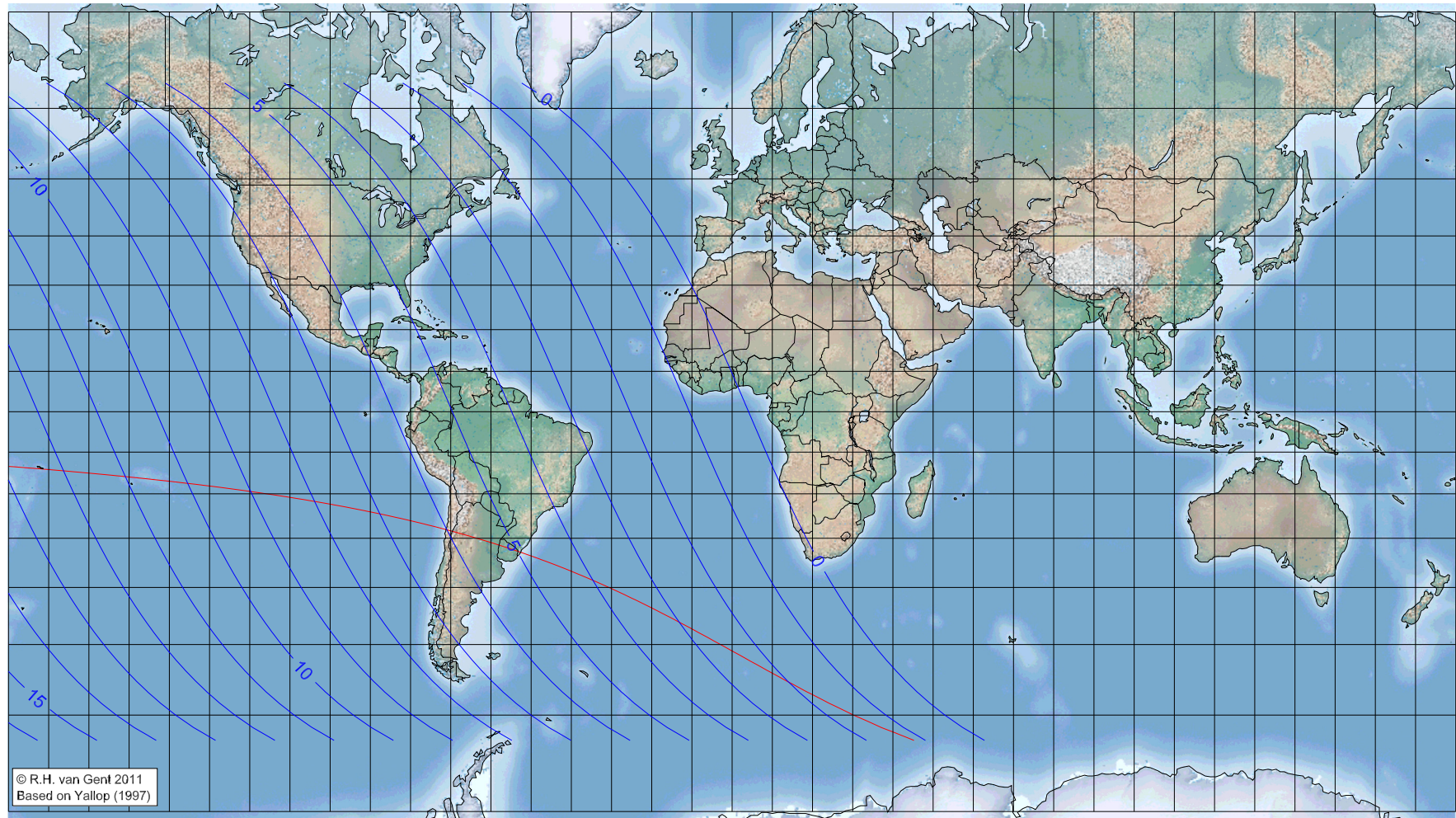


# First visibility lunar crescent for Muḥarram 1432 AH

Global visibility map for 5 December 2010 [Sunday]

Day of luni-solar conjunction



Astronomical New Moon: 5 December 2010, 17h 35.6m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
not visible until the next evening

Astronomical (Brown) Lunation Number = 1088

Islamic Lunation Number = 17173

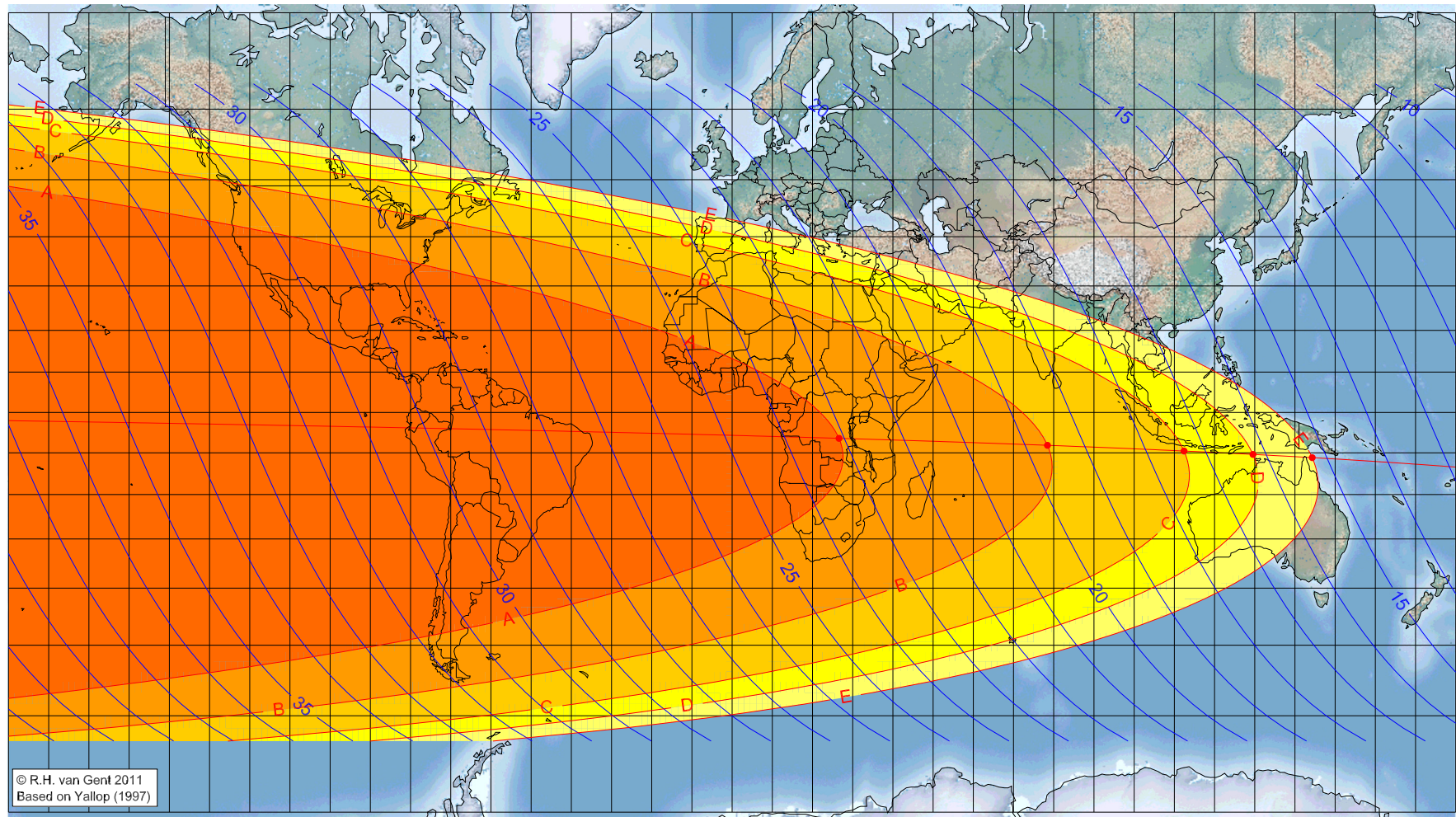
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Muḥarram 1432 AH

Global visibility map for 6 December 2010 [Monday]  
Day after luni-solar conjunction



Astronomical New Moon: 5 December 2010, 17h 35.6m (UTC)  
 $\Delta T = 1.1$  min

First visibility (●)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Longitude ( $^\circ$ )	Latitude ( $^\circ$ )	Lunar age (h)
26.59	-6.43	23.09
78.44	-8.15	19.62
112.42	-9.55	17.36
129.56	-10.38	16.22
144.30	-11.17	15.25

Astronomical (Brown) Lunation Number = 1088  
Islamic Lunation Number = 17173

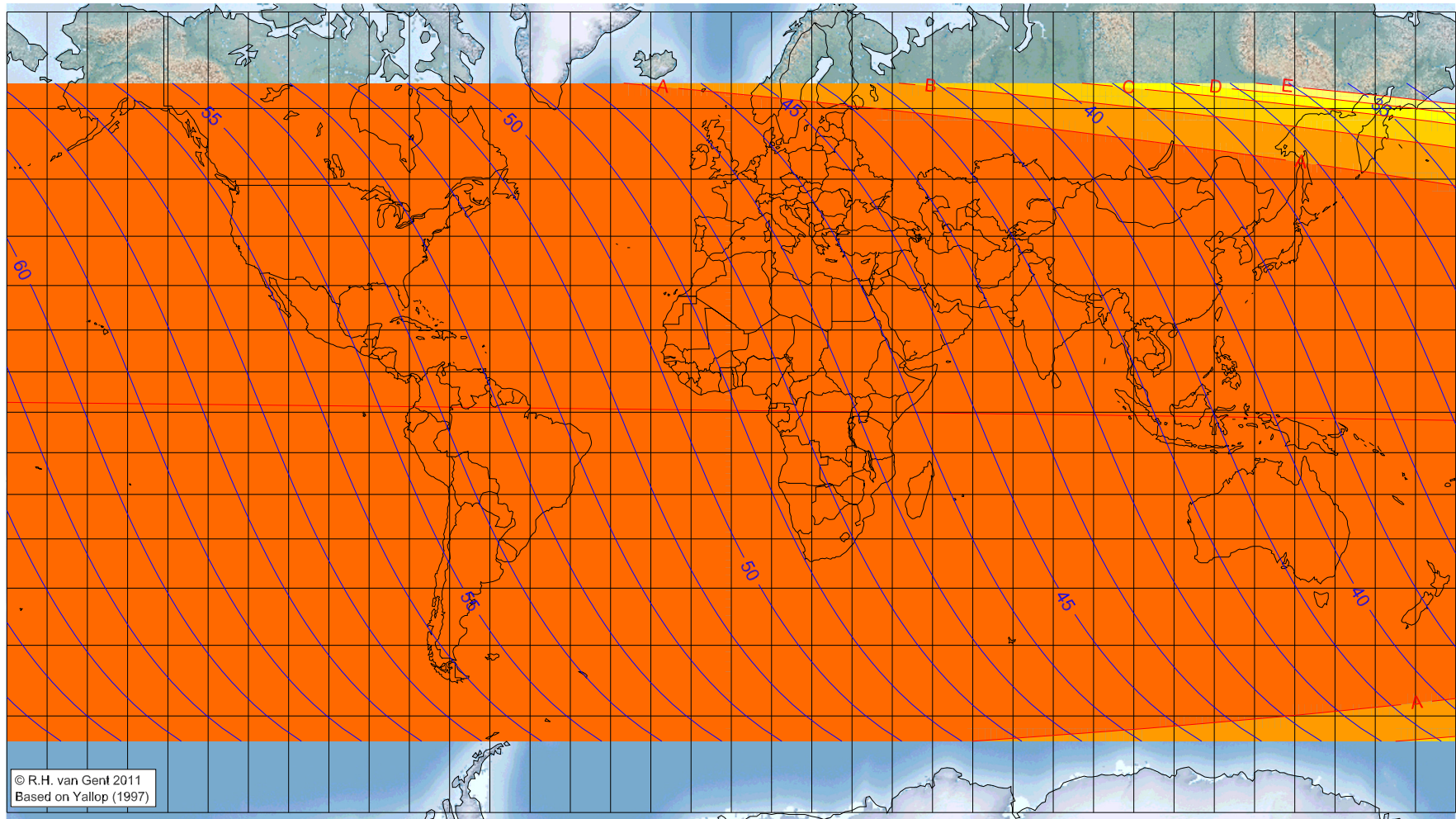
Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Muḥarram 1432 AH

Global visibility map for 7 December 2010 [Tuesday]

Second day after luni-solar conjunction



Astronomical New Moon: 5 December 2010, 17h 35.6m (UTC)

$\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1088

Islamic Lunation Number = 17173

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

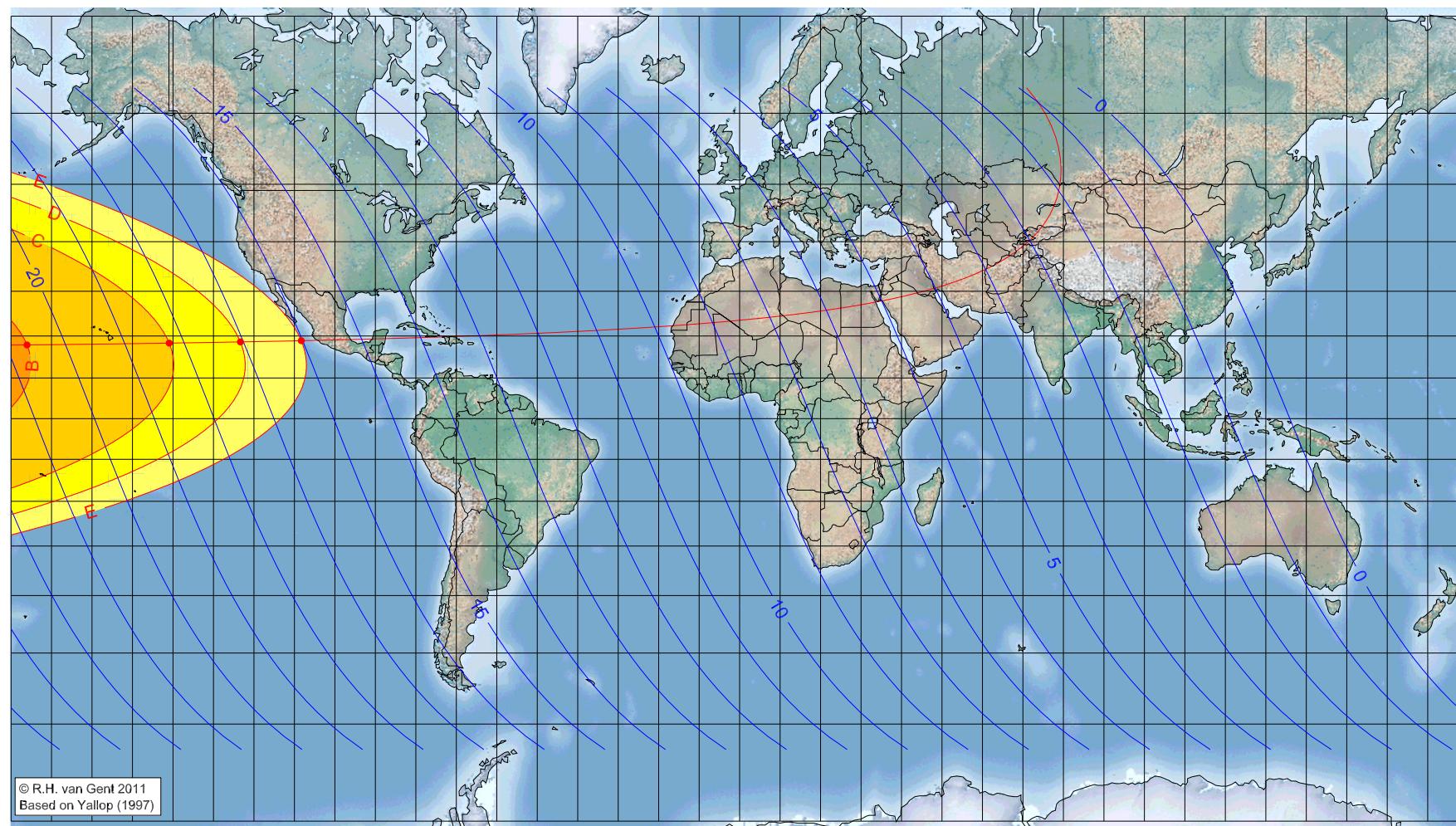
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Şafar 1432 AH

Global visibility map for 4 January 2011 [Tuesday]  
Day of luni-solar conjunction



Astronomical New Moon: 4 January 2011, 9h 2.6m (UTC)  
 $\Delta T = 1.1$  min

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
-176.06	17.91	20.65
-140.93	18.34	18.25
-123.34	18.62	17.05
-108.30	18.90	16.02

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

Astronomical (Brown) Lunation Number = 1089  
Islamic Lunation Number = 17174

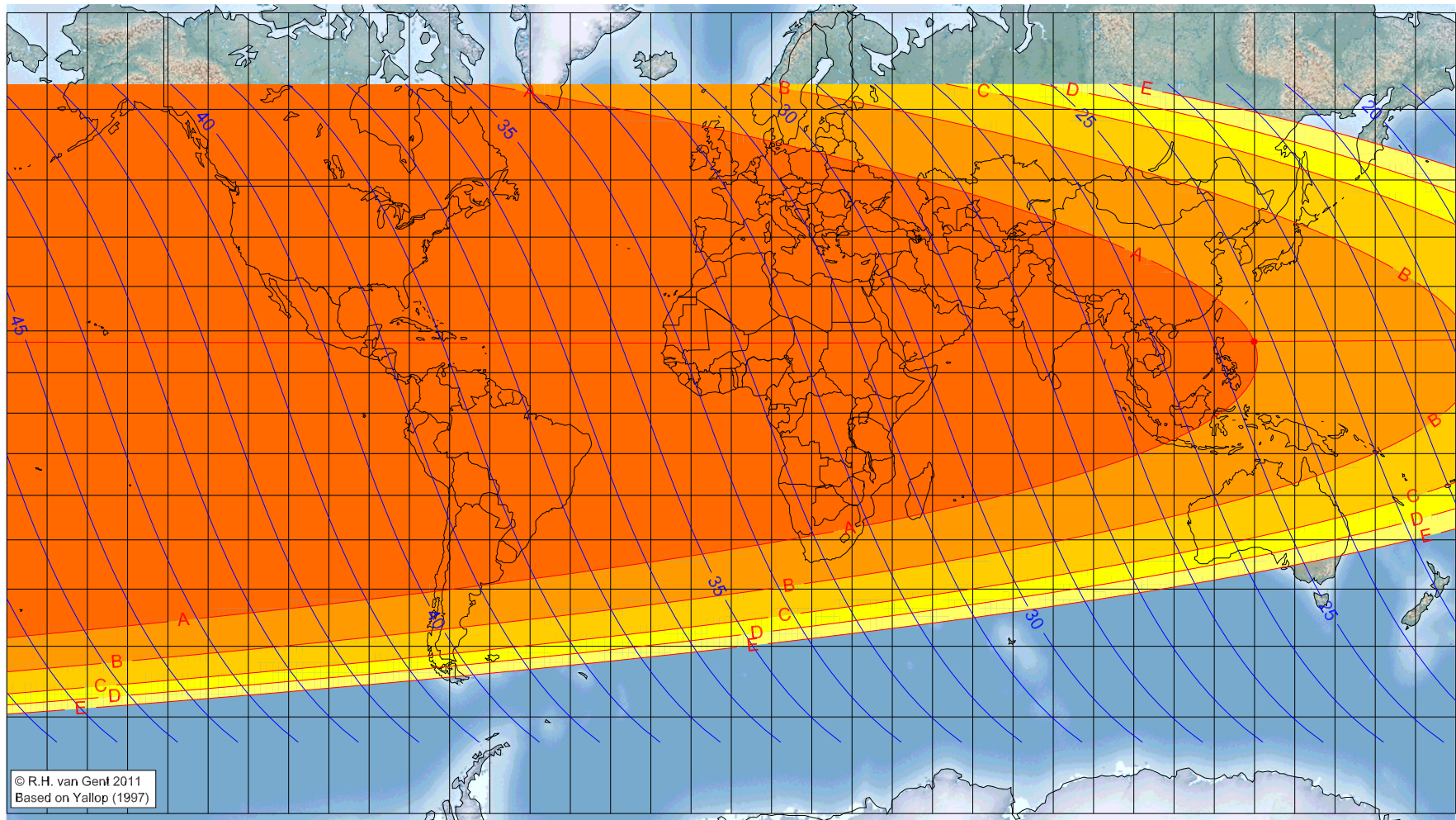
Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Şafar 1432 AH

Global visibility map for 5 January 2011 [Wednesday]  
Day after luni-solar conjunction



Astronomical New Moon: 4 January 2011, 9h 2.6m (UTC)  
 $\Delta T = 1.1$  min

First visibility (•)

Astronomical (Brown) Lunation Number = 1089  
Islamic Lunation Number = 17174

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Longitude ( $^\circ$ )	Latitude ( $^\circ$ )	Lunar age (h)
129.90	17.49	24.32
visible on the previous evening		
visible on the previous evening		
visible on the previous evening		
visible on the previous evening		

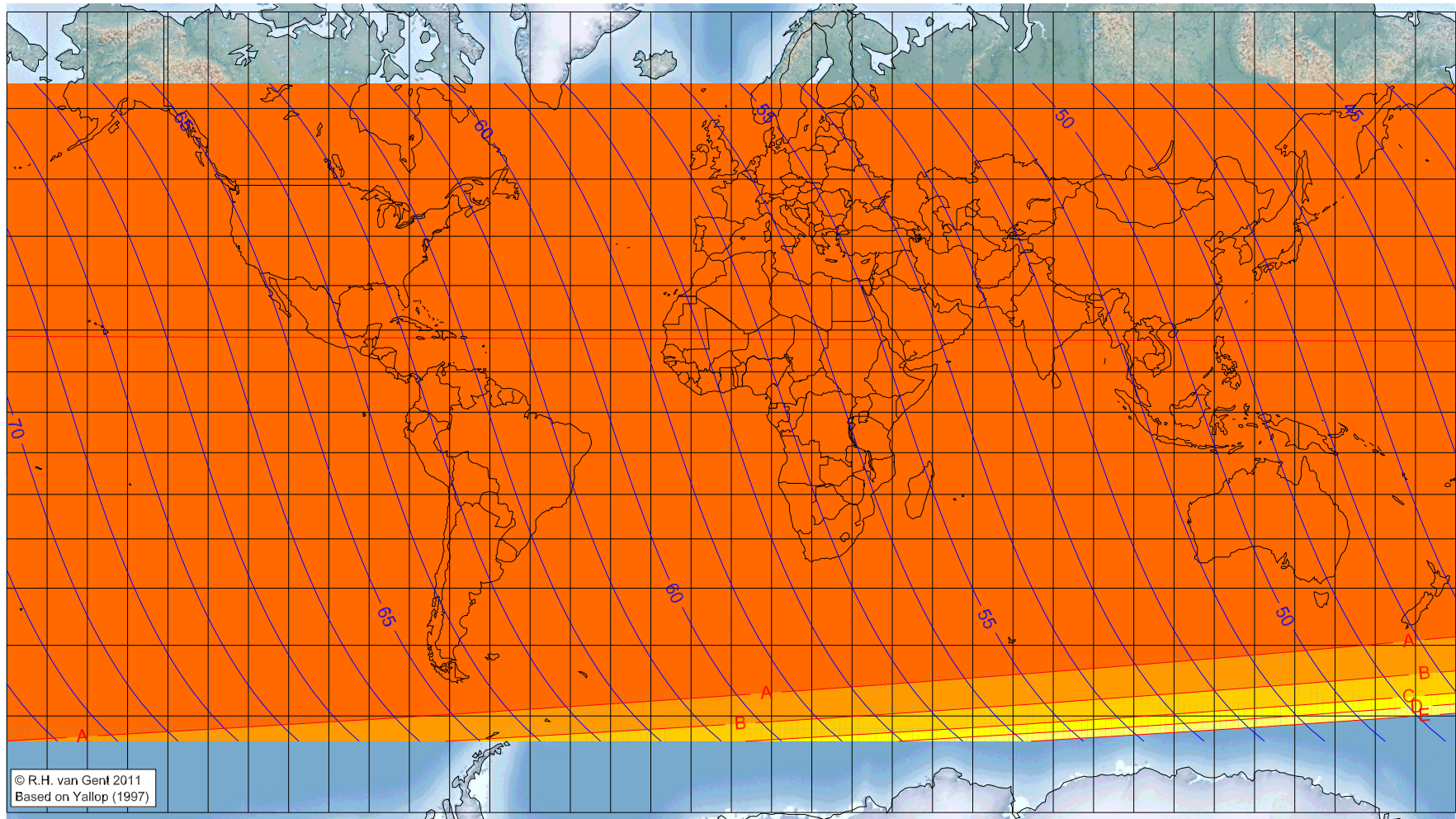
Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Şafar 1432 AH

Global visibility map for 6 January 2011 [Thursday]

Second day after luni-solar conjunction



Astronomical New Moon: 4 January 2011, 9h 2.6m (UTC)

$\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1089

Islamic Lunation Number = 17174

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

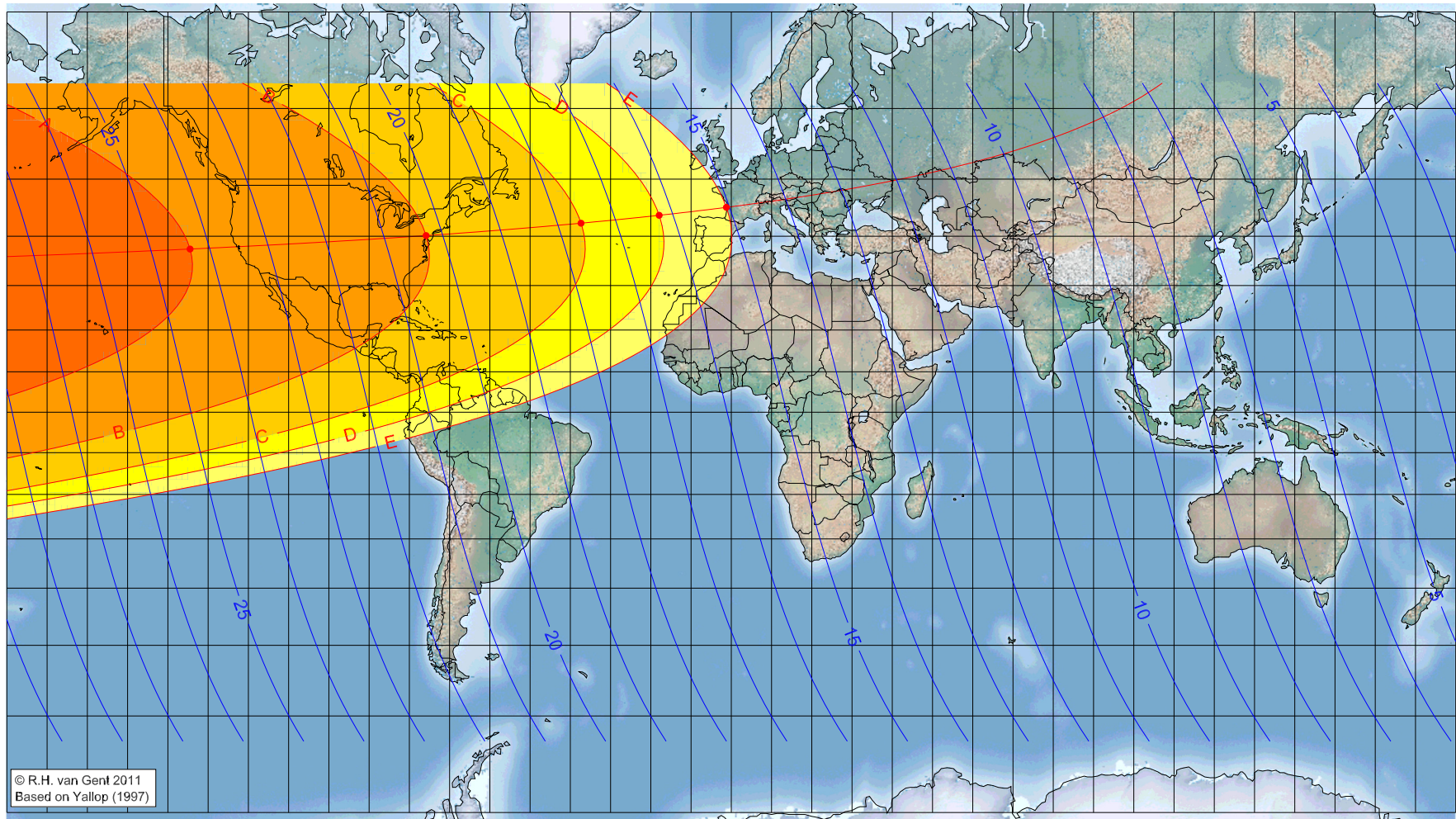
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Rabī al-Awwal 1432 AH

Global visibility map for 3 February 2011 [Thursday]

Day of luni-solar conjunction



Astronomical New Moon: 3 February 2011, 2h 30.6m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
-134.48	37.52	24.33
-75.84	40.13	20.28
-37.34	42.44	17.60
-17.92	43.87	16.23
-1.22	45.28	15.05

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

Astronomical (Brown) Lunation Number = 1090

Islamic Lunation Number = 17175

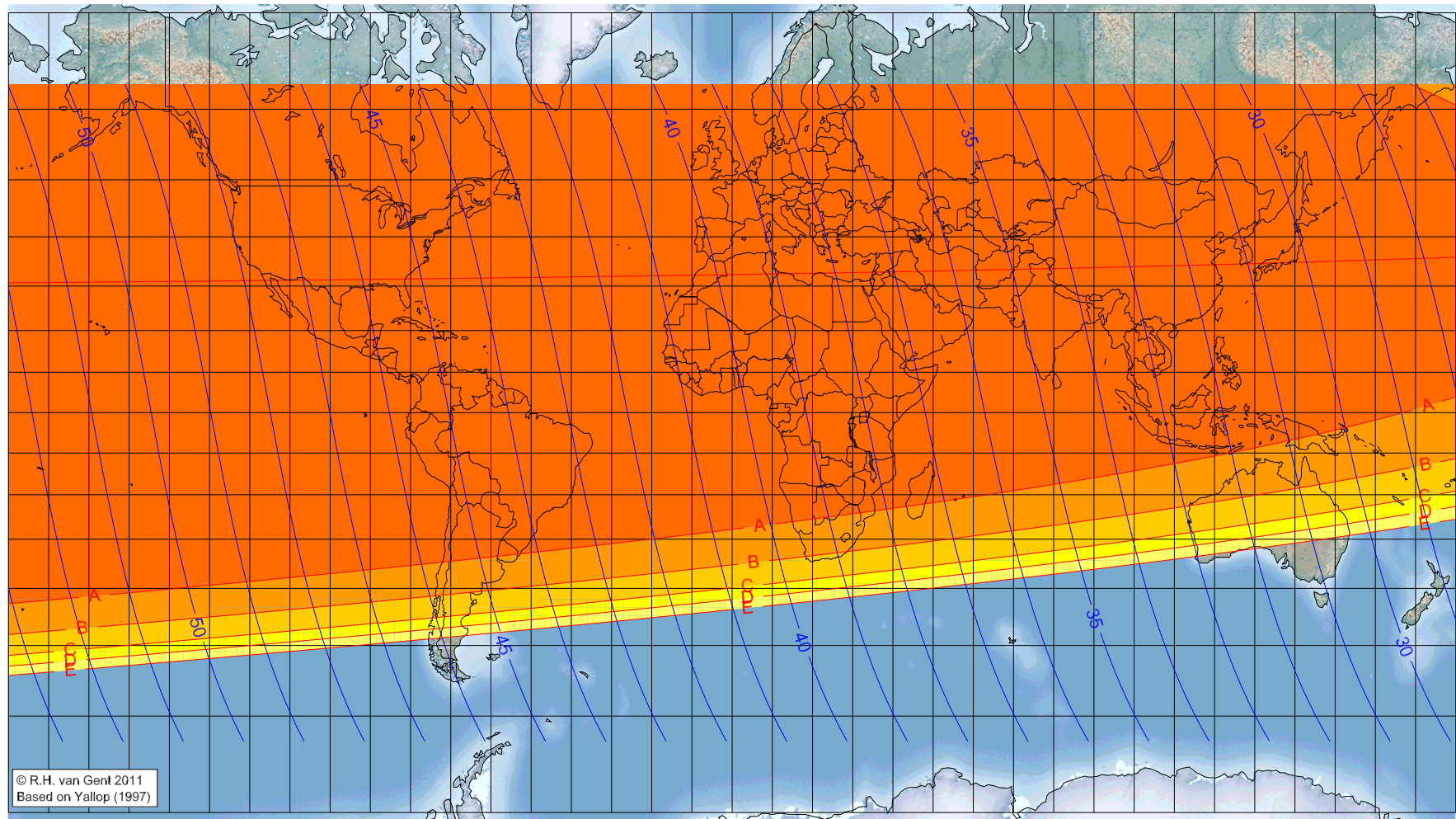
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Rabī al-Awwal 1432 AH

Global visibility map for 4 February 2011 [Friday]

Day after luni-solar conjunction



Astronomical New Moon: 3 February 2011, 2h 30.6m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

visible on the previous evening  
visible on the previous evening  
visible on the previous evening  
visible on the previous evening  
visible on the previous evening

Astronomical (Brown) Lunation Number = 1090

Islamic Lunation Number = 17175

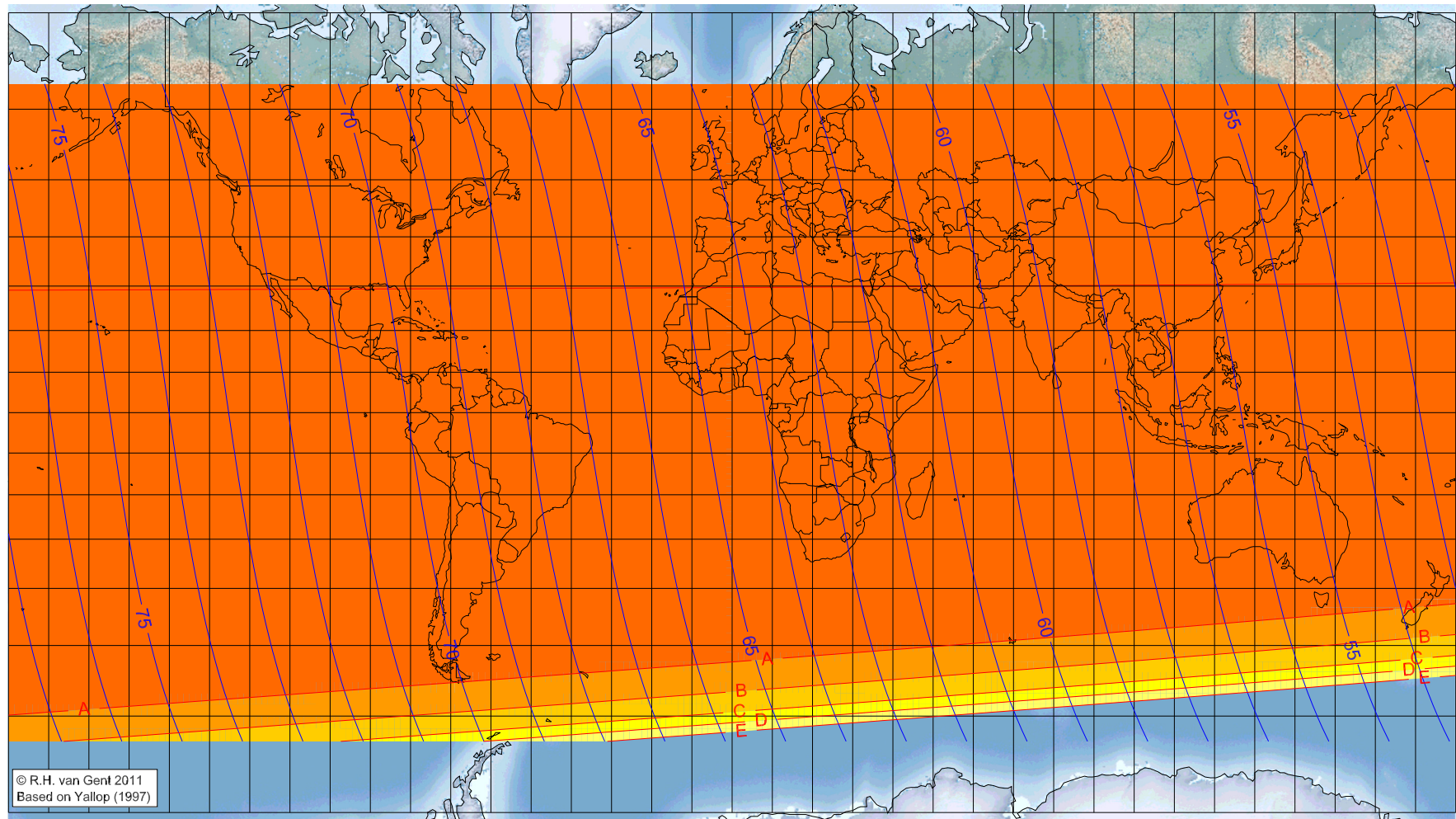
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Rabī al-Awwal 1432 AH

Global visibility map for 5 February 2011 [Saturday]  
Second day after luni-solar conjunction



Astronomical New Moon: 3 February 2011, 2h 30.6m (UTC)  
 $\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1090  
Islamic Lunation Number = 17175

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

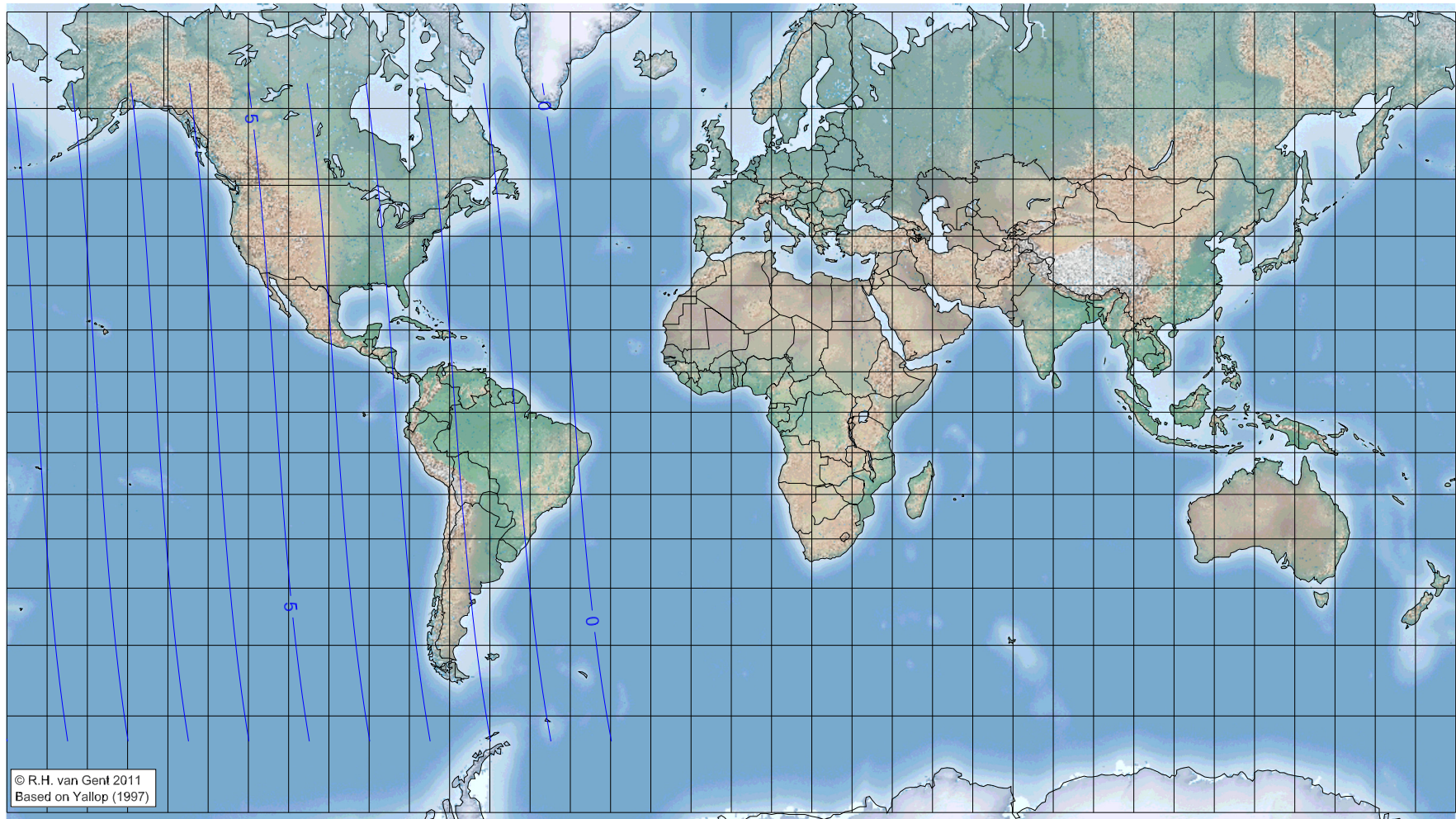
Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Rabī al-Ākhir 1432 AH

Global visibility map for 4 March 2011 [Friday]

Day of luni-solar conjunction



Astronomical New Moon: 4 March 2011, 20h 45.8m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
not visible until the next evening

Astronomical (Brown) Lunation Number = 1091

Islamic Lunation Number = 17176

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

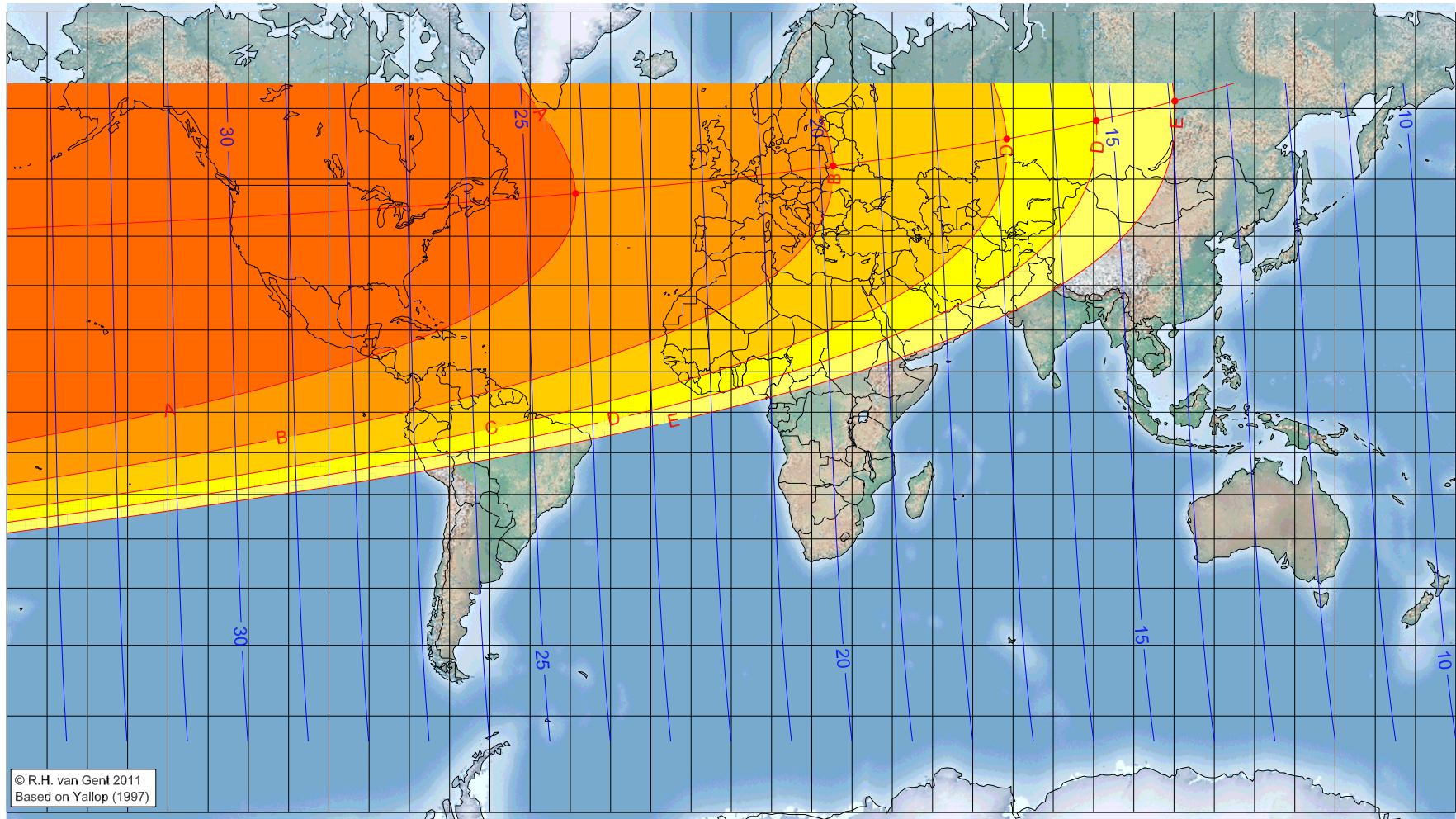
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Rabī al-Ākhir 1432 AH

Global visibility map for 5 March 2011 [Saturday]

Day after luni-solar conjunction



Astronomical New Moon: 4 March 2011, 20h 45.8m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Longitude (°)	Latitude (°)	Lunar age (h)
-38.66	47.64	24.15
25.34	52.05	19.78
68.46	55.99	16.81
90.70	58.45	15.27
110.19	60.91	13.91

Astronomical (Brown) Lunation Number = 1091

Islamic Lunation Number = 17176

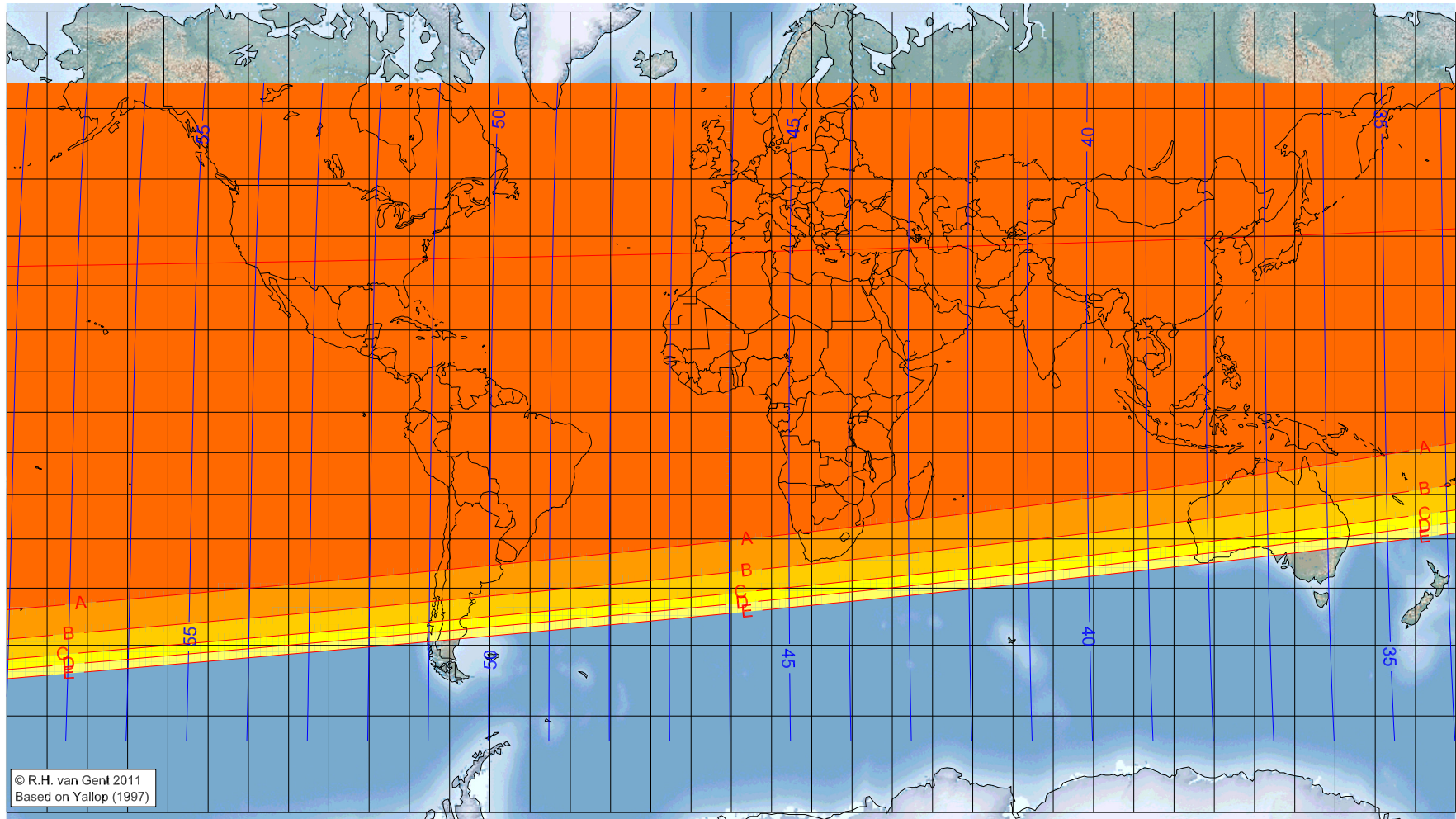
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Rabī al-Ākhir 1432 AH

Global visibility map for 6 March 2011 [Sunday]

Second day after luni-solar conjunction



Astronomical New Moon: 4 March 2011, 20h 45.8m (UTC)

$\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1091

Islamic Lunation Number = 17176

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

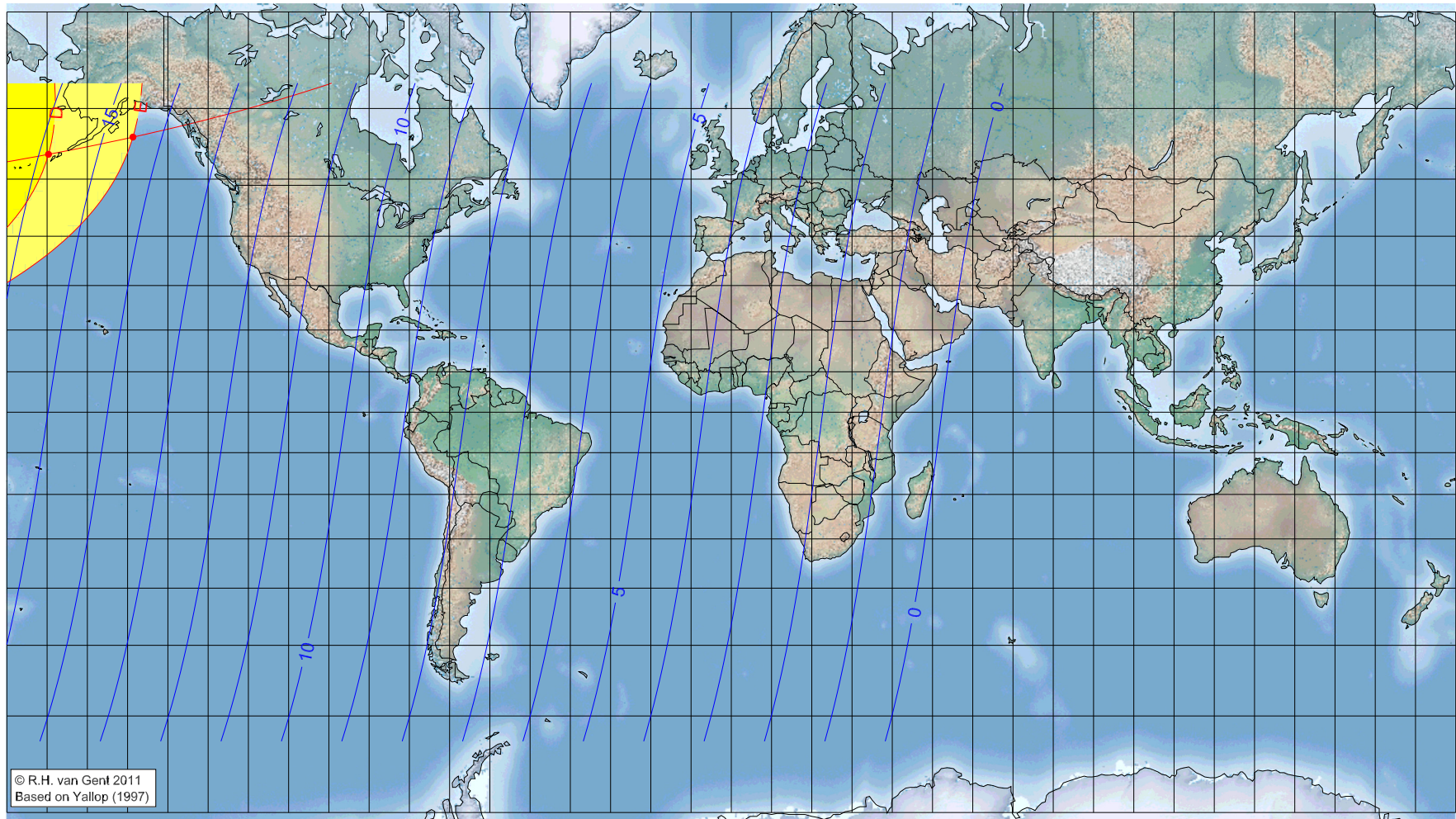
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Jumādā 'l-Ūlā 1432 AH

Global visibility map for 3 April 2011 [Sunday]

Day of luni-solar conjunction



© R.H. van Gent 2011  
Based on Yallop (1997)

Astronomical New Moon: 3 April 2011, 14h 32.3m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
-169.66 53.80 15.84  
-148.68 56.25 14.49

Astronomical (Brown) Lunation Number = 1092

Islamic Lunation Number = 17177

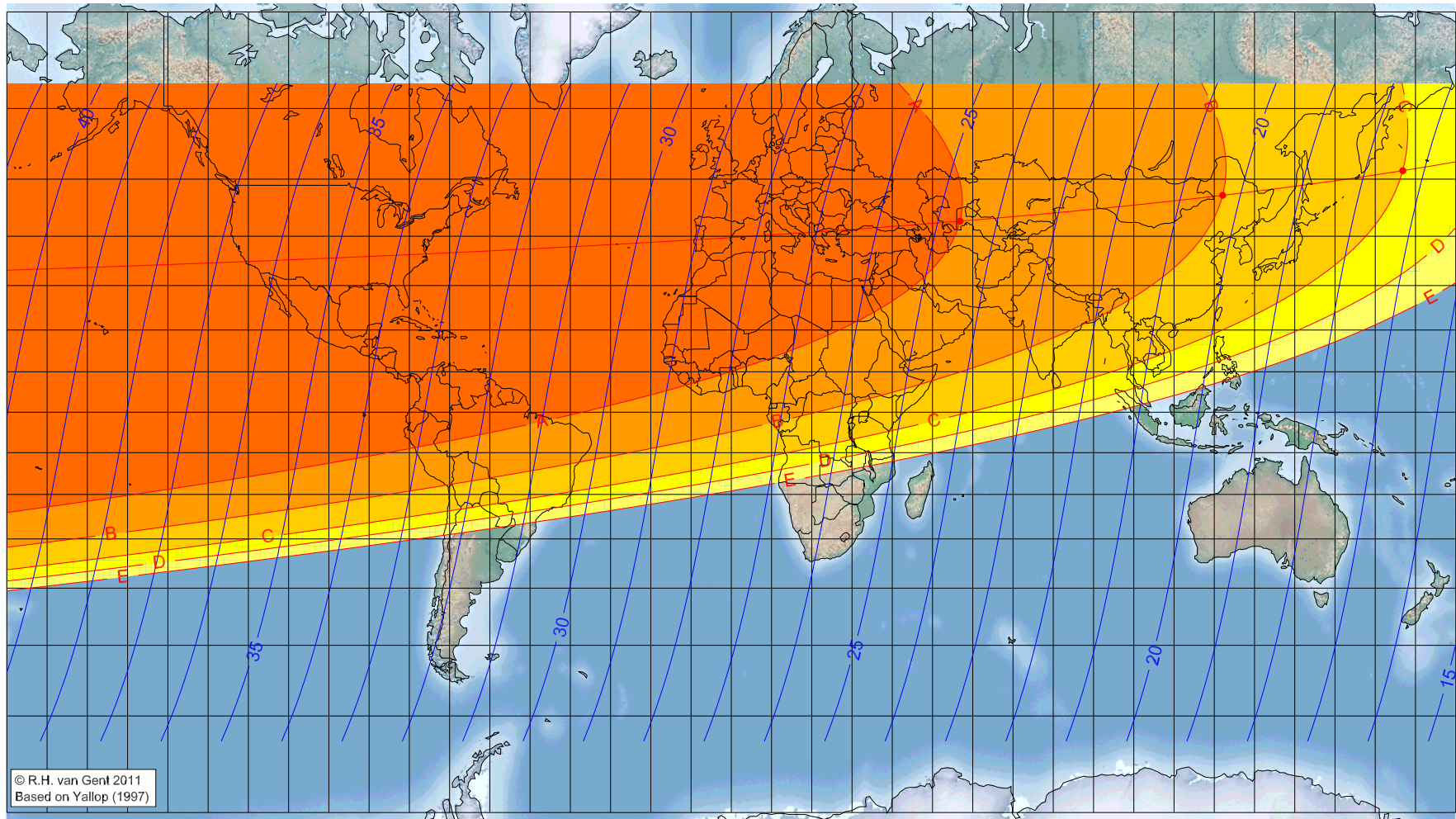
Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Jumādā 'l-Ūlā 1432 AH

Global visibility map for 4 April 2011 [Monday]

Day after luni-solar conjunction



Astronomical New Moon: 3 April 2011, 14h 32.3m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

56.85	42.81	24.63
122.09	47.34	20.30
166.83	51.33	17.36
visible on the previous evening		
visible on the previous evening		

Astronomical (Brown) Lunation Number = 1092

Islamic Lunation Number = 17177

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

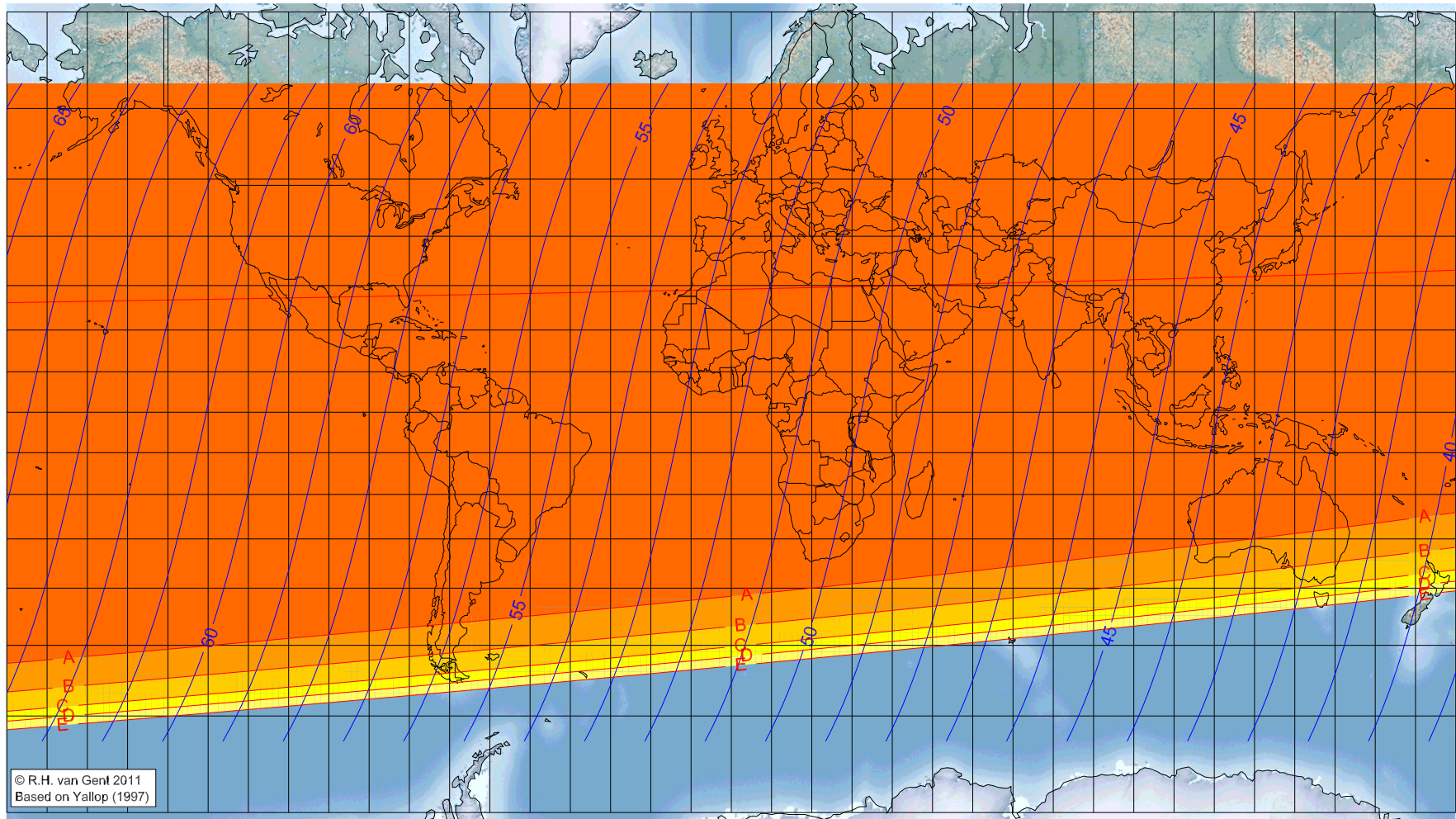
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Jumādā 'l-Ūlā 1432 AH

Global visibility map for 5 April 2011 [Tuesday]

Second day after luni-solar conjunction



Astronomical New Moon: 3 April 2011, 14h 32.3m (UTC)

$\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1092

Islamic Lunation Number = 17177

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

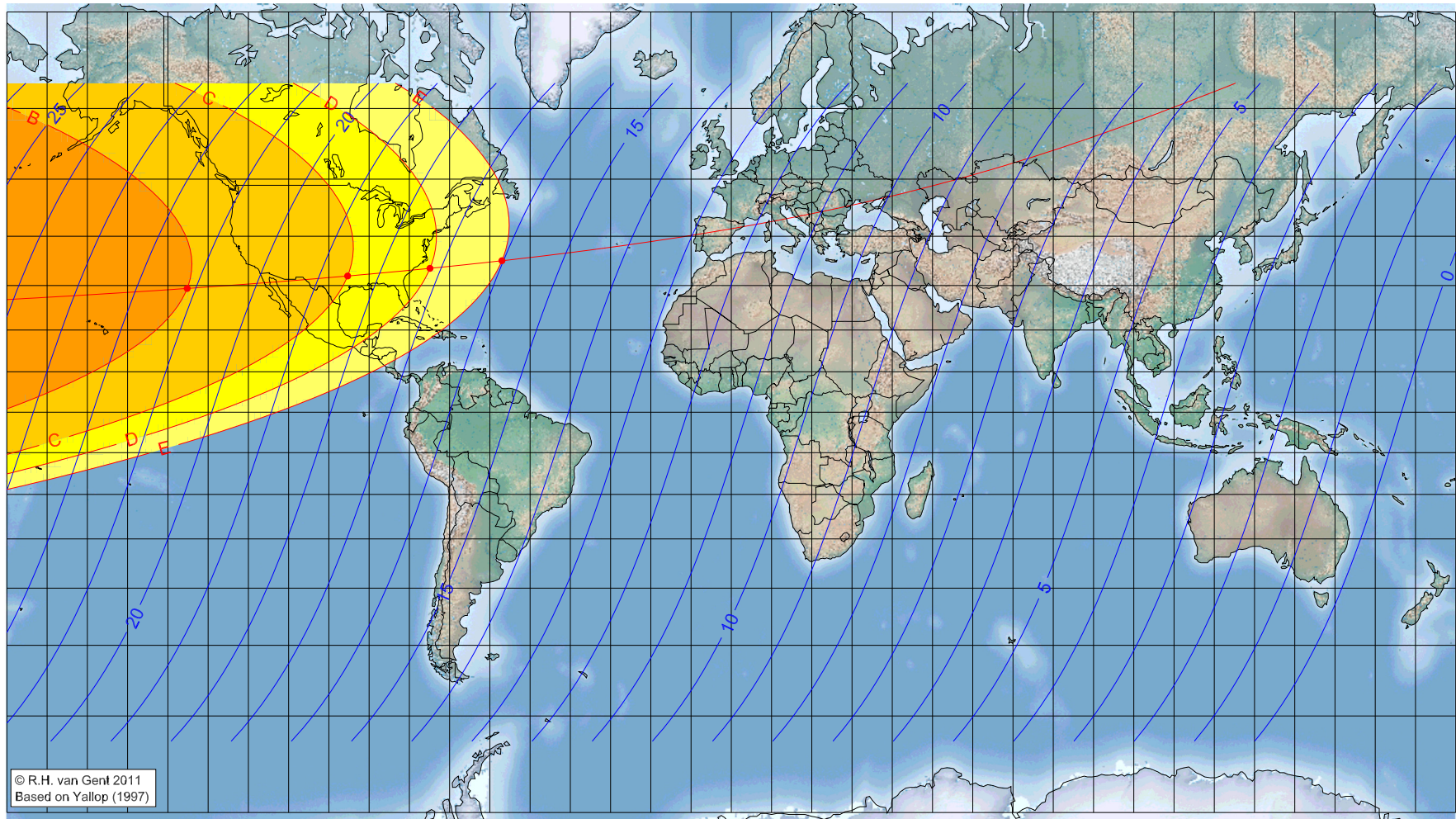
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Jumādā 'l-Ākhira 1432 AH

Global visibility map for 3 May 2011 [Tuesday]

Day of luni-solar conjunction



Astronomical New Moon: 3 May 2011, 6h 50.7m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

		not visible until the next evening
-135.19	29.37	21.14
-95.33	32.03	18.52
-74.87	33.63	17.19
-57.00	35.19	16.03

Astronomical (Brown) Lunation Number = 1093

Islamic Lunation Number = 17178

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

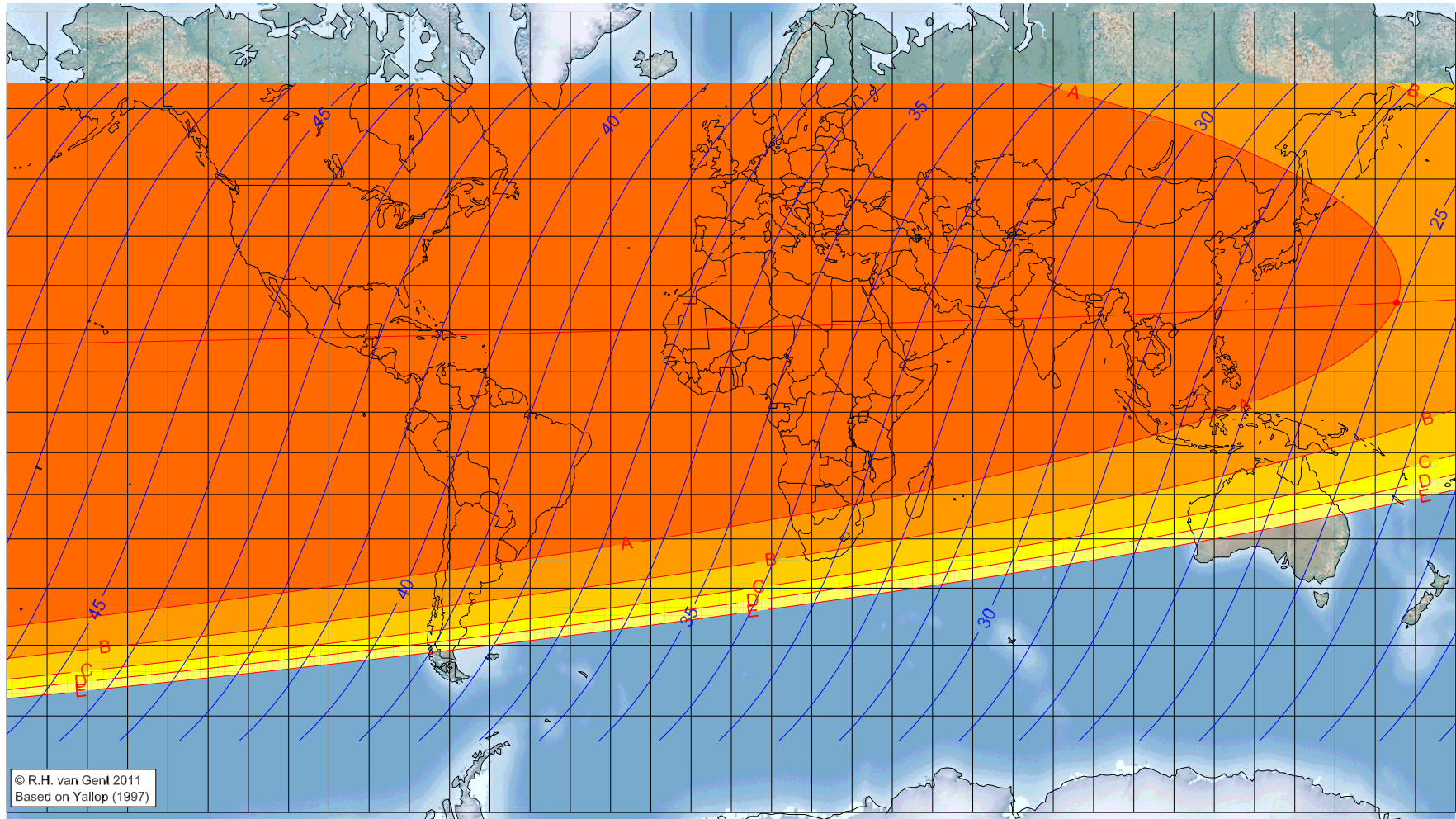
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Jumādā 'l-Ākhira 1432 AH

Global visibility map for 4 May 2011 [Wednesday]

Day after luni-solar conjunction



Astronomical New Moon: 3 May 2011, 6h 50.7m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

165.34	26.24	25.08
visible on the previous evening		
visible on the previous evening		
visible on the previous evening		
visible on the previous evening		

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

Astronomical (Brown) Lunation Number = 1093

Islamic Lunation Number = 17178

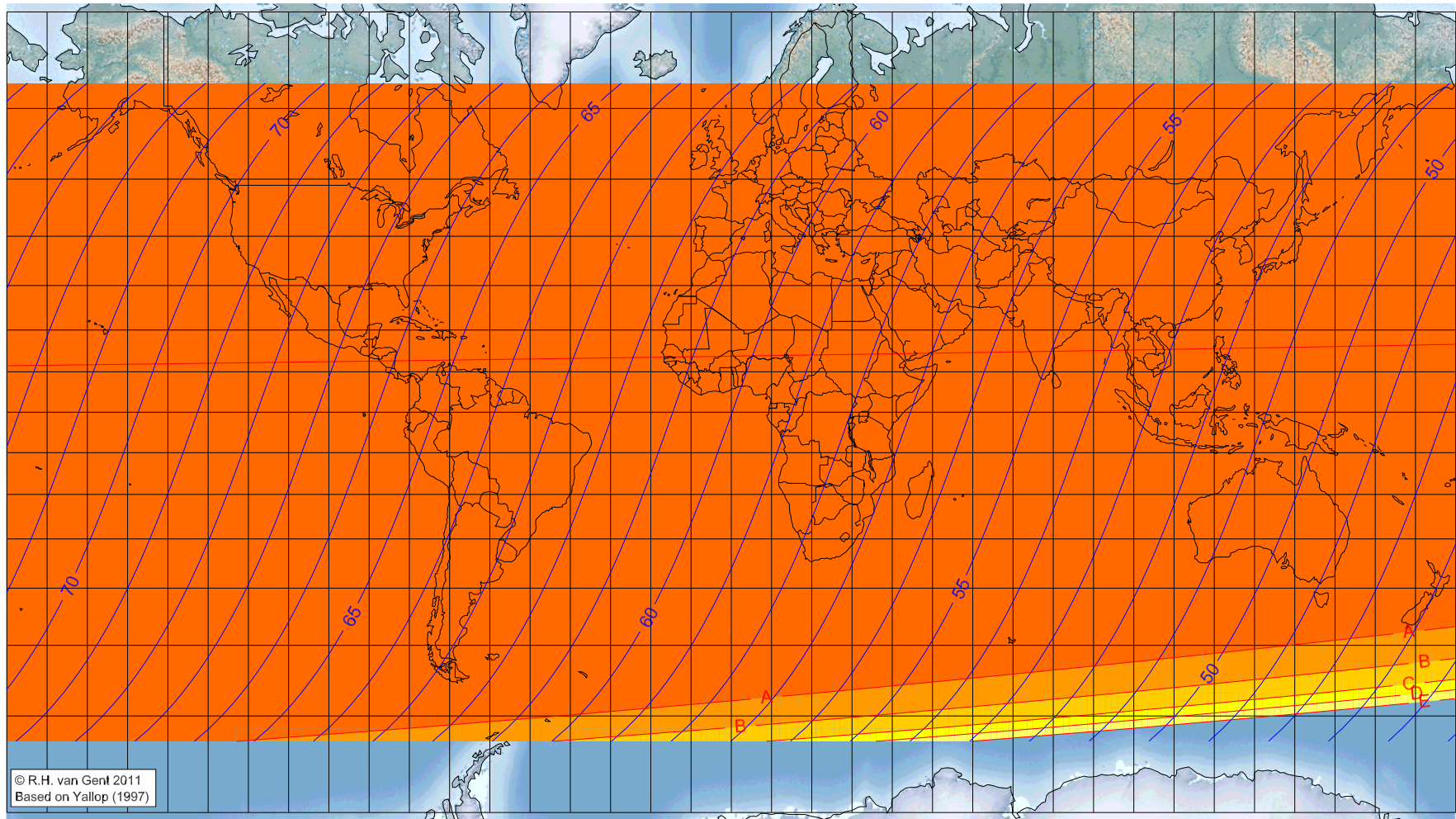
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Jumādā 'l-Ākhira 1432 AH

Global visibility map for 5 May 2011 [Thursday]

Second day after luni-solar conjunction



Astronomical New Moon: 3 May 2011, 6h 50.7m (UTC)

$\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1093

Islamic Lunation Number = 17178

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

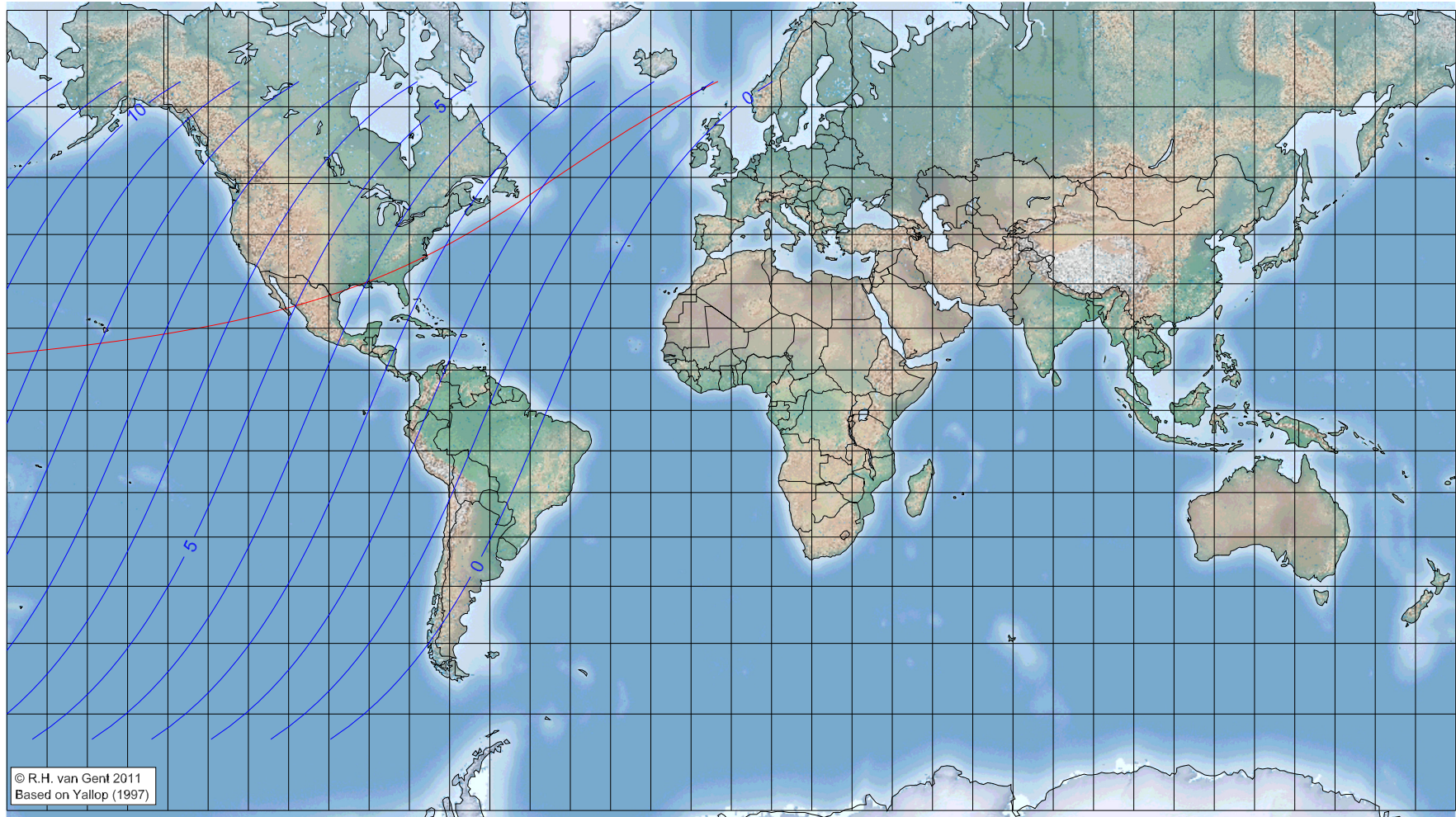
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Rajab 1432 AH

Global visibility map for 1 June 2011 [Wednesday]

Day of luni-solar conjunction



Astronomical New Moon: 1 June 2011, 21h 2.6m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
not visible until the next evening

Astronomical (Brown) Lunation Number = 1094

Islamic Lunation Number = 17179

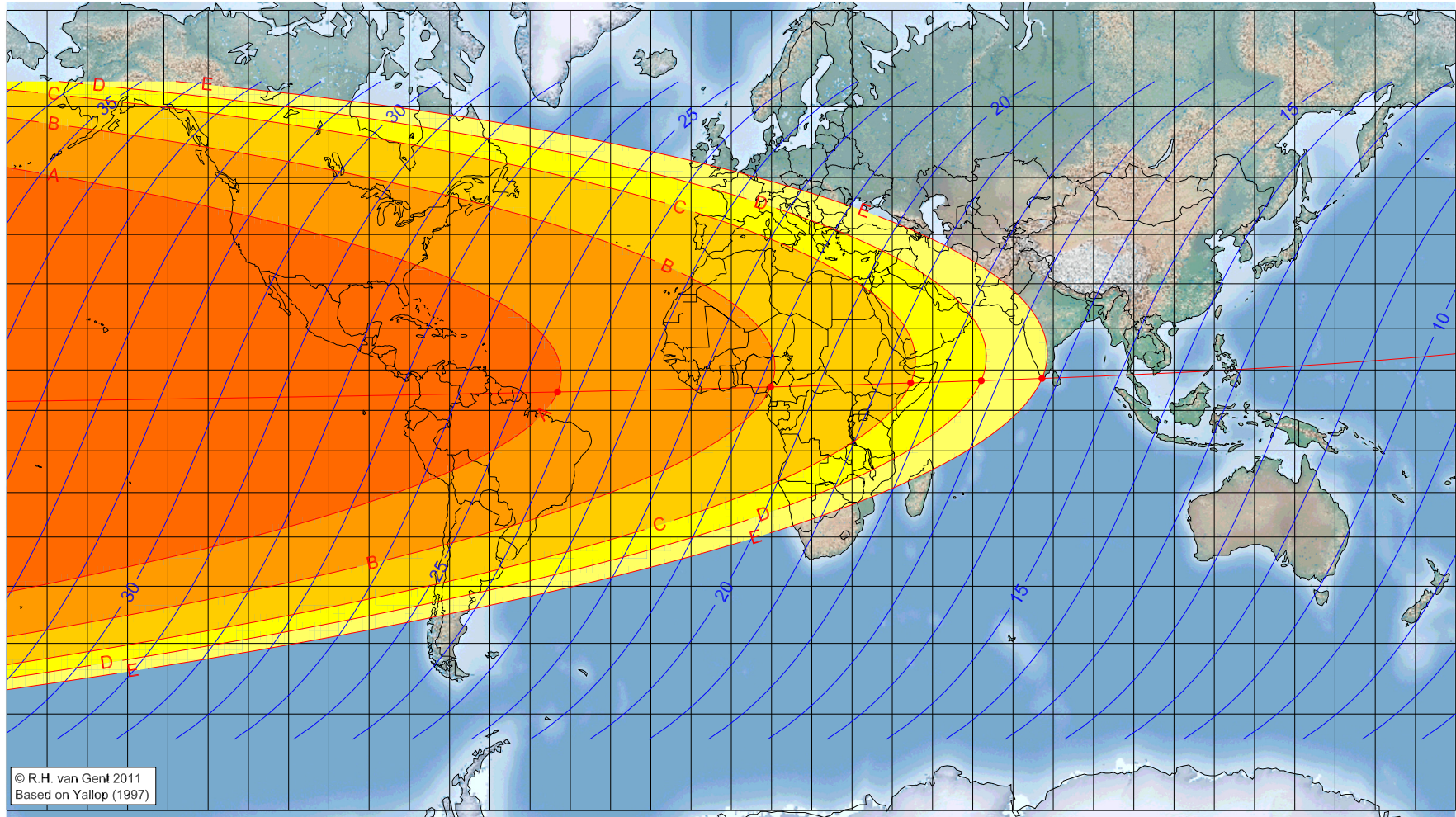
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Rajab 1432 AH

Global visibility map for 2 June 2011 [Thursday]

Day after luni-solar conjunction



Astronomical New Moon: 1 June 2011, 21h 2.6m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
-43.16	4.58	24.35
9.78	5.81	20.80
44.57	6.80	18.47
62.11	7.37	17.29
77.20	7.92	16.29

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

Astronomical (Brown) Lunation Number = 1094

Islamic Lunation Number = 17179

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

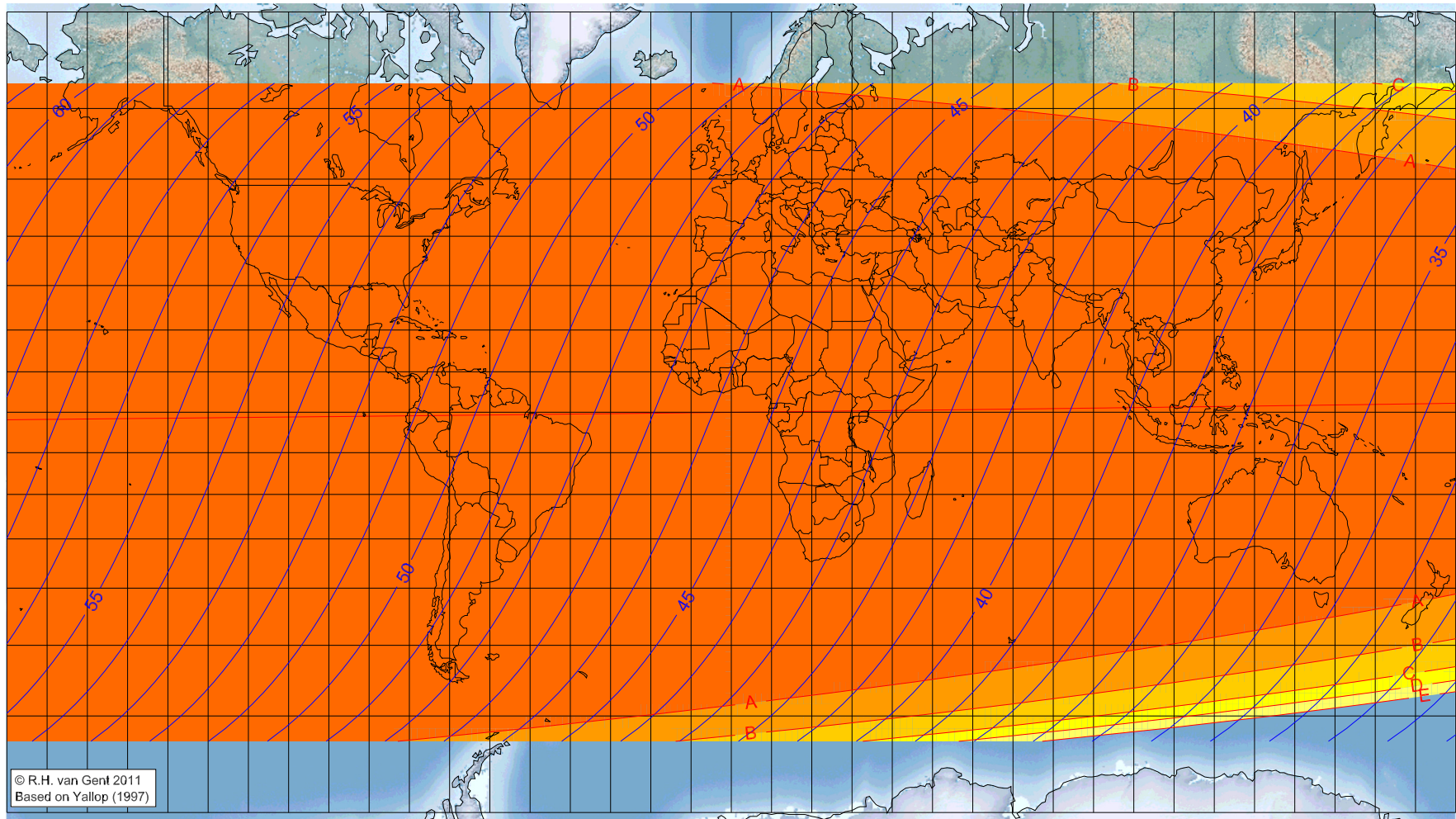
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Rajab 1432 AH

Global visibility map for 3 June 2011 [Friday]

Second day after luni-solar conjunction



Astronomical New Moon: 1 June 2011, 21h 2.6m (UTC)

$\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1094

Islamic Lunation Number = 17179

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

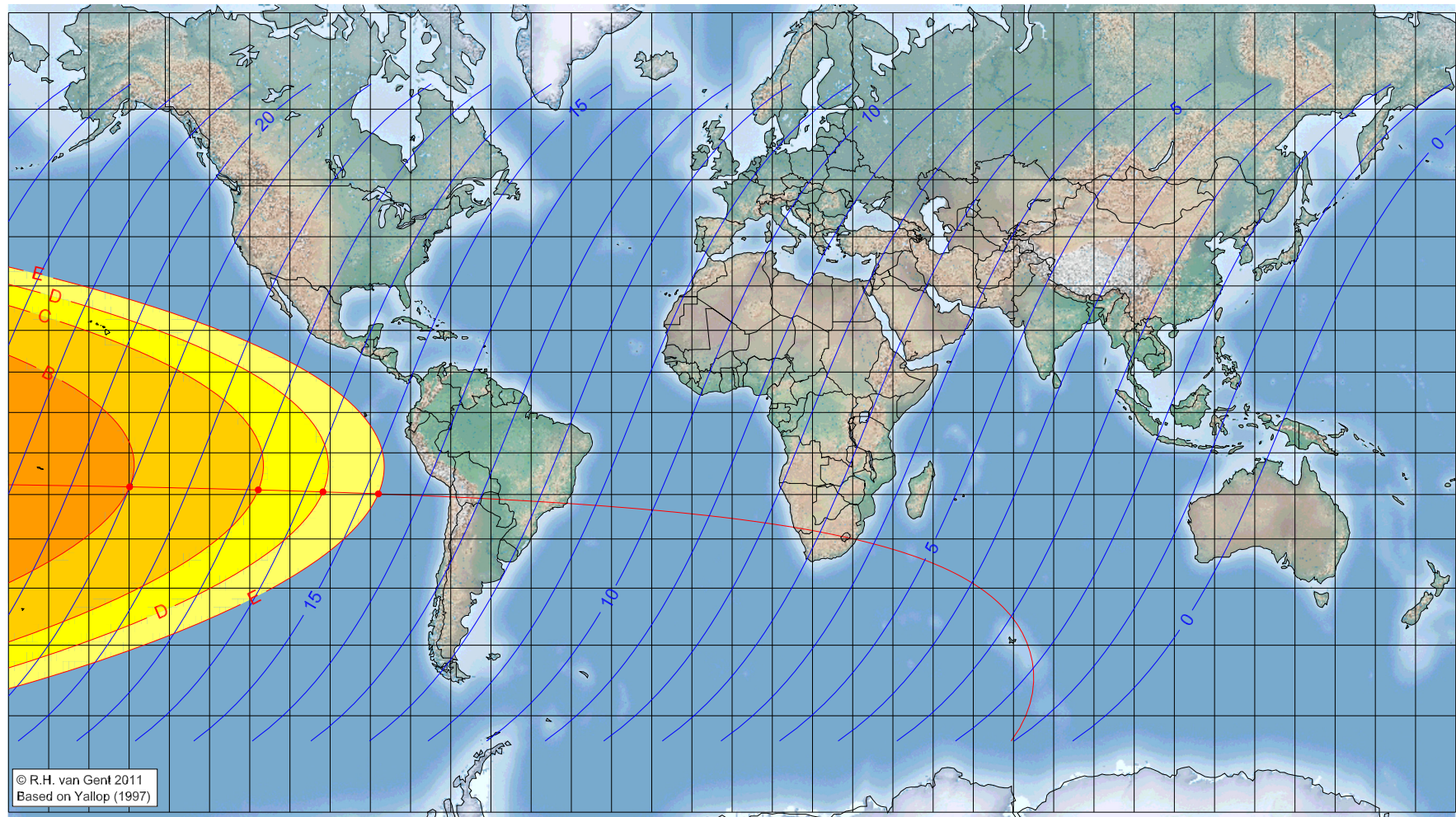
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Sha'bān 1432 AH

Global visibility map for 1 July 2011 [Friday]

Day of luni-solar conjunction



Astronomical New Moon: 1 July 2011, 8h 53.9m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

-149.87	-18.20	19.00
-117.86	-18.92	16.81
-101.78	-19.38	15.70
-87.99	-19.84	14.75

Astronomical (Brown) Lunation Number = 1095

Islamic Lunation Number = 17180

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

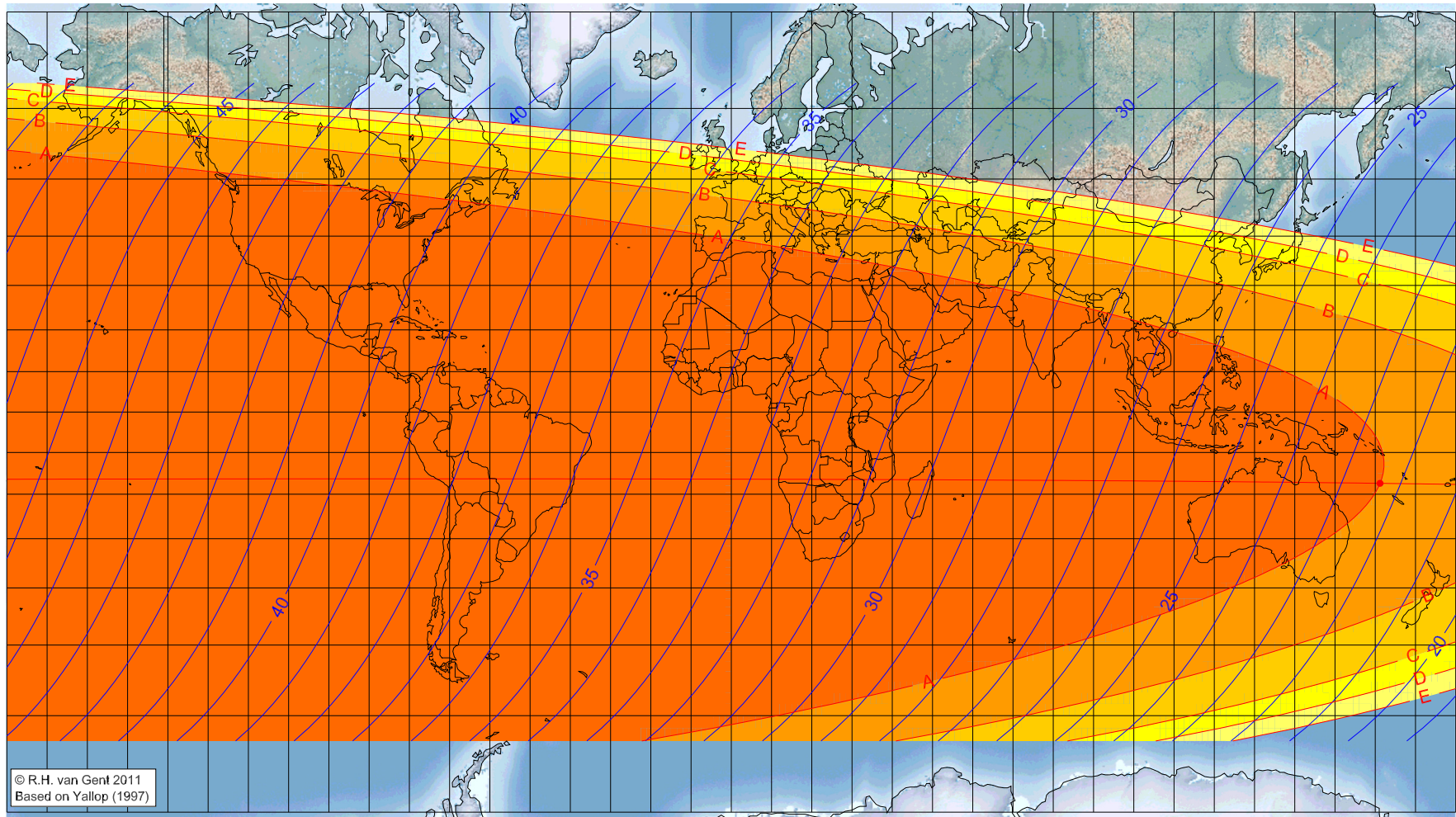
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Sha'bān 1432 AH

Global visibility map for 2 July 2011 [Saturday]

Day after luni-solar conjunction



Astronomical New Moon: 1 July 2011, 8h 53.9m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

161.20	-17.44	22.35
visible on the previous evening		
visible on the previous evening		
visible on the previous evening		
visible on the previous evening		

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

Astronomical (Brown) Lunation Number = 1095

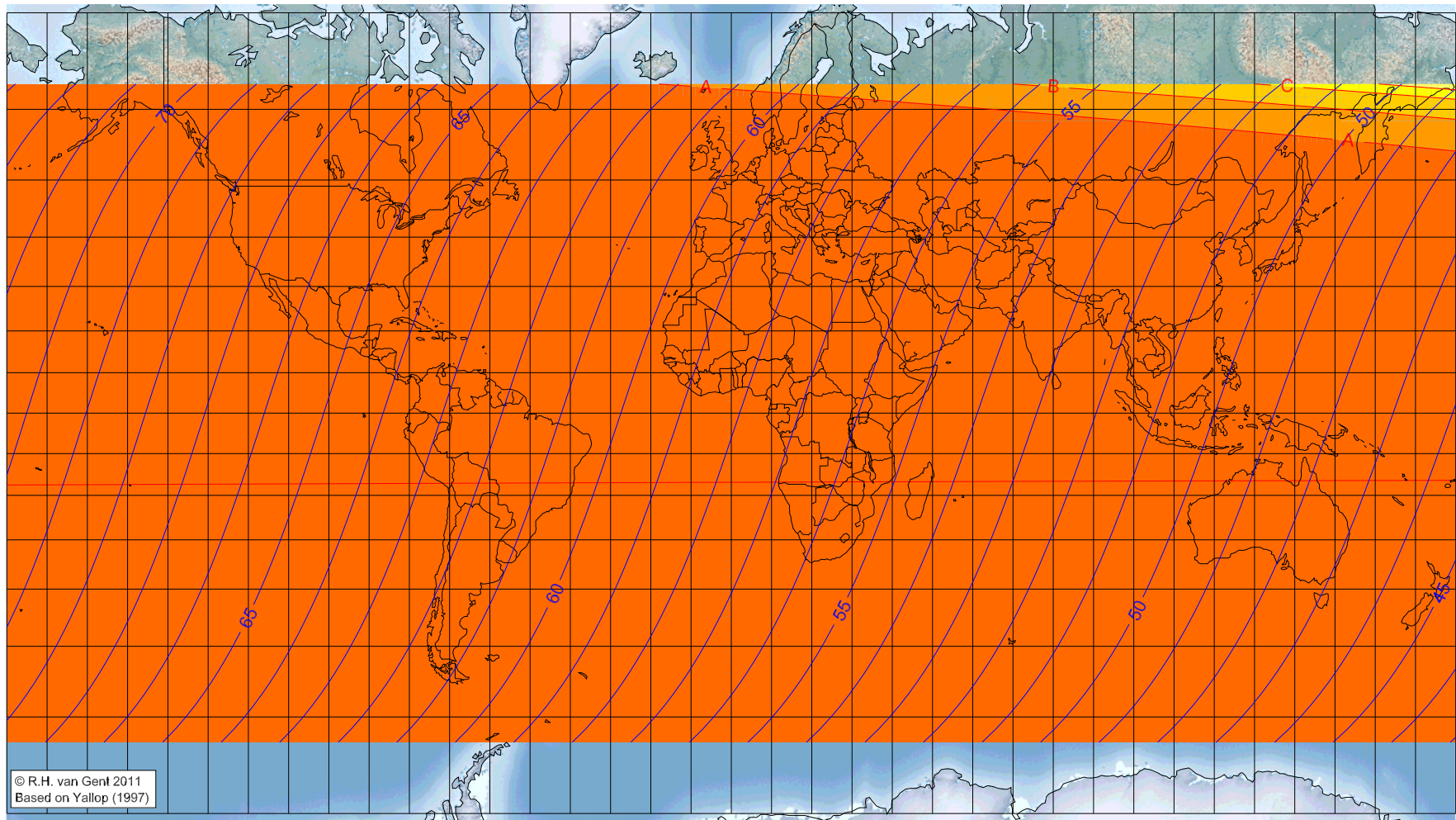
Islamic Lunation Number = 17180

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Sha'bān 1432 AH

Global visibility map for 3 July 2011 [Sunday]  
Second day after luni-solar conjunction



Astronomical New Moon: 1 July 2011, 8h 53.9m (UTC)  
 $\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1095  
Islamic Lunation Number = 17180

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

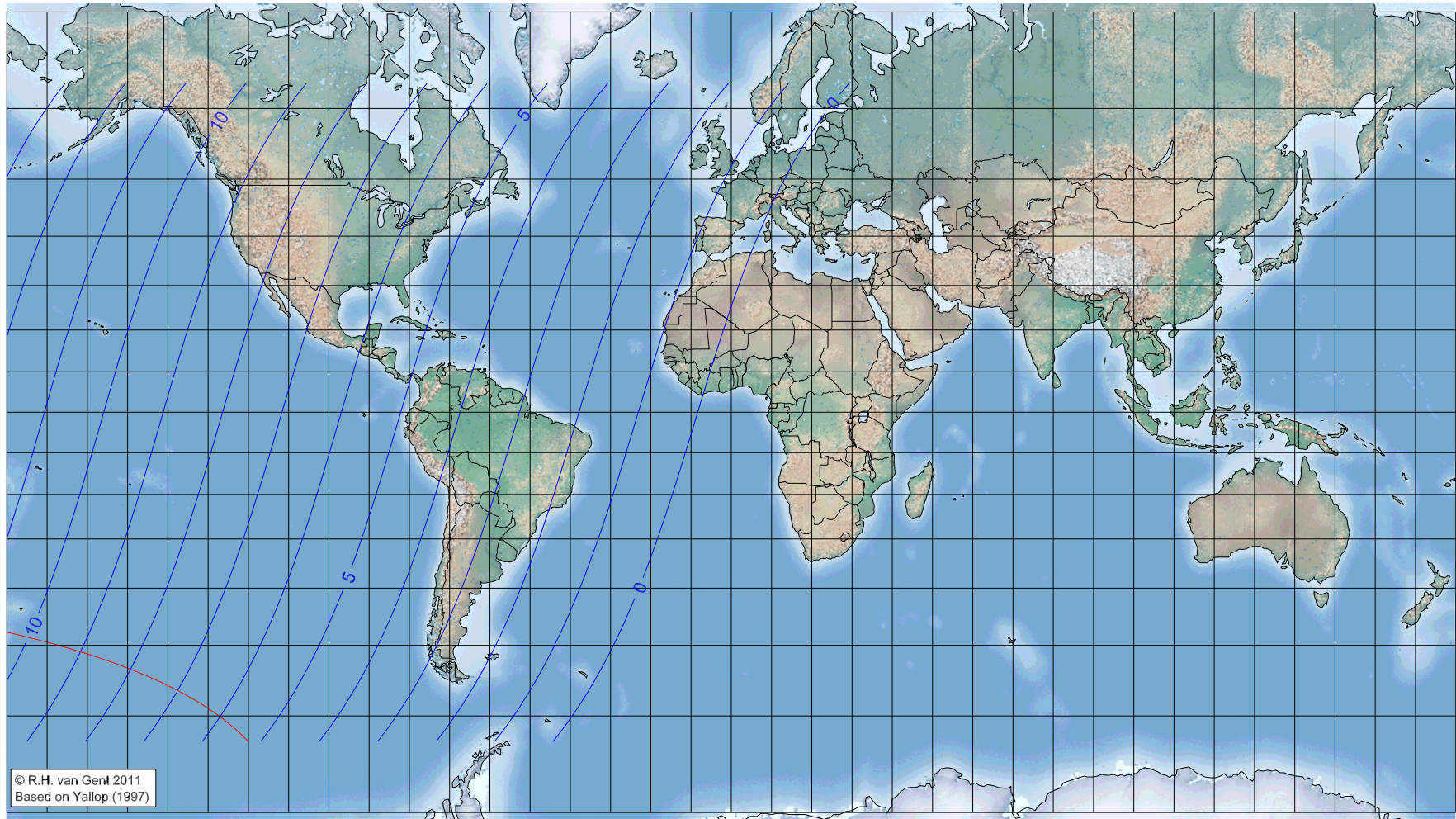
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Ramaḍān 1432 AH

Global visibility map for 30 July 2011 [Saturday]

Day of luni-solar conjunction



© R.H. van Gent 2011  
Based on Yallop (1997)

Astronomical New Moon: 30 July 2011, 18h 39.8m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
not visible until the next evening

Astronomical (Brown) Lunation Number = 1096

Islamic Lunation Number = 17181

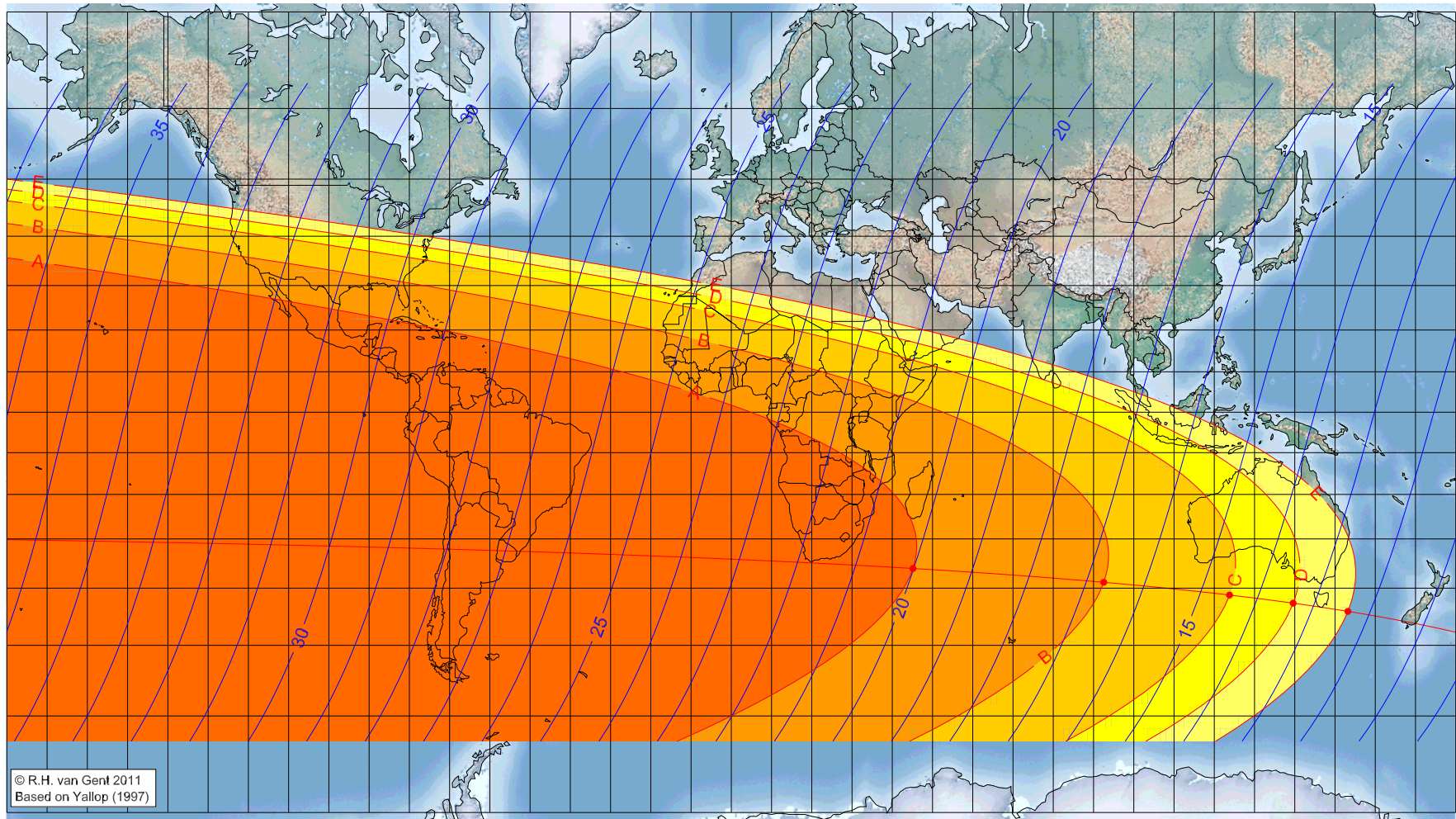
Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Ramaḍān 1432 AH

Global visibility map for 31 July 2011 [Sunday]

Day after luni-solar conjunction



Astronomical New Moon: 30 July 2011, 18h 39.8m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Longitude ( $^\circ$ )	Latitude ( $^\circ$ )	Lunar age (h)
45.14	-36.15	20.01
92.54	-38.87	16.70
123.80	-41.29	14.49
139.60	-42.79	13.36
153.20	-44.27	12.38

Astronomical (Brown) Lunation Number = 1096

Islamic Lunation Number = 17181

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

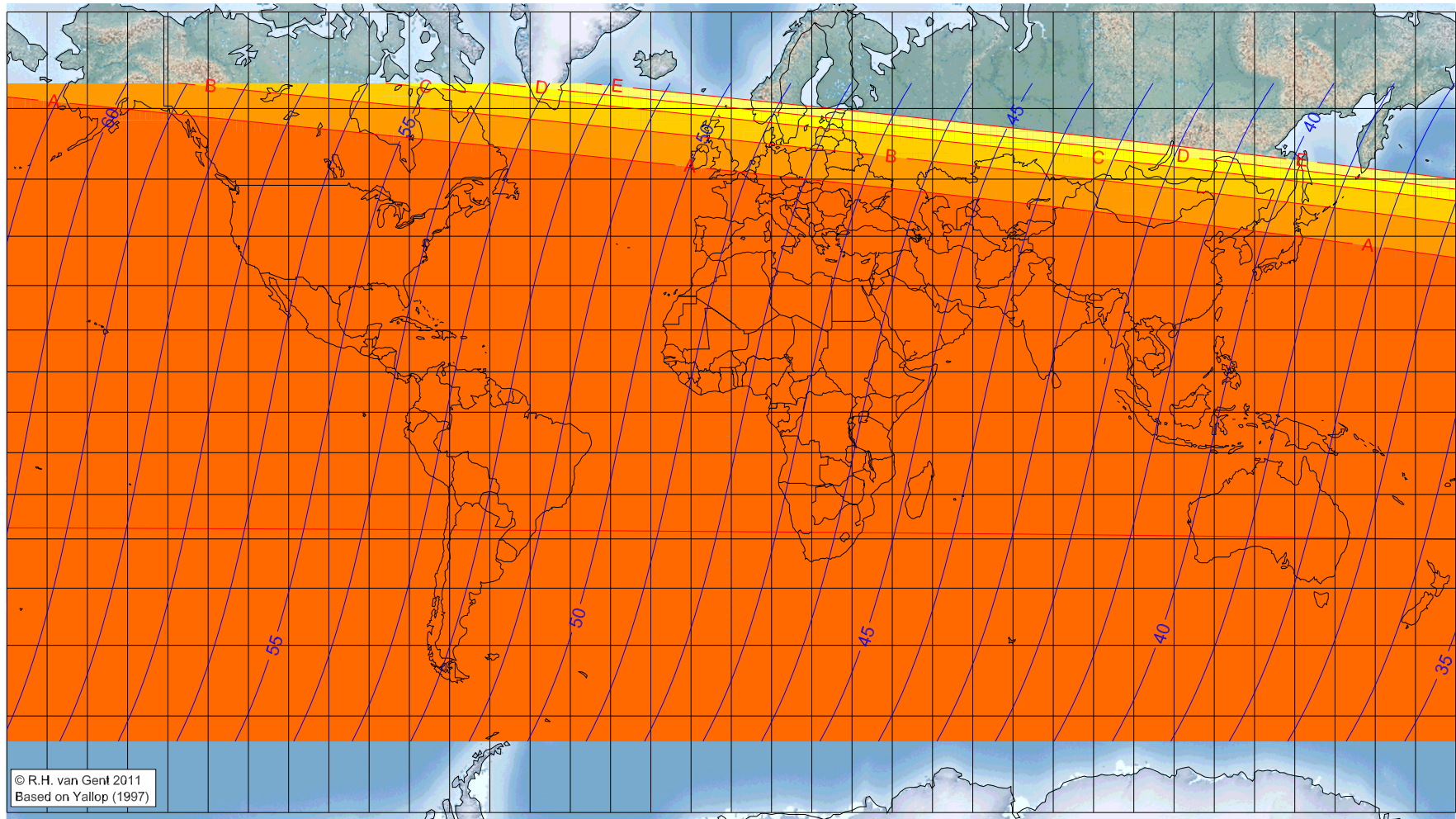
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Ramaḍān 1432 AH

Global visibility map for 1 August 2011 [Monday]

Second day after luni-solar conjunction



Astronomical New Moon: 30 July 2011, 18h 39.8m (UTC)

$\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1096

Islamic Lunation Number = 17181

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

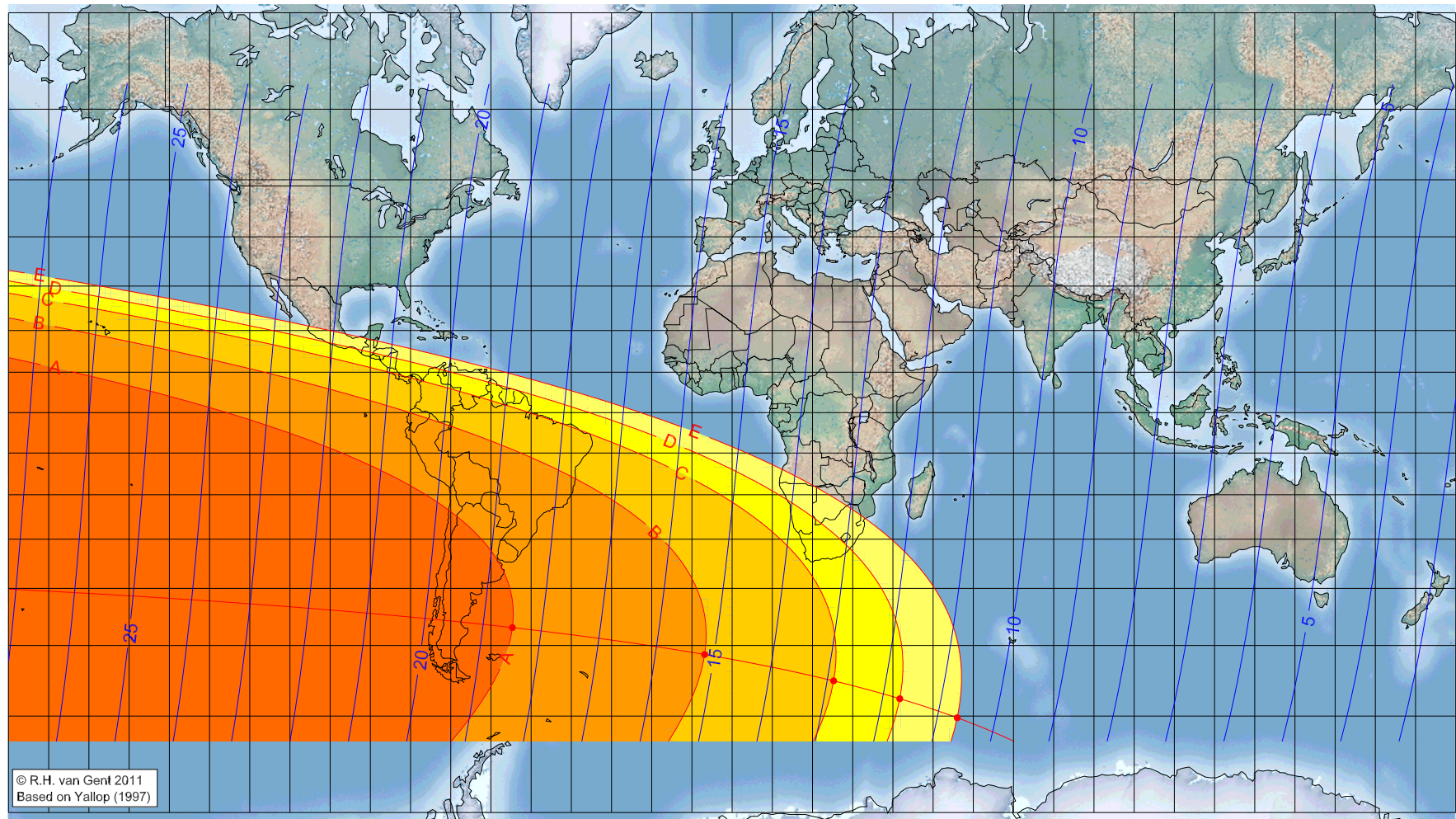
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Shawwāl 1432 AH

Global visibility map for 29 August 2011 [Monday]

Day of luni-solar conjunction



Astronomical New Moon: 29 August 2011, 3h 4.0m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
-54.65	-47.05	18.49
-6.83	-51.42	15.16
25.25	-55.32	12.89
41.70	-57.77	11.70
56.00	-60.21	10.66

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

Astronomical (Brown) Lunation Number = 1097

Islamic Lunation Number = 17182

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

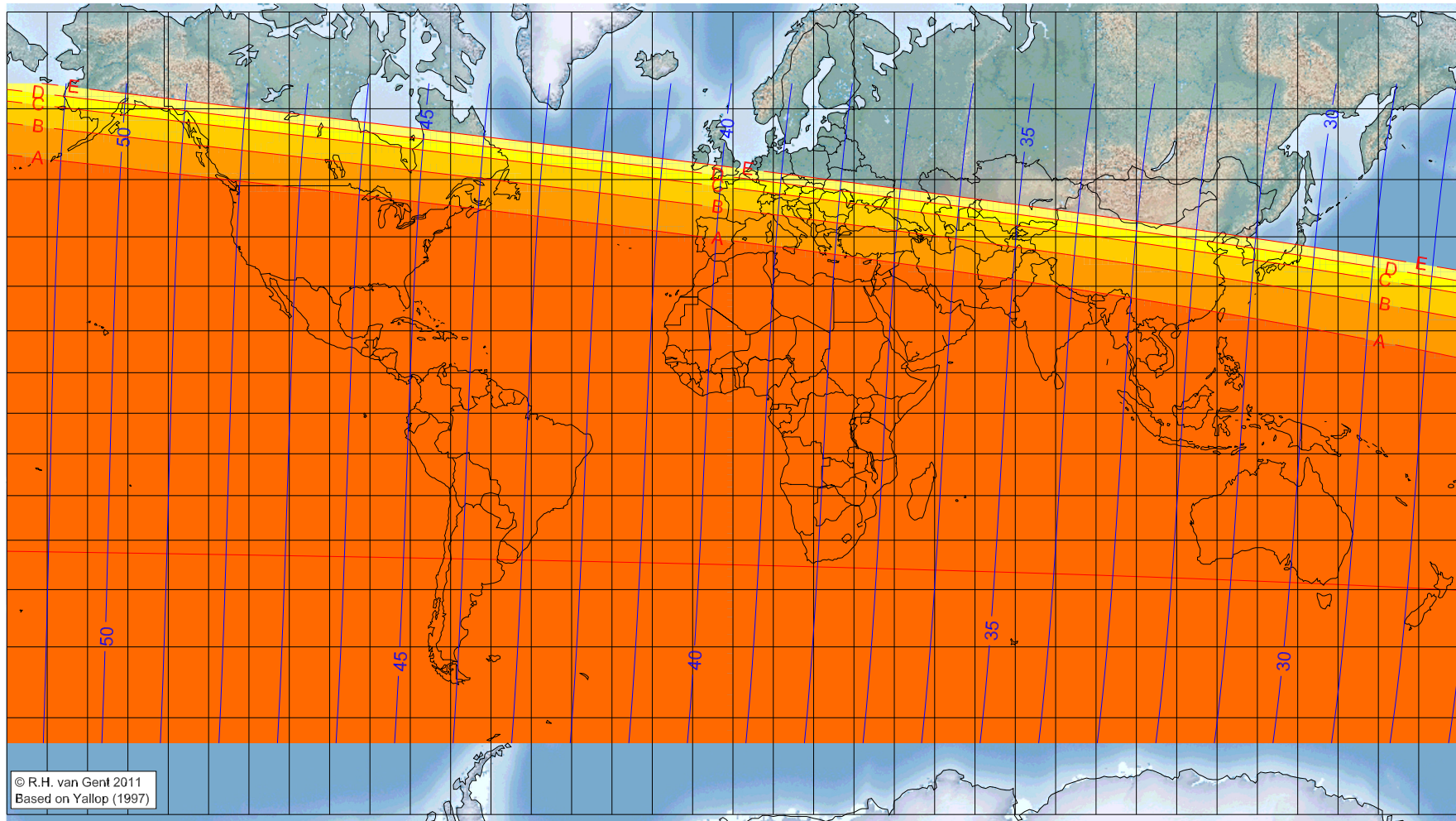
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Shawwāl 1432 AH

Global visibility map for 30 August 2011 [Tuesday]

Day after luni-solar conjunction



Astronomical New Moon: 29 August 2011, 3h 4.0m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

visible on the previous evening  
visible on the previous evening  
visible on the previous evening  
visible on the previous evening  
visible on the previous evening

Astronomical (Brown) Lunation Number = 1097

Islamic Lunation Number = 17182

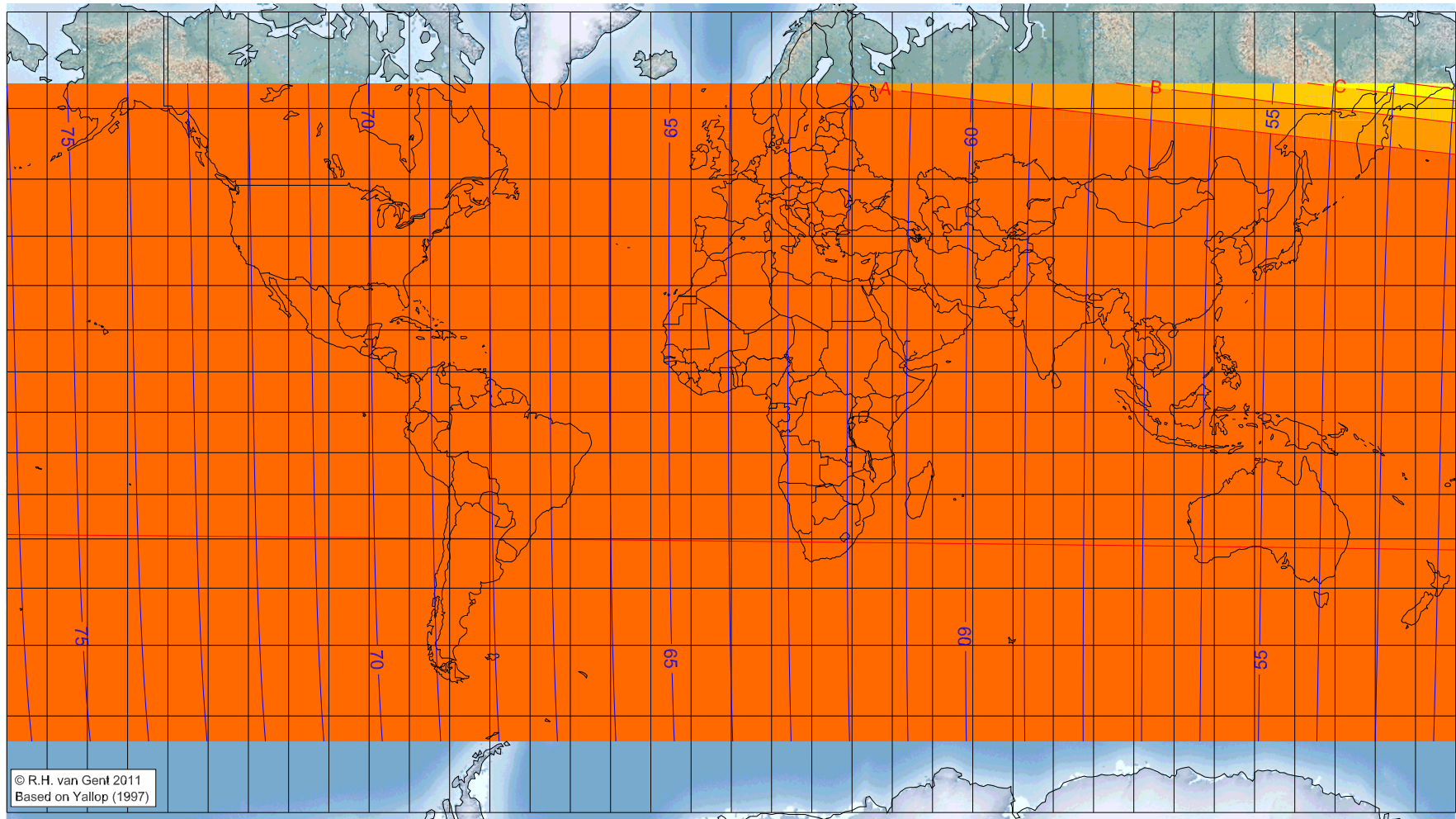
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Shawwāl 1432 AH

Global visibility map for 31 August 2011 [Wednesday]

Second day after luni-solar conjunction



Astronomical New Moon: 29 August 2011, 3h 4.0m (UTC)

$\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1097

Islamic Lunation Number = 17182

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

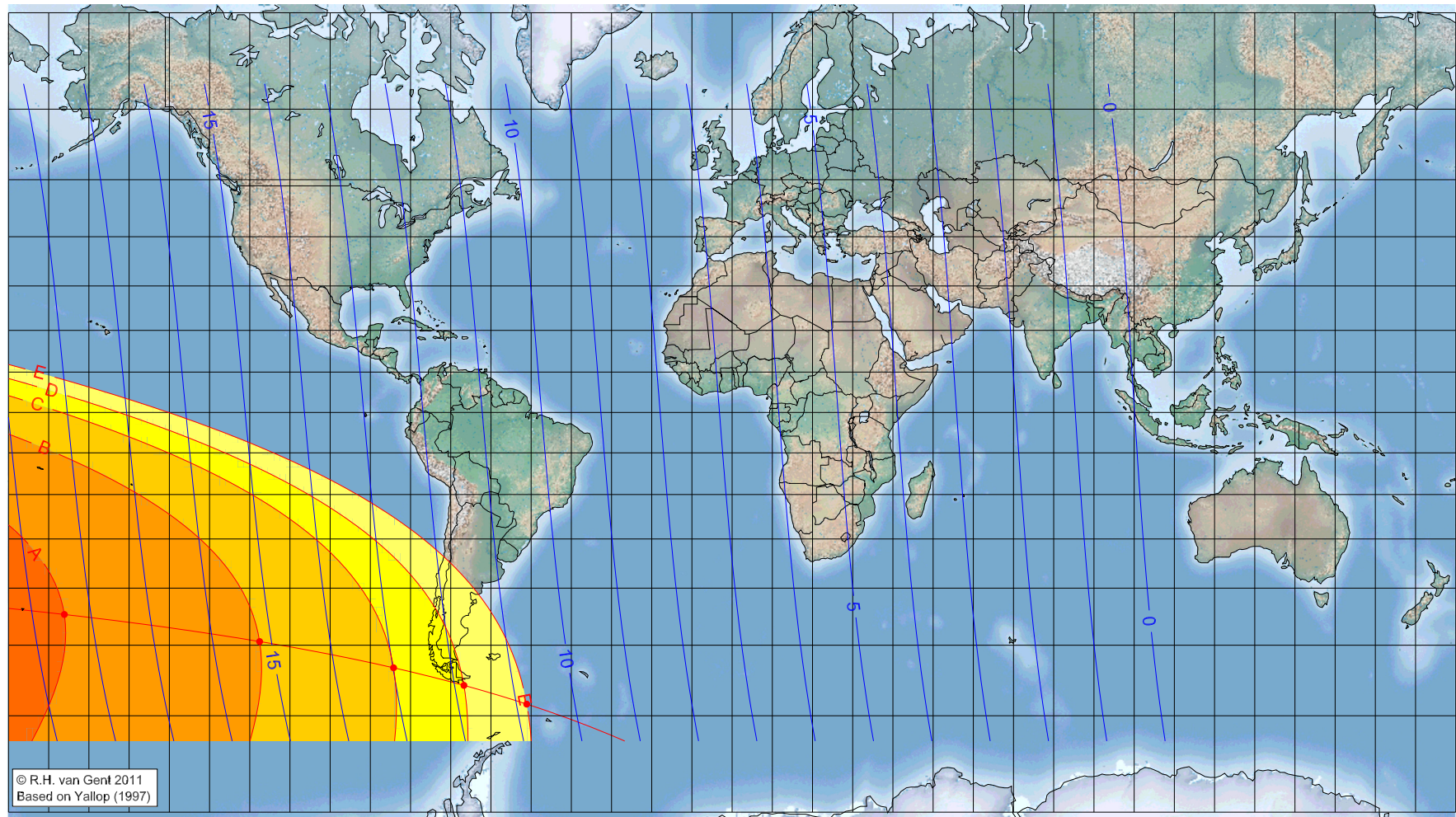
More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Dhū 'l-Qa'da 1432 AH

Global visibility map for 27 September 2011 [Tuesday]

Day of luni-solar conjunction



Astronomical New Moon: 27 September 2011, 11h 8.7m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Longitude ( $^\circ$ )	Latitude ( $^\circ$ )	Lunar age (h)
-166.11	-44.83	18.45
-117.54	-49.41	15.20
-84.22	-53.47	12.99
-66.71	-56.00	11.84
-51.09	-58.52	10.82

Astronomical (Brown) Lunation Number = 1098

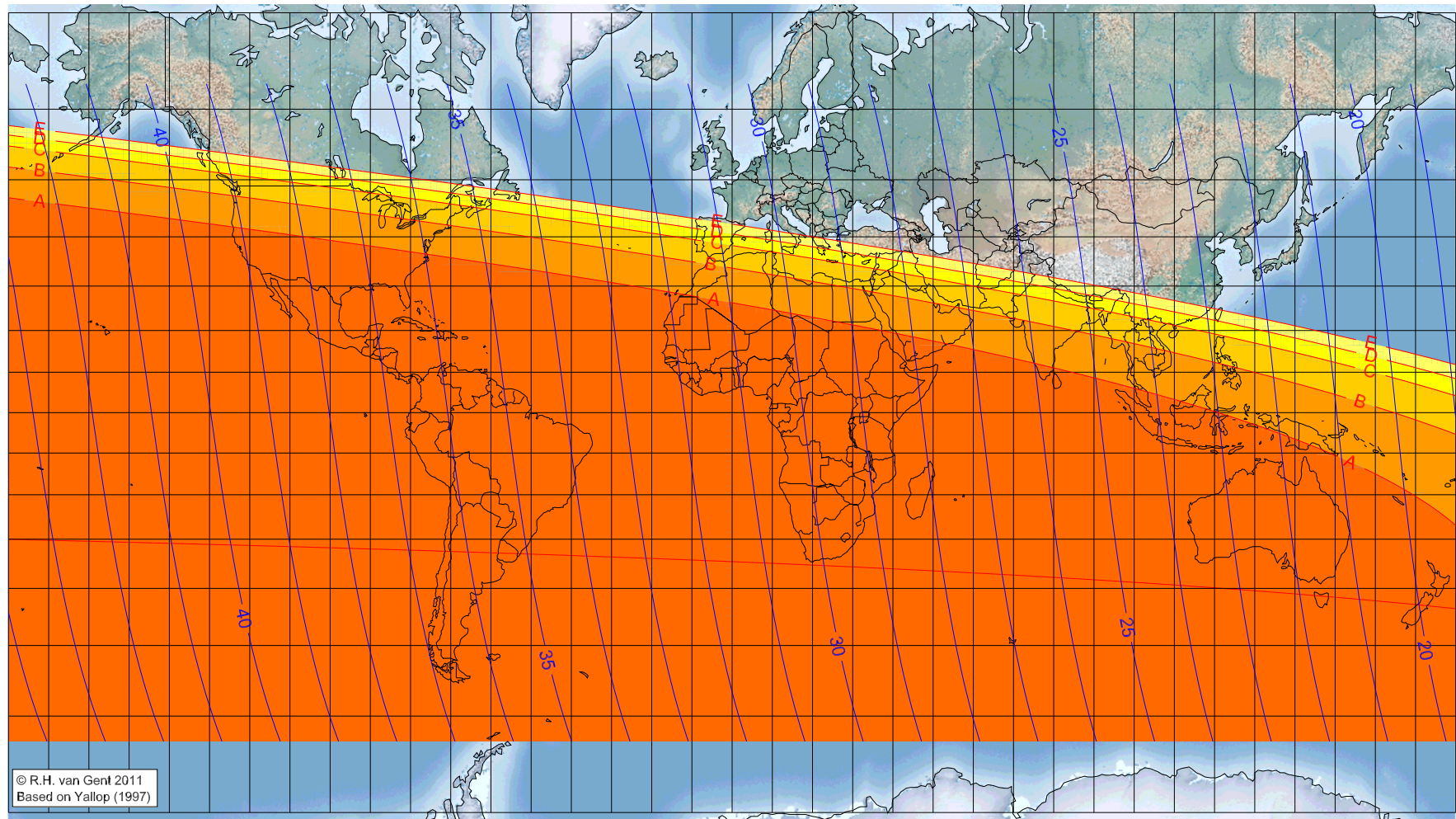
Islamic Lunation Number = 17183

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Dhū 'l-Qa'da 1432 AH

Global visibility map for 28 September 2011 [Wednesday]  
Day after luni-solar conjunction



Astronomical New Moon: 27 September 2011, 11h 8.7m (UTC)  
 $\Delta T = 1.1$  min

First visibility (●)

Astronomical (Brown) Lunation Number = 1098  
Islamic Lunation Number = 17183

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Longitude ( $^\circ$ )   Latitude ( $^\circ$ )   Lunar age (h)  
visible on the previous evening  
visible on the previous evening  
visible on the previous evening  
visible on the previous evening  
visible on the previous evening

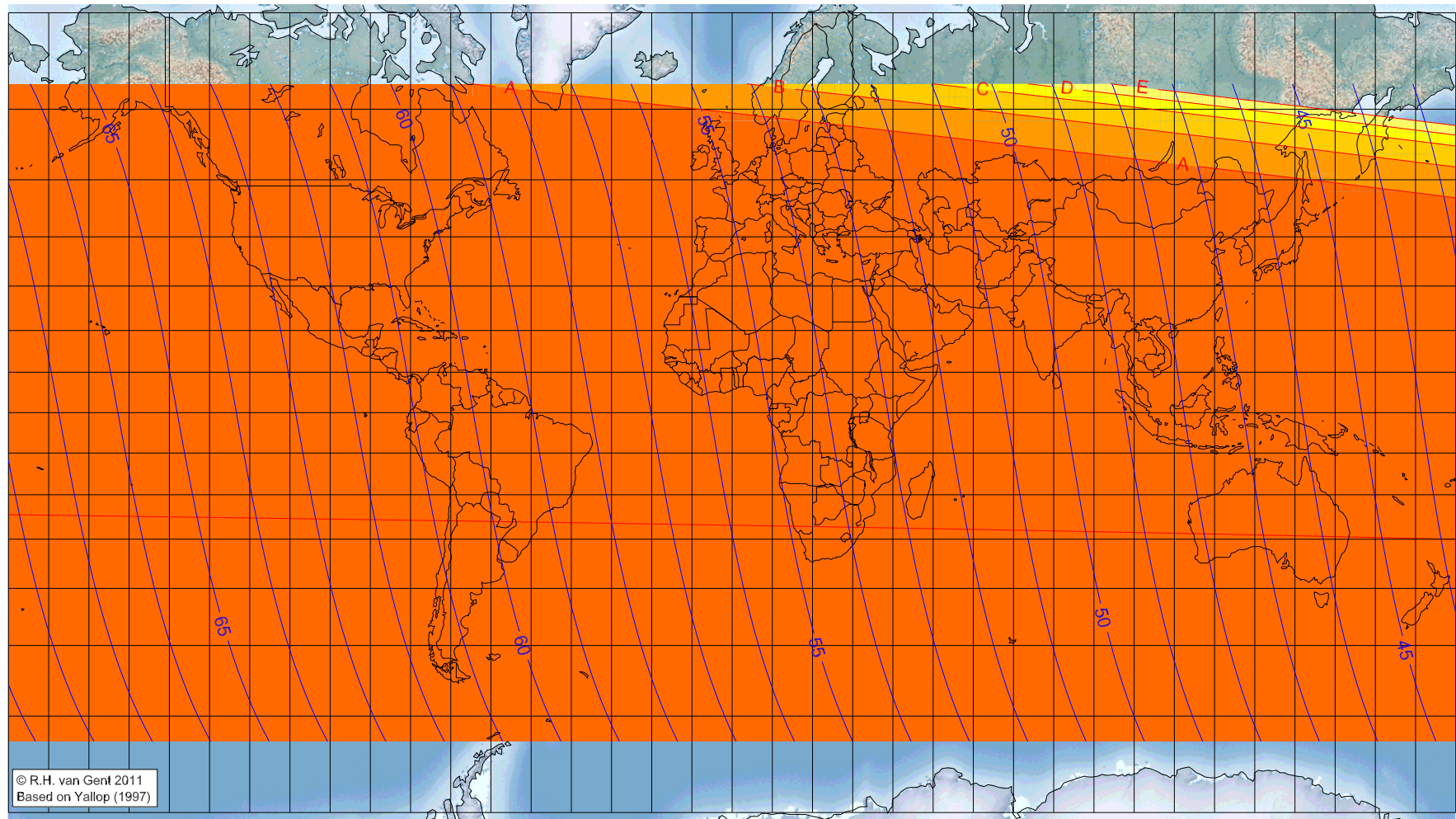
Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Dhū 'l-Qa'da 1432 AH

Global visibility map for 29 September 2011 [Thursday]  
Second day after luni-solar conjunction



Astronomical New Moon: 27 September 2011, 11h 8.7m (UTC)  
 $\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1098  
Islamic Lunation Number = 17183

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

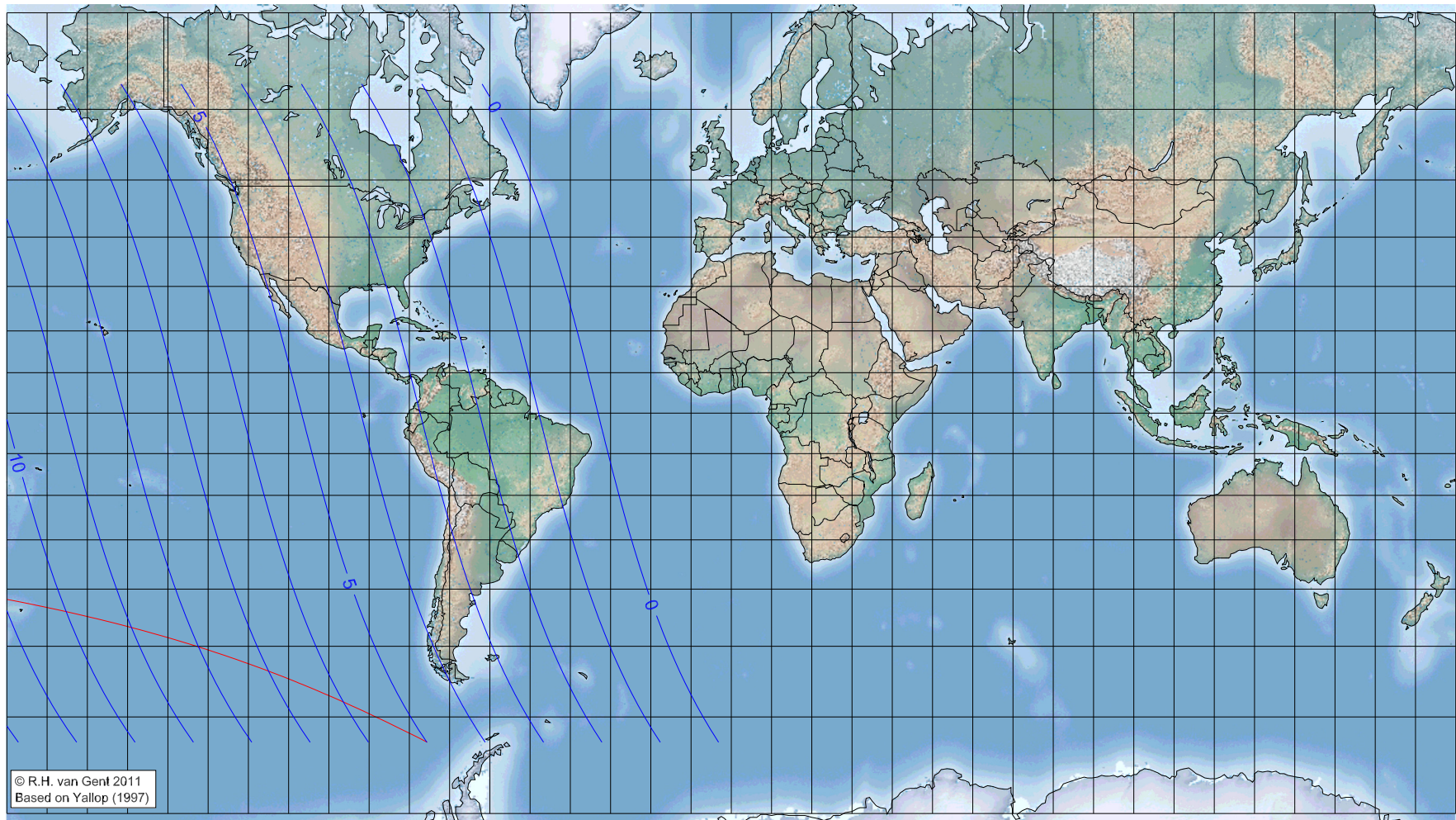
Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Dhū 'l-Hijja 1432 AH

Global visibility map for 26 October 2011 [Wednesday]

Day of luni-solar conjunction



© R.H. van Gent 2011  
Based on Yallop (1997)

Astronomical New Moon: 26 October 2011, 19h 55.8m (UTC)

$\Delta T = 1.1$  min

First visibility (●)

Longitude (°) Latitude (°) Lunar age (h)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit (8°) – invisible even with optical aid

not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
not visible until the next evening  
not visible until the next evening

Astronomical (Brown) Lunation Number = 1099

Islamic Lunation Number = 17184

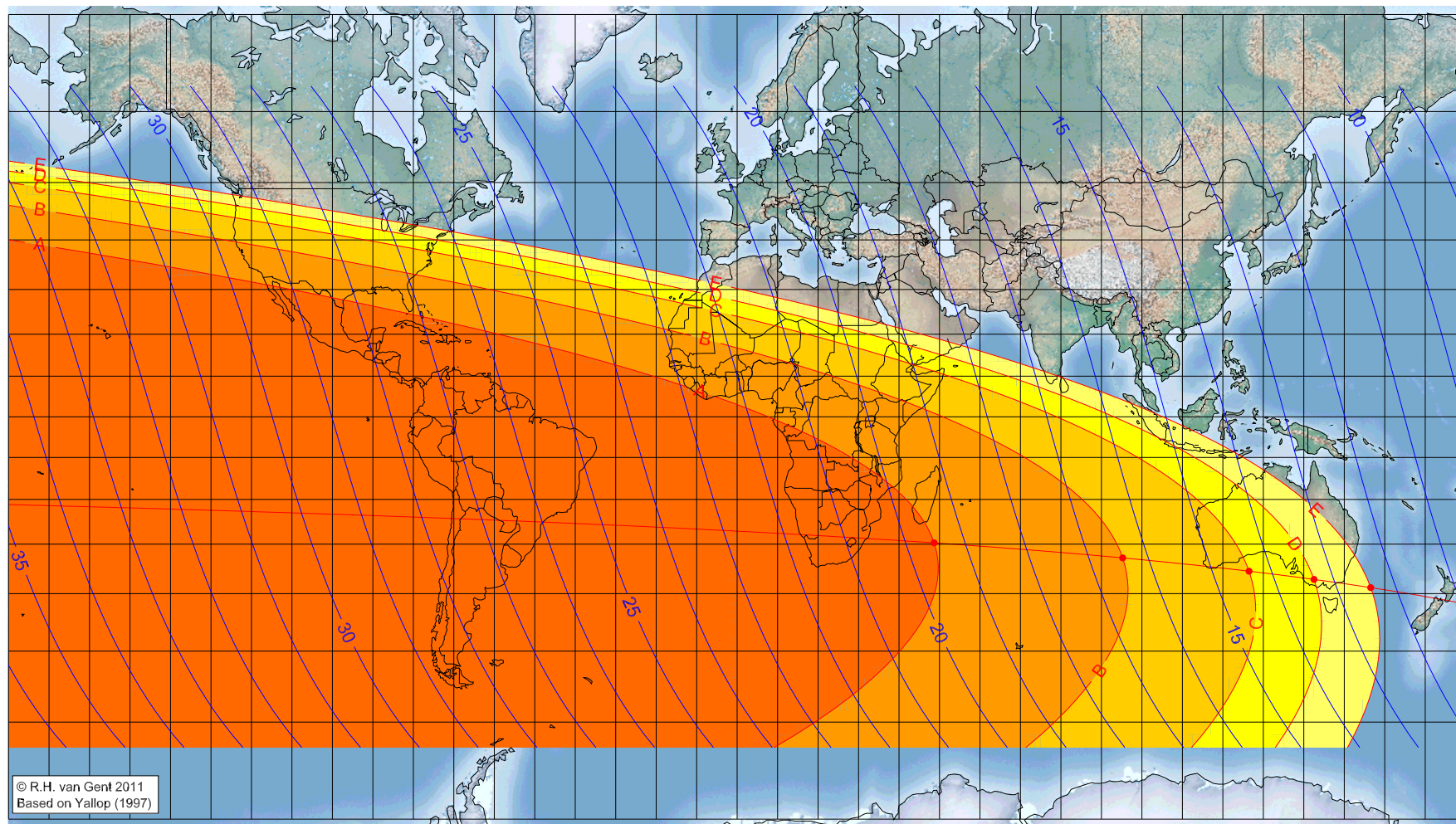
Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>



# First visibility lunar crescent for Dhū 'l-Hijja 1432 AH

Global visibility map for 27 October 2011 [Thursday]  
Day after luni-solar conjunction



Astronomical New Moon: 26 October 2011, 19h 55.8m (UTC)  
 $\Delta T = 1.1$  min

First visibility (●)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Longitude ( $^\circ$ )	Latitude ( $^\circ$ )	Lunar age (h)
48.67	-29.73	19.52
95.25	-32.90	16.43
126.47	-35.62	14.38
142.52	-37.25	13.33
156.54	-38.85	12.43

Astronomical (Brown) Lunation Number = 1099  
Islamic Lunation Number = 17184

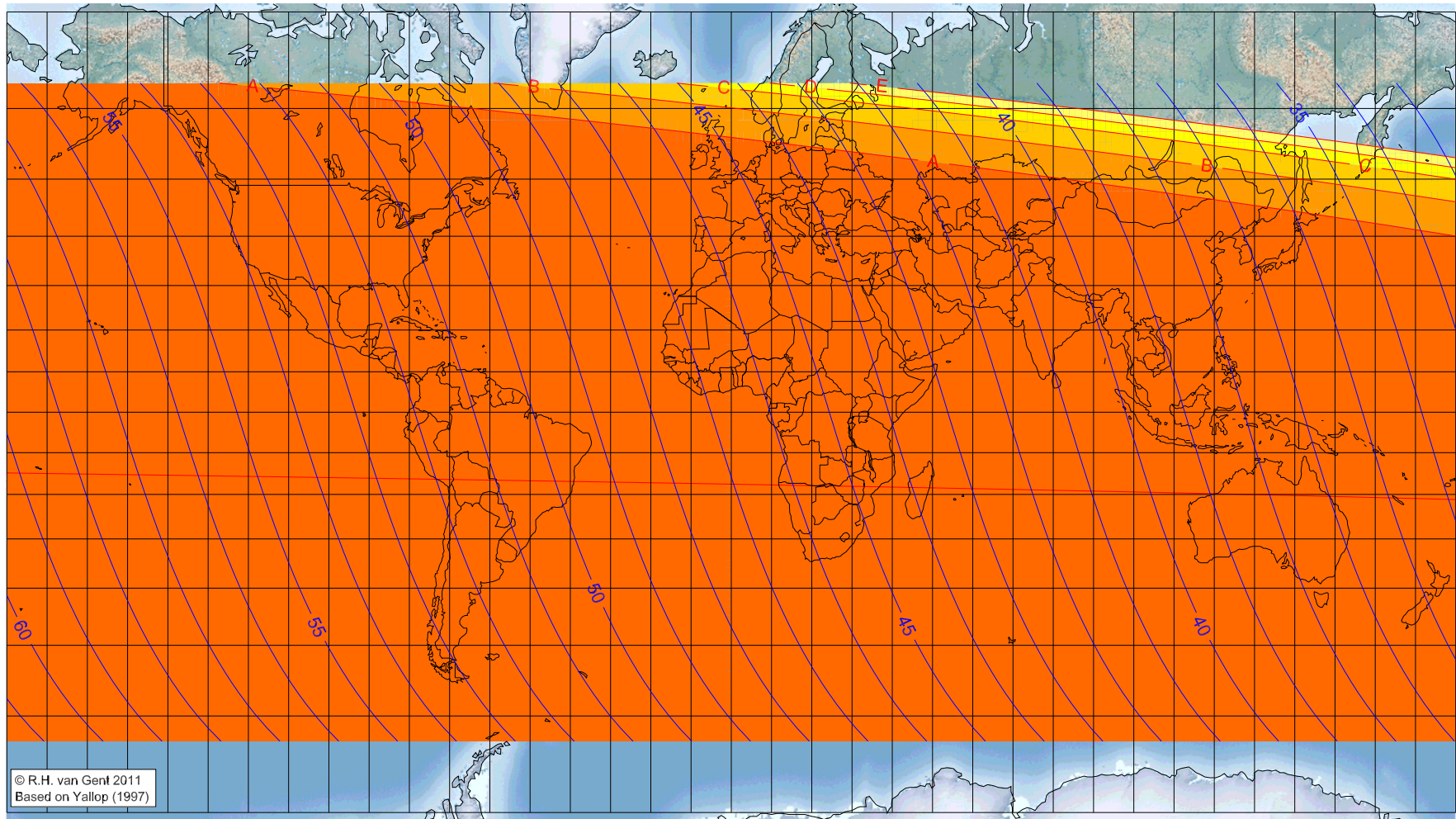
Lunar age (in hours) is given for the 'best time',  
defined as the moment 4/9ths between sunset  
and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>

# First visibility lunar crescent for Dhū 'l-Hijja 1432 AH

Global visibility map for 28 October 2011 [Friday]

Second day after luni-solar conjunction



Astronomical New Moon: 26 October 2011, 19h 55.8m (UTC)

$\Delta T = 1.1$  min

Astronomical (Brown) Lunation Number = 1099

Islamic Lunation Number = 17184

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – may need optical aid before visible to the unaided eye
- D – only visible with binoculars or a telescope
- E – Danjon limit ( $8^\circ$ ) – invisible even with optical aid

Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

More info: <http://www.staff.science.uu.nl/~gent0113/>