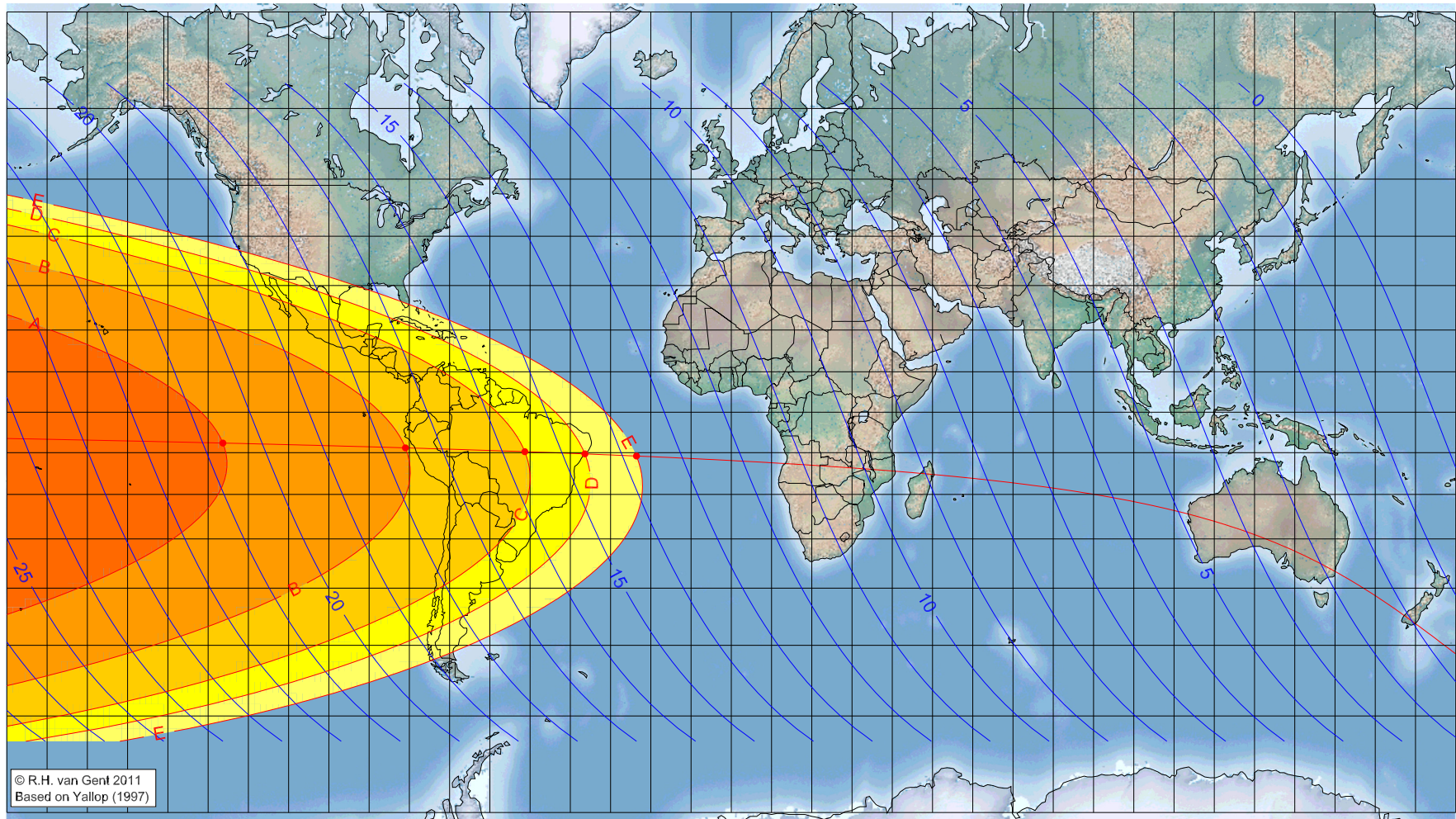


First visibility lunar crescent for Muḥarram 1433 AH

Global visibility map for 25 November 2011 [Friday]

Day of luni-solar conjunction



Astronomical New Moon: 25 November 2011, 6h 9.6m (UTC)

$\Delta T = 1.1$ min

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
-126.33	-7.64	20.66
-80.97	-8.82	17.61
-51.30	-9.76	15.62
-36.38	-10.30	14.62
-23.56	-10.82	13.76

- 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 = 1100

Islamic Lunation Number = 17185

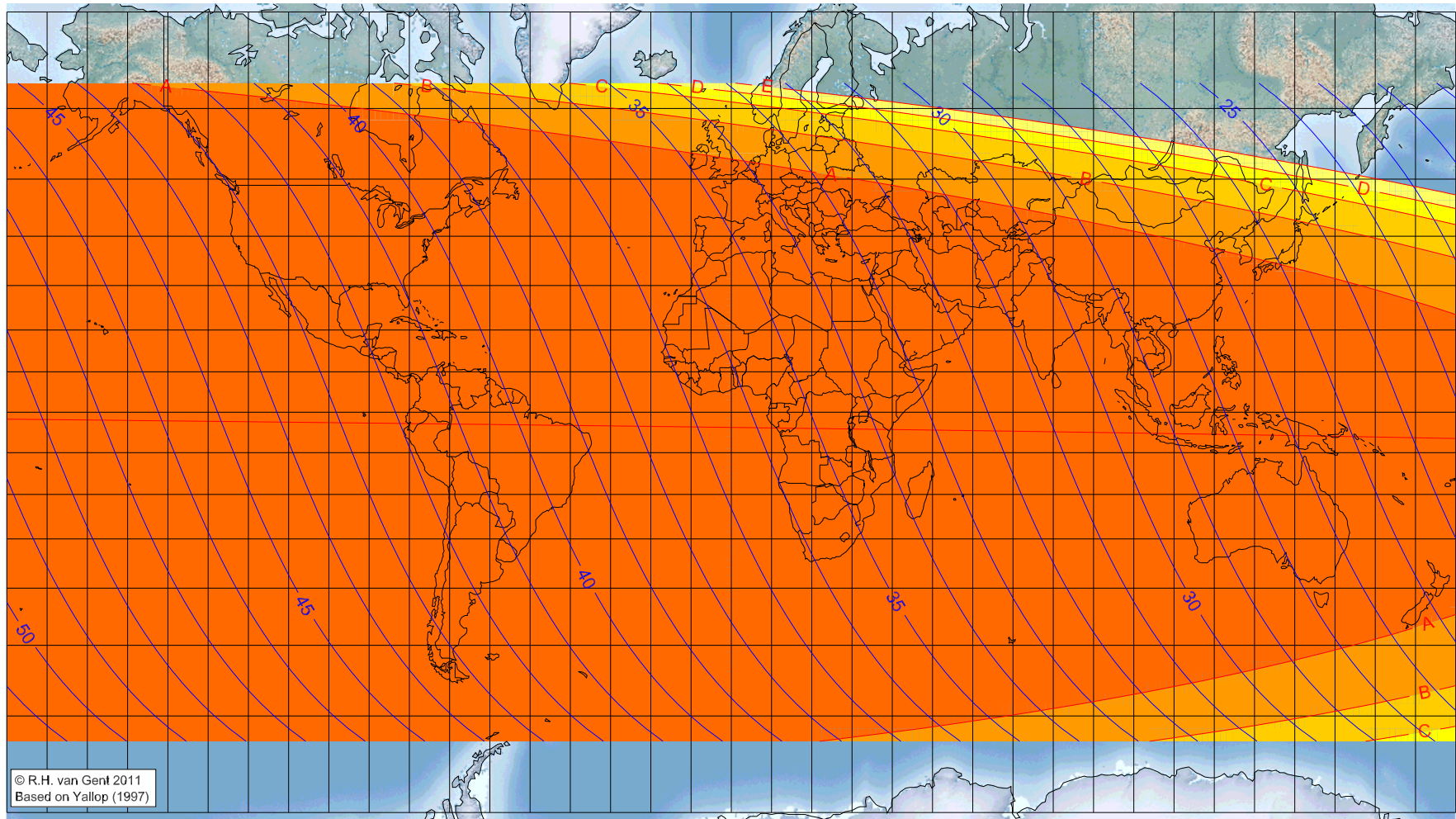
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Muḥarram 1433 AH

Global visibility map for 26 November 2011 [Saturday]

Day after luni-solar conjunction



Astronomical New Moon: 25 November 2011, 6h 9.6m (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 = 1100

Islamic Lunation Number = 17185

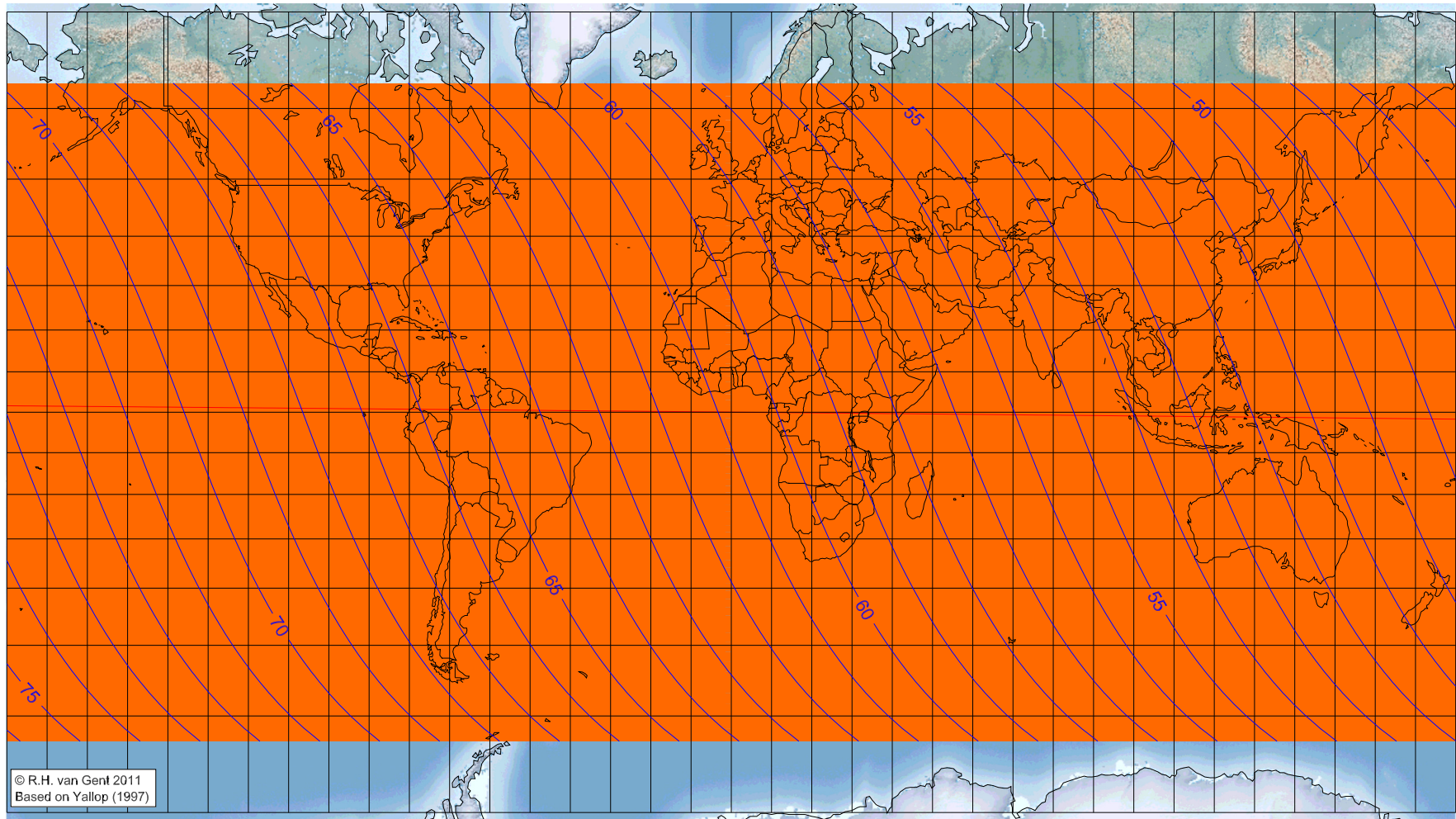
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Muḥarram 1433 AH

Global visibility map for 27 November 2011 [Sunday]

Second day after luni-solar conjunction



Astronomical New Moon: 25 November 2011, 6h 9.6m (UTC)

$\Delta T = 1.1$ min

- 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 = 1100

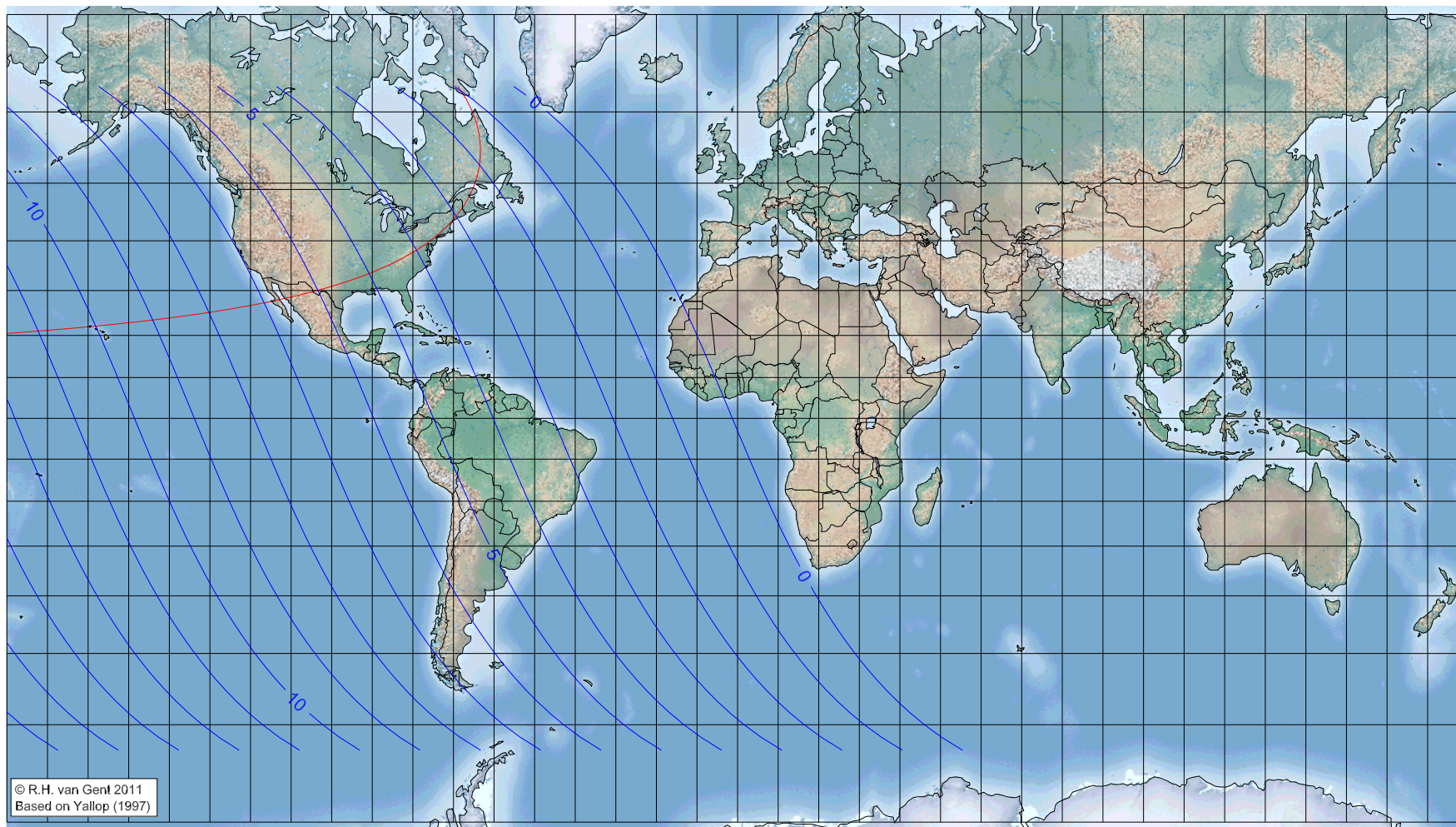
Islamic Lunation Number = 17185

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 1433 AH

Global visibility map for 24 December 2011 [Saturday]
Day of luni-solar conjunction



Astronomical New Moon: 24 December 2011, 18h 6.3m (UTC)
 $\Delta T = 1.1$ min

First visibility (●)

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

- 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 = 1101
Islamic Lunation Number = 17186

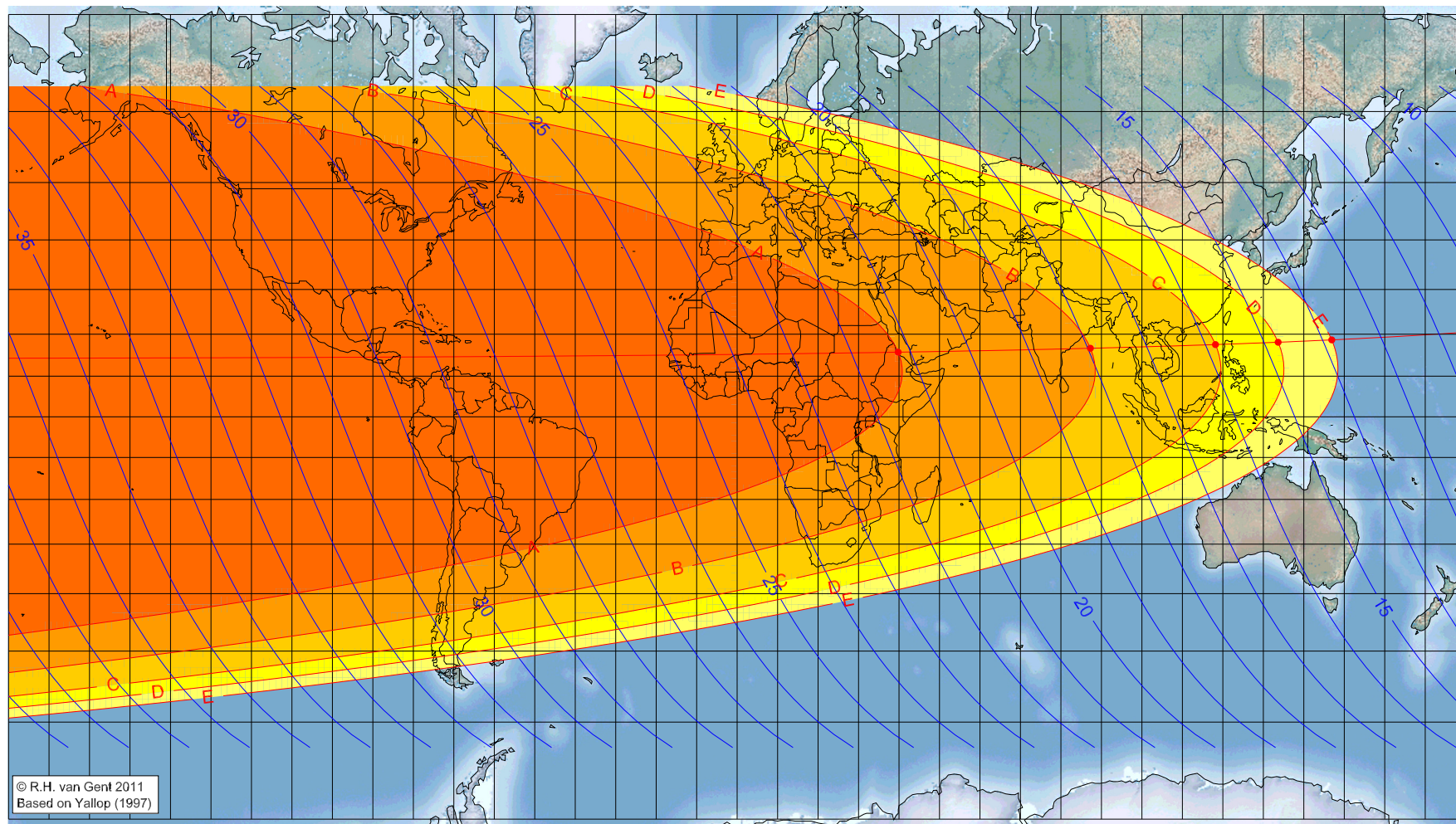
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

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

First visibility lunar crescent for Şafar 1433 AH

Global visibility map for 25 December 2011 [Sunday]

Day after luni-solar conjunction



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

Astronomical New Moon: 24 December 2011, 18h 6.3m (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°) – invisible even with optical aid

Longitude ($^\circ$)	Latitude ($^\circ$)	Lunar age (h)
39.79	15.77	21.21
87.28	16.70	17.96
118.18	17.57	15.83
133.66	18.12	14.76
146.91	18.67	13.84

Astronomical (Brown) Lunation Number = 1101

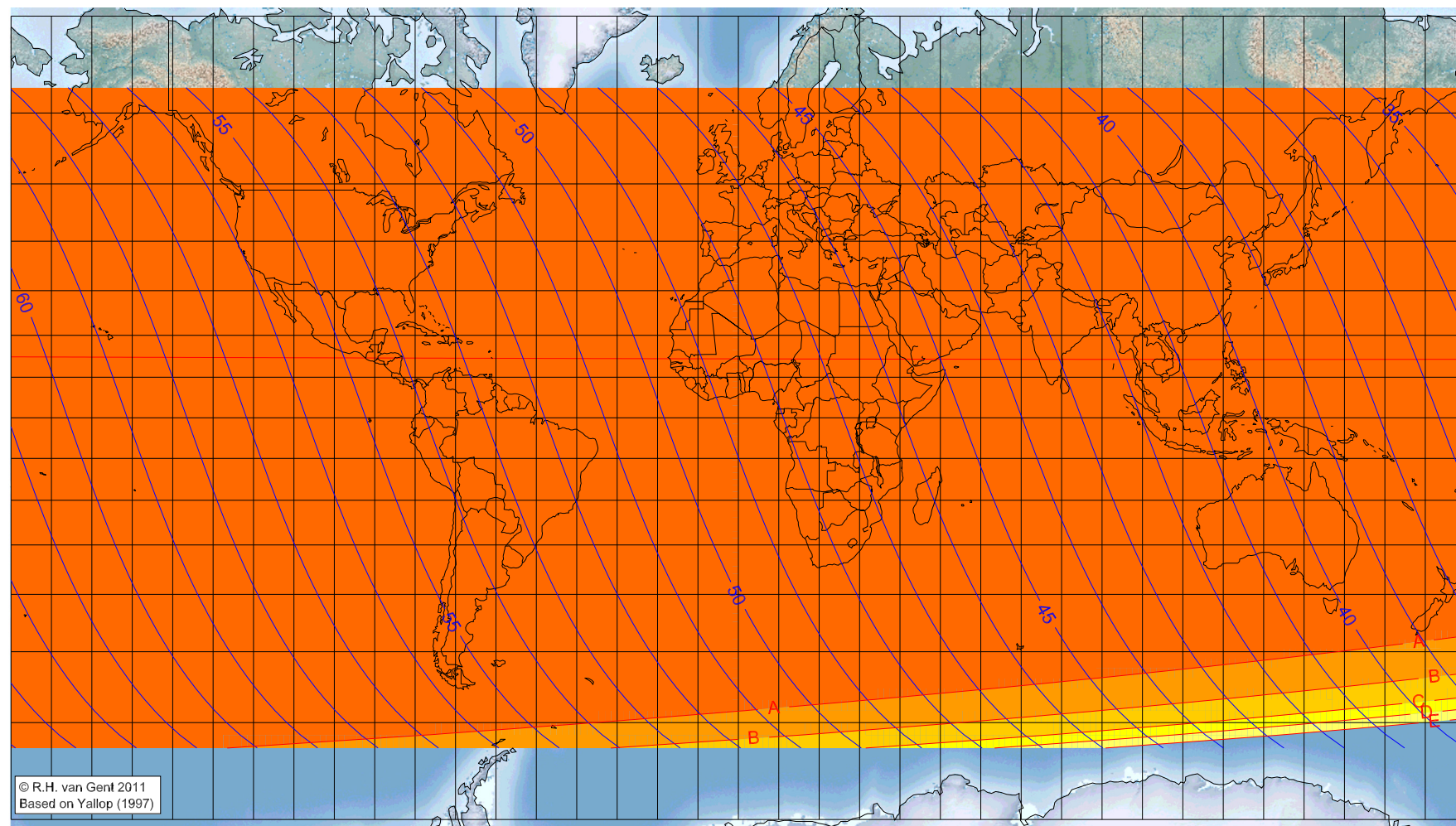
Islamic Lunation Number = 17186

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 1433 AH

Global visibility map for 26 December 2011 [Monday]
Second day after luni-solar conjunction



Astronomical New Moon: 24 December 2011, 18h 6.3m (UTC)
 $\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1101
Islamic Lunation Number = 17186

- 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

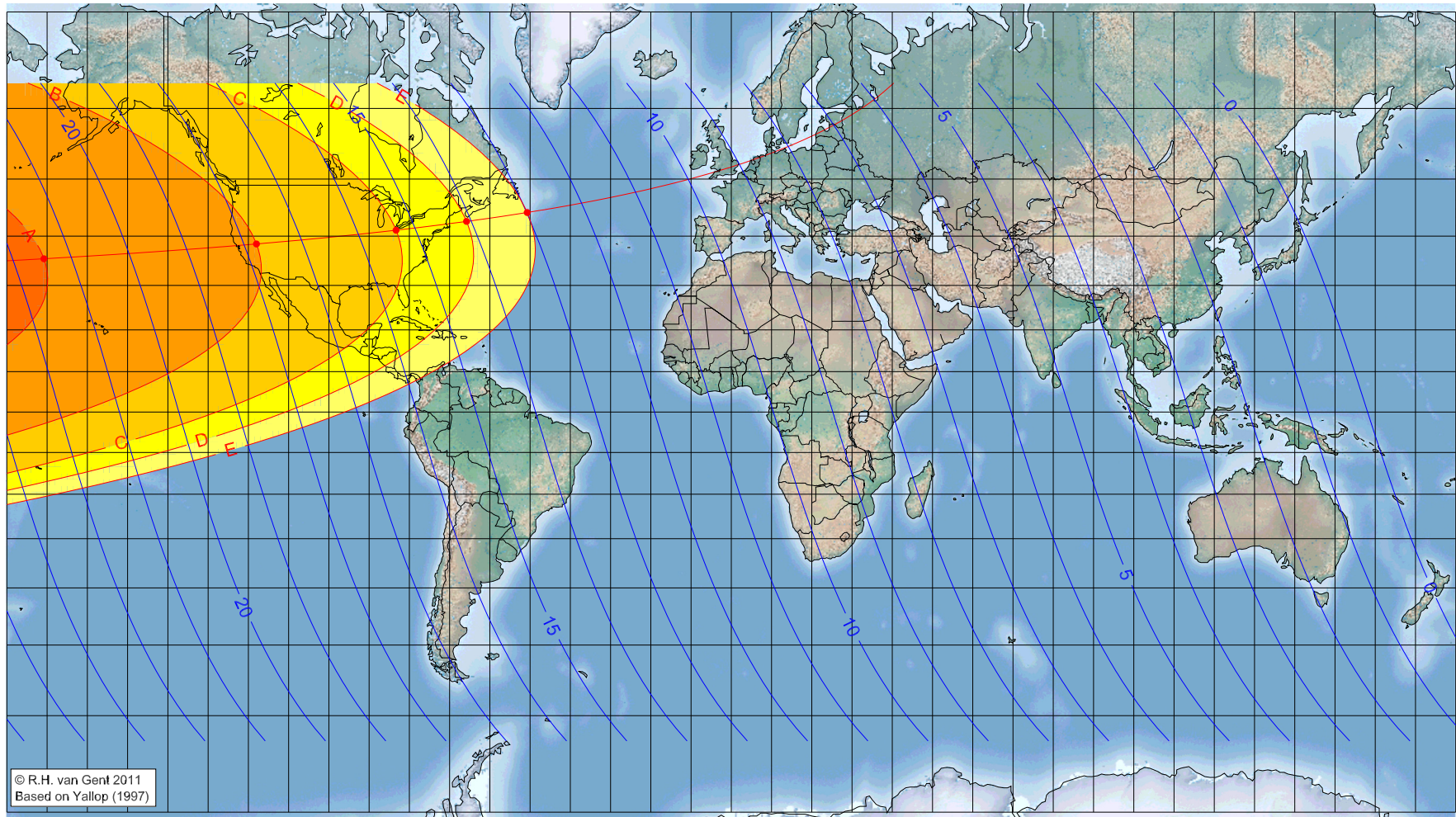
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

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

First visibility lunar crescent for Rabī al-Awwal 1433 AH

Global visibility map for 23 January 2012 [Monday]

Day of luni-solar conjunction



Astronomical New Moon: 23 January 2012, 7h 39.3m (UTC)

$\Delta T = 1.1$ min

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
-170.79	35.56	21.47
-117.99	38.50	17.79
-83.30	41.12	15.33
-65.79	42.75	14.08
-50.72	44.35	12.99

- 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 = 1102

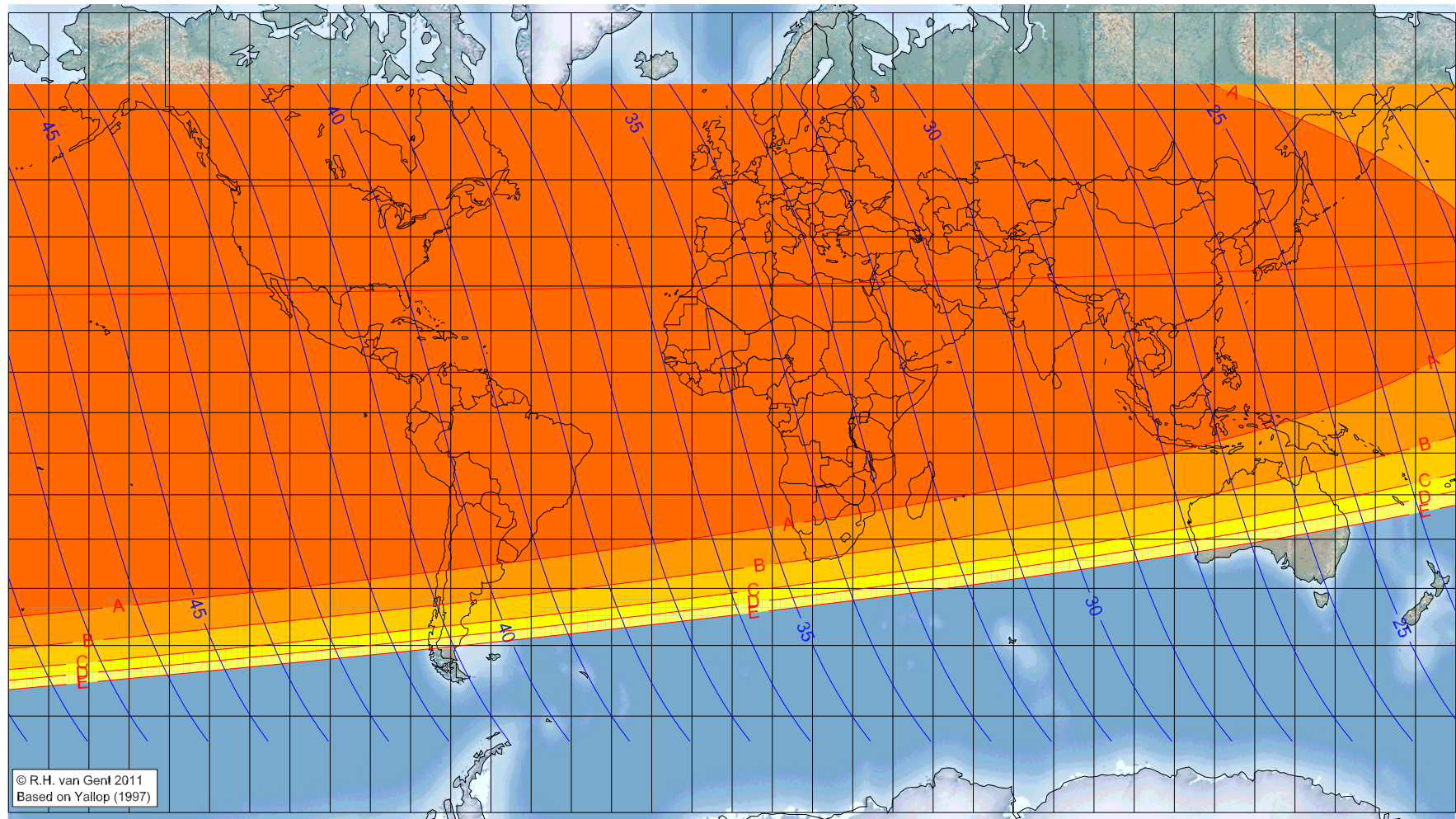
Islamic Lunation Number = 17187

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 1433 AH

Global visibility map for 24 January 2012 [Tuesday]
Day after luni-solar conjunction



Astronomical New Moon: 23 January 2012, 7h 39.3m (UTC)
 $\Delta T = 1.1$ min

First visibility (●)

Longitude (°)	Latitude (°)	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

- 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

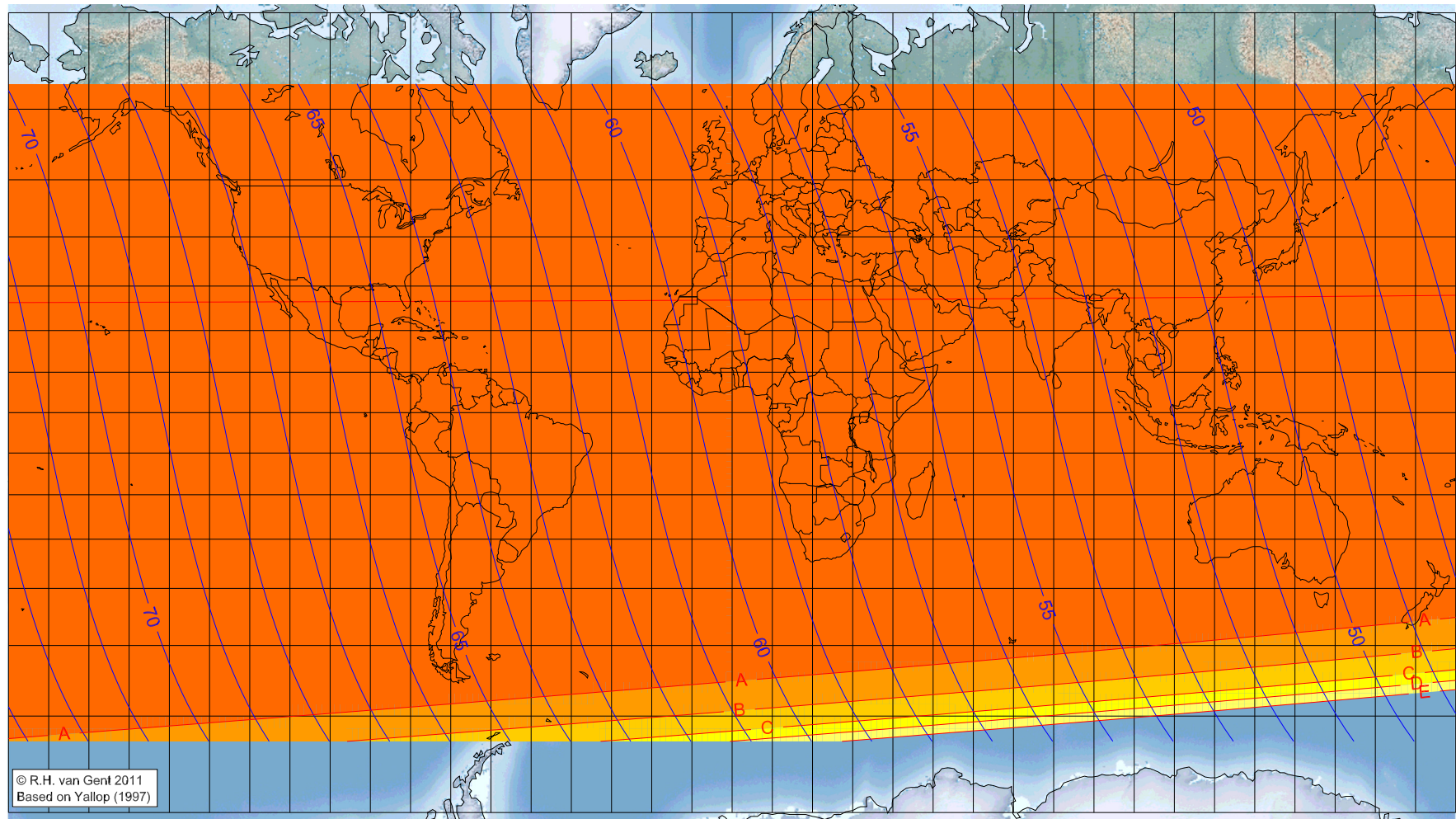
Astronomical (Brown) Lunation Number = 1102
Islamic Lunation Number = 17187

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 1433 AH

Global visibility map for 25 January 2012 [Wednesday]
Second day after luni-solar conjunction



Astronomical New Moon: 23 January 2012, 7h 39.3m (UTC)
 $\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1102
Islamic Lunation Number = 17187

- 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

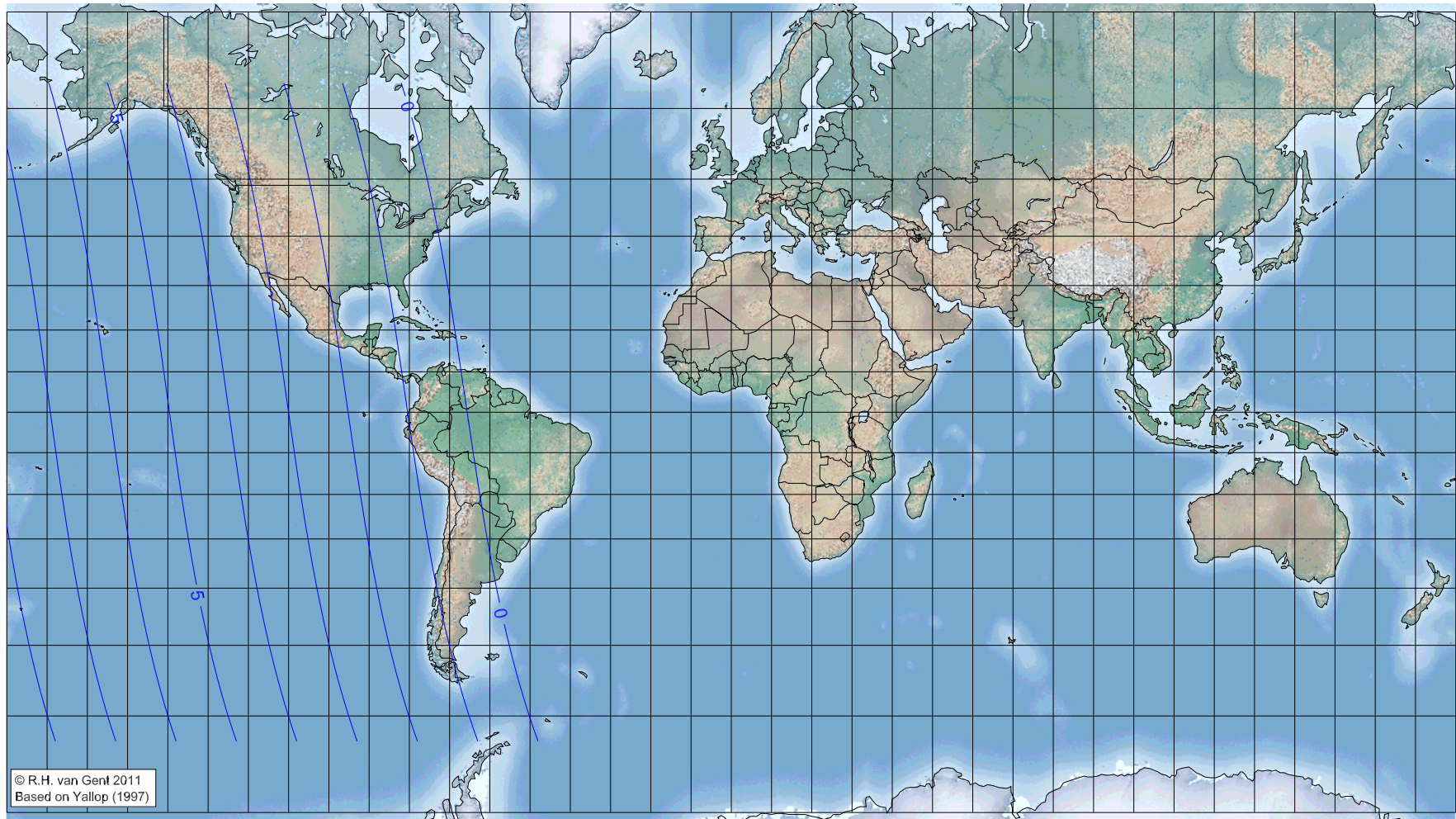
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

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

First visibility lunar crescent for Rabī al-Ākhir 1433 AH

Global visibility map for 21 February 2012 [Tuesday]

Day of luni-solar conjunction



Astronomical New Moon: 21 February 2012, 22h 34.6m (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 = 1103

Islamic Lunation Number = 17188

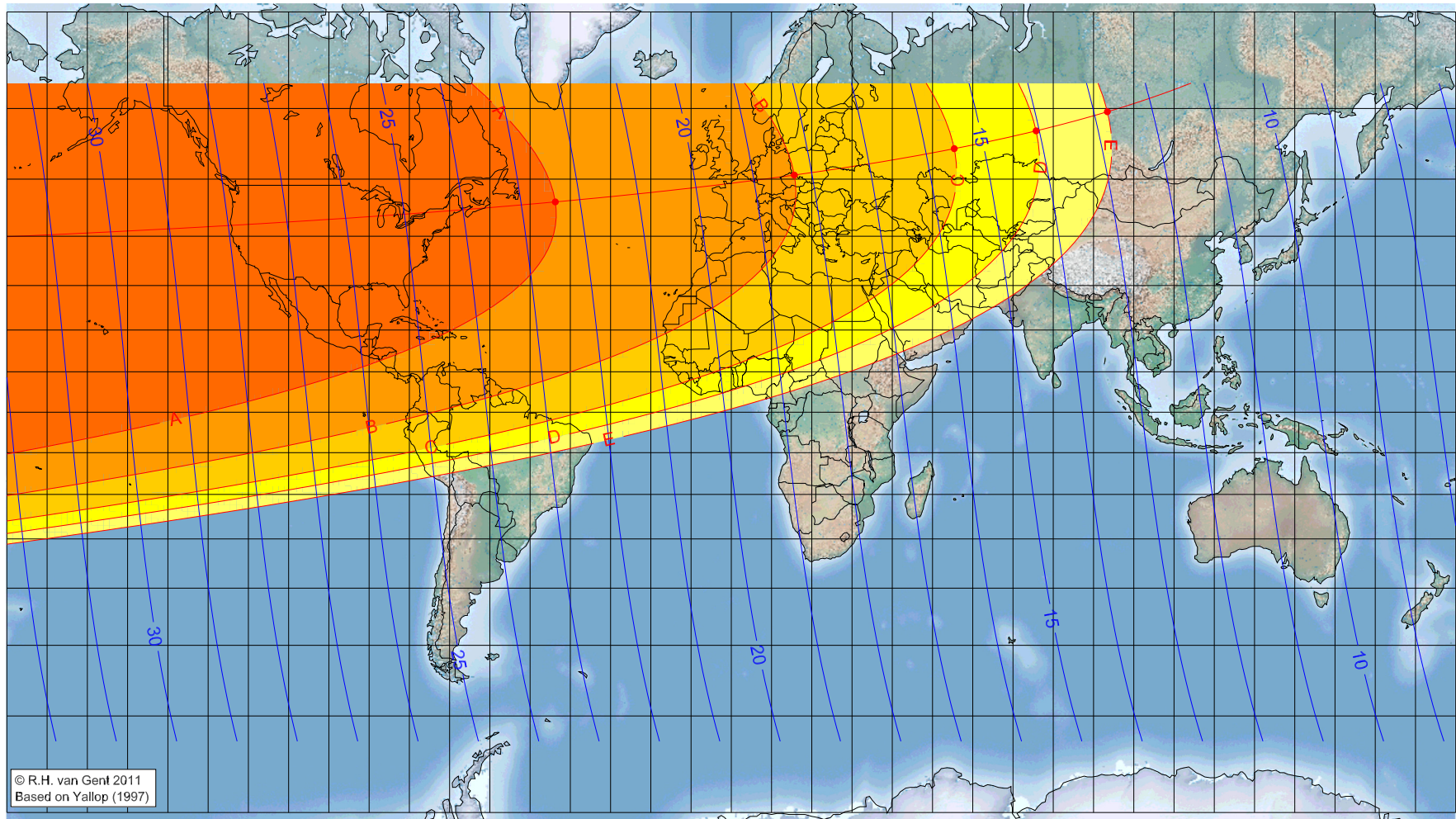
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

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

First visibility lunar crescent for Rabī al-Ākhir 1433 AH

Global visibility map for 22 February 2012 [Wednesday]

Day after luni-solar conjunction



Astronomical New Moon: 21 February 2012, 22h 34.6m (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

-43.73	46.22	22.42
15.65	50.64	18.30
55.39	54.62	15.51
75.74	57.10	14.05
93.44	59.59	12.77

Astronomical (Brown) Lunation Number = 1103

Islamic Lunation Number = 17188

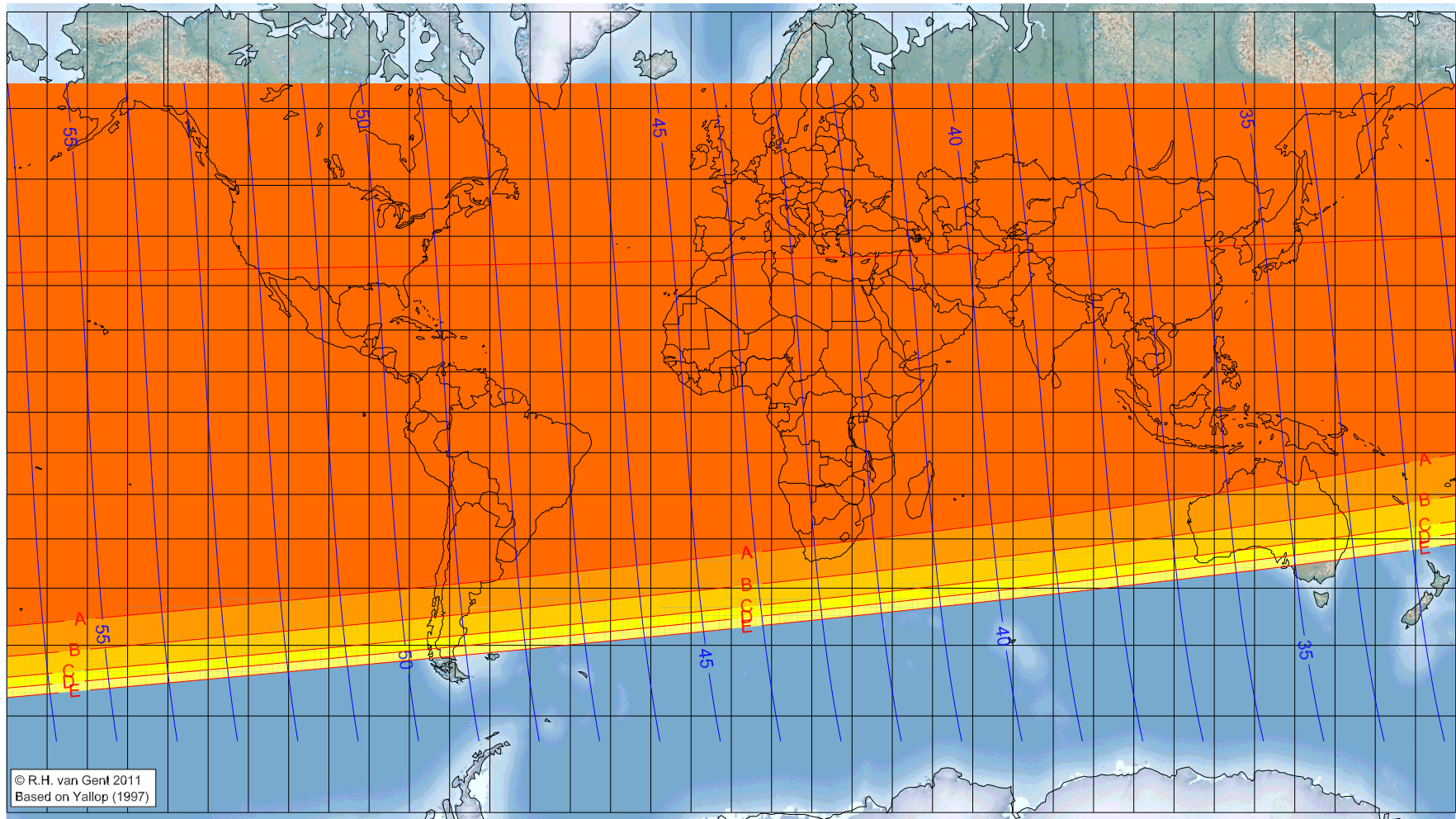
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Rabī al-Ākhir 1433 AH

Global visibility map for 23 February 2012 [Thursday]

Second day after luni-solar conjunction



Astronomical New Moon: 21 February 2012, 22h 34.6m (UTC)

$\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1103

Islamic Lunation Number = 17188

- 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

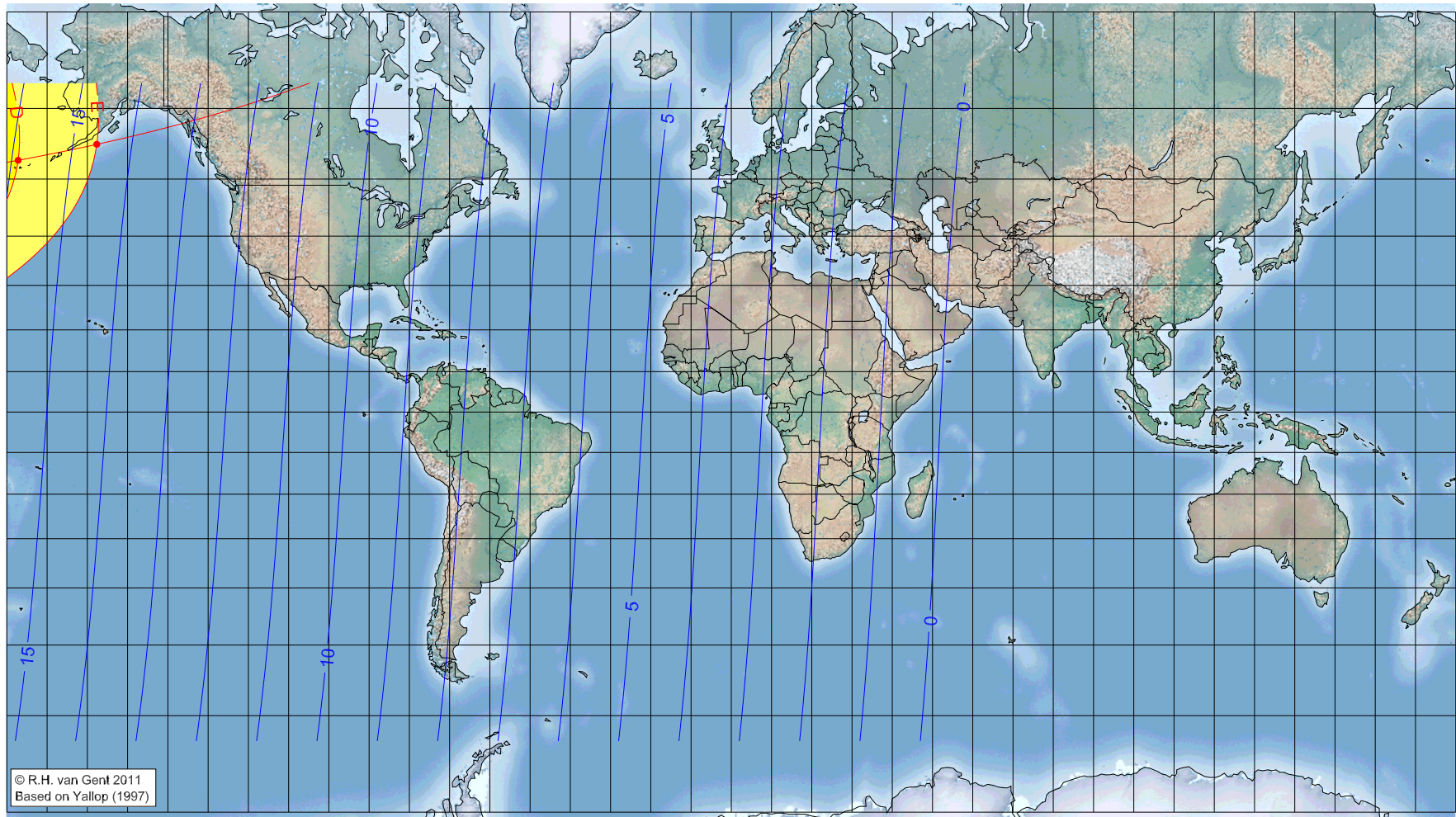
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Jumādā 'l-Ūlā 1433 AH

Global visibility map for 22 March 2012 [Thursday]

Day of luni-solar conjunction



Astronomical New Moon: 22 March 2012, 14h 37.1m (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°) – invisible even with optical aid

Longitude ($^\circ$)	Latitude ($^\circ$)	Lunar age (h)
		not visible until the next evening
		not visible until the next evening
		not visible until the next evening
-177.20	52.90	15.89
-157.66	55.23	14.60

Astronomical (Brown) Lunation Number = 1104

Islamic Lunation Number = 17189

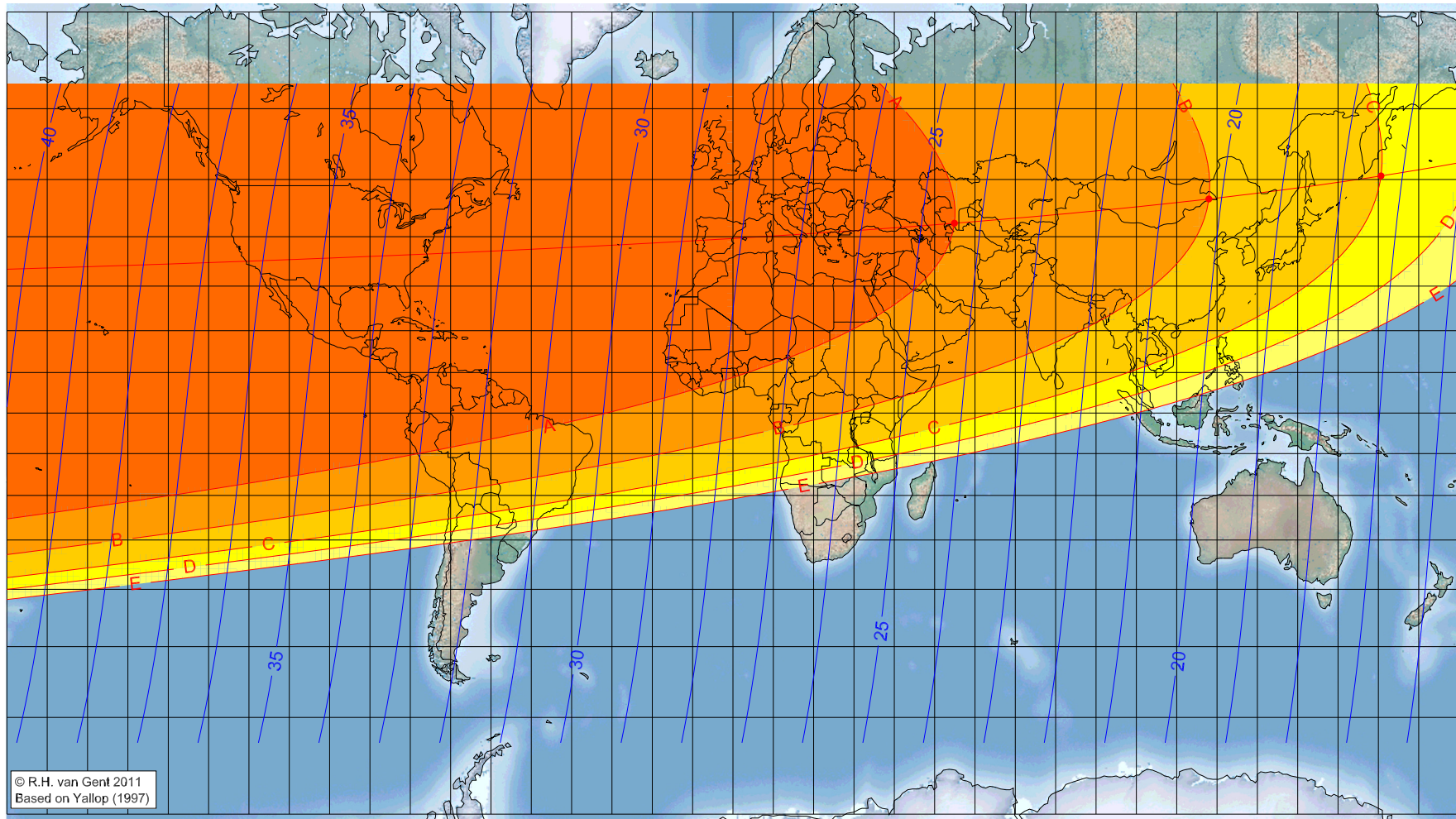
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Jumādā 'l-Ūlā 1433 AH

Global visibility map for 23 March 2012 [Friday]

Day after luni-solar conjunction



Astronomical New Moon: 22 March 2012, 14h 37.1m (UTC)

$\Delta T = 1.1$ min

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
54.90	42.52	24.45
117.98	46.79	20.21
160.65	50.57	17.36
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 = 1104

Islamic Lunation Number = 17189

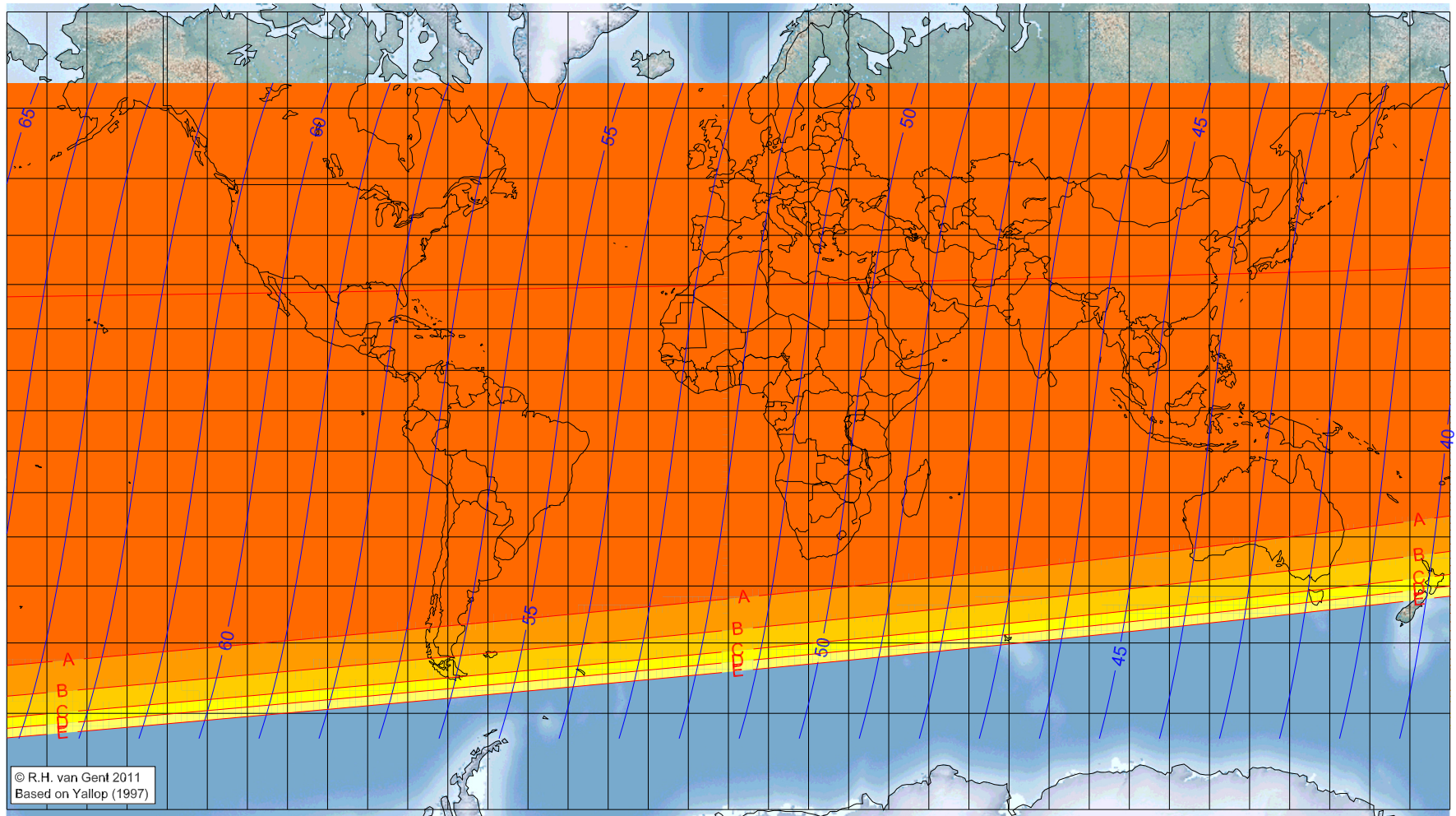
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Jumādā 'l-Ūlā 1433 AH

Global visibility map for 24 March 2012 [Saturday]

Second day after luni-solar conjunction



Astronomical New Moon: 22 March 2012, 14h 37.1m (UTC)

$\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1104

Islamic Lunation Number = 17189

- 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

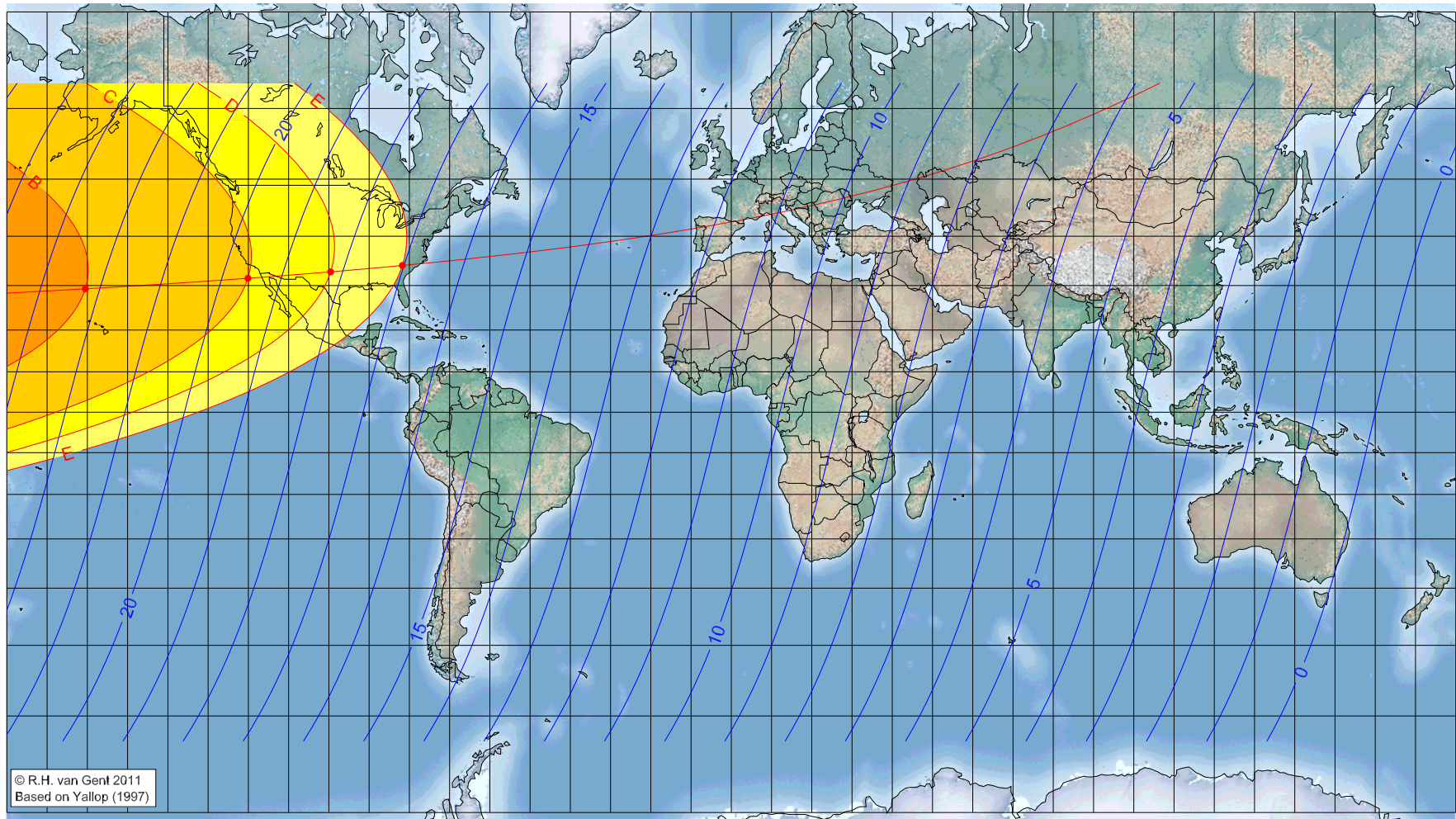
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Jumādā 'l-Ākhira 1433 AH

Global visibility map for 21 April 2012 [Saturday]

Day of luni-solar conjunction



Astronomical New Moon: 21 April 2012, 7h 18.3m (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
-160.51	29.29	22.24
-120.11	31.55	19.56
-99.55	32.90	18.20
-81.73	34.22	17.03

Astronomical (Brown) Lunation Number = 1105

Islamic Lunation Number = 17190

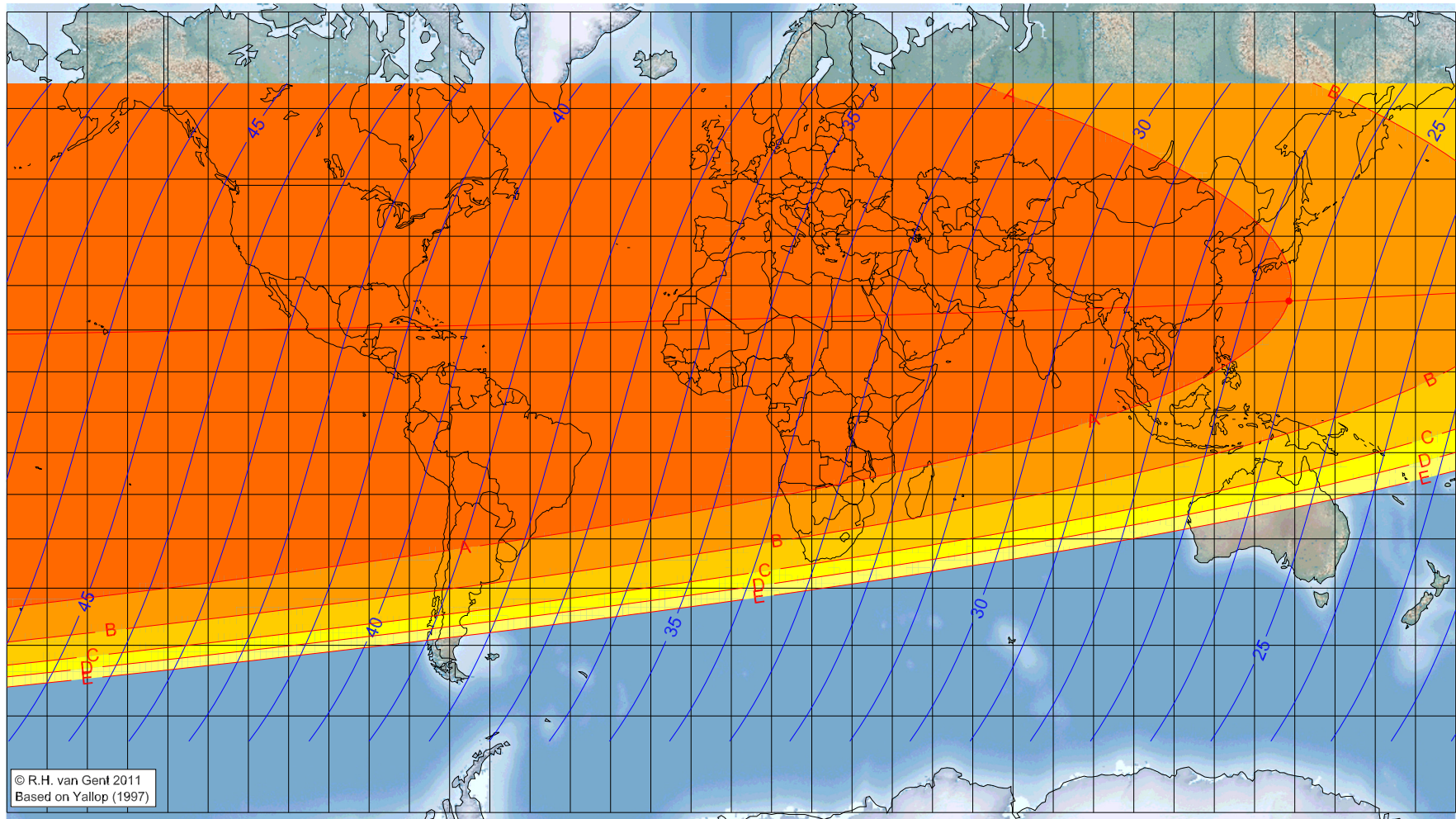
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Jumādā 'l-Ākhira 1433 AH

Global visibility map for 22 April 2012 [Sunday]

Day after luni-solar conjunction



Astronomical New Moon: 21 April 2012, 7h 18.3m (UTC)

$\Delta T = 1.1$ min

First visibility (●)

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

138.54	26.62	26.31
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 = 1105

Islamic Lunation Number = 17190

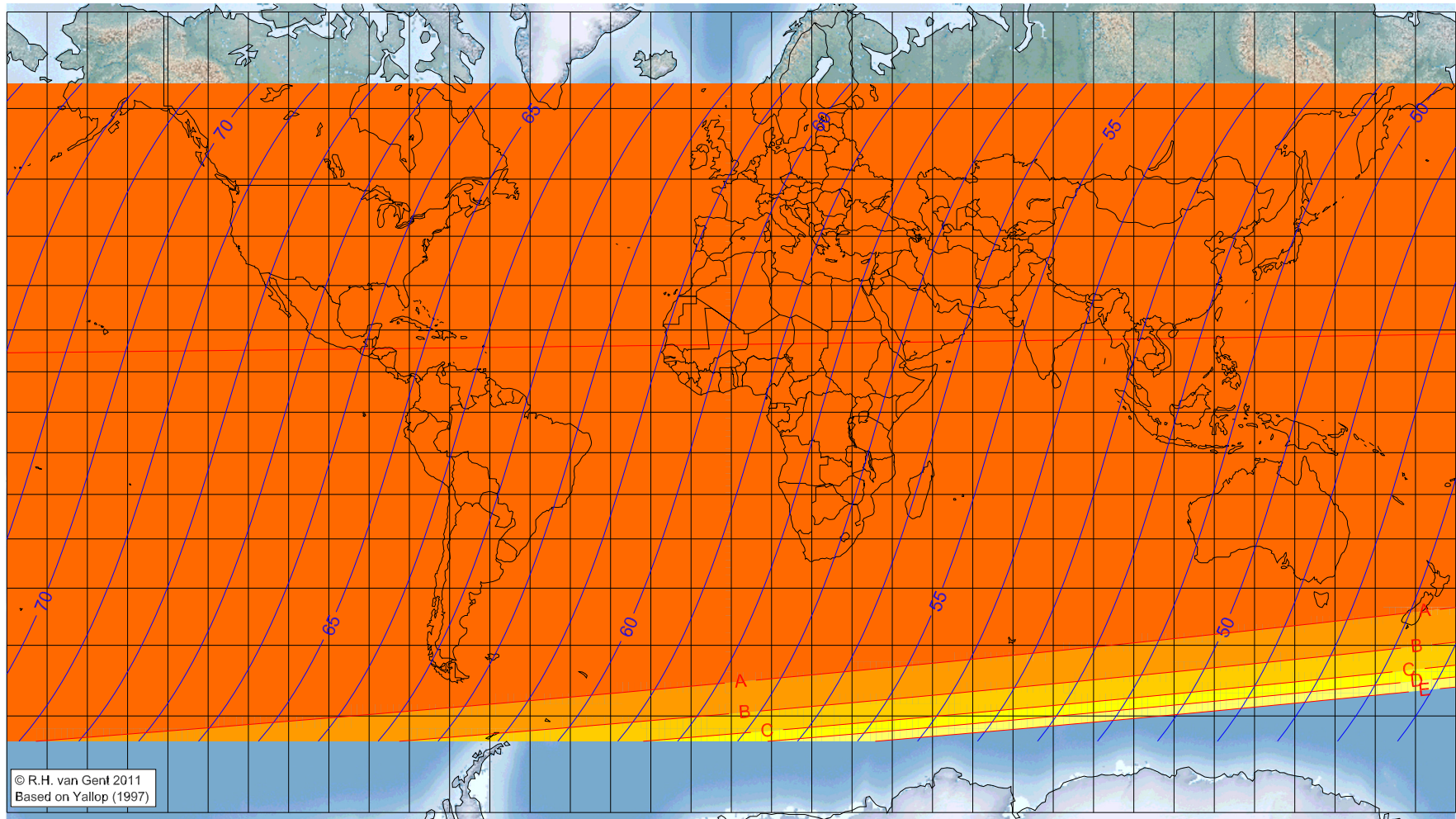
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Jumādā 'l-Ākhira 1433 AH

Global visibility map for 23 April 2012 [Monday]

Second day after luni-solar conjunction



Astronomical New Moon: 21 April 2012, 7h 18.3m (UTC)

$\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1105

Islamic Lunation Number = 17190

- 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

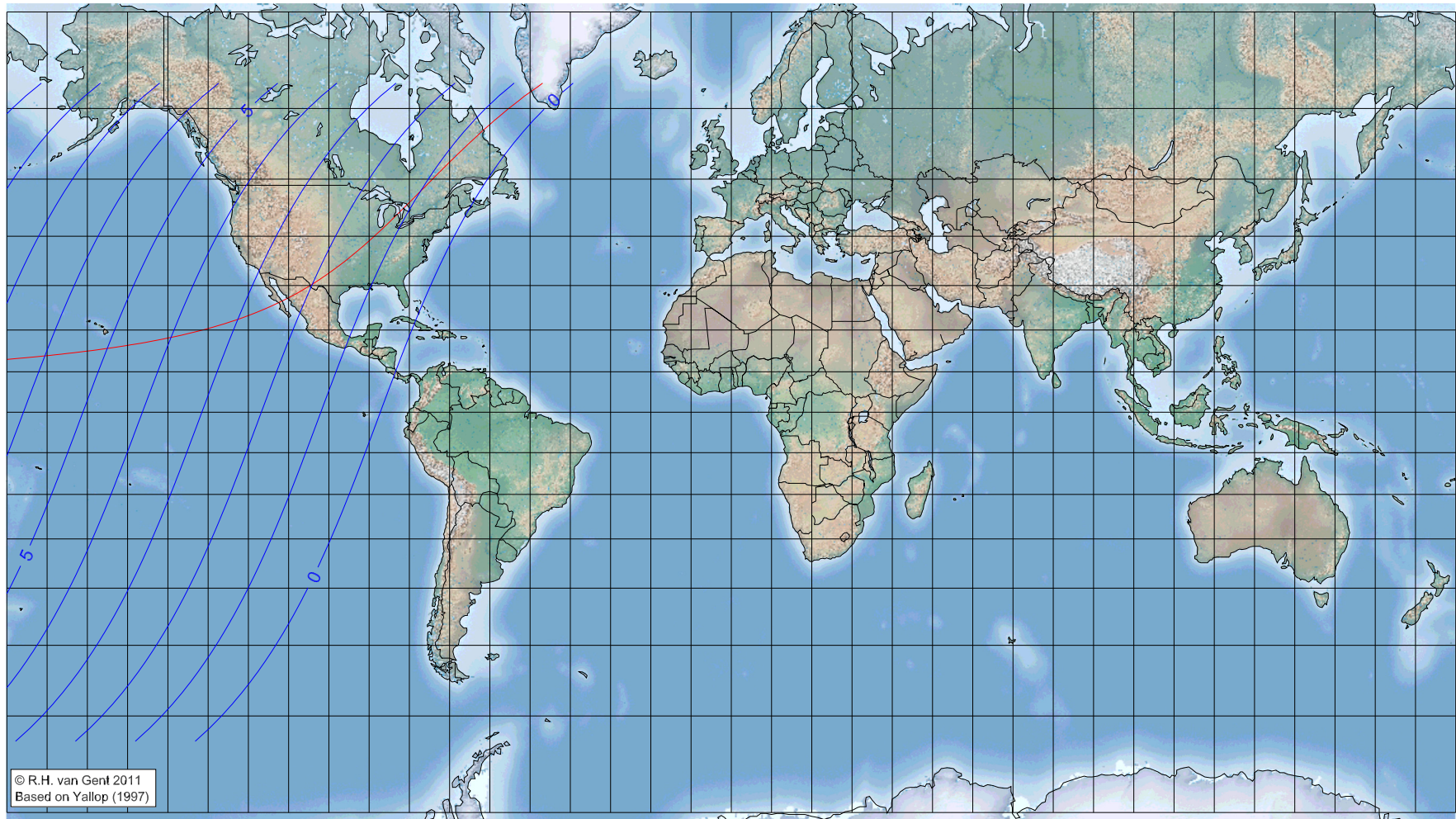
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Rajab 1433 AH

Global visibility map for 20 May 2012 [Sunday]

Day of luni-solar conjunction



Astronomical New Moon: 20 May 2012, 23h 47.0m (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

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 = 1106

Islamic Lunation Number = 17191

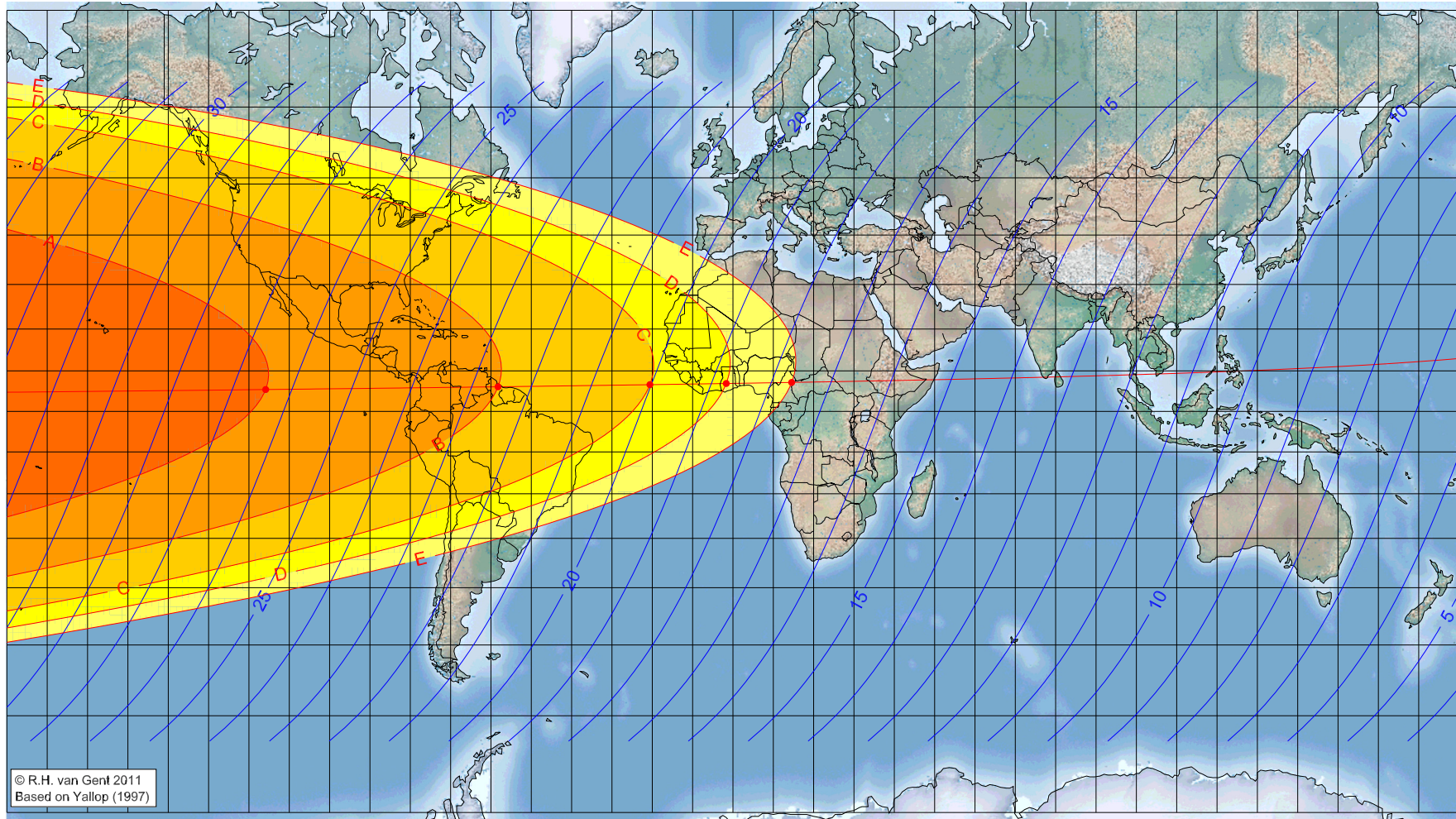
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

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

First visibility lunar crescent for Rajab 1433 AH

Global visibility map for 21 May 2012 [Monday]

Day after luni-solar conjunction



Astronomical New Moon: 20 May 2012, 23h 47.0m (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°) – invisible even with optical aid

Longitude ($^\circ$)	Latitude ($^\circ$)	Lunar age (h)
-115.85	5.41	26.44
-58.24	6.09	22.56
-20.59	6.61	20.02
-1.67	6.90	18.75
14.55	7.16	17.66

Astronomical (Brown) Lunation Number = 1106

Islamic Lunation Number = 17191

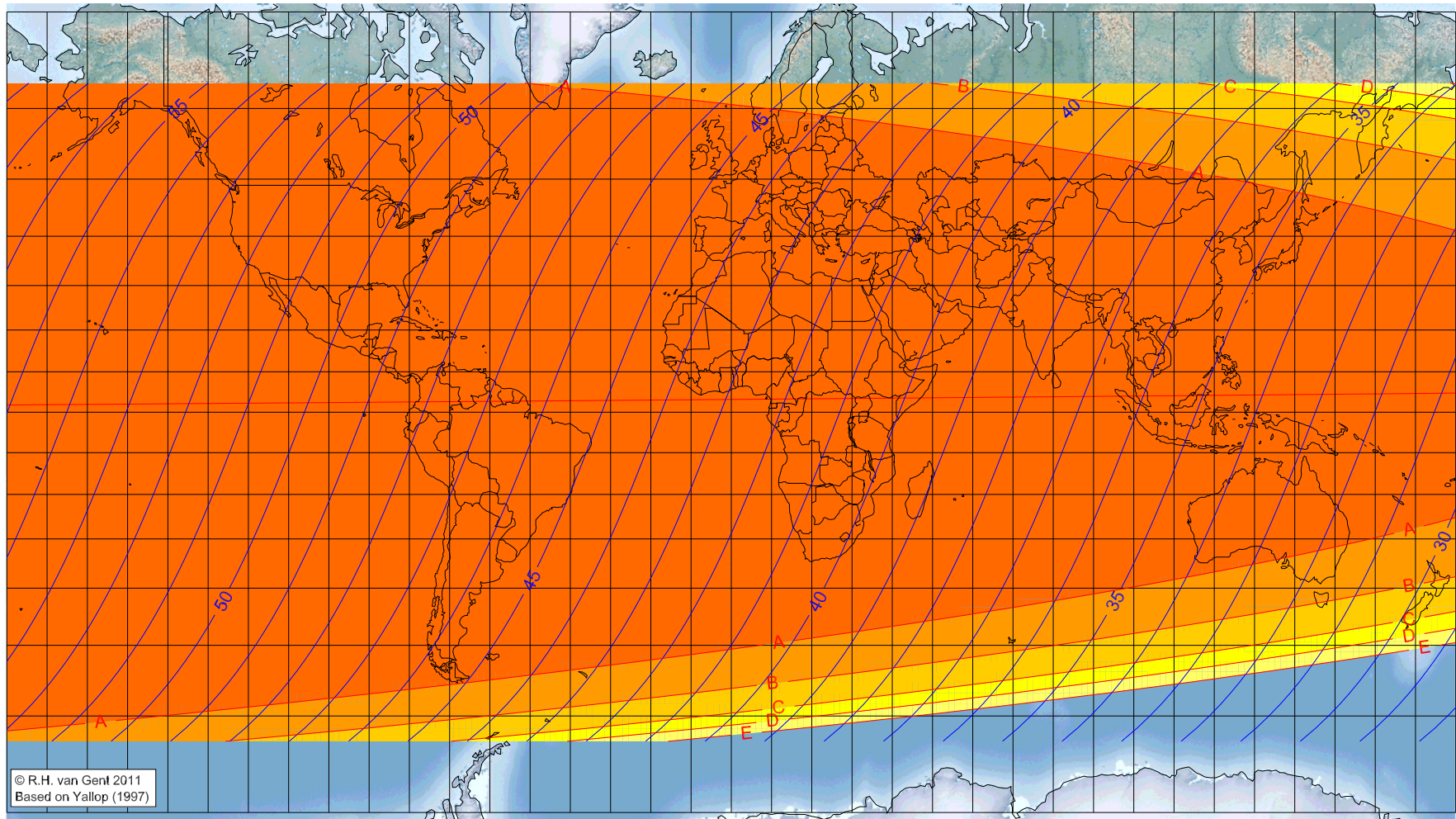
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Rajab 1433 AH

Global visibility map for 22 May 2012 [Tuesday]

Second day after luni-solar conjunction



Astronomical New Moon: 20 May 2012, 23h 47.0m (UTC)

$\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1106

Islamic Lunation Number = 17191

- 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

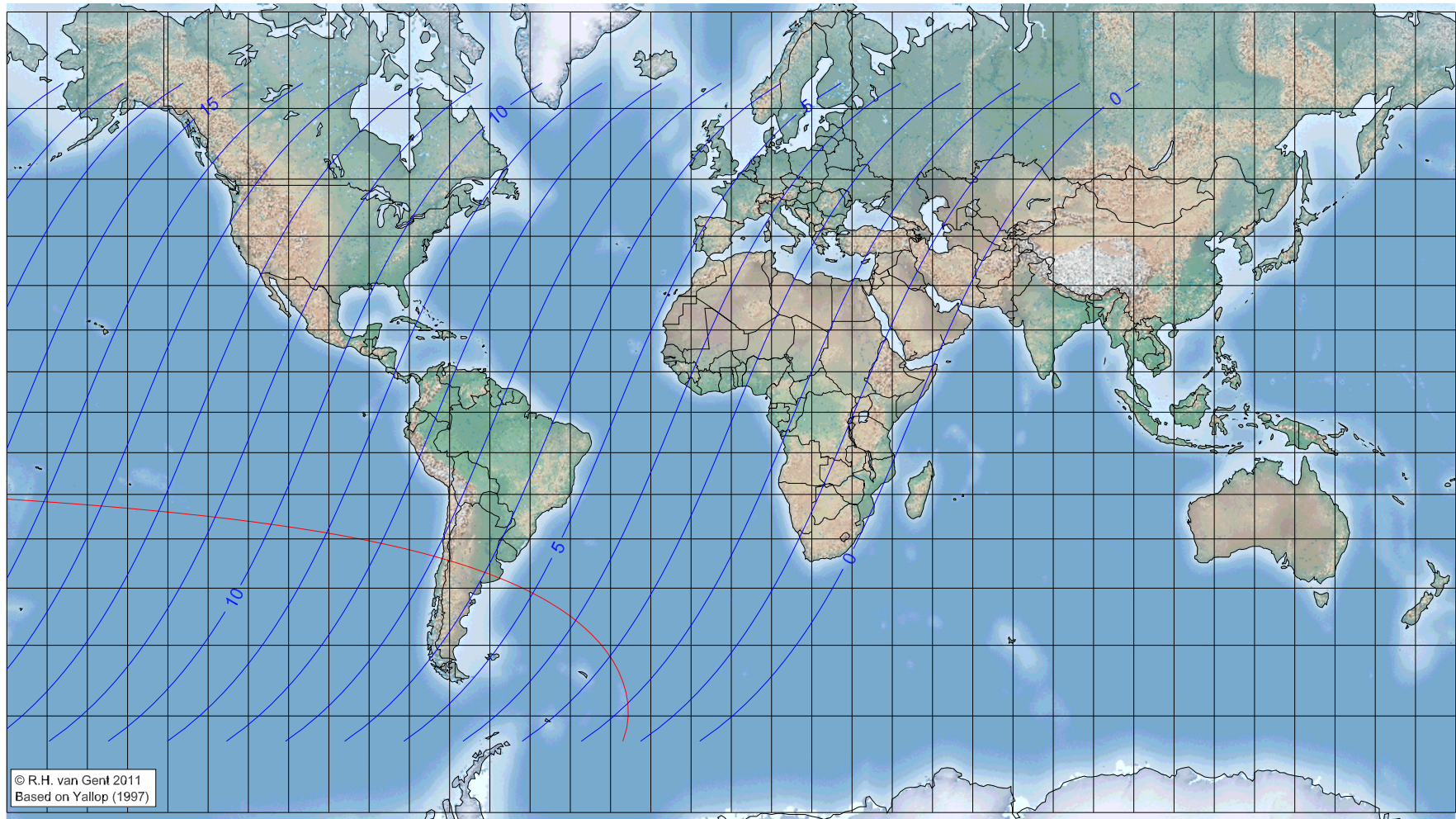
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Sha'bān 1433 AH

Global visibility map for 19 June 2012 [Tuesday]

Day of luni-solar conjunction



Astronomical New Moon: 19 June 2012, 15h 2.1m (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 = 1107

Islamic Lunation Number = 17192

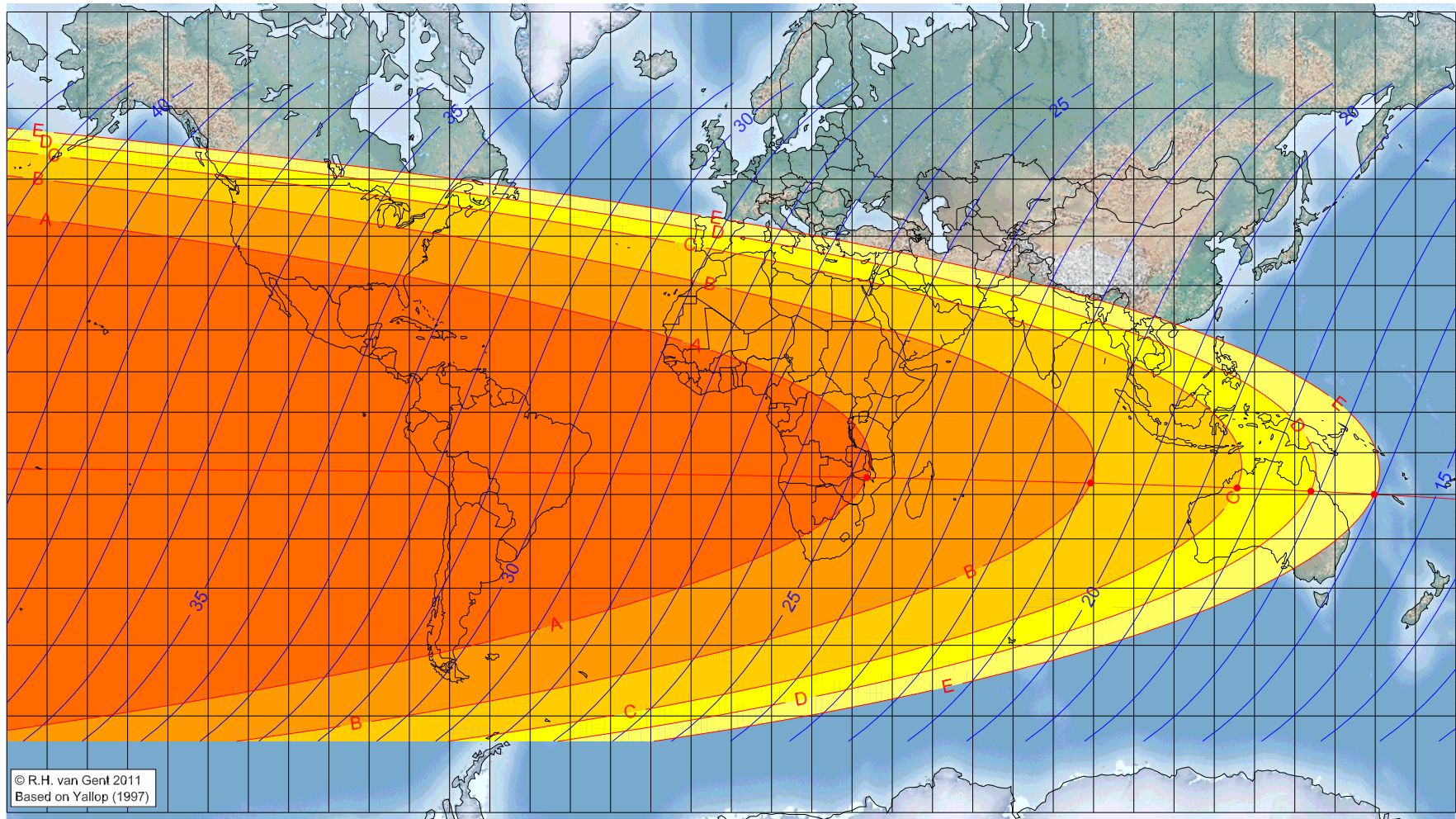
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Sha'bān 1433 AH

Global visibility map for 20 June 2012 [Wednesday]

Day after luni-solar conjunction



Astronomical New Moon: 19 June 2012, 15h 2.1m (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°) – invisible even with optical aid

Longitude ($^\circ$)	Latitude ($^\circ$)	Lunar age (h)
33.64	-16.04	24.71
89.26	-17.32	20.91
125.69	-18.50	18.40
144.02	-19.24	17.14
159.74	-19.98	16.05

Astronomical (Brown) Lunation Number = 1107

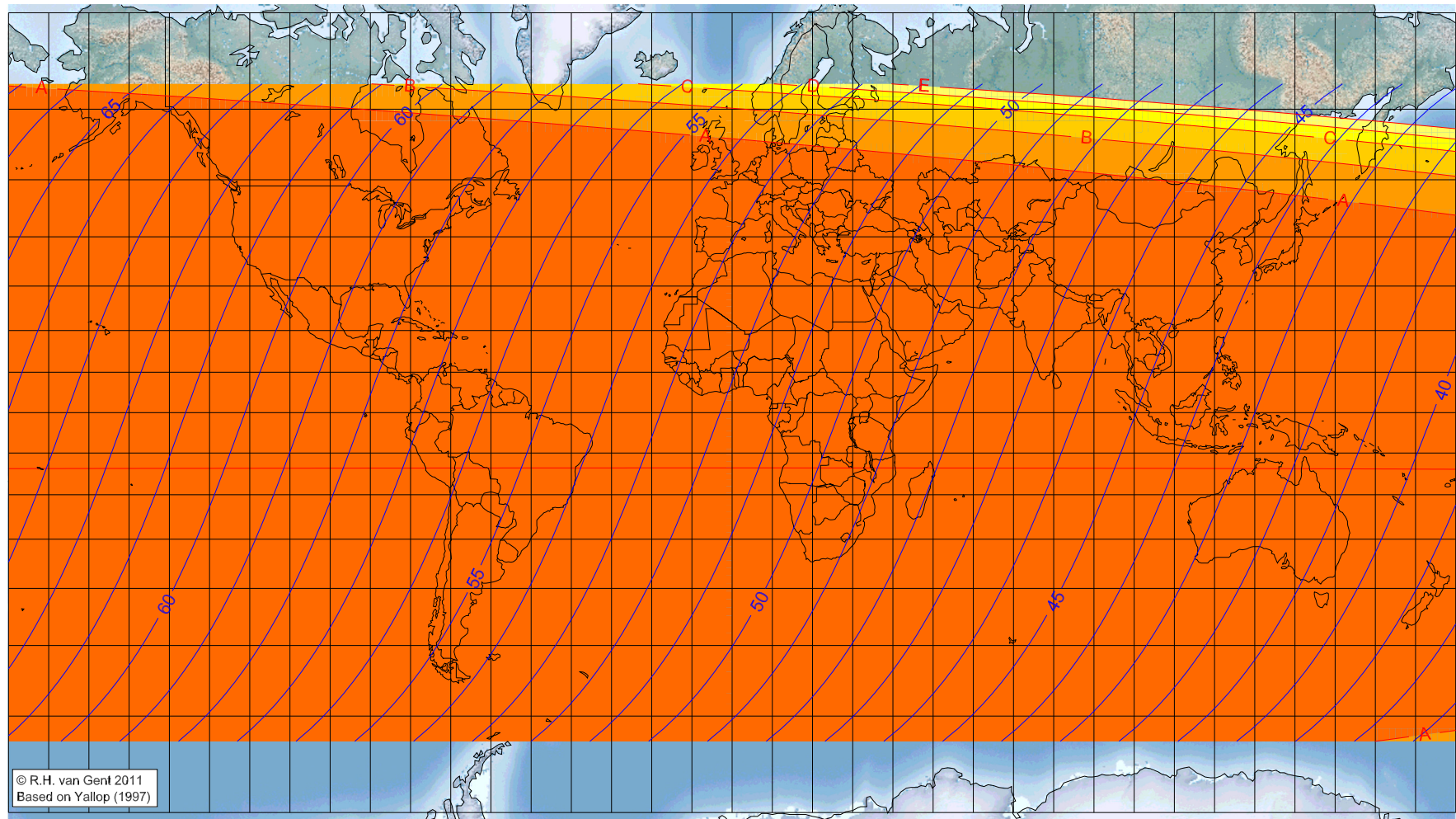
Islamic Lunation Number = 17192

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 1433 AH

Global visibility map for 21 June 2012 [Thursday]
Second day after luni-solar conjunction



Astronomical New Moon: 19 June 2012, 15h 2.1m (UTC)
 $\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1107
Islamic Lunation Number = 17192

- 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

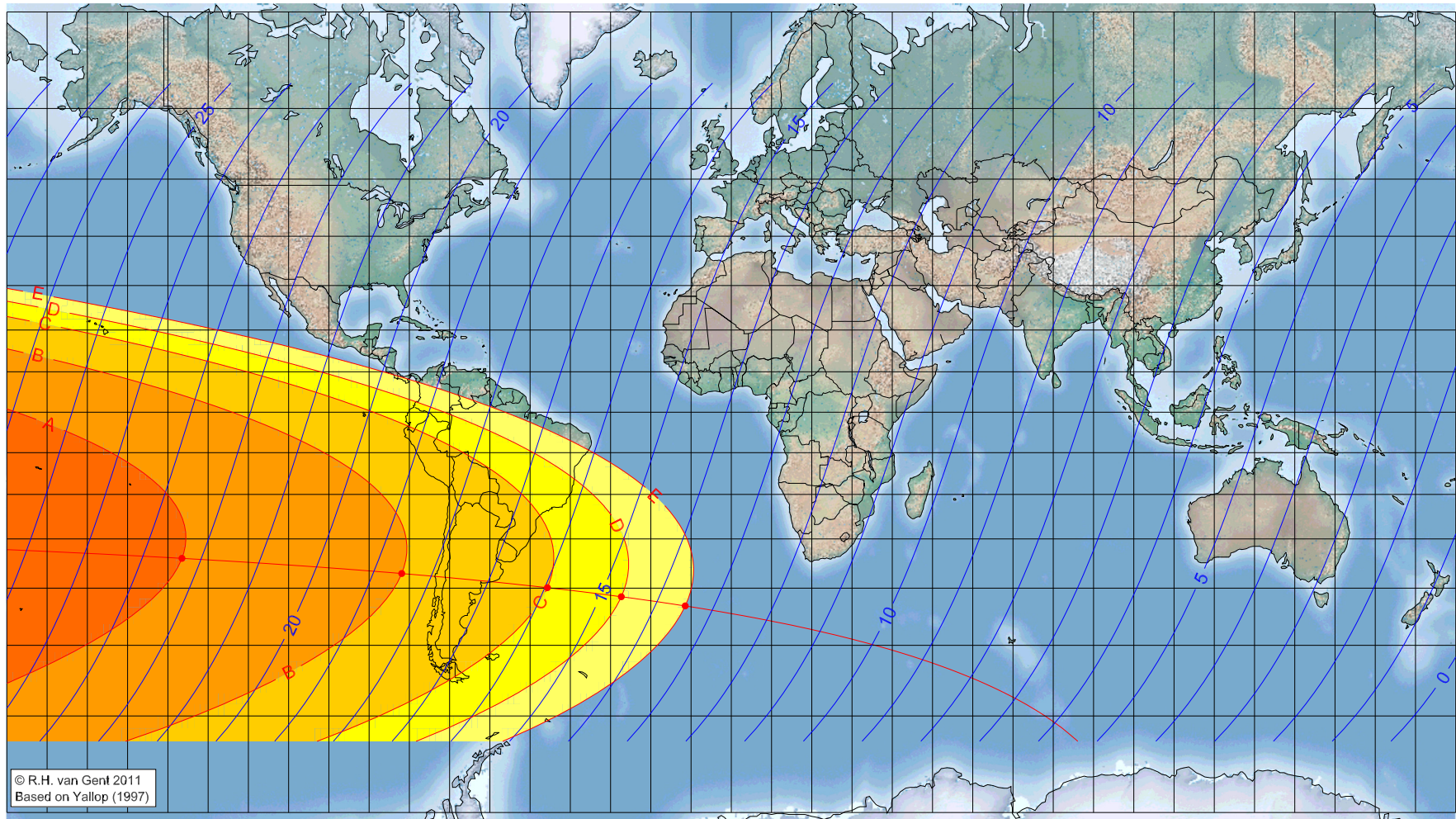
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

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

First visibility lunar crescent for Ramaḍān 1433 AH

Global visibility map for 19 July 2012 [Thursday]

Day of luni-solar conjunction



Astronomical New Moon: 19 July 2012, 4h 24.1m (UTC)

$\Delta T = 1.1$ min

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
-136.50	-34.09	22.33
-81.89	-37.15	18.52
-45.70	-39.90	15.96
-27.33	-41.61	14.64
-11.45	-43.29	13.49

- 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 = 1108

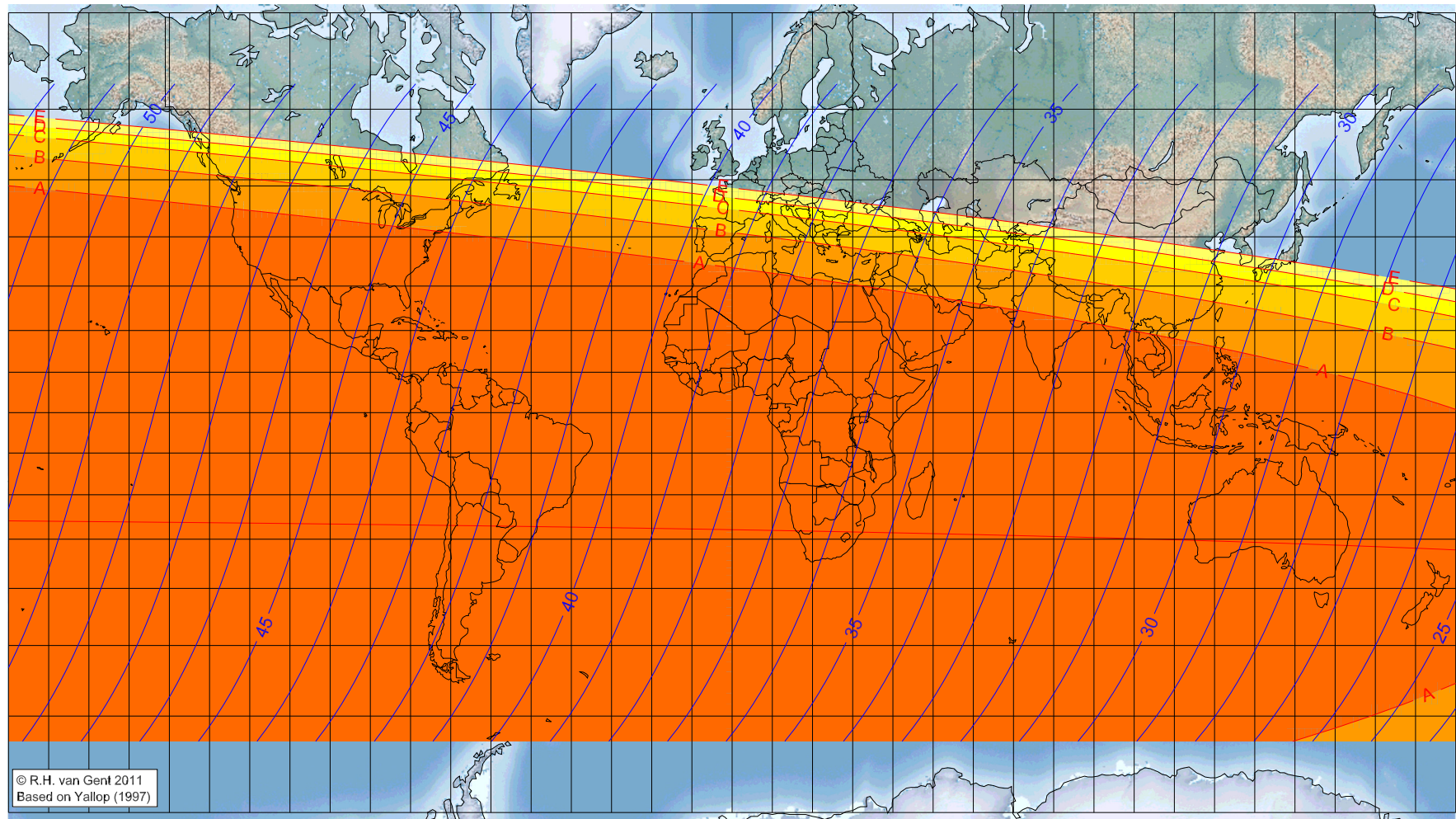
Islamic Lunation Number = 17193

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 1433 AH

Global visibility map for 20 July 2012 [Friday]
Day after luni-solar conjunction



Astronomical New Moon: 19 July 2012, 4h 24.1m (UTC)
 $\Delta T = 1.1$ min

First visibility (•)

Astronomical (Brown) Lunation Number = 1108
Islamic Lunation Number = 17193

- 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

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

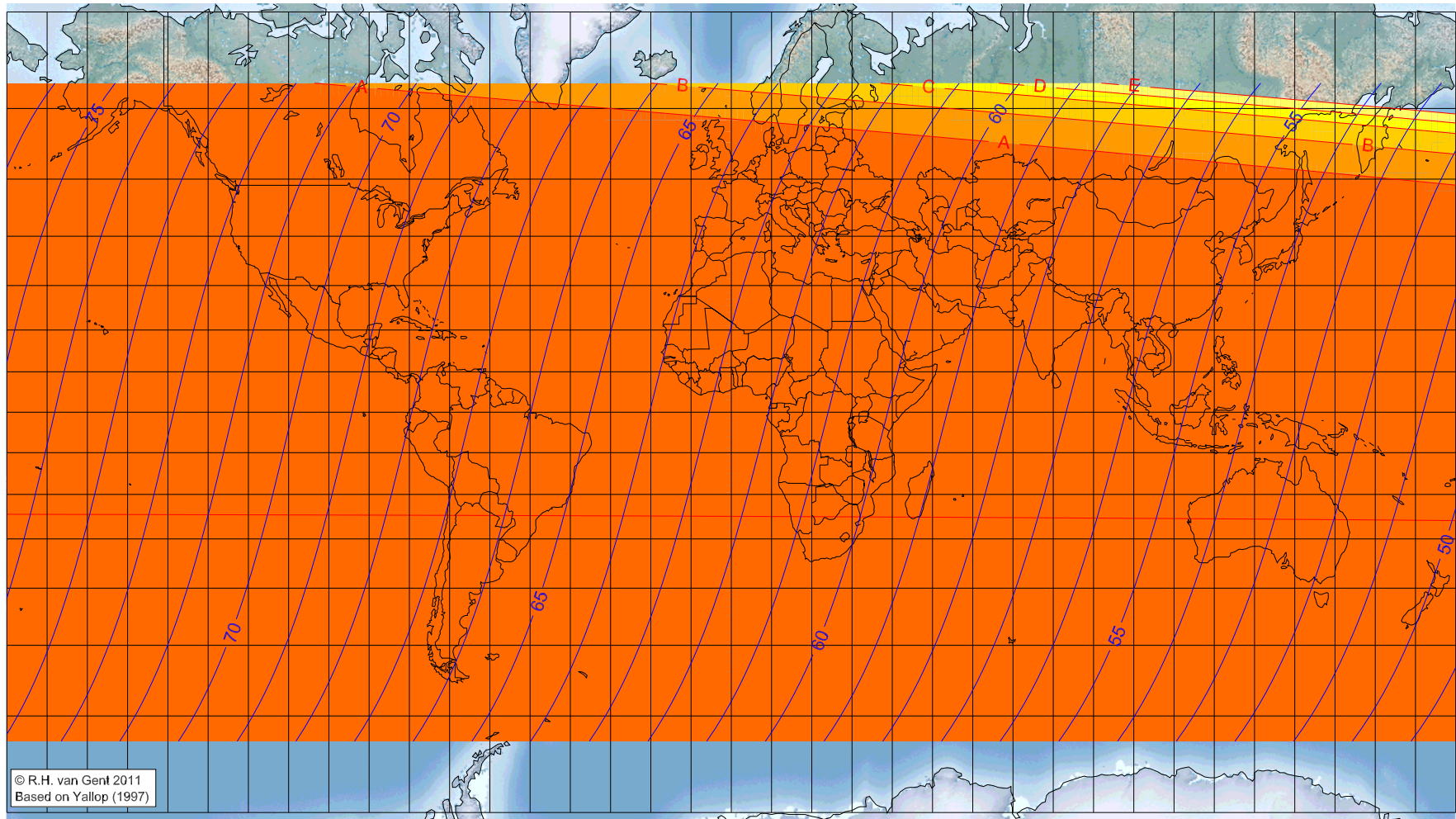
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

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

First visibility lunar crescent for Ramaḍān 1433 AH

Global visibility map for 21 July 2012 [Saturday]

Second day after luni-solar conjunction



Astronomical New Moon: 19 July 2012, 4h 24.1m (UTC)

$\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1108

Islamic Lunation Number = 17193

- 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

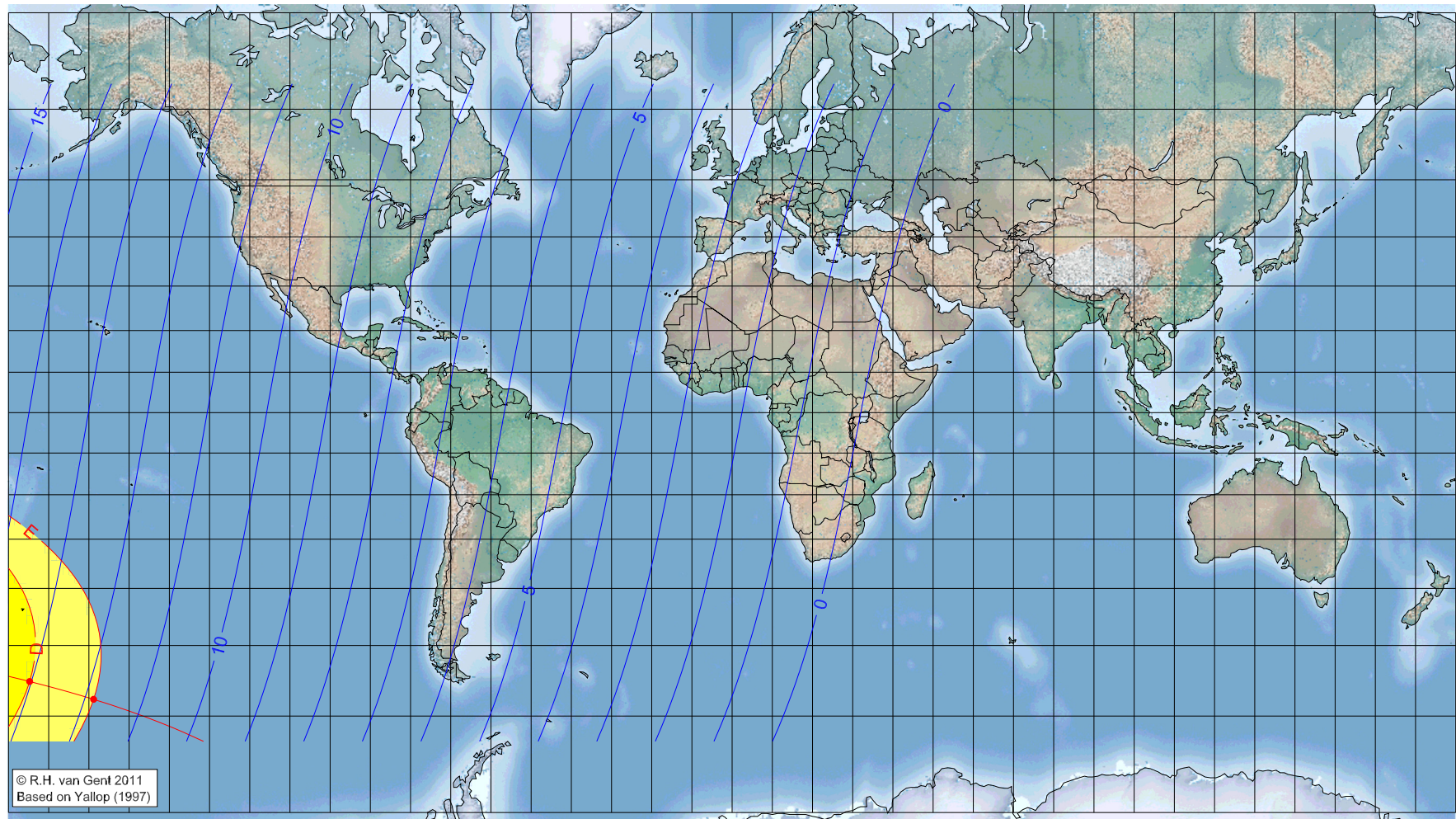
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Shawwāl 1433 AH

Global visibility map for 17 August 2012 [Friday]

Day of luni-solar conjunction



Astronomical New Moon: 17 August 2012, 15h 54.5m (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
-174.74 -55.41 13.03
-158.84 -57.85 11.85

Astronomical (Brown) Lunation Number = 1109

Islamic Lunation Number = 17194

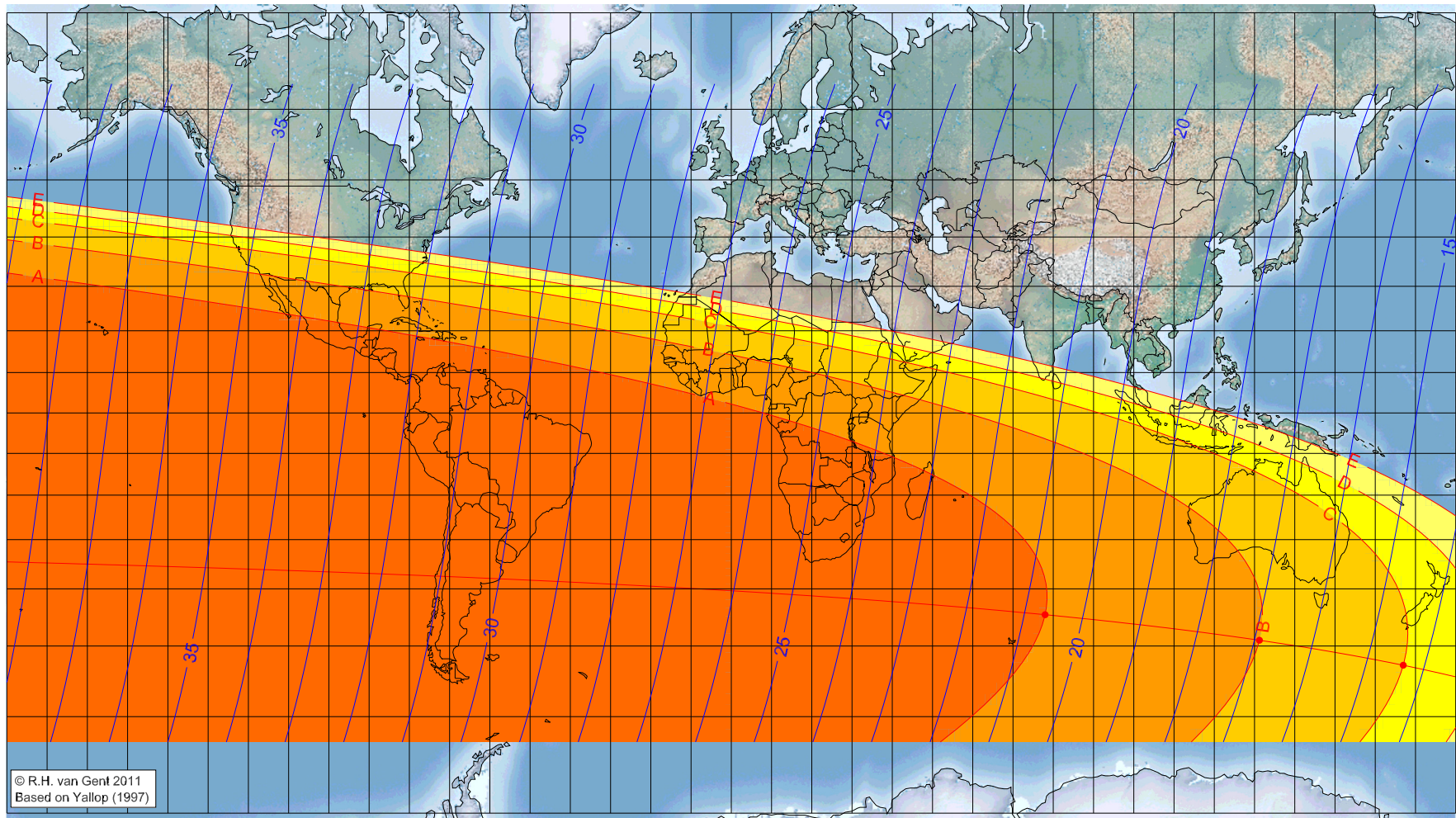
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Shawwāl 1433 AH

Global visibility map for 18 August 2012 [Saturday]

Day after luni-solar conjunction



Astronomical New Moon: 17 August 2012, 15h 54.5m (UTC)

$\Delta T = 1.1$ min

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
77.97	-44.74	20.65
131.22	-49.07	16.91
166.96	-52.97	14.36
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 = 1109

Islamic Lunation Number = 17194

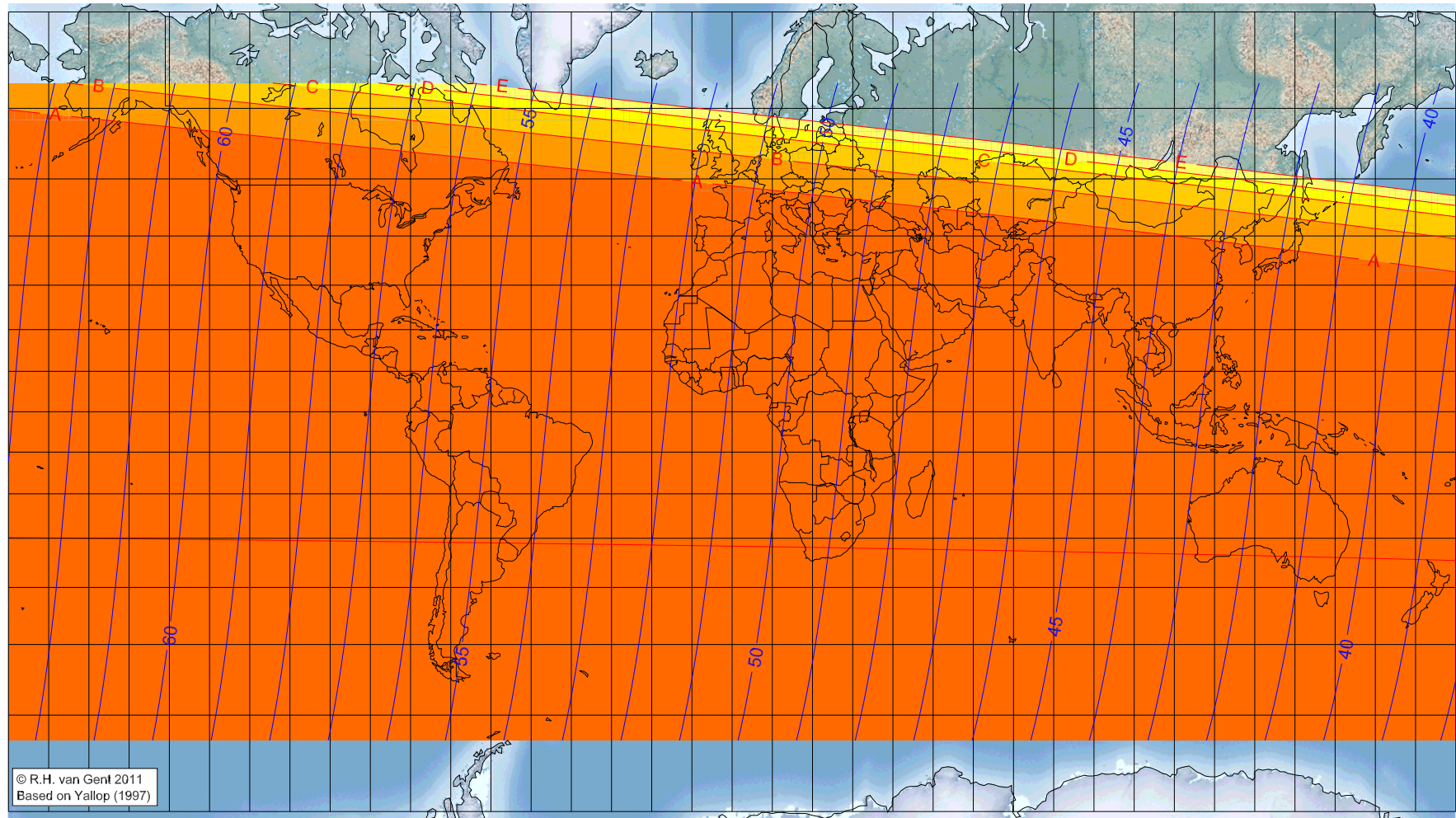
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Shawwāl 1433 AH

Global visibility map for 19 August 2012 [Sunday]

Second day after luni-solar conjunction



Astronomical New Moon: 17 August 2012, 15h 54.5m (UTC)

$\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1109

Islamic Lunation Number = 17194

- 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

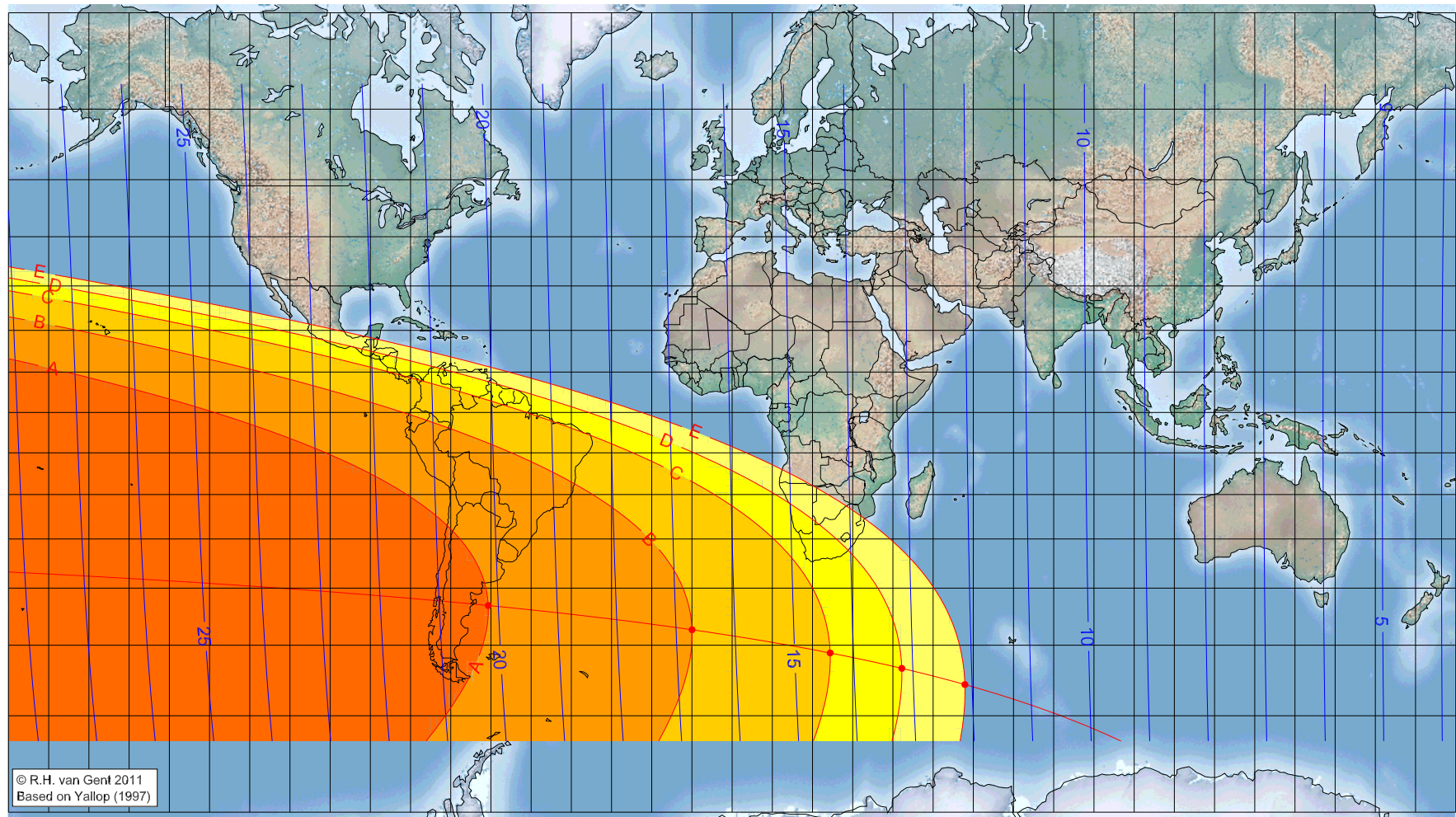
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Dhū 'l-Qa'da 1433 AH

Global visibility map for 16 September 2012 [Sunday]

Day of luni-solar conjunction



Astronomical New Moon: 16 September 2012, 2h 10.6m (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

-60.66	-43.23	20.17
-9.97	-47.46	16.73
24.39	-51.22	14.40
42.21	-53.56	13.19
57.91	-55.88	12.12

Astronomical (Brown) Lunation Number = 1110

Islamic Lunation Number = 17195

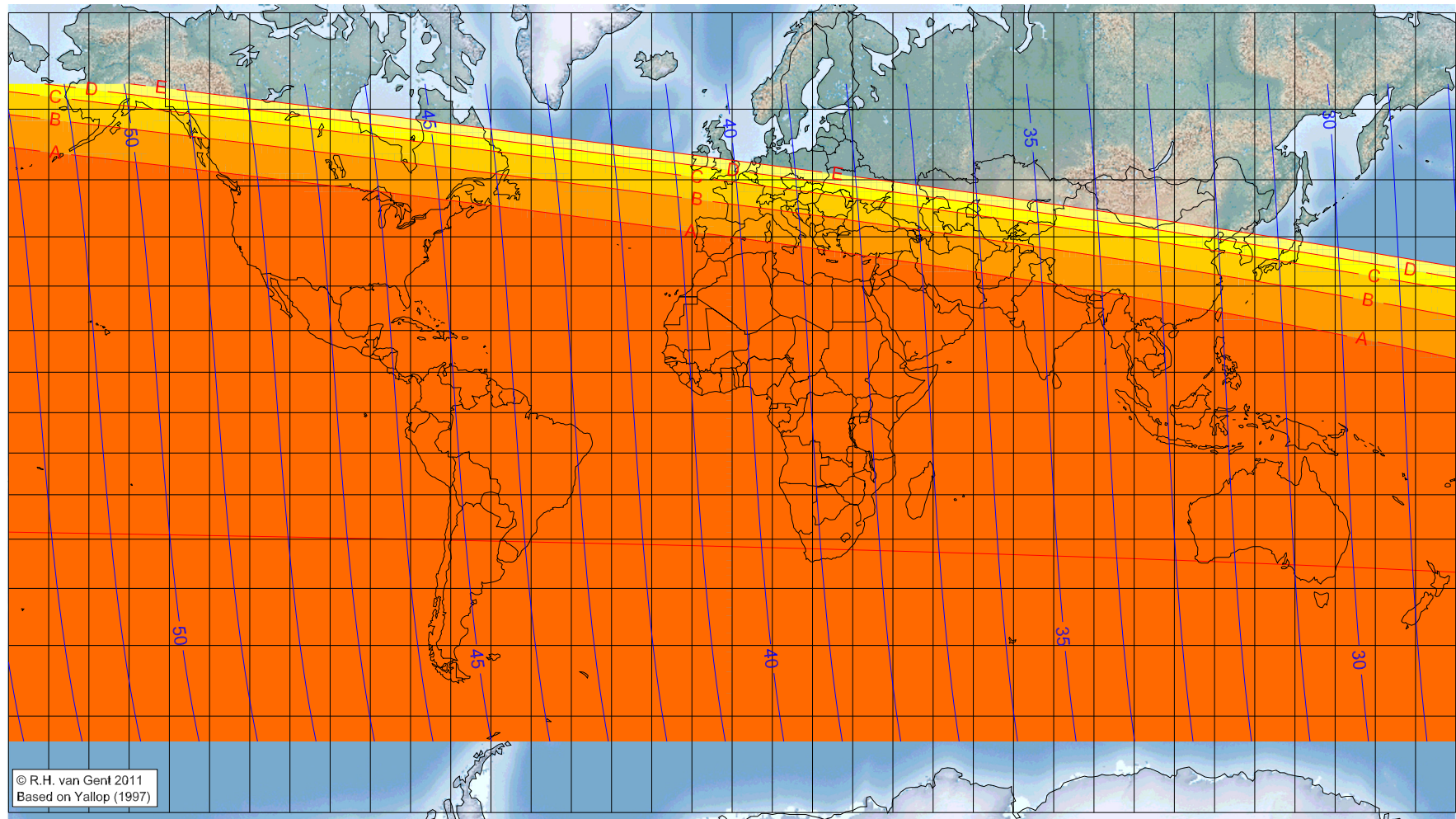
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Dhū 'l-Qa'da 1433 AH

Global visibility map for 17 September 2012 [Monday]

Day after luni-solar conjunction



Astronomical New Moon: 16 September 2012, 2h 10.6m (UTC)
 $\Delta T = 1.1$ min

First visibility (●)

Astronomical (Brown) Lunation Number = 1110
Islamic Lunation Number = 17195

- 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

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

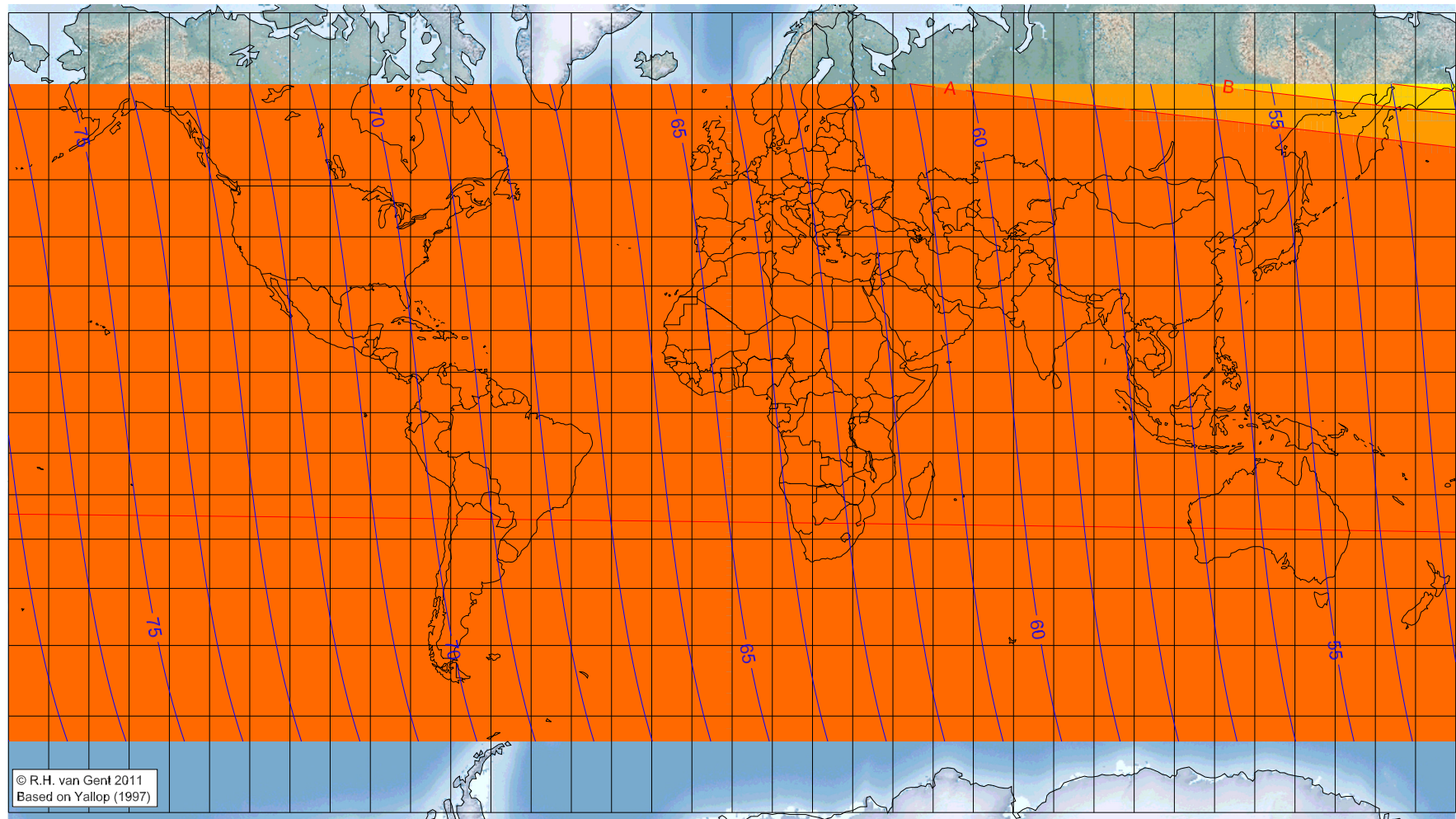
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

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

First visibility lunar crescent for Dhū 'l-Qa'da 1433 AH

Global visibility map for 18 September 2012 [Tuesday]

Second day after luni-solar conjunction



Astronomical New Moon: 16 September 2012, 2h 10.6m (UTC)

$\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1110

Islamic Lunation Number = 17195

- 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

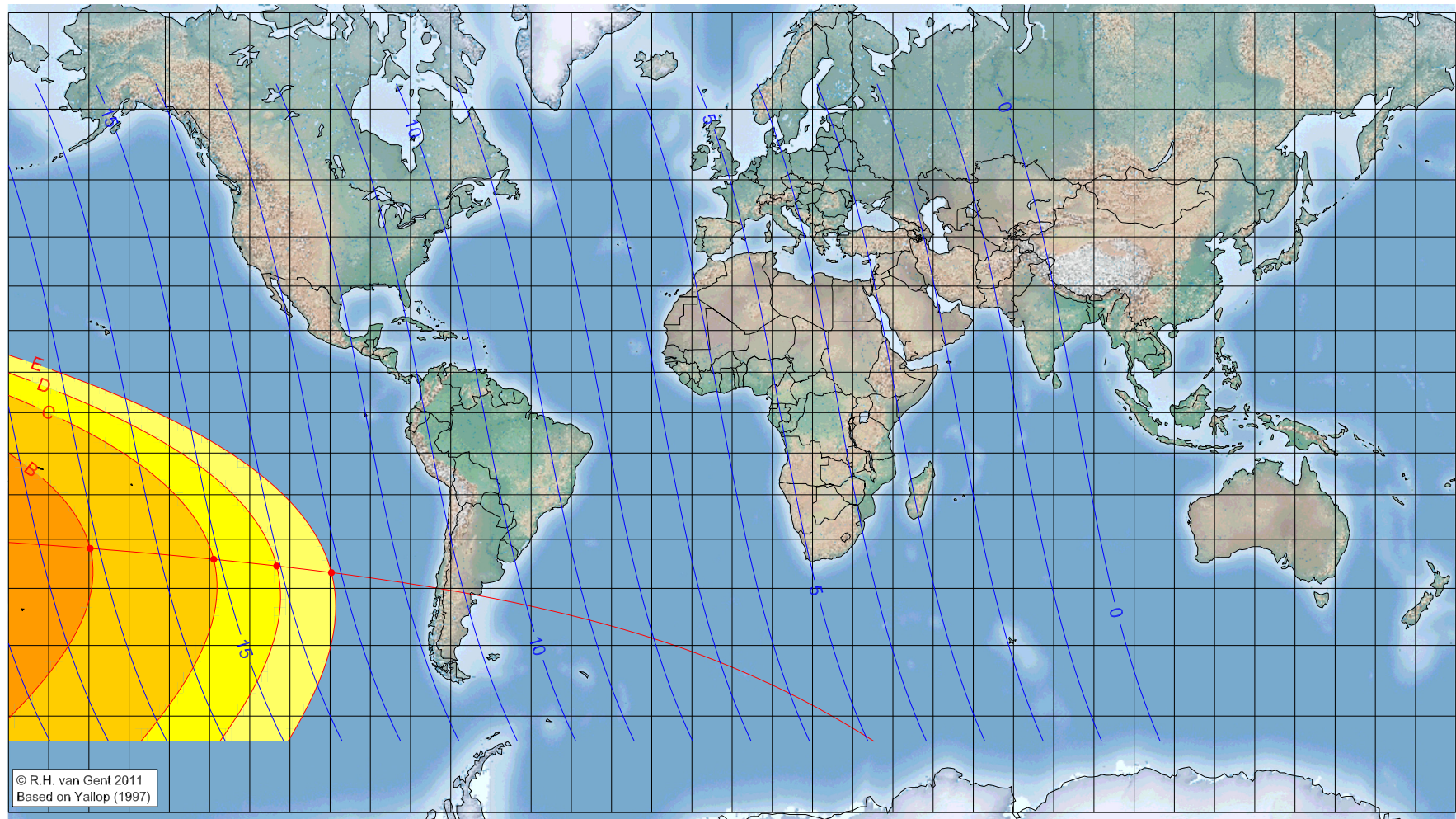
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

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

First visibility lunar crescent for Dhū 'l-Hijja 1433 AH

Global visibility map for 15 October 2012 [Monday]

Day of luni-solar conjunction



Astronomical New Moon: 15 October 2012, 12h 2.5m (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

Longitude (°)	Latitude (°)	Lunar age (h)
-159.69	-31.97	17.15
-128.96	-34.23	15.10
-113.28	-35.60	14.06
-99.67	-36.93	13.16

Astronomical (Brown) Lunation Number = 1111

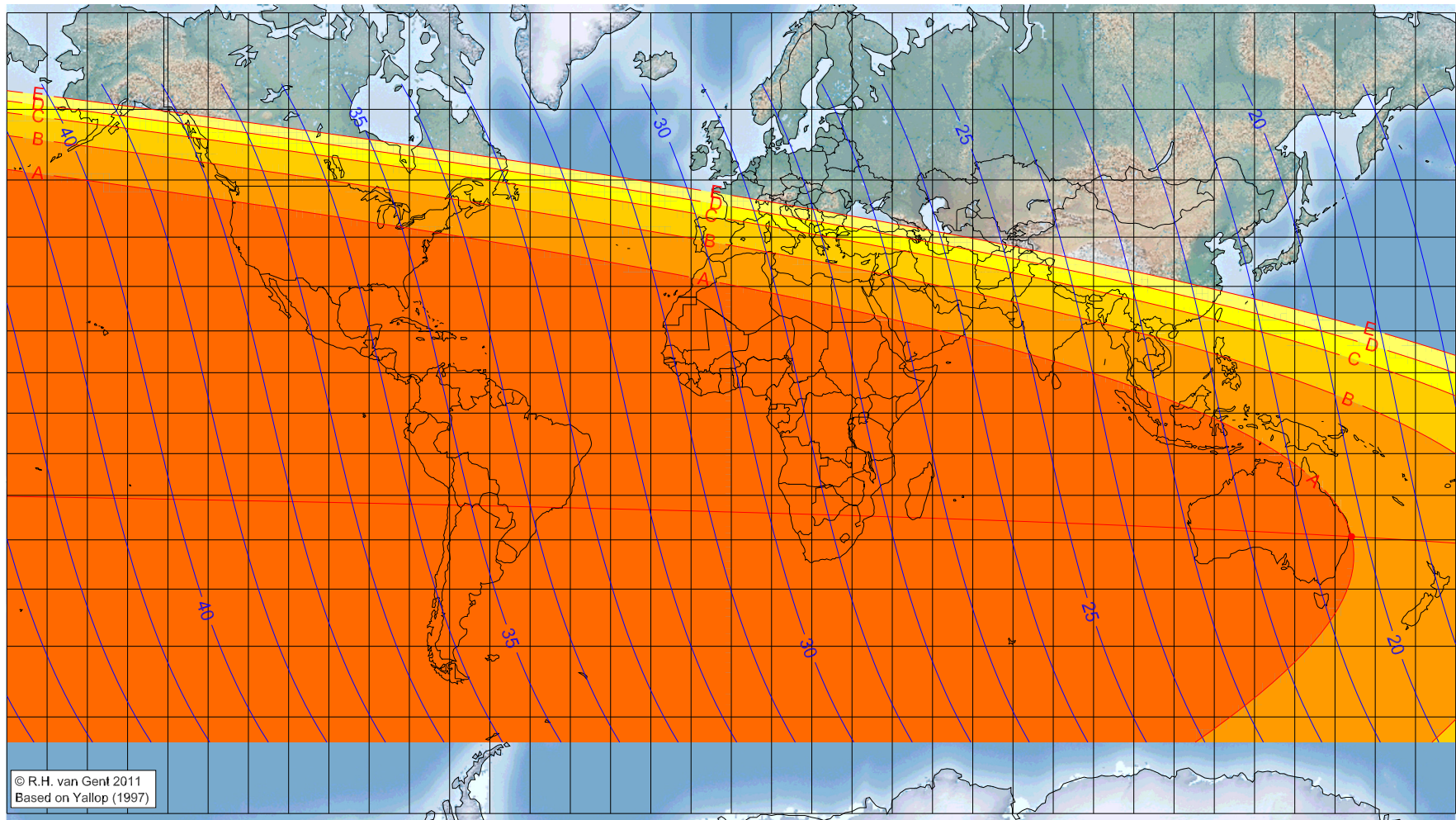
Islamic Lunation Number = 17196

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 1433 AH

Global visibility map for 16 October 2012 [Tuesday]
Day after luni-solar conjunction



Astronomical New Moon: 15 October 2012, 12h 2.5m (UTC)
 $\Delta T = 1.1$ min

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
154.12	-29.30	20.24
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 = 1111
Islamic Lunation Number = 17196

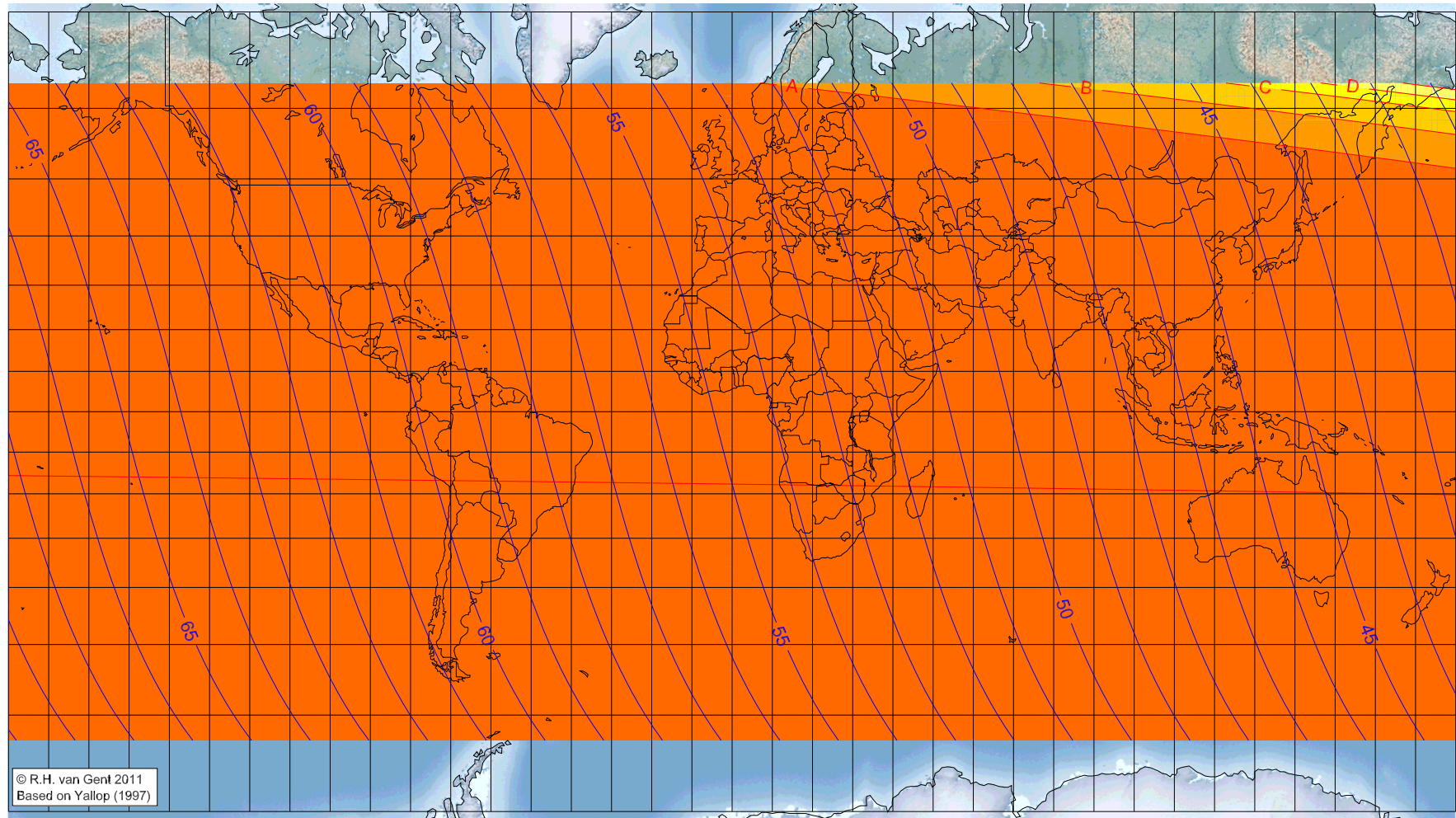
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

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

First visibility lunar crescent for Dhū 'l-Hijja 1433 AH

Global visibility map for 17 October 2012 [Wednesday]

Second day after luni-solar conjunction



Astronomical New Moon: 15 October 2012, 12h 2.5m (UTC)

$\Delta T = 1.1$ min

Astronomical (Brown) Lunation Number = 1111

Islamic Lunation Number = 17196

- 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

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/>