b>	<b>Rising at about 23:00 between Sagittarius and Ophiuchus</b>
<b>Uranus</b>	<b>N/a</b>	<b>Not visible this month</b>
<b>Neptune</b>	<b>+7.9</b>	<b>Rising in Aquarius at about 02:30</b>

### Comets

<b>Name: C/2015 Johnson</b>	<b>Magnitude</b>	<b>RA</b>	<b>Dec</b>
<b>5<sup>th</sup> of the month</b>	<b>+6.7</b>	<b>14h 36'</b>	<b>+17° 26'</b>
<b>15<sup>th</sup> of the month</b>	<b>+6.8</b>	<b>14h 23'</b>	<b>+6° 17'</b>
<b>25<sup>th</sup> of the month</b>	<b>+6.9</b>	<b>14h 15'</b>	<b>-3° 55'</b>

<b>Name: 71P/Clark</b>	<b>Magnitude</b>	<b>RA</b>	<b>Dec</b>
<b>5<sup>th</sup> of the month</b>	<b>+11.7</b>	<b>16h 34'</b>	<b>-28° 21'</b>
<b>15<sup>th</sup> of the month</b>	<b>+11.7</b>	<b>16h 29'</b>	<b>-30° 43'</b>
<b>25<sup>th</sup> of the month</b>	<b>+11.7</b>	<b>16h 28'</b>	<b>-32° 42'</b>

<b>Name: 41P/ Tuttle-Gia...</b>	<b>Magnitude</b>	<b>RA</b>	<b>Dec</b>
<b>5<sup>th</sup> of the month</b>	<b>+11.6</b>	<b>18h 27'</b>	<b>+11° 30'</b>
<b>15<sup>th</sup> of the month</b>	<b>+12.9</b>	<b>18h 21'</b>	<b>+5° 09'</b>
<b>25<sup>th</sup> of the month</b>	<b>+14.2</b>	<b>18h 15'</b>	<b>-0° 15'</b>

### **Meteor Showers**

<b>Name</b>	<b>Nominal start date</b>	<b>Nominal end date</b>	<b>Peak ZHR</b>	<b>Originating comet</b>	<b>Moon illumination at peak and comments</b>
No showers this	month				

### **Deep Sky**

<b>Constellation</b>	<b>Object</b>	<b>RA</b>	<b>Dec</b>	<b>Mag</b>	<b>Type</b>	<b>Dates seen</b>
<b>Boótes</b>	<b>NGC5466</b>	<b>14h 05'</b>	<b>+28° 32'</b>	<b>+9.2</b>	<b>Globular Cluster</b>	
<b>Camelopardis</b>	<b>IC342</b>	<b>03h 47'</b>	<b>+68° 06'</b>	<b>+9.1</b>	<b>Galaxy</b>	
<b>Camelopardis</b>	<b>NGC1502</b>	<b>04h 08'</b>	<b>+62° 21'</b>	<b>+4.1</b>	<b>Open Cluster</b>	
<b>Camelopardis</b>	<b>NGC2403</b>	<b>07h 37'</b>	<b>+65° 35'</b>	<b>+8.9</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC4111</b>	<b>12h 07'</b>	<b>+43° 04'</b>	<b>+10.7</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC4138</b>	<b>12h 09'</b>	<b>+43° 41'</b>	<b>+11.3</b>	<b>Galaxy</b>	

<b>Canes Venatici</b>	<b>NGC4145</b>	<b>12h 10'</b>	<b>+39° 53'</b>	<b>+11.3</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC4151</b>	<b>12h 11'</b>	<b>+39° 24'</b>	<b>+11.5</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC4214</b>	<b>12h 16'</b>	<b>+36° 20'</b>	<b>+10.2</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC4220</b>	<b>12h 16'</b>	<b>+47° 53'</b>	<b>+11.3</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC4244</b>	<b>12h 17'</b>	<b>+37° 48'</b>	<b>+10.4</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>M106</b>	<b>12h 19'</b>	<b>+47° 18'</b>	<b>+9.1</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC4449</b>	<b>12h 28'</b>	<b>+44° 05'</b>	<b>+10.1</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC4490</b>	<b>12h 31'</b>	<b>+41° 39'</b>	<b>+9.8</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC4631</b>	<b>12h 42'</b>	<b>+32° 32'</b>	<b>+9.8</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC4656</b>	<b>12h 44'</b>	<b>+32° 10'</b>	<b>+11.0</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>M94</b>	<b>12h 50'</b>	<b>+41° 07'</b>	<b>+8.8</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC5005</b>	<b>13h 11'</b>	<b>+37° 04'</b>	<b>+10.6</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC5033</b>	<b>13h 13'</b>	<b>+36° 36'</b>	<b>+10.2</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>M63</b>	<b>13h 16'</b>	<b>+42° 02'</b>	<b>+9.3</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>M51</b>	<b>13h 30'</b>	<b>+47° 12'</b>	<b>+8.9</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC5195</b>	<b>13h 30'</b>	<b>+47° 16'</b>	<b>+9.6</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>M3</b>	<b>13h 42'</b>	<b>+28° 23'</b>	<b>+6.3</b>	<b>Globular Cluster</b>	
<b>Canes Venatici</b>	<b>NGC5377</b>	<b>13h 56'</b>	<b>+47° 14'</b>	<b>+11.3</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC5383</b>	<b>13h 57'</b>	<b>+41° 51'</b>	<b>+11.5</b>	<b>Galaxy</b>	
<b>Canes Venatici</b>	<b>NGC5273</b>	<b>35h 42'</b>	<b>+35° 39'</b>	<b>+11.6</b>	<b>Galaxy</b>	
<b>Cassiopeia</b>	<b>NGC129</b>	<b>00h 30'</b>	<b>+60° 13'</b>	<b>+9.8</b>	<b>Open Cluster</b>	
<b>Cassiopeia</b>	<b>NGC281</b>	<b>00h 53'</b>	<b>+56° 38'</b>	<b>+7.4</b>	<b>Diffuse Nebula</b>	
<b>Cassiopeia</b>	<b>NGC457</b>	<b>01h 19'</b>	<b>+58° 19'</b>	<b>+5.1</b>	<b>Open Cluster</b>	
<b>Cassiopeia</b>	<b>M103</b>	<b>01h 33'</b>	<b>+60° 42'</b>	<b>+6.9</b>	<b>Open Cluster</b>	

<b>Cassiopeia</b>	<b>M52</b>	<b>23h 24'</b>	<b>+61° 35'</b>	<b>+8.2</b>	<b>Open Cluster</b>	
<b>Cepheus</b>	<b>NGC40</b>	<b>00h 13'</b>	<b>+72° 33'</b>	<b>+10.7</b>	<b>Planetary Nebula</b>	
<b>Cepheus</b>	<b>NGC188</b>	<b>00h 44'</b>	<b>+85° 22'</b>	<b>+9.3</b>	<b>Open Cluster</b>	
<b>Cepheus</b>	<b>NGC7354</b>	<b>22h 40'</b>	<b>+61° 17'</b>	<b>+12.2</b>	<b>Planetary Nebula</b>	
<b>Coma Berenices</b>	<b>NGC4147</b>	<b>12h 10'</b>	<b>+18° 33'</b>	<b>+10.3</b>	<b>Globular Cluster</b>	
<b>Coma Berenices</b>	<b>M98</b>	<b>12h 14'</b>	<b>+14° 24'</b>	<b>+10.9</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>M99</b>	<b>12h 19'</b>	<b>+14° 55'</b>	<b>+10.4</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>NGC4293</b>	<b>12h 21'</b>	<b>+18° 23'</b>	<b>+10.4</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>M100</b>	<b>12h 23'</b>	<b>+15° 49'</b>	<b>+10.1</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>M85</b>	<b>12h 25'</b>	<b>+18° 11'</b>	<b>+9.2</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>NGC4414</b>	<b>12h 26'</b>	<b>+31° 13'</b>	<b>+10.1</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>NGC4450</b>	<b>12h 29'</b>	<b>+17° 05'</b>	<b>+10.1</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>NGC4473</b>	<b>12h 30'</b>	<b>+13° 26'</b>	<b>+10.2</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>NGC4477&amp;4459</b>	<b>12h 30'</b>	<b>+13° 38'</b>	<b>+10.4</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>M88</b>	<b>12h 32'</b>	<b>+14° 25'</b>	<b>+10.3</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>M91</b>	<b>12h 35'</b>	<b>+14° 30'</b>	<b>+10.9</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>NGC4565</b>	<b>12h 36'</b>	<b>+25° 59'</b>	<b>+10.6</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>NGC4559</b>	<b>12h 36'</b>	<b>+27° 57'</b>	<b>+10.5</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>M64</b>	<b>12h 57'</b>	<b>+21° 41'</b>	<b>+9.3</b>	<b>Galaxy</b>	
<b>Coma Berenices</b>	<b>M53</b>	<b>13h 13'</b>	<b>+18° 10'</b>	<b>+7.7</b>	<b>Globular Cluster</b>	
<b>Draco</b>	<b>NGC5907</b>	<b>15h 15'</b>	<b>+56° 19'</b>	<b>+11.1</b>	<b>Galaxy</b>	
<b>Draco</b>	<b>NGC6543</b>	<b>17h 58'</b>	<b>+66° 37'</b>	<b>+8.8</b>	<b>Planetary Nebula</b>	
<b>Hercules</b>	<b>IC4593</b>	<b>16h 12'</b>	<b>+12° 04'</b>	<b>+10.7</b>	<b>Planetary Nebula</b>	
<b>Hercules</b>	<b>M13</b>	<b>16h 42'</b>	<b>+36° 28'</b>	<b>+5.9</b>	<b>Globular Cluster</b>	

<b>Hercules</b>	<b>NGC6207</b>	<b>16h 43'</b>	<b>+36° 50'</b>	<b>+11.6</b>	<b>Galaxy</b>	
<b>Hercules</b>	<b>NGC6229</b>	<b>16h 46'</b>	<b>+47° 31'</b>	<b>+9.4</b>	<b>Globular Cluster</b>	
<b>Hercules</b>	<b>M92</b>	<b>17h 17'</b>	<b>+43° 08'</b>	<b>+6.5</b>	<b>Globular Cluster</b>	
<b>Lacerta</b>	<b>NGC7209</b>	<b>22h 05'</b>	<b>+46° 29'</b>	<b>+7.8</b>	<b>Open Cluster</b>	
<b>Leo</b>	<b>NGC2903</b>	<b>09h 32'</b>	<b>+21° 30'</b>	<b>+9.6</b>	<b>Galaxy</b>	
<b>Leo</b>	<b>NGC3226</b>	<b>10h 23'</b>	<b>+19° 54'</b>	<b>+11.4</b>	<b>Galaxy</b>	
<b>Leo</b>	<b>NGC3227</b>	<b>10h 24'</b>	<b>+19° 52'</b>	<b>+10.3</b>	<b>Galaxy</b>	
<b>Leo</b>	<b>M95</b>	<b>10h 44'</b>	<b>+11° 42'</b>	<b>+10.5</b>	<b>Galaxy</b>	
<b>Leo</b>	<b>M96</b>	<b>10h 47'</b>	<b>+11° 49'</b>	<b>+10.1</b>	<b>Galaxy</b>	
<b>Leo</b>	<b>M105</b>	<b>10h 48'</b>	<b>+12° 35'</b>	<b>+10.2</b>	<b>Galaxy</b>	
<b>Leo</b>	<b>M65</b>	<b>11h 19'</b>	<b>+13° 05'</b>	<b>+10.2</b>	<b>Galaxy</b>	
<b>Leo</b>	<b>M66</b>	<b>11h 20'</b>	<b>+12° 59'</b>	<b>+9.5</b>	<b>Galaxy</b>	
<b>Leo</b>	<b>NGC3628</b>	<b>11h 21'</b>	<b>+13° 31'</b>	<b>+9.5</b>	<b>Galaxy</b>	
<b>Leo Minor</b>	<b>NGC3432</b>	<b>10h 53'</b>	<b>+36° 37'</b>	<b>+11.2</b>	<b>Galaxy</b>	
<b>Perseus</b>	<b>M76</b>	<b>01h 42'</b>	<b>+51° 34'</b>	<b>+12.2</b>	<b>Planetary Nebula</b>	
<b>Perseus</b>	<b>NGC869</b>	<b>02h 19'</b>	<b>+57° 08'</b>	<b>+4.3</b>	<b>Open Cluster</b>	
<b>Perseus</b>	<b>NGC884</b>	<b>02h 22'</b>	<b>+57° 06'</b>	<b>+4.3</b>	<b>Open Cluster</b>	
<b>Perseus</b>	<b>M34</b>	<b>02h 42'</b>	<b>+42° 47'</b>	<b>+5.8</b>	<b>Open Cluster</b>	
<b>Perseus</b>	<b>NGC1499</b>	<b>04h 03'</b>	<b>+36° 23'</b>	<b>+5.0</b>	<b>Diffuse Nebula</b>	
<b>Perseus</b>	<b>NGC1491</b>	<b>04h 03m</b>	<b>+51° 19'</b>		<b>Emission Nebula</b>	
<b>Perseus</b>	<b>NGC1579</b>	<b>04h 30'</b>	<b>+35° 16'</b>		<b>Emission Nebula</b>	
<b>Ursa Major</b>	<b>M81</b>	<b>09h 56'</b>	<b>+69° 04'</b>	<b>+7.8</b>	<b>Galaxy</b>	
<b>Ursa Major</b>	<b>M82</b>	<b>09h 56'</b>	<b>+69° 41'</b>	<b>+9.2</b>	<b>Galaxy</b>	
<b>Ursa Major</b>	<b>NGC3079</b>	<b>10h 02'</b>	<b>+55° 41'</b>	<b>+10.9</b>	<b>Galaxy</b>	

Ursa Major	NGC3077	10h 03'	+68° 44'	+9.8	Galaxy	
Ursa Major	NGC3198	10h 20'	+45° 33'	+10.3	Galaxy	
Ursa Major	M108	11h 11'	+55° 40'	+10.9	Galaxy	
Ursa Major	M97	11h 15'	+55° 01'	+12.0	Planetary Nebula	
Ursa Major	NGC3675	11h 26'	+43° 35'	+11.0	Galaxy	
Ursa Major	NGC3726	11h 33'	+47° 01'	+10.9	Galaxy	
Ursa Major	NGC3877	11h 46'	+47° 29'	+11.8	Galaxy	
Ursa Major	NGC3893	11h 49'	+48° 43'	+10.5	Galaxy	
Ursa Major	NGC3953	11h 54'	+52° 20'	+10.1	Galaxy	
Ursa Major	M109	11h 58'	+53° 23'	+10.8	Galaxy	
Ursa Major	NGC4026	11h 59'	+50° 57'	+11.7	Galaxy	
Ursa Major	NGC4036	12h 01'	+61° 54'	+10.7	Galaxy	
Ursa Major	NGC4051	12h 03'	+44° 32'	+10.2	Galaxy	
Ursa Major	M40	12h 22'	+58° 50'	+8.0	Double Star	
Ursa Major	M101	14h 03'	+54° 21'	+7.7	Galaxy	
Virgo	NGC4378	12h 25'	+04° 55'	+12.3	Galaxy	
Virgo	M84	12h 25'	+12° 53'	+10.1	Galaxy	
Virgo	M84	12h 25'	+12° 53'	+10.1	Galaxy	
Virgo	M84	12h 26'	+12° 47'	+9.3	Galaxy	
Virgo	NGC4388	12h 26'	+12° 40'	+11.0	Galaxy	
Virgo	M86	12h 26'	+12° 57'	+8.9	Galaxy	
Virgo	NGC4438	12h 28'	+13° 01'	+10.2	Galaxy	
Virgo	NGC4438&4435	12h 28'	+13° 01'	+10.0	Galaxy	
Virgo	3C 273	12h 29'	+02° 03'	+11.7-13.2	Quasar	

<b>Virgo</b>	<b>M87</b>	<b>12h 31'</b>	<b>+12° 24'</b>	<b>+9.5</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC4564</b>	<b>12h 37'</b>	<b>+11° 20'</b>	<b>+11.1</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>M90</b>	<b>12h 38'</b>	<b>+13° 04'</b>	<b>+9.5</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>M104</b>	<b>12h 39'</b>	<b>-11° 37'</b>	<b>+9.1</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>M58</b>	<b>12h 39'</b>	<b>+11° 43'</b>	<b>+9.8</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC4636</b>	<b>12h 43'</b>	<b>+02° 41'</b>	<b>+9.5</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC4665</b>	<b>12h 45'</b>	<b>+03° 03'</b>	<b>+10.5</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC4753</b>	<b>12h 52'</b>	<b>-01° 12'</b>	<b>+9.9</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC4762</b>	<b>12h 53'</b>	<b>+11° 04'</b>	<b>+10.3</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC4461</b>	<b>12h029'</b>	<b>+13° 11'</b>	<b>+11.2</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC4435</b>	<b>12h28'</b>	<b>+13° 05'</b>	<b>+10.8</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC5044</b>	<b>13h 16'</b>	<b>-16° 28'</b>	<b>+11.0</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC5077</b>	<b>13h 20'</b>	<b>-12° 44'</b>	<b>+11.5</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC5247</b>	<b>13h 29'</b>	<b>-17° 58'</b>	<b>+10.5</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC5170</b>	<b>13h 31'</b>	<b>-18° 03'</b>	<b>+12.0</b>	<b>Galaxy</b>	
<b>Virgo</b>	<b>NGC5846</b>	<b>15h 06'</b>	<b>+01° 36'</b>	<b>+10.0</b>	<b>Galaxy</b>	