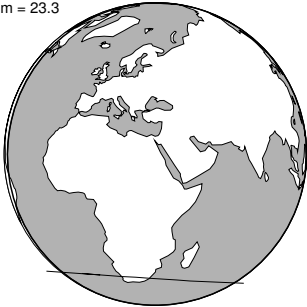
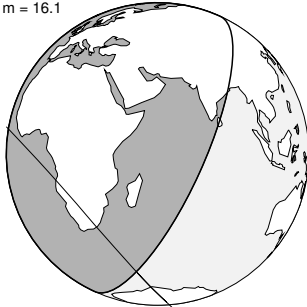
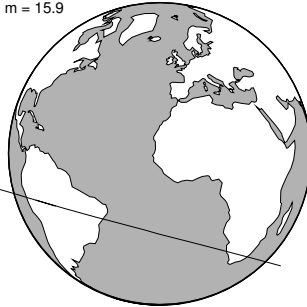
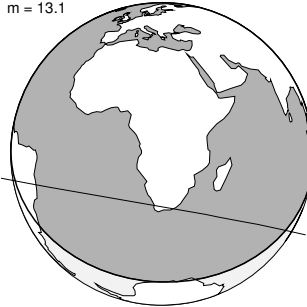
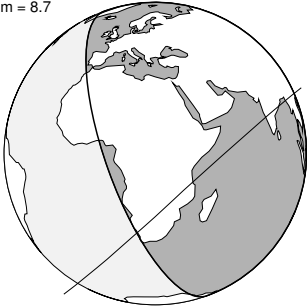
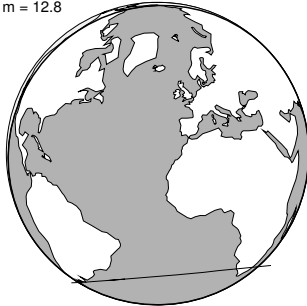
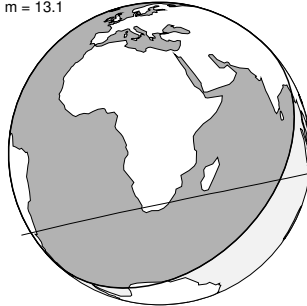
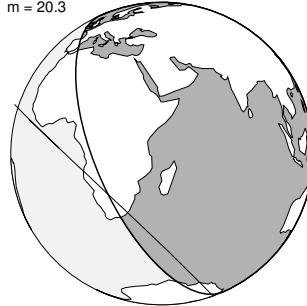
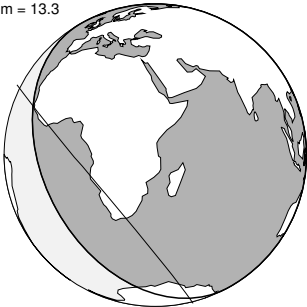
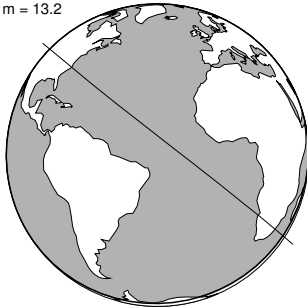
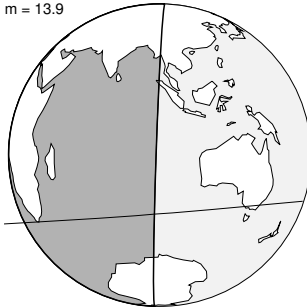
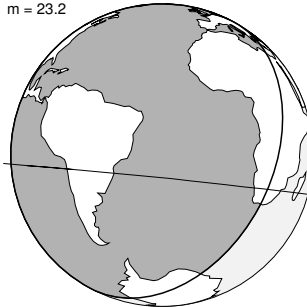
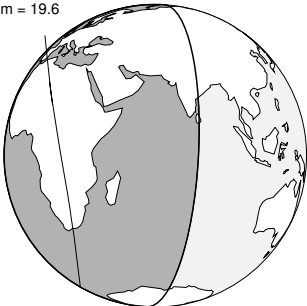
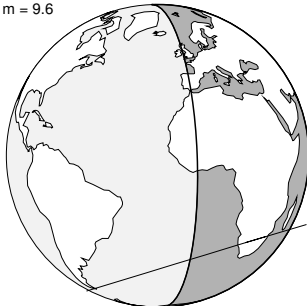
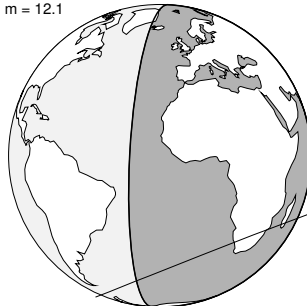
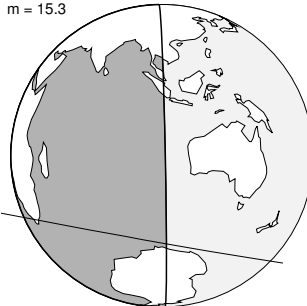


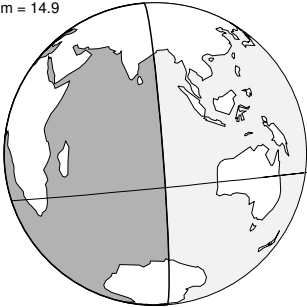
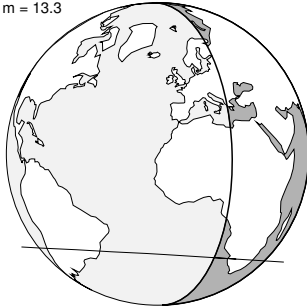
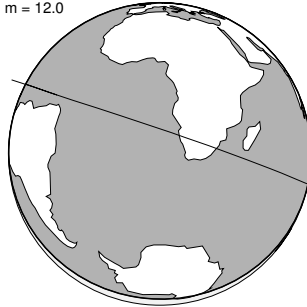
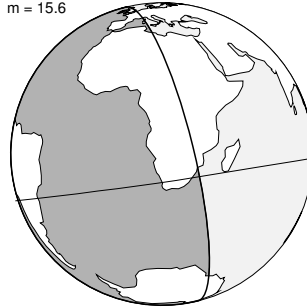
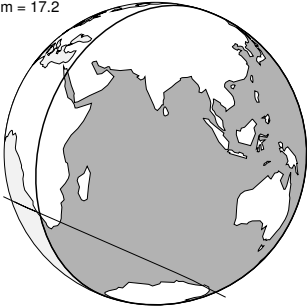
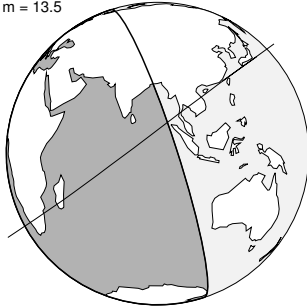
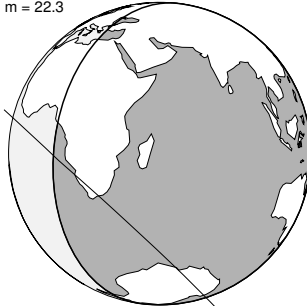
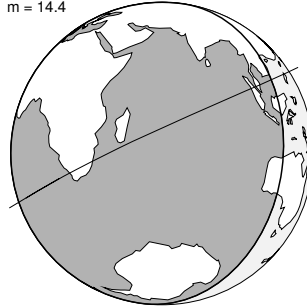
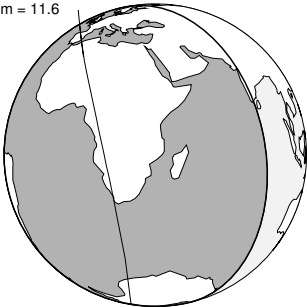
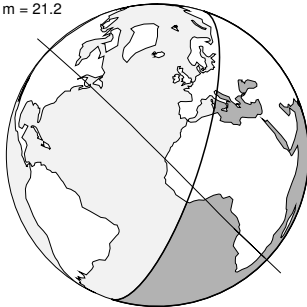
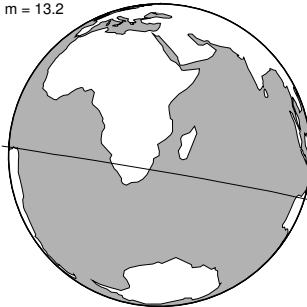
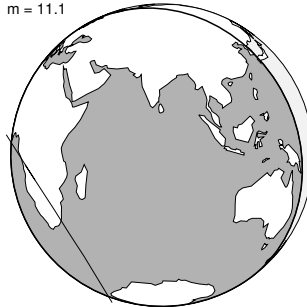
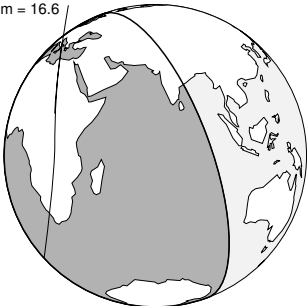
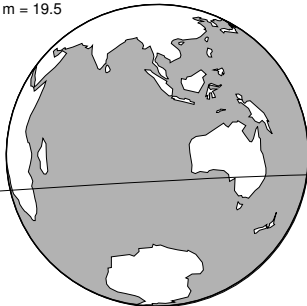
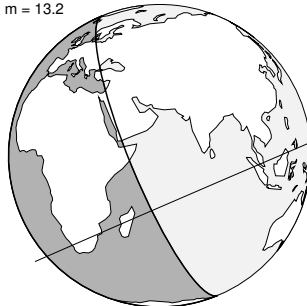
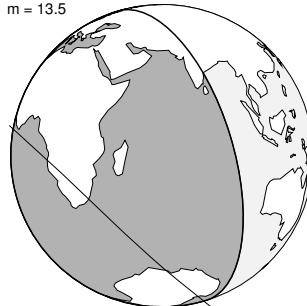
Occultations by major and minor planets – 2019

Region 4

<p>2019 jan 10 21h 4.2m A19_01147 1998WY31 UCAC5 572-029554 Diam = 173.8 m = 10.7 m = 23.3</p>  <p>Dur = 6.9s Dmag = 12.6 Sun: 167° Moon: 116°</p>	<p>2019 jan 13 0h58.5m A19_01130 1285 Julietta TYC 4943-00516-1 Diam = 45.5 m = 11.7 m = 16.1</p>  <p>Dur = 6.5s Dmag = 4.4 Sun: 107° Moon: 171°</p>	<p>2019 jan 16 1h 0.9m A19_01138 2246 Bowell UCAC5 528-042131 Diam = 52.1 m = 11.8 m = 15.9</p>  <p>Dur = 3.5s Dmag = 4.1 Sun: 174° Moon: 68°</p>	<p>2019 jan 21 22h34.1m A19_01060 276 Adelheid UCAC5 389-038458 Diam = 127.0 m = 12.2 m = 13.1</p>  <p>Dur = 10.5s Dmag = 1.3 Sun: 147° Moon: 34°</p>
<p>2019 jan 24 17h51.2m A19_01003 3 Juno UCAC5 458-004988 Diam = 257.6 m = 12.3 m = 8.7</p>  <p>Dur = 21.0s Dmag = 0.0 Sun: 109° Moon: 119°</p>	<p>2019 jan 27 0h56.7m A19_01082 469 Argentina UCAC5 604-040205 Diam = 129.0 m = 10.8 m = 12.8</p>  <p>Dur = 10.2s Dmag = 2.1 Sun: 165° Moon: 90°</p>	<p>2019 feb 2 0h23.1m A19_02079 980 Anacostia TYC 5503-00114-1 Diam = 89.0 m = 9.8 m = 13.1</p>  <p>Dur = 7.4s Dmag = 3.4 Sun: 139° Moon: 111°</p>	<p>2019 feb 2 17h19.4m B19_02002 447178 2005RO43 UCAC5 403-007507 Diam = 158.5 m = 12.7 m = 20.3</p>  <p>Dur = 10.7s Dmag = 7.5 Sun: 116° Moon: 134°</p>
<p>2019 feb 19 19h13.9m A19_02039 276 Adelheid TYC 5414-01843-1 Diam = 127.0 m = 10.4 m = 13.3</p>  <p>Dur = 11.6s Dmag = 3.0 Sun: 138° Moon: 45°</p>	<p>2019 feb 20 2h38.5m A19_02056 491 Carina UCAC5 450-047826 Diam = 101.0 m = 11.3 m = 13.2</p>  <p>Dur = 6.7s Dmag = 2.0 Sun: 167° Moon: 13°</p>	<p>2019 mar 14 23h44.4m A19_03033 179 Klytaemnestra UCAC5 330-101539 Diam = 81.0 m = 11.7 m = 13.9</p>  <p>Dur = 4.6s Dmag = 2.3 Sun: 88° Moon: 174°</p>	<p>2019 mar 17 4h27.5m B19_03004 131318 2001FL194 UCAC5 340-066254 Diam = 114.8 m = 12.6 m = 23.2</p>  <p>Dur = 6.8s Dmag = 10.6 Sun: 136° Moon: 97°</p>
<p>2019 mar 18 0h44.5m A19_03122 38628 Huya UCAC5 417-063129 Diam = 457.1 m = 11.5 m = 19.6</p>  <p>Dur = 56.0s Dmag = 8.1 Sun: 106° Moon: 114°</p>	<p>2019 mar 22 18h30.6m A19_03004 3 Juno UCAC5 506-009319 Diam = 257.6 m = 12.4 m = 9.6</p>  <p>Dur = 8.7s Dmag = 0.1 Sun: 74° Moon: 129°</p>	<p>2019 mar 24 20h 3.9m A19_03037 216 Kleopatra UCAC5 487-031003 Diam = 112.6 m = 12.5 m = 12.1</p>  <p>Dur = 8.4s Dmag = 0.6 Sun: 101° Moon: 128°</p>	<p>2019 mar 24 23h13.2m A19_03047 331 Etheridgea PPMX 12692076 Diam = 78.5 m = 12.4 m = 15.3</p>  <p>Dur = 4.7s Dmag = 3.0 Sun: 91° Moon: 38°</p>

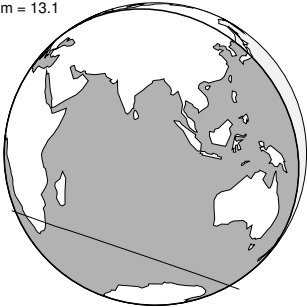
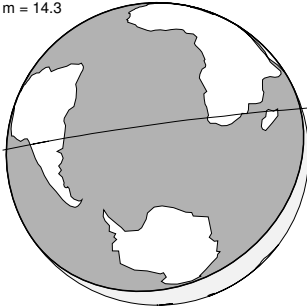
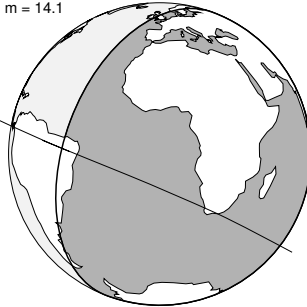
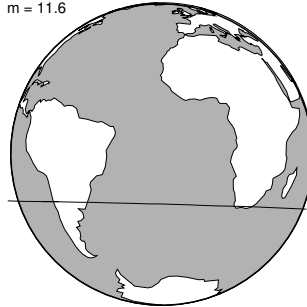
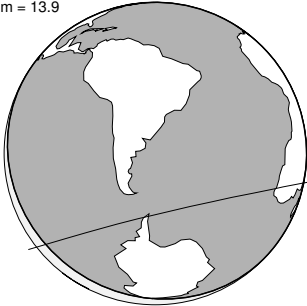
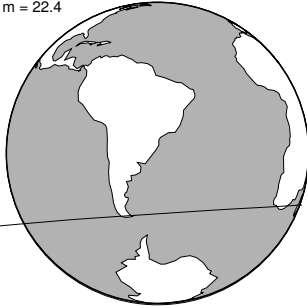
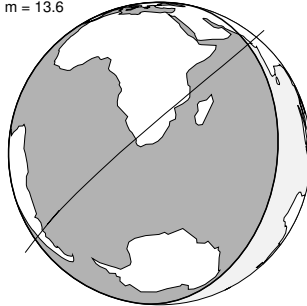
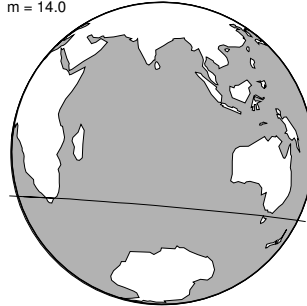
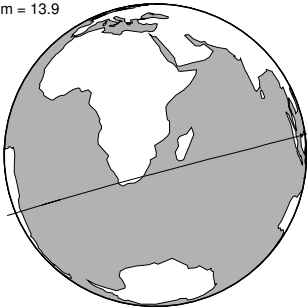
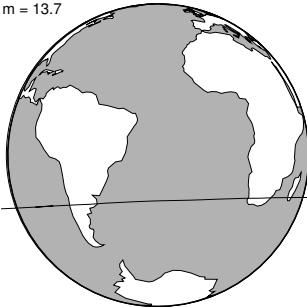
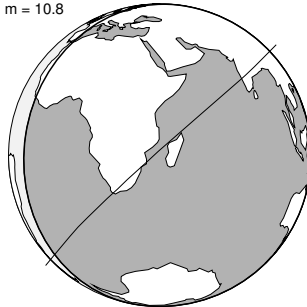

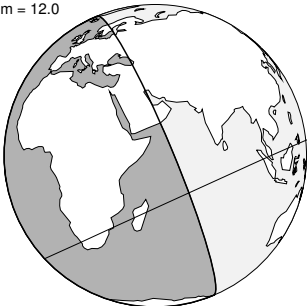
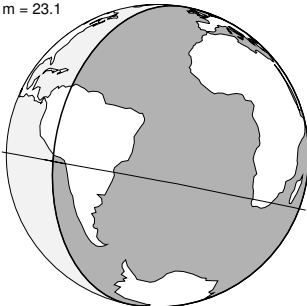
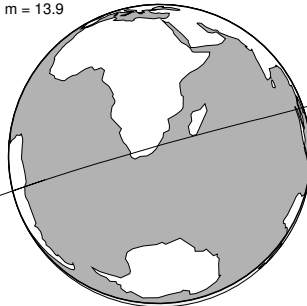

Occultations by major and minor planets – 2019

Region 4

<p>2019 apr 3 0h12.6m A19_04027 62 Erato UCAC5 343-156390 Diam = 99.3 m = 11.5 m = 14.9</p>  <p>Dur = 7.2s Dmag = 3.5 Sun: 92° Moon: 67°</p>	<p>2019 apr 16 17h11.7m A19_04016 38 Leda TYC 1862-01924-1 Diam = 120.0 m = 11.6 m = 13.3</p>  <p>Dur = 3.6s Dmag = 1.9 Sun: 60° Moon: 82°</p>	<p>2019 may 6 23h21.2m A19_05029 165 Loreley UCAC5 285-072339 Diam = 160.0 m = 12.3 m = 12.0</p>  <p>Dur = 13.5s Dmag = 0.6 Sun: 163° Moon: 151°</p>	<p>2019 may 8 4h17.2m A19_05107 1162 Larissa UCAC5 346-177793 Diam = 56.8 m = 12.1 m = 15.6</p>  <p>Dur = 5.9s Dmag = 3.6 Sun: 102° Moon: 142°</p>
<p>2019 may 12 16h 8.6m A19_05105 958 Asplinda TYC 5527-00524-1 Diam = 53.7 m = 11.1 m = 17.2</p>  <p>Dur = 5.9s Dmag = 6.1 Sun: 139° Moon: 42°</p>	<p>2019 may 13 23h32.3m A19_05052 345 Tercidina UCAC5 422-124826 Diam = 100.0 m = 11.1 m = 13.5</p>  <p>Dur = 6.9s Dmag = 2.5 Sun: 97° Moon: 144°</p>	<p>2019 may 15 17h12.3m B19_05013 2015GO50 UCAC5 352-060984 Diam = 229.1 m = 12.6 m = 22.3</p>  <p>Dur = 13.0s Dmag = 9.7 Sun: 134° Moon: 22°</p>	<p>2019 may 20 22h22.0m A19_05051 331 Etheridgea UCAC5 296-180624 Diam = 78.5 m = 11.9 m = 14.4</p>  <p>Dur = 11.3s Dmag = 2.5 Sun: 143° Moon: 15°</p>
<p>2019 may 22 0h31.1m A19_05099 914 Palisana TYC 6282-00100-1 Diam = 79.0 m = 9.5 m = 11.6</p>  <p>Dur = 7.1s Dmag = 2.3 Sun: 136° Moon: 7°</p>	<p>2019 jun 4 18h40.9m A19_06148 2005CA79 UCAC5 568-045337 Diam = 380.2 m = 12.0 m = 21.2</p>  <p>Dur = 25.6s Dmag = 9.2 Sun: 73° Moon: 57°</p>	<p>2019 jun 6 21h46.3m A19_06090 514 Armida UCAC5 330-088505 Diam = 110.0 m = 11.0 m = 13.2</p>  <p>Dur = 8.7s Dmag = 2.4 Sun: 177° Moon: 137°</p>	<p>2019 jun 9 20h10.5m A19_06126 914 Palisana UCAC5 399-083291 Diam = 79.0 m = 11.8 m = 11.1</p>  <p>Dur = 6.2s Dmag = 0.4 Sun: 153° Moon: 117°</p>
<p>2019 jun 11 0h 2.5m A19_06101 588 Achilles UCAC5 392-121294 Diam = 147.0 m = 12.5 m = 16.6</p>  <p>Dur = 55.9s Dmag = 4.2 Sun: 111° Moon: 148°</p>	<p>2019 jun 14 17h38.4m B19_06002 28978 Ixion UCAC5 304-133829 Diam = 794.3 m = 12.8 m = 19.5</p>  <p>Dur = 31.9s Dmag = 6.8 Sun: 172° Moon: 38°</p>	<p>2019 jun 19 2h37.5m A19_06020 72 Feronia TYC 0009-00704-1 Diam = 89.3 m = 10.8 m = 13.2</p>  <p>Dur = 3.6s Dmag = 2.5 Sun: 78° Moon: 81°</p>	<p>2019 jun 20 0h13.4m A19_06082 411 Xanthe UCAC5 356-190273 Diam = 79.0 m = 11.7 m = 13.5</p>  <p>Dur = 9.5s Dmag = 1.9 Sun: 118° Moon: 32°</p>

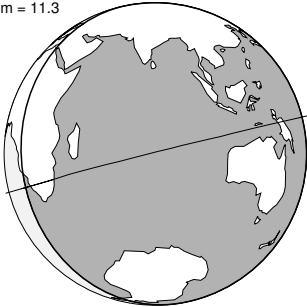
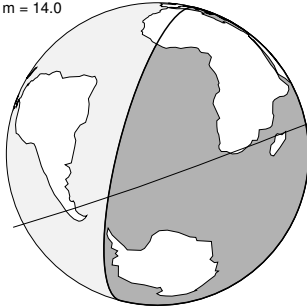
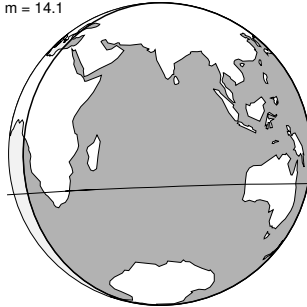
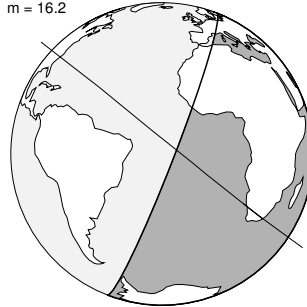
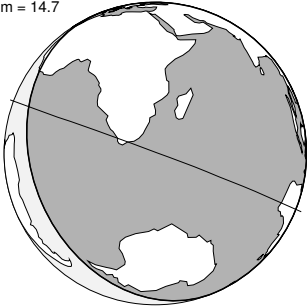
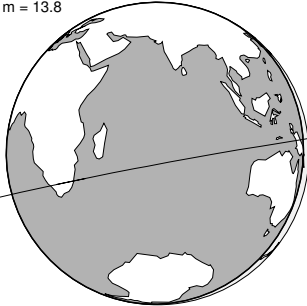
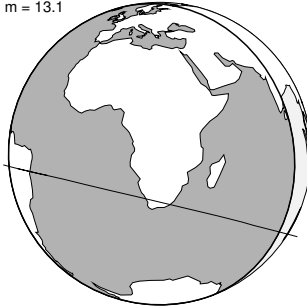
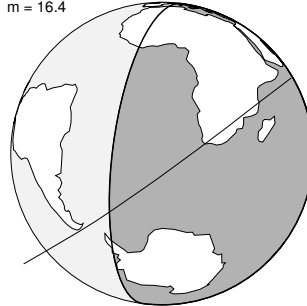
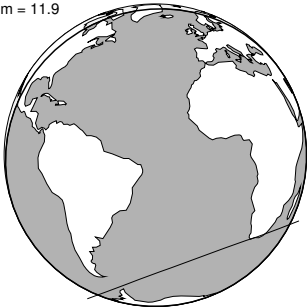
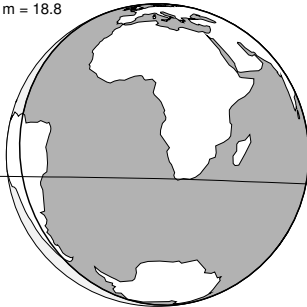
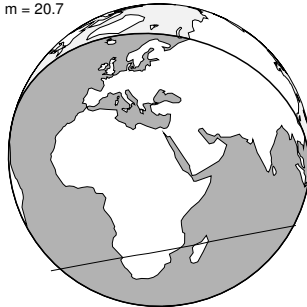
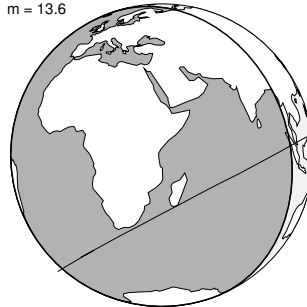
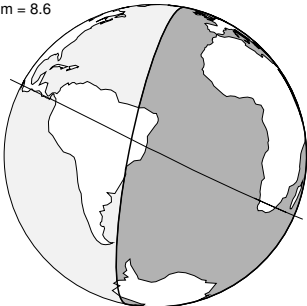
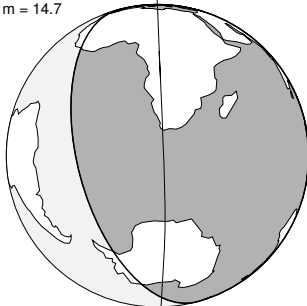
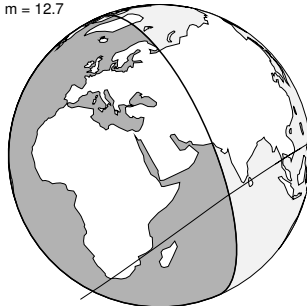
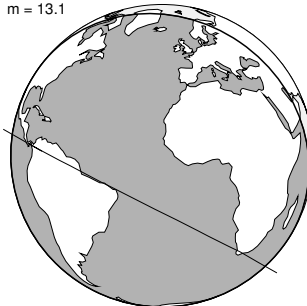
Occultations by major and minor planets – 2019

Region 4

<p>2019 jun 20 19h29.7m A19_06058 266 Aline UCAC5 414-111799 Diam = 113.0 m = 11.7</p>  <p>Dur = 10.1s Dmag = 1.6 Sun: 154° Moon: 25°</p>	<p>2019 jun 21 1h27.4m A19_06102 605 Juvisia UCAC5 200-171076 Diam = 72.0 m = 8.9</p>  <p>Dur = 6.5s Dmag = 5.4 Sun: 150° Moon: 38°</p>	<p>2019 jun 21 20h41.9m A19_06027 102 Miriam TYC 5571-00111-1 Diam = 86.0 m = 11.6</p>  <p>Dur = 20.9s Dmag = 2.6 Sun: 129° Moon: 102°</p>	<p>2019 jun 23 1h26.3m A19_06025 79 Eurynome TYC 6265-02492-1 Diam = 68.0 m = 9.8</p>  <p>Dur = 5.5s Dmag = 1.9 Sun: 171° Moon: 61°</p>
<p>2019 jun 26 2h40.5m A19_06134 926 Imhilde UCAC5 250-107354 Diam = 50.5 m = 11.3</p>  <p>Dur = 5.1s Dmag = 2.7 Sun: 159° Moon: 106°</p>	<p>2019 jun 26 3h16.1m B19_06005 119068 2001KC77 UCAC5 295-165203 Diam = 190.5 m = 14.8</p>  <p>Dur = 8.0s Dmag = 7.7 Sun: 172° Moon: 98°</p>	<p>2019 jun 27 0h58.6m A19_06071 373 Melusina TYC 7966-00264-1 Diam = 99.6 m = 12.2</p>  <p>Dur = 14.9s Dmag = 1.7 Sun: 140° Moon: 73°</p>	<p>2019 jun 29 18h 6.5m A19_06078 406 Erna UCAC5 311-141337 Diam = 53.8 m = 12.1</p>  <p>Dur = 4.9s Dmag = 2.1 Sun: 172° Moon: 146°</p>
<p>2019 jul 6 21h34.6m A19_07080 424 Gratia UCAC5 332-166661 Diam = 90.5 m = 13.9</p>  <p>Dur = 6.8s Dmag = 2.2 Sun: 177° Moon: 122°</p>	<p>2019 jul 7 1h19.3m A19_07108 586 Thekla UCAC5 343-140046 Diam = 85.0 m = 11.9</p>  <p>Dur = 6.6s Dmag = 2.0 Sun: 172° Moon: 114°</p>	<p>2019 jul 7 19h28.1m A19_07076 410 Chloris TYC 6245-00158-1 Diam = 128.0 m = 10.5</p>  <p>Dur = 20.7s Dmag = 0.9 Sun: 153° Moon: 85°</p>	<p>2019 jul 10 3h20.1m A19_07069 379 Huenna TYC 6307-01055-1 Diam = 96.1 m = 8.8</p>  <p>Dur = 9.1s Dmag = 3.8 Sun: 173° Moon: 87°</p>
<p>2019 jul 13 1h57.7m A19_07012 33 Polyhymnia UCAC5 472-001157 Diam = 81.3 m = 12.0</p>  <p>Dur = 4.5s Dmag = 1.1 Sun: 96° Moon: 128°</p>	<p>2019 jul 13 22h42.1m B19_07012 2006HW122 UCAC5 343-077073 Diam = 208.9 m = 13.4</p>  <p>Dur = 13.5s Dmag = 9.7 Sun: 133° Moon: 13°</p>	<p>2019 jul 14 22h14.3m A19_07149 1424 Sundmania UCAC5 280-200364 Diam = 74.0 m = 13.9</p>  <p>Dur = 6.1s Dmag = 1.7 Sun: 167° Moon: 28°</p>	<p>2019 jul 15 19h39.6m A19_07068 373 Melusina TYC 7964-00671-1 Diam = 99.6 m = 10.8</p>  <p>Dur = 9.8s Dmag = 2.7 Sun: 155° Moon: 33°</p>

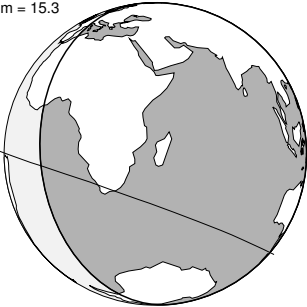
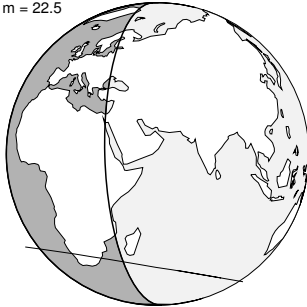
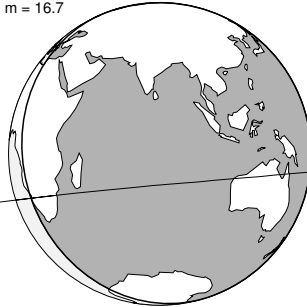
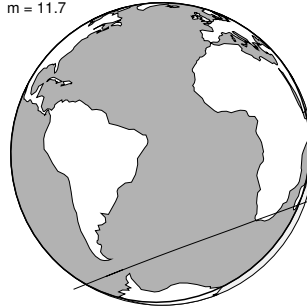
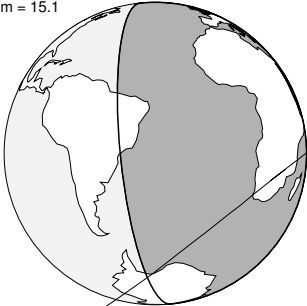
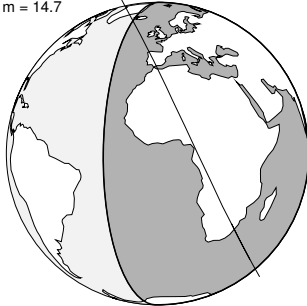
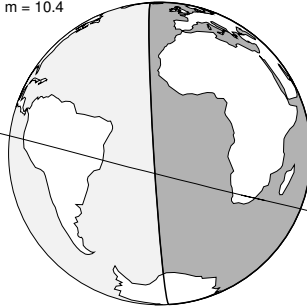
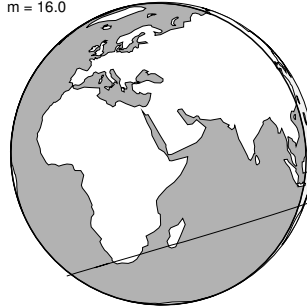
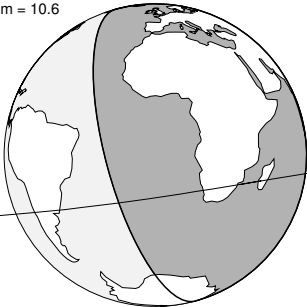
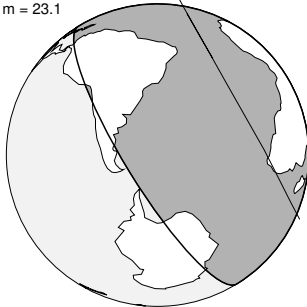
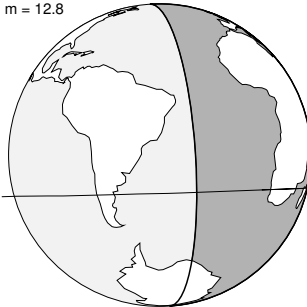
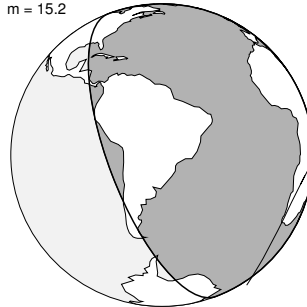
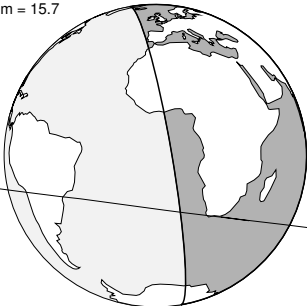
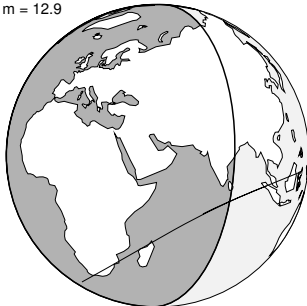

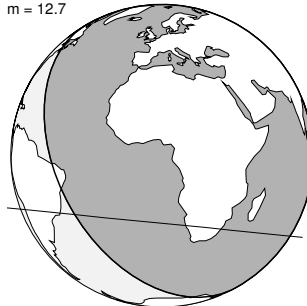
Occultations by major and minor planets – 2019

Region 4

<p>2019 jul 18 16h41.9m A19_07092 471 Papagena TYC 6840–00913–1 Diam = 127.0 m = 11.1 m = 11.3</p>  <p>Dur = 10.8s Dmag = 0.9 Sun: 152° Moon: 47°</p>	<p>2019 jul 20 19h 1.4m A19_07131 1000 Piazzia UCAC5 251–062195 Diam = 54.0 m = 11.5 m = 14.0</p>  <p>Dur = 3.5s Dmag = 2.6 Sun: 105° Moon: 111°</p>	<p>2019 jul 22 17h19.7m A19_07110 586 Thekla UCAC5 343–127612 Diam = 85.0 m = 11.5 m = 14.1</p>  <p>Dur = 8.2s Dmag = 2.7 Sun: 154° Moon: 90°</p>	<p>2019 jul 24 19h 3.9m A19_07130 965 Angelica TYC 5549–00888–1 Diam = 54.5 m = 10.9 m = 16.2</p>  <p>Dur = 3.3s Dmag = 5.3 Sun: 85° Moon: 174°</p>
<p>2019 jul 24 19h29.1m A19_07036 193 Ambrosia PPMX 14685772 Diam = 48.3 m = 12.1 m = 14.7</p>  <p>Dur = 4.0s Dmag = 2.7 Sun: 144° Moon: 116°</p>	<p>2019 jul 26 20h29.2m A19_07142 1242 Zambesia TYC 6942–00031–1 Diam = 49.2 m = 11.6 m = 13.8</p>  <p>Dur = 4.7s Dmag = 2.3 Sun: 163° Moon: 97°</p>	<p>2019 jul 27 0h26.7m A19_07151 1467 Mashona UCAC5 384–149274 Diam = 112.0 m = 12.3 m = 13.1</p>  <p>Dur = 10.0s Dmag = 1.2 Sun: 151° Moon: 85°</p>	<p>2019 aug 2 18h48.9m A19_08147 1877 Marsden TYC 7840–01158–1 Diam = 50.3 m = 10.5 m = 16.4</p>  <p>Dur = 5.3s Dmag = 5.9 Sun: 109° Moon: 89°</p>
<p>2019 aug 8 1h32.4m A19_08067 345 Tercidina UCAC5 442–113268 Diam = 100.0 m = 11.4 m = 11.9</p>  <p>Dur = 9.4s Dmag = 1.1 Sun: 163° Moon: 81°</p>	<p>2019 aug 8 21h42.0m B19_08001 10199 Chariklo UCAC5 323–192195 Diam = 248.0 m = 15.0 m = 18.8</p>  <p>Dur = 12.3s Dmag = 3.8 Sun: 154° Moon: 51°</p>	<p>2019 aug 9 22h34.1m B19_08004 444030 2004NT33 UCAC5 555–124506 Diam = 478.6 m = 13.3 m = 20.7</p>  <p>Dur = 20.7s Dmag = 7.5 Sun: 142° Moon: 83°</p>	<p>2019 aug 10 23h30.9m A19_08055 268 Adorea UCAC5 422–130451 Diam = 142.0 m = 11.4 m = 13.6</p>  <p>Dur = 13.8s Dmag = 2.3 Sun: 147° Moon: 84°</p>
<p>2019 aug 15 20h50.6m A19_08001 1 Ceres UCAC5 344–074929 Diam = 952.5 m = 12.2 m = 8.6</p>  <p>Dur = 79.2s Dmag = 0.0 Sun: 100° Moon: 84°</p>	<p>2019 aug 20 19h 6.9m A19_08094 605 Jovisia PPMX 14700637 Diam = 72.0 m = 12.4 m = 14.7</p>  <p>Dur = 7.0s Dmag = 2.5 Sun: 121° Moon: 110°</p>	<p>2019 aug 22 1h15.8m A19_08103 678 Fredegundis UCAC5 561–004082 Diam = 44.0 m = 12.2 m = 12.7</p>  <p>Dur = 4.2s Dmag = 1.0 Sun: 110° Moon: 14°</p>	<p>2019 aug 22 2h 9.2m A19_08114 759 Vinifera UCAC5 491–142901 Diam = 52.7 m = 11.7 m = 13.1</p>  <p>Dur = 4.9s Dmag = 1.6 Sun: 155° Moon: 55°</p>

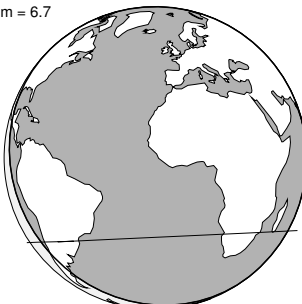
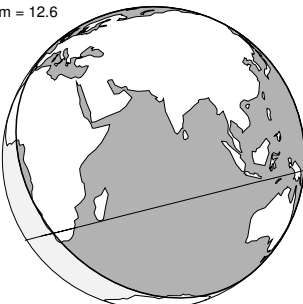
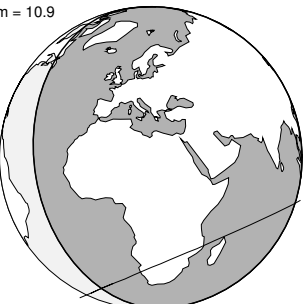
Occultations by major and minor planets – 2019

Region 4

<p>2019 aug 22 18h22.0m A19_08097 657 Guniöd UCAC5 346-166706 Diam = 43.6 m = 12.1 m = 15.3</p>  <p>Dur = 7.7s Dmag = 3.3 Sun: 139° Moon: 121°</p>	<p>2019 sep 4 3h28.3m A19_09174 2014WK510 UCAC5 536-022253 Diam = 182.0 m = 12.4 m = 22.5</p>  <p>Dur = 11.6s Dmag = 10.1 Sun: 69° Moon: 135°</p>	<p>2019 sep 9 16h50.7m A19_09159 2456 Palamedes UCAC5 375-171224 Diam = 103.0 m = 11.9 m = 16.7</p>  <p>Dur = 7.2s Dmag = 4.8 Sun: 154° Moon: 23°</p>	<p>2019 sep 21 2h38.7m A19_09110 423 Diotima TYC 5271-00018-1 Diam = 217.0 m = 10.4 m = 11.7</p>  <p>Dur = 17.2s Dmag = 1.6 Sun: 163° Moon: 72°</p>
<p>2019 sep 21 21h 1.0m A19_09081 285 Regina UCAC5 324-174033 Diam = 48.3 m = 12.1 m = 15.1</p>  <p>Dur = 3.6s Dmag = 3.1 Sun: 103° Moon: 163°</p>	<p>2019 sep 22 19h33.1m A19_09146 754 Malabar TYC 0464-01935-1 Diam = 89.1 m = 11.5 m = 14.7</p>  <p>Dur = 6.4s Dmag = 3.3 Sun: 111° Moon: 154°</p>	<p>2019 sep 29 19h 9.2m A19_09007 18 Melpomene UCAC5 358-148415 Diam = 135.0 m = 12.5 m = 10.4</p>  <p>Dur = 8.1s Dmag = 0.2 Sun: 92° Moon: 77°</p>	<p>2019 oct 9 22h13.7m A19_10151 2032 Ethel UCAC5 516-003333 Diam = 42.0 m = 11.8 m = 16.0</p>  <p>Dur = 4.0s Dmag = 4.3 Sun: 161° Moon: 62°</p>
<p>2019 oct 13 19h34.8m A19_10005 16 Psyche TYC 6335-00807-1 Diam = 264.0 m = 11.1 m = 10.6</p>  <p>Dur = 33.0s Dmag = 0.6 Sun: 109° Moon: 70°</p>	<p>2019 oct 15 22h45.8m B19_10009 2013RQ98 UCAC5 194-185066 Diam = 131.8 m = 12.7 m = 23.1</p>  <p>Dur = 7.3s Dmag = 10.4 Sun: 102° Moon: 94°</p>	<p>2019 oct 18 19h47.0m A19_10078 410 Chloris UCAC5 307-228929 Diam = 128.0 m = 10.0 m = 12.8</p>  <p>Dur = 4.5s Dmag = 2.9 Sun: 76° Moon: 159°</p>	<p>2019 oct 19 23h12.3m A19_10146 1351 Uzbekistania UCAC5 340-183851 Diam = 67.1 m = 11.4 m = 15.2</p>  <p>Dur = 9.4s Dmag = 3.8 Sun: 110° Moon: 139°</p>
<p>2019 oct 21 17h49.4m A19_10141 1114 Lorraine UCAC5 391-110331 Diam = 63.0 m = 10.9 m = 15.7</p>  <p>Dur = 3.1s Dmag = 4.8 Sun: 83° Moon: 165°</p>	<p>2019 oct 28 0h24.8m A19_10029 86 Semele UCAC5 560-024794 Diam = 127.0 m = 11.7 m = 12.9</p>  <p>Dur = 46.2s Dmag = 1.6 Sun: 120° Moon: 119°</p>	<p>2019 nov 3 17h59.5m A19_11078 386 Siegena UCAC5 396-112511 Diam = 173.0 m = 11.2 m = 12.8</p>  <p>Dur = 6.4s Dmag = 1.8 Sun: 73° Moon: 16°</p>	<p>2019 nov 25 20h37.5m A19_11041 113 Amalthea TYC 0020-00742-1 Diam = 47.6 m = 11.5 m = 12.7</p>  <p>Dur = 10.6s Dmag = 1.5 Sun: 134° Moon: 145°</p>

Occultations by major and minor planets – 2019

Region 4

<p>2019 nov 26 23h38.7m A19_11003 4 Vesta UCAC5 491-004294 Diam = 523.2 m = 12.1 m = 6.7</p>  <p>Dur = 47.2s Dmag = 0.0 Sun: 159° Moon: 156°</p>	<p>2019 nov 28 17h28.1m A19_11013 41 Daphne UCAC5 445-003049 Diam = 182.0 m = 12.0 m = 12.6</p>  <p>Dur = 14.3s Dmag = 1.1 Sun: 145° Moon: 121°</p>	<p>2019 dec 29 19h51.4m A19_12002 10 Hygiea UCAC5 563-007362 Diam = 429.0 m = 10.8 m = 10.9</p>  <p>Dur = 48.9s Dmag = 0.8 Sun: 140° Moon: 98°</p>
--	---	---