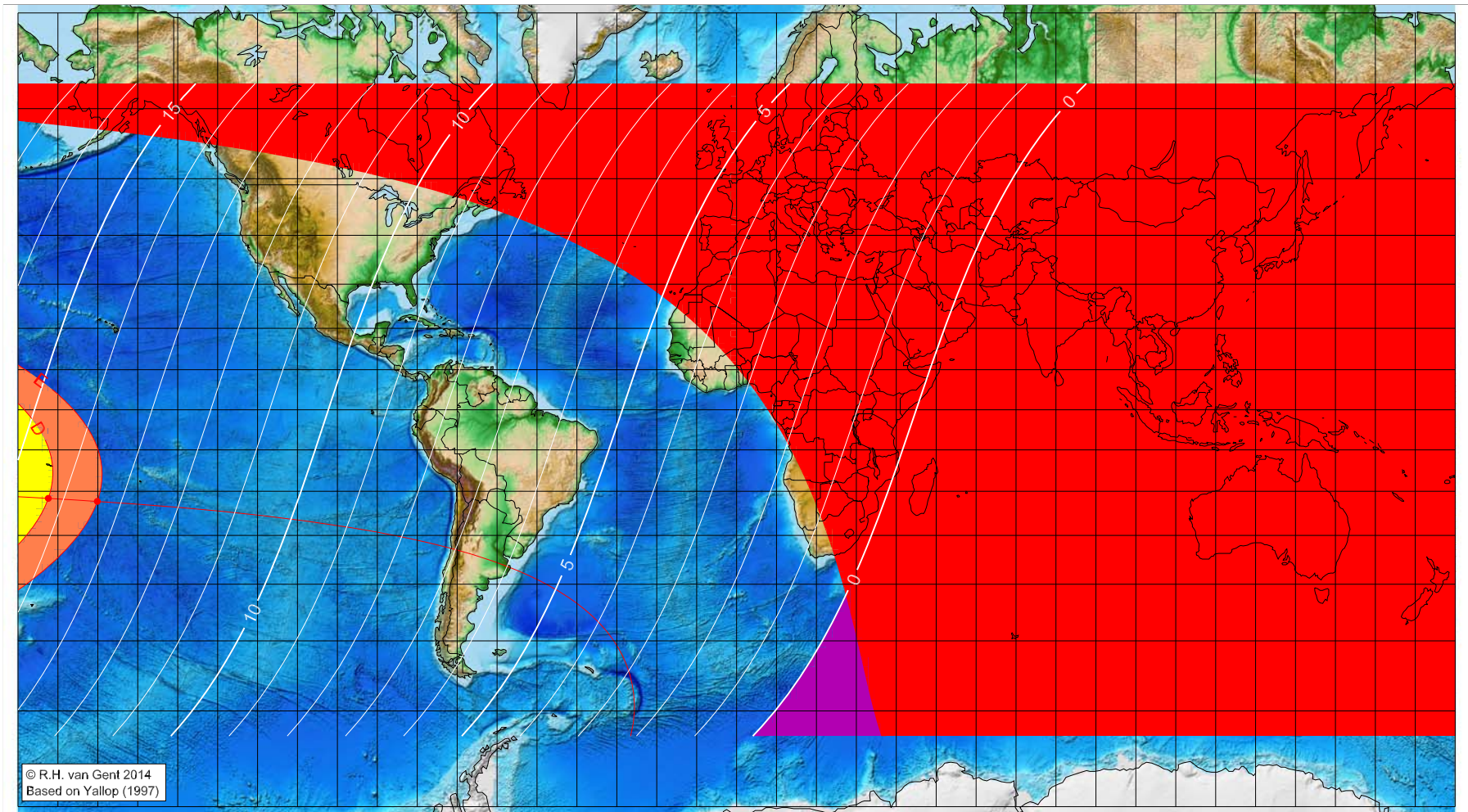


First visibility lunar crescent for Muḥarram 0 AH (proleptic)

Global visibility map for 24 July 621 [Friday]
Day of luni-solar conjunction



Astronomical New Moon: 24 July 621, 15h 4.6m (UTC)

First visibility (•)

Astronomical (Brown) Lunation Number = -16096
Islamic Lunation Number = -11
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset

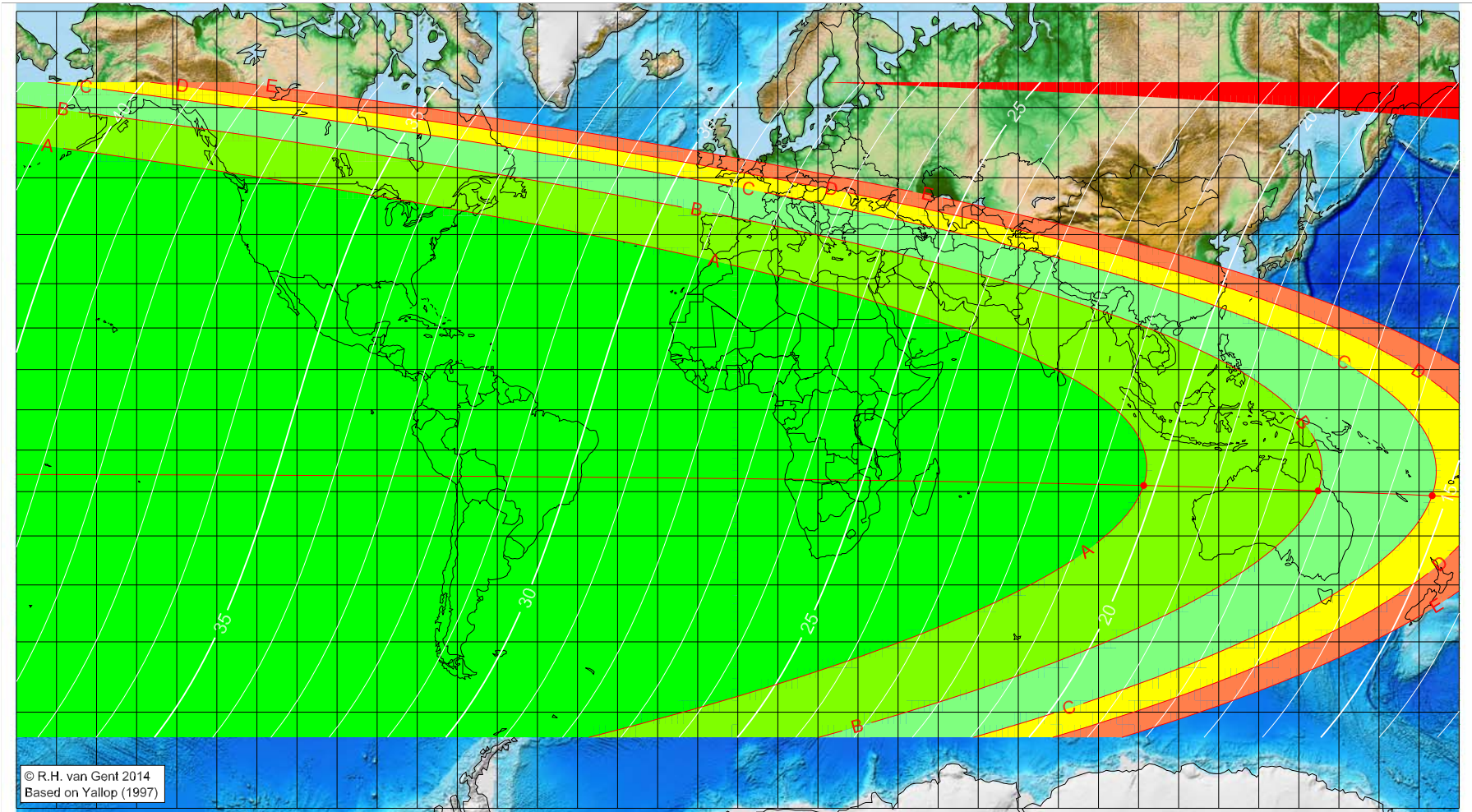
Longitude (°)	Latitude (°)	Lunar age (h)
-172.41	-21.66	14.26
-160.14	-22.36	13.41

■ before conjunction (astronomical new moon)

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

First visibility lunar crescent for Muḥarram 0 AH (proleptic)

Global visibility map for 25 July 621 [Saturday]
Day after luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 24 July 621, 15h 4.6m (UTC)

First visibility (•)

Longitude (°)	Latitude (°)	Lunar age (h)
101.28	-18.56	20.21
144.81	-19.81	17.22
173.28	-20.95	15.26

visible on the previous evening
visible on the previous evening

Astronomical (Brown) Lunation Number = -16096
Islamic Lunation Number = -11
TT - UT [= ΔT] = 1.27 h

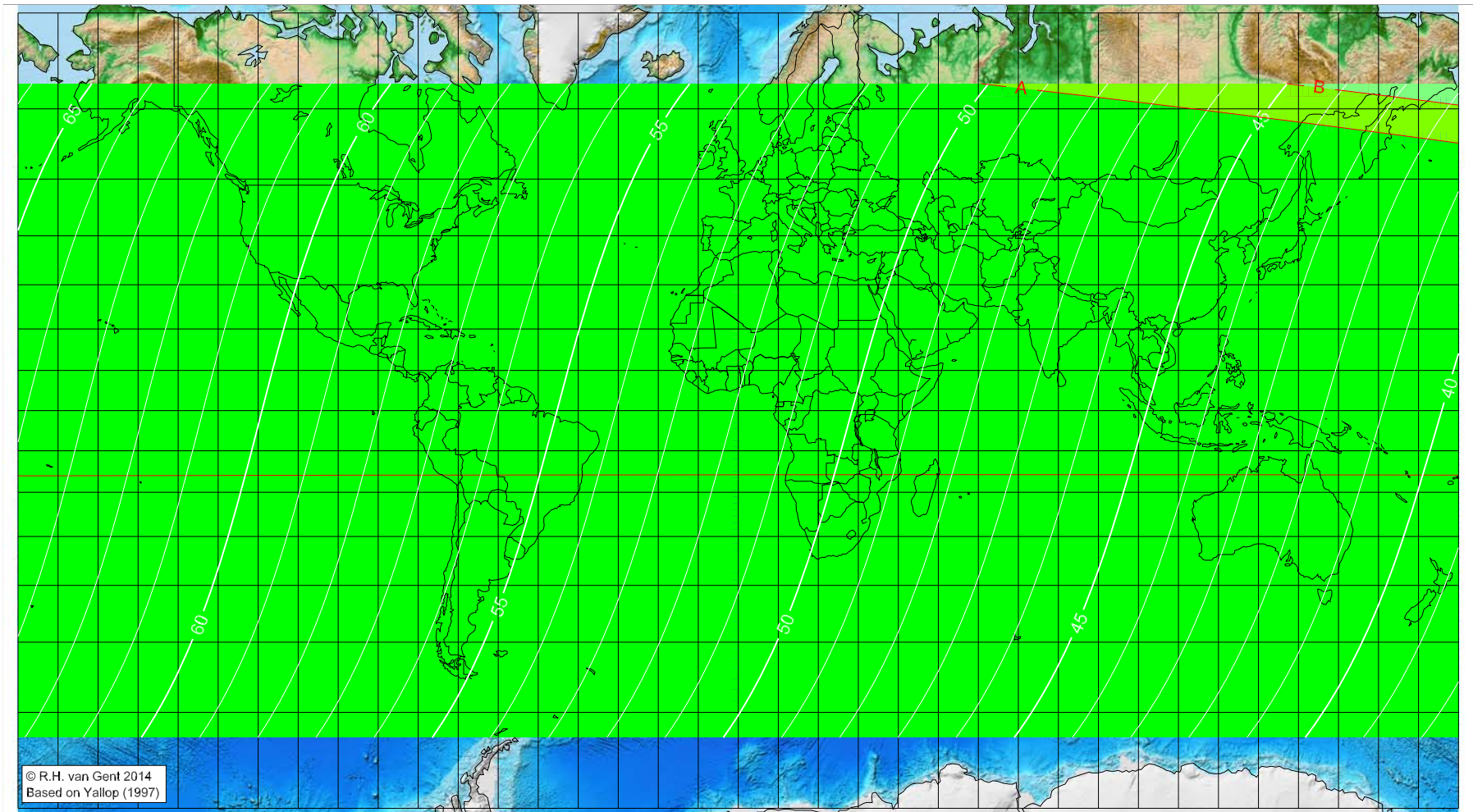
- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

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 0 AH (proleptic)

Global visibility map for 26 July 621 [Sunday]
Second day after luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 24 July 621, 15h 4.6m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

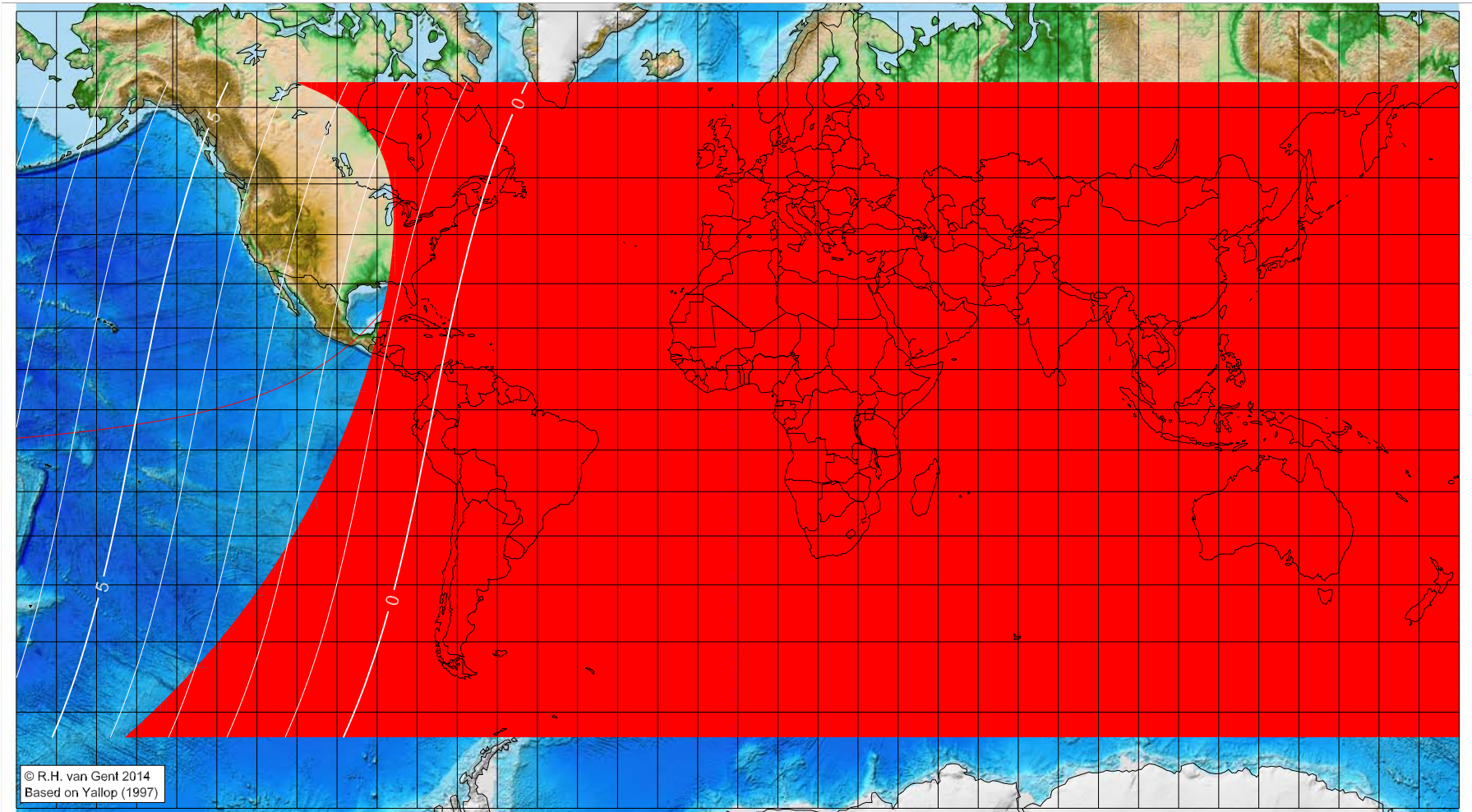
Astronomical (Brown) Lunation Number = -16096
Islamic Lunation Number = -11
TT – UT [= ΔT] = 1.27 h

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 0 AH (proleptic)

Global visibility map for 22 August 621 [Saturday]
Day of luni-solar conjunction



Astronomical New Moon: 22 August 621, 23h 6.5m (UTC)

First visibility (•)

Astronomical (Brown) Lunation Number = -16095
Islamic Lunation Number = -10
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset

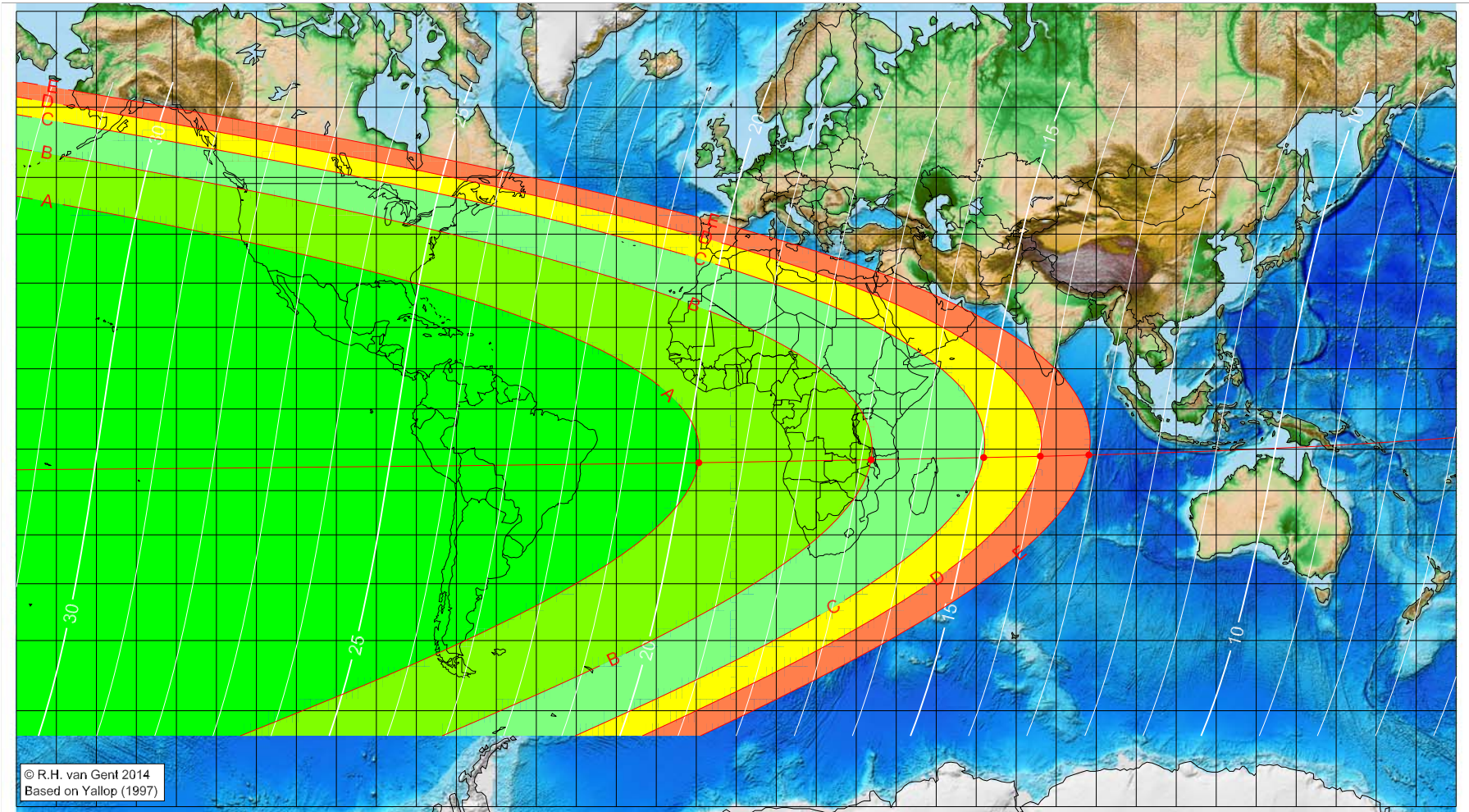
Longitude (°) Latitude (°) Lunar age (h)
not visible until the next evening
not visible until the next evening
not visible until the next evening
not visible until the next evening

■ before conjunction (astronomical new moon)

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

First visibility lunar crescent for Şafar 0 AH (proleptic)

Global visibility map for 23 August 621 [Sunday]
Day after luni-solar conjunction



Astronomical New Moon: 22 August 621, 23h 6.5m (UTC)

First visibility (●)

Astronomical (Brown) Lunation Number = -16095

Islamic Lunation Number = -10

TT - UT [= ΔT] = 1.27 h

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

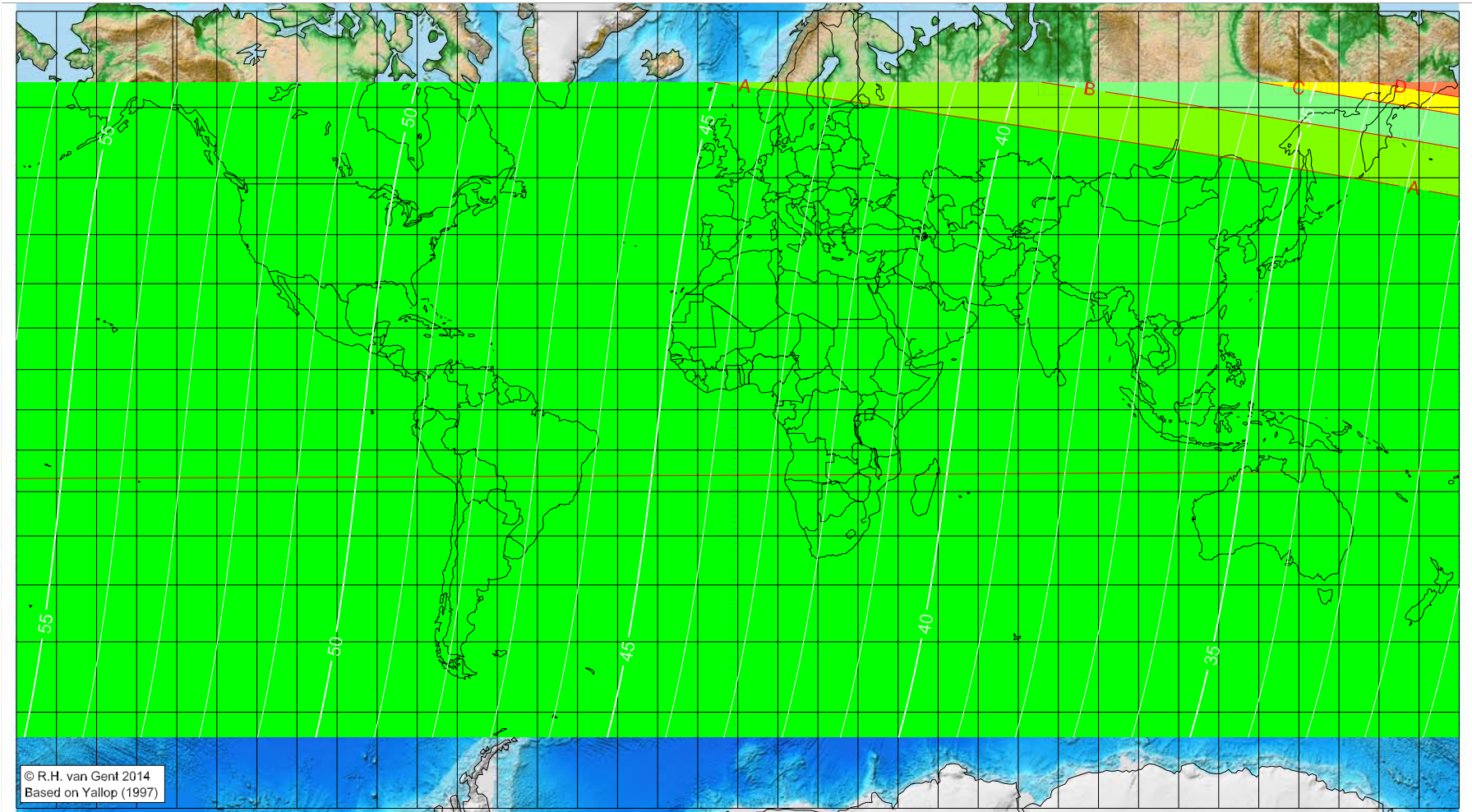
- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

Longitude (°)	Latitude (°)	Lunar age (h)
-9.37	-13.31	19.75
33.70	-12.62	16.83
61.86	-12.06	14.93
76.02	-11.73	13.97
88.16	-11.42	13.15

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

First visibility lunar crescent for Şafar 0 AH (proleptic)

Global visibility map for 24 August 621 [Monday]
Second day after luni-solar conjunction



Astronomical New Moon: 22 August 621, 23h 6.5m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- ▬ F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

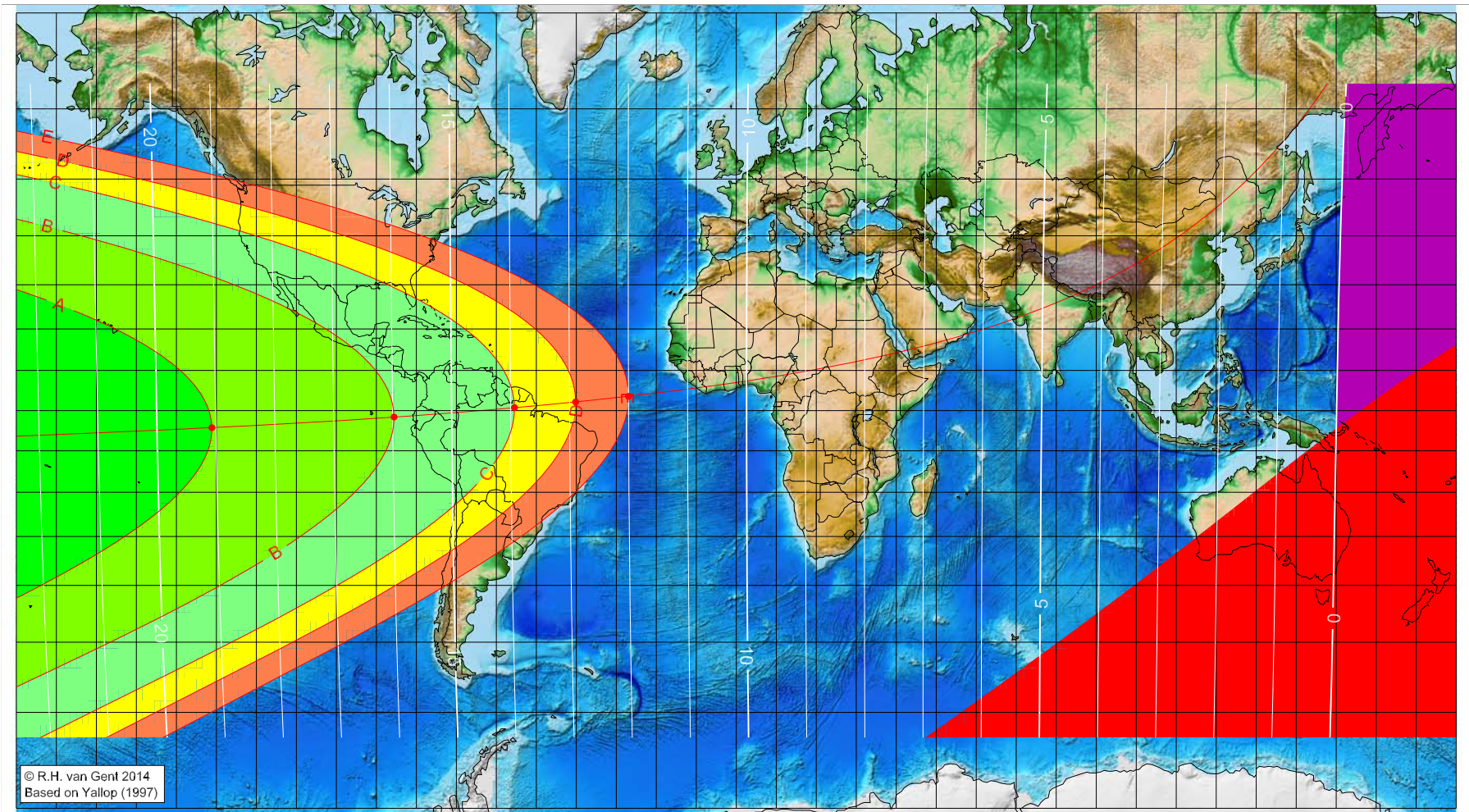
Astronomical (Brown) Lunation Number = -16095
Islamic Lunation Number = -10
 $TT - UT [= \Delta T] = 1.27 \text{ h}$

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 Rabīʿ al-Awwal 0 AH (proleptic)

Global visibility map for 21 September 621 [Monday]
Day of luni-solar conjunction



Astronomical New Moon: 21 September 621, 7h 55.4m (UTC)

First visibility (•)

Astronomical (Brown) Lunation Number = -16094
Islamic Lunation Number = -9
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)

Longitude (°)	Latitude (°)	Lunar age (h)
-131.12	-4.27	19.07
-85.58	-1.60	15.98
-55.46	0.74	13.93
-40.17	2.16	12.90
-26.94	3.56	12.00

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

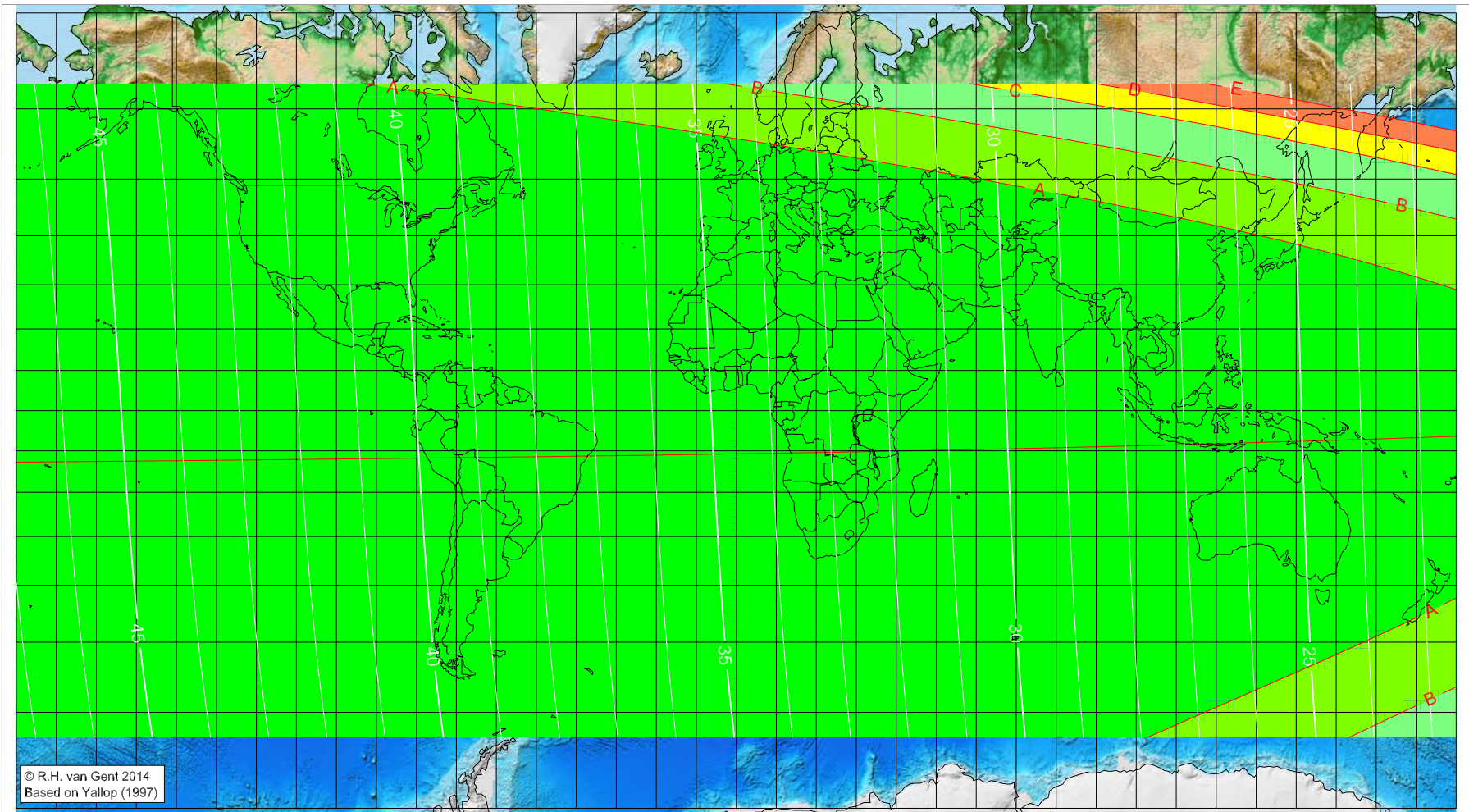
■ moonset before sunset

■ before conjunction (astronomical new moon)

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

First visibility lunar crescent for Rabīʿ al-Awwal 0 AH (proleptic)

Global visibility map for 22 September 621 [Tuesday]
Day after luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 21 September 621, 7h 55.4m (UTC)

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

Astronomical (Brown) Lunation Number = -16094
Islamic Lunation Number = -9
TT - UT [= ΔT] = 1.27 h

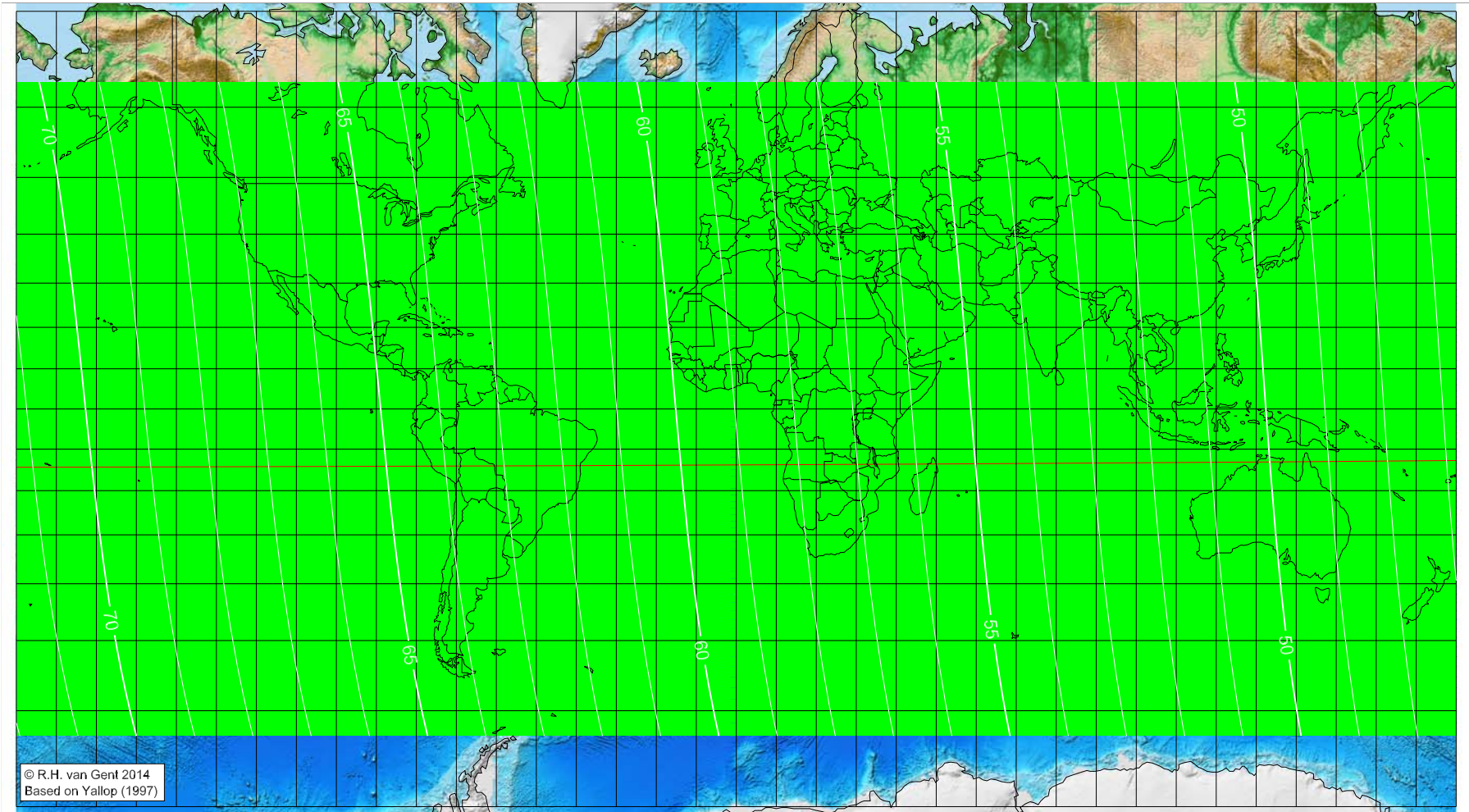
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

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

First visibility lunar crescent for Rabīʿ al-Awwal 0 AH (proleptic)

Global visibility map for 23 September 621 [Wednesday]
 Second day after luni-solar conjunction



Astronomical New Moon: 21 September 621, 7h 55.4m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

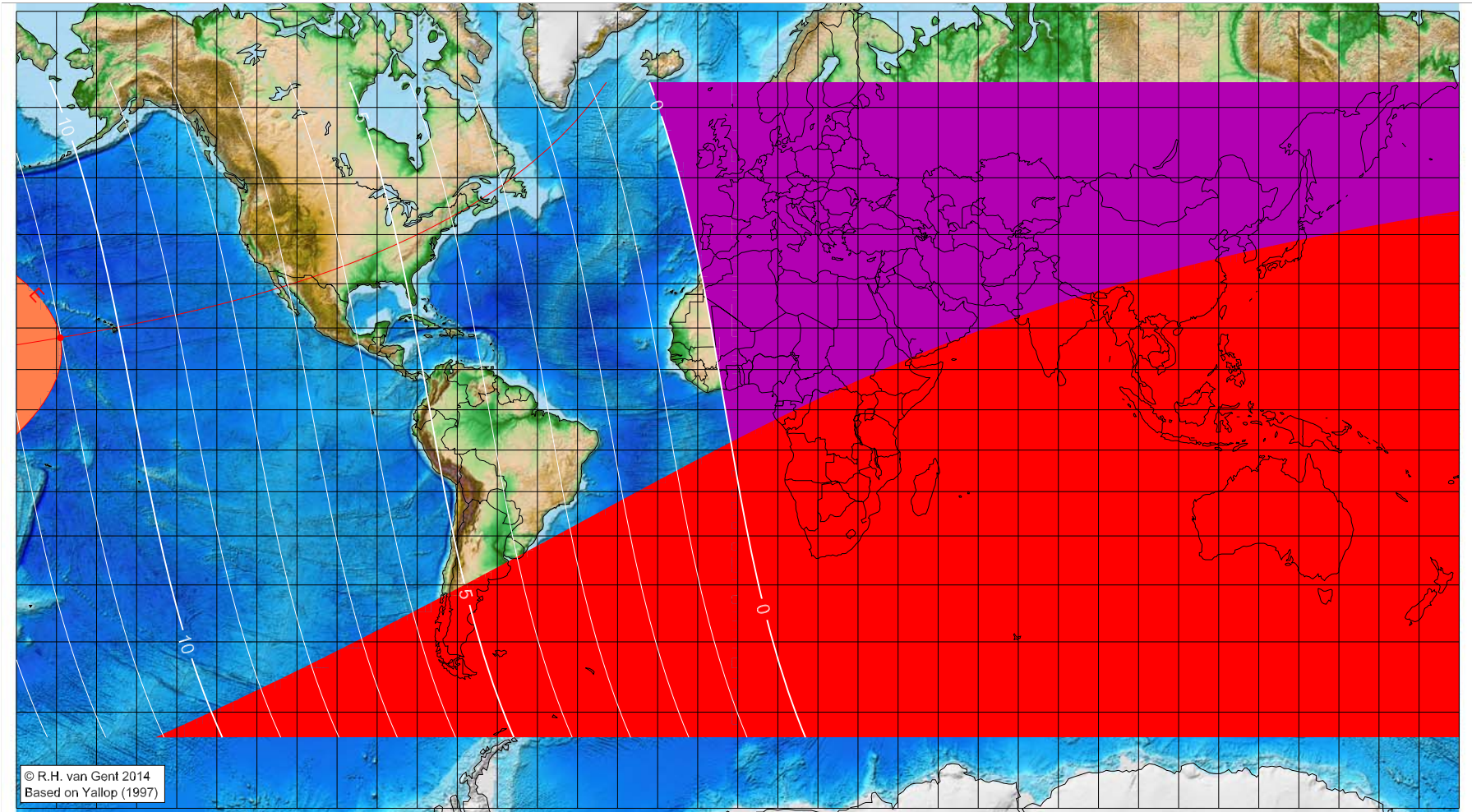
Astronomical (Brown) Lunation Number = -16094
 Islamic Lunation Number = -9
 $TT - UT [= \Delta T] = 1.27 \text{ h}$

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 Rabīʿ al-Ākhir 0 AH (proleptic)

Global visibility map for 20 October 621 [Tuesday]
Day of luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 20 October 621, 18h 2.5m (UTC)

First visibility (•)

Longitude (°)	Latitude (°)	Lunar age (h)
-169.06	17.68	11.02

Astronomical (Brown) Lunation Number = -16093
Islamic Lunation Number = -8
TT - UT [= ΔT] = 1.27 h

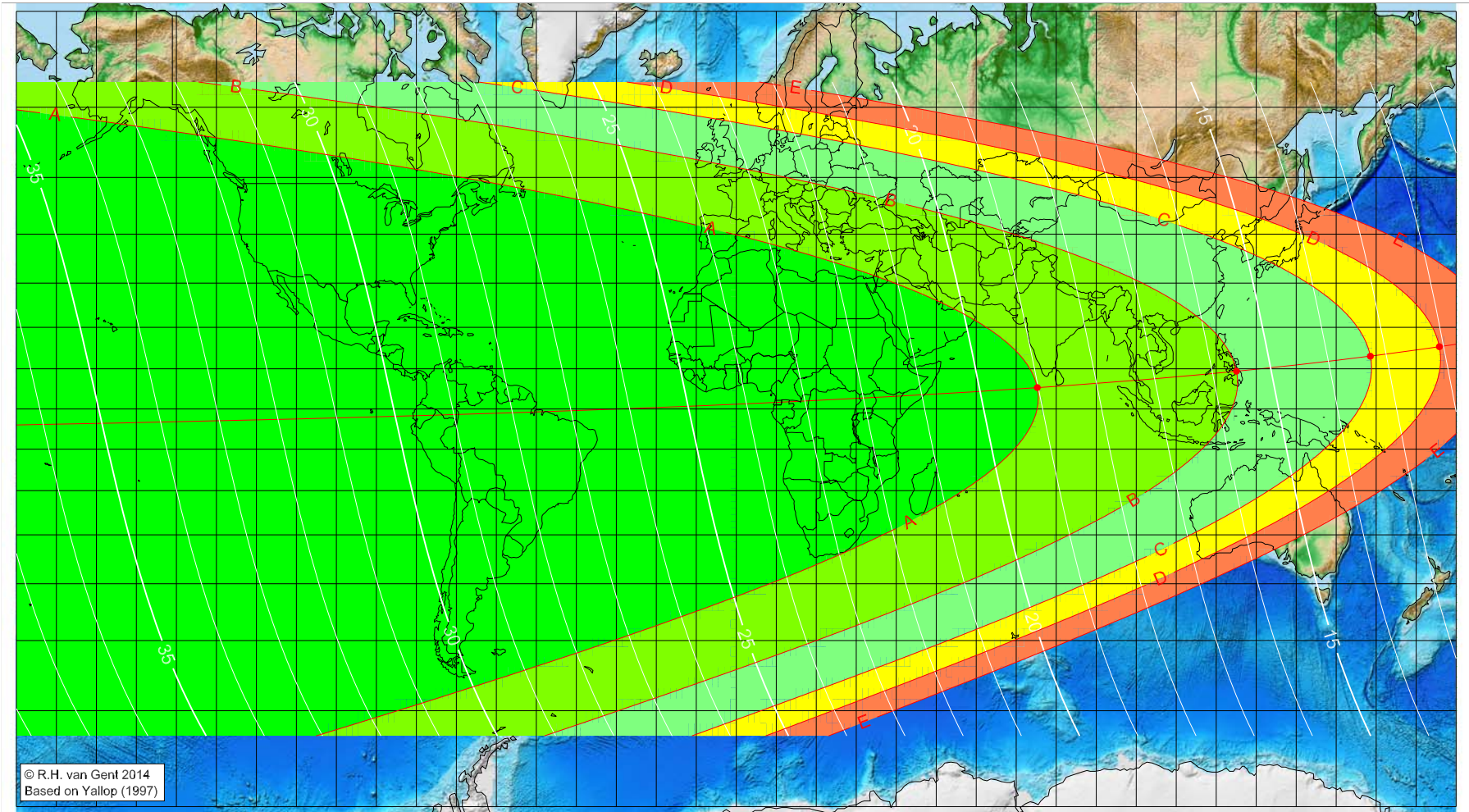
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

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

First visibility lunar crescent for Rabī al-Ākhir 0 AH (proleptic)

Global visibility map for 21 October 621 [Wednesday]
Day after luni-solar conjunction



Astronomical New Moon: 20 October 621, 18h 2.5m (UTC)

First visibility (•)

Longitude (°)	Latitude (°)	Lunar age (h)
75.27	5.34	19.02
125.08	9.40	15.59
158.55	13.07	13.27
175.81	15.38	12.07

Astronomical (Brown) Lunation Number = -16093
Islamic Lunation Number = -8
TT - UT [= ΔT] = 1.27 h

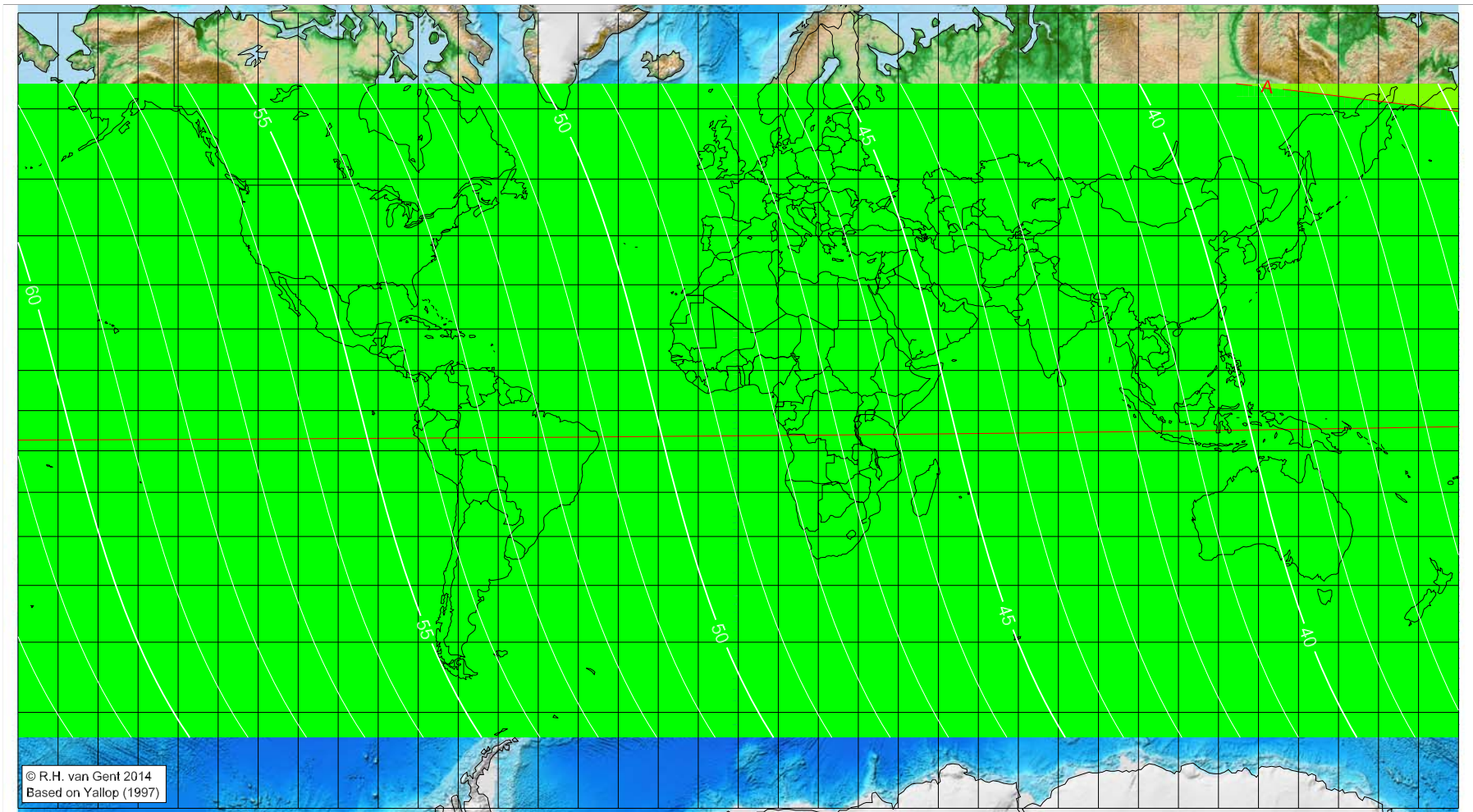
- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

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 Rabīʿ al-Ākhir 0 AH (proleptic)

Global visibility map for 22 October 621 [Thursday]
 Second day after luni-solar conjunction



Astronomical New Moon: 20 October 621, 18h 2.5m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

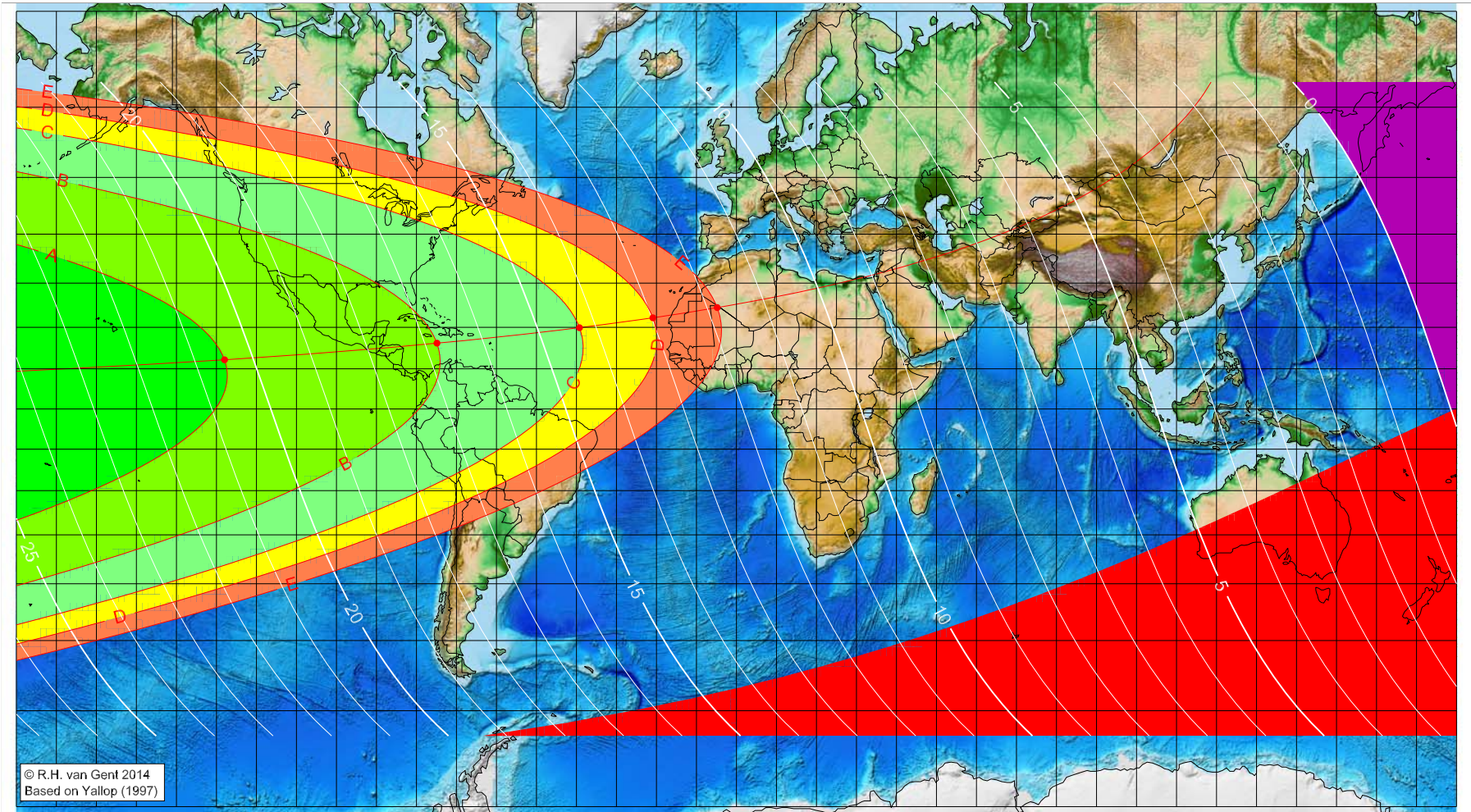
Astronomical (Brown) Lunation Number = -16093
 Islamic Lunation Number = -8
 $TT - UT [= \Delta T] = 1.27 \text{ h}$

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 0 AH (proleptic)

Global visibility map for 19 November 621 [Thursday]
Day of luni-solar conjunction



Astronomical New Moon: 19 November 621, 5h 57.9m (UTC)

First visibility (•)

Astronomical (Brown) Lutation Number = -16092
Islamic Lutation Number = -7
TT - UT [= ΔT] = 1.27 h

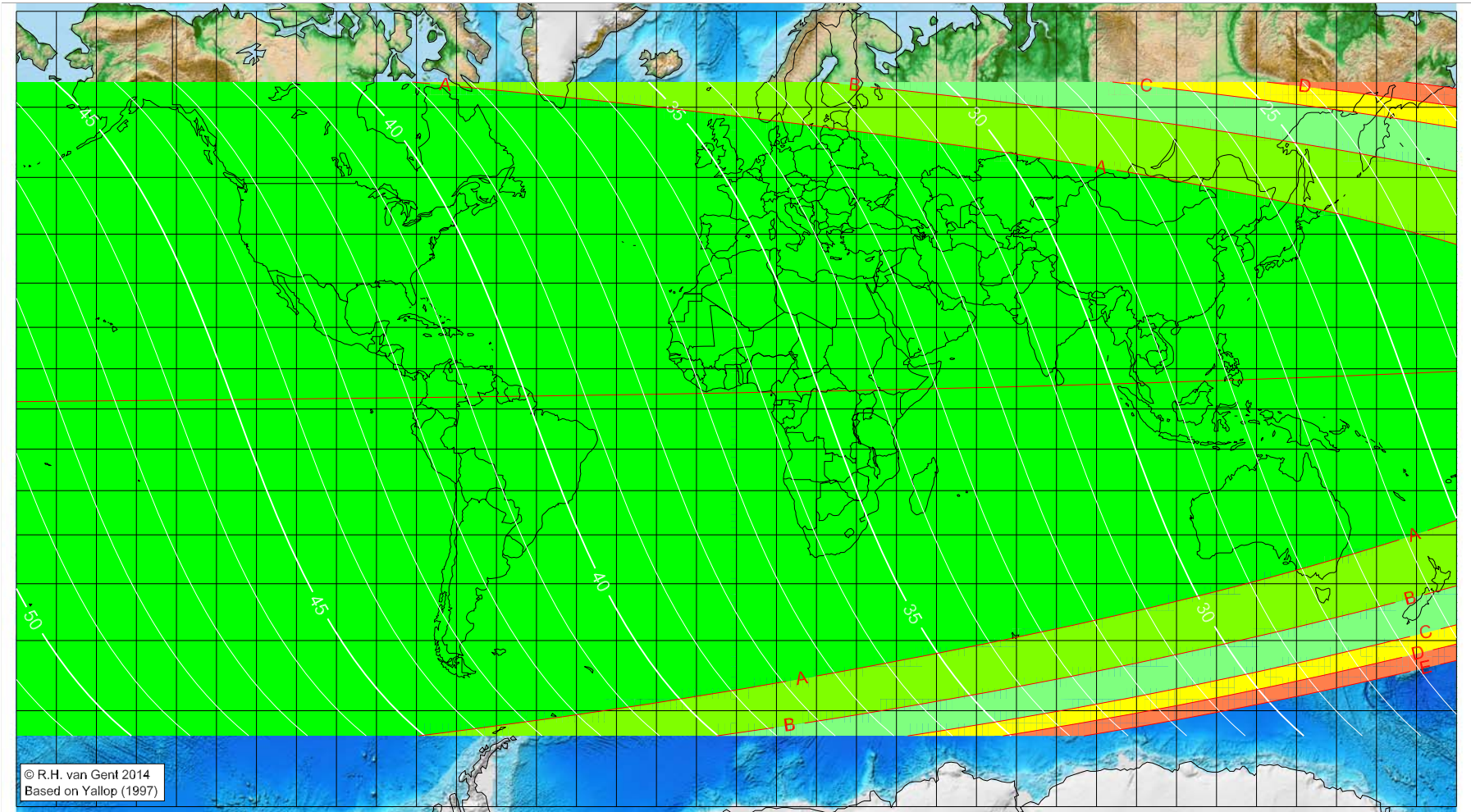
- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

Longitude (°)	Latitude (°)	Lunar age (h)
-127.97	12.21	20.49
-74.87	16.23	16.79
-39.24	19.90	14.28
-20.89	22.22	12.98
-4.81	24.56	11.83

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

First visibility lunar crescent for Jumādā 'l-Ūlā 0 AH (proleptic)

Global visibility map for 20 November 621 [Friday]
Day after luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 19 November 621, 5h 57.9m (UTC)

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

Astronomical (Brown) Lunation Number = -16092
Islamic Lunation Number = -7
TT - UT [= ΔT] = 1.27 h

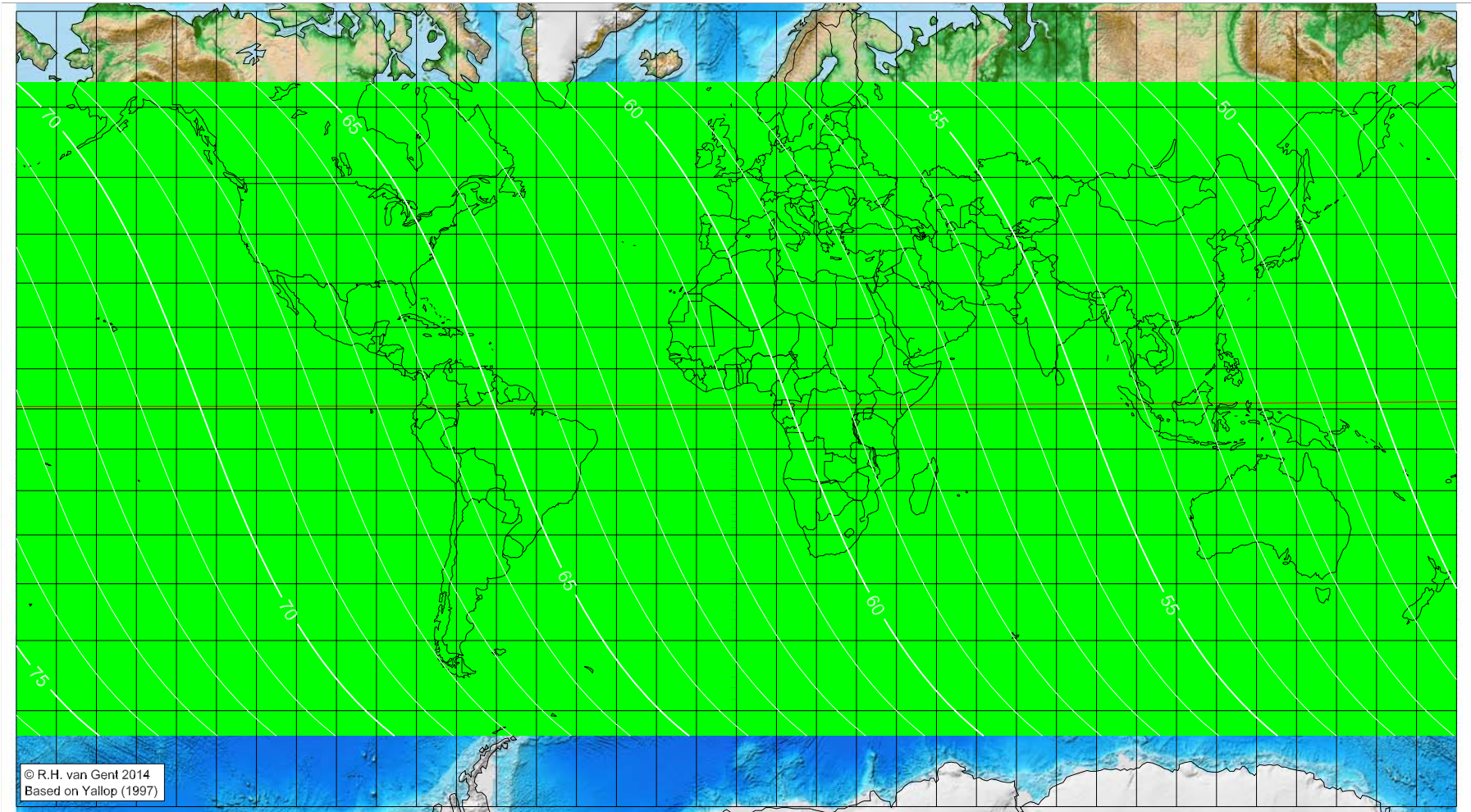
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

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

First visibility lunar crescent for Jumādā 'l-Ūlā 0 AH (proleptic)

Global visibility map for 21 November 621 [Saturday]
 Second day after luni-solar conjunction



Astronomical New Moon: 19 November 621, 5h 57.9m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

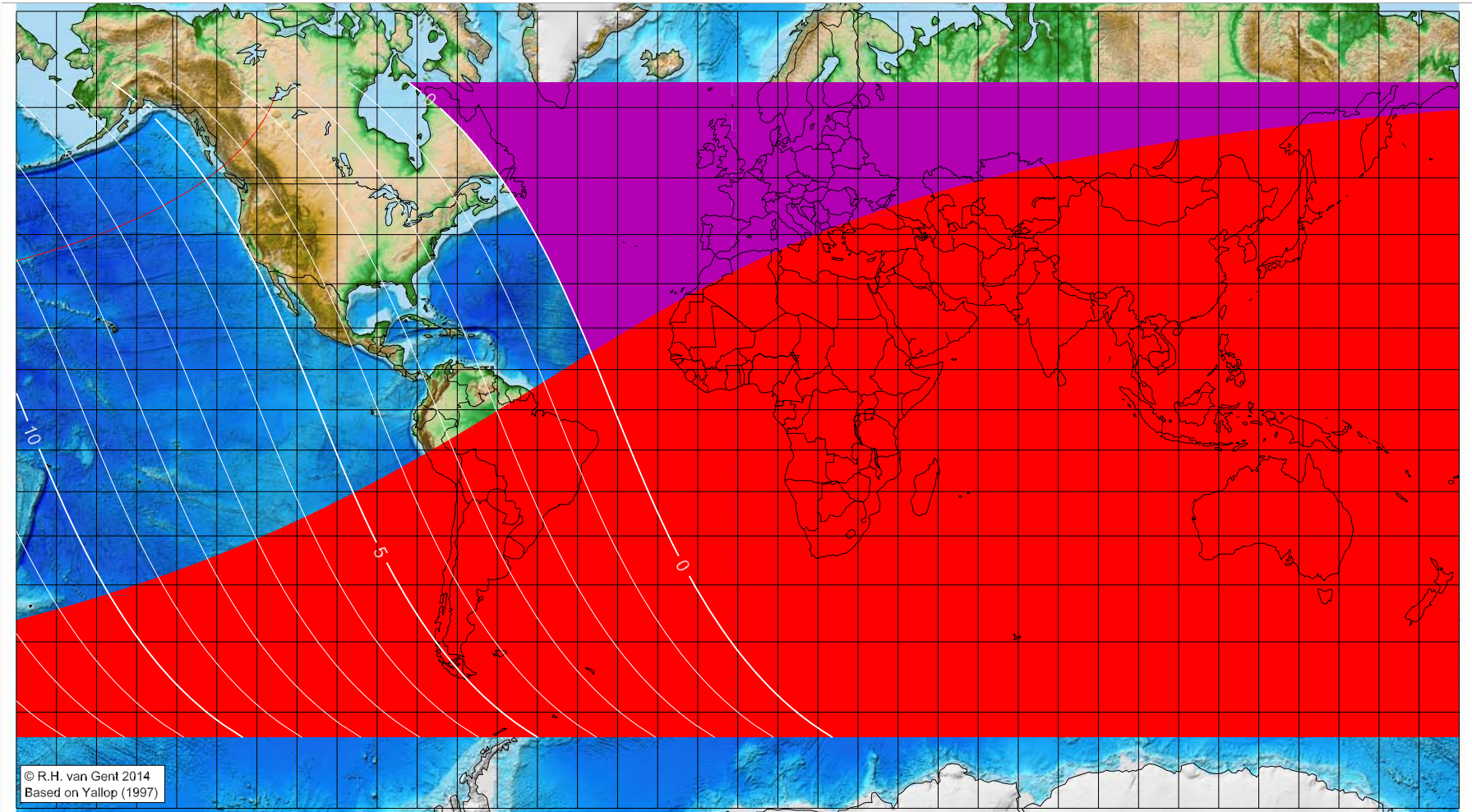
Astronomical (Brown) Lunation Number = -16092
 Islamic Lunation Number = -7
 $TT - UT [= \Delta T] = 1.27 \text{ h}$

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 0 AH (proleptic)

Global visibility map for 18 December 621 [Friday]
Day of luni-solar conjunction



Astronomical New Moon: 18 December 621, 20h 6.4m (UTC)

First visibility (•)

Astronomical (Brown) Lunation Number = -16091
Islamic Lunation Number = -6
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)

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

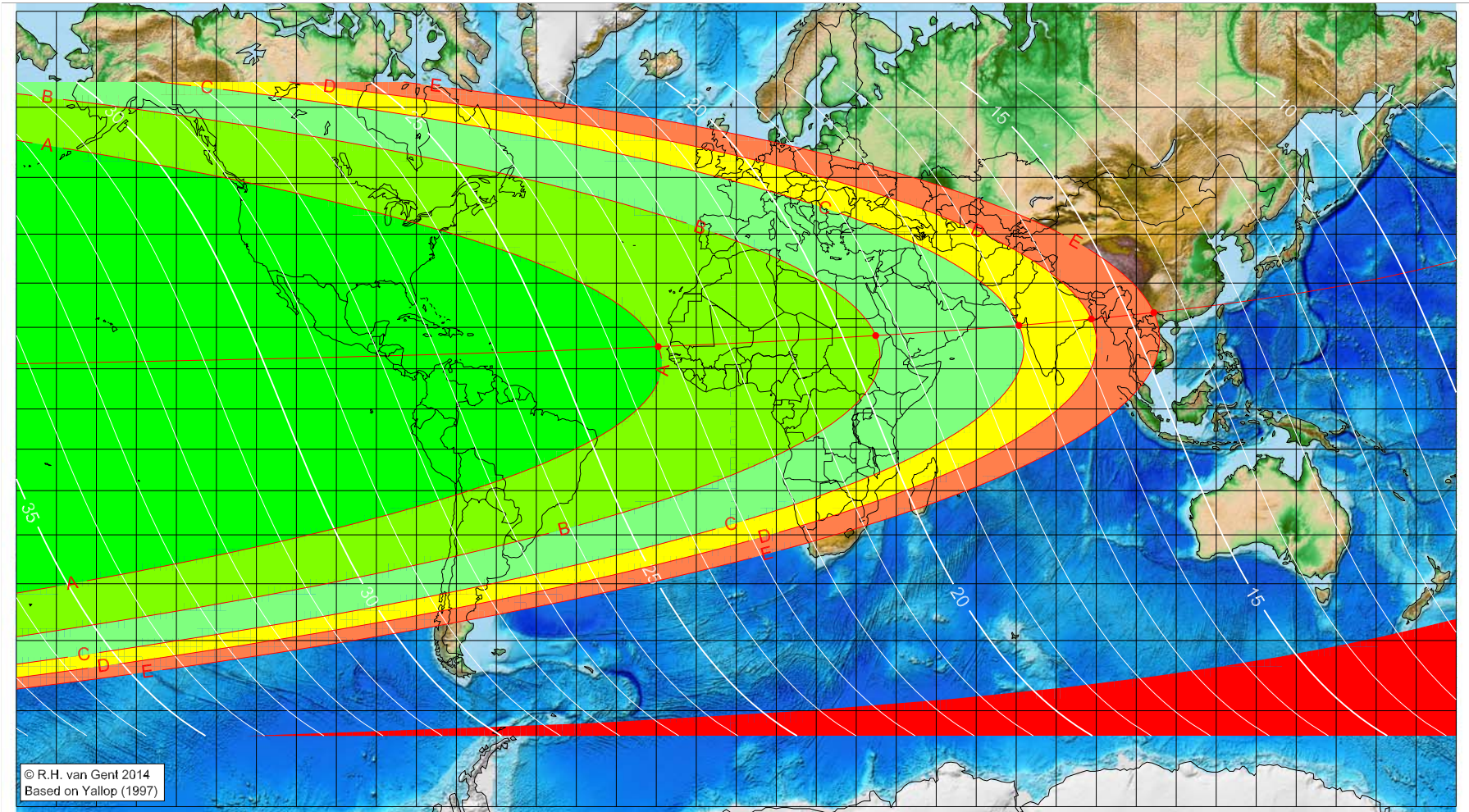
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

- moonset before sunset
- before conjunction (astronomical new moon)

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

First visibility lunar crescent for Jumādā 'l-Ākhira 0 AH (proleptic)

Global visibility map for 19 December 621 [Saturday]
Day after luni-solar conjunction



Astronomical New Moon: 18 December 621, 20h 6.4m (UTC)

First visibility (•)

Astronomical (Brown) Lunation Number = -16091
Islamic Lunation Number = -6
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

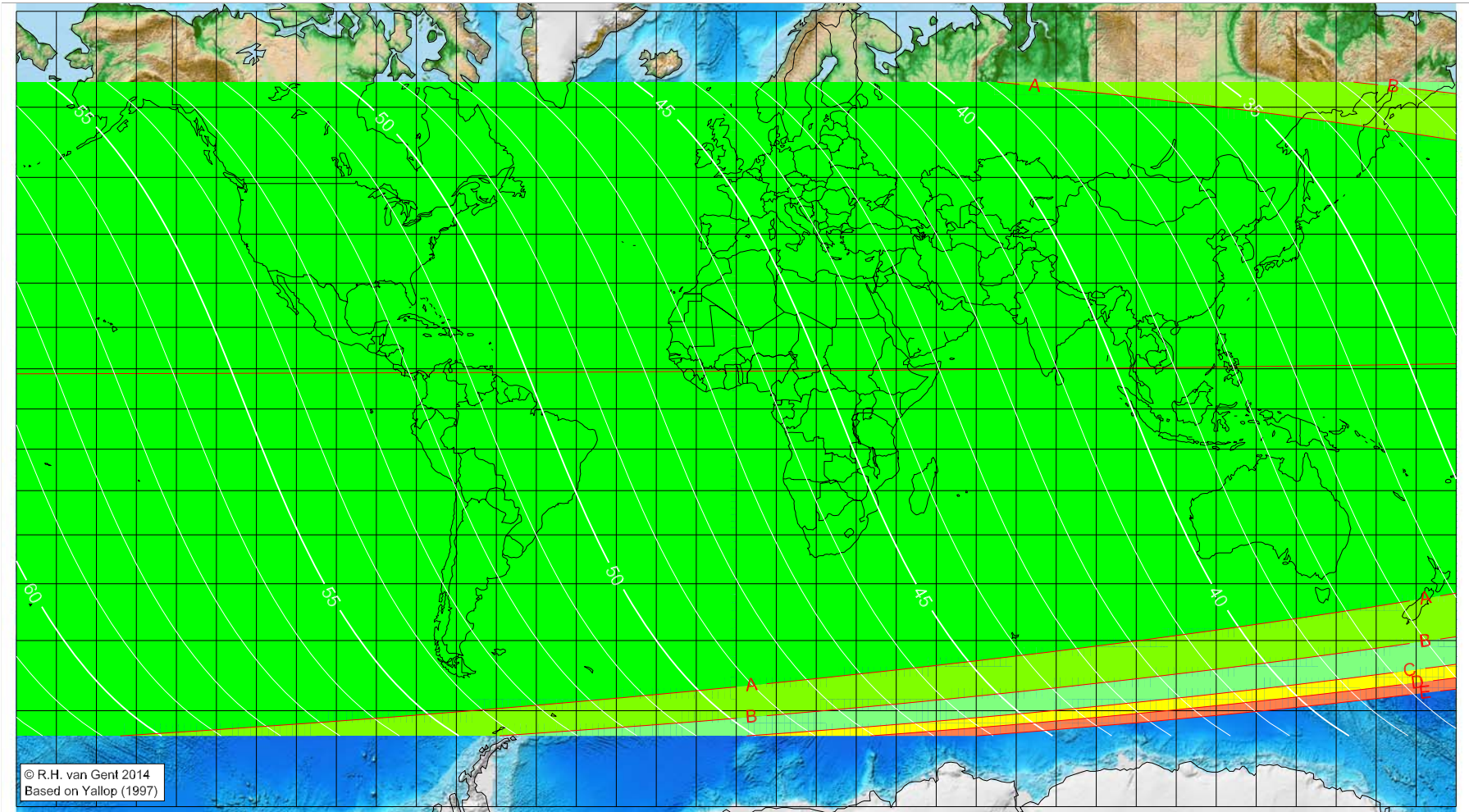
Longitude (°)	Latitude (°)	Lunar age (h)
-19.53	15.40	23.20
34.86	18.04	19.44
70.66	20.44	16.94
88.77	21.94	15.66
104.40	23.42	14.56

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 0 AH (proleptic)

Global visibility map for 20 December 621 [Sunday]
Second day after luni-solar conjunction



Astronomical New Moon: 18 December 621, 20h 6.4m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

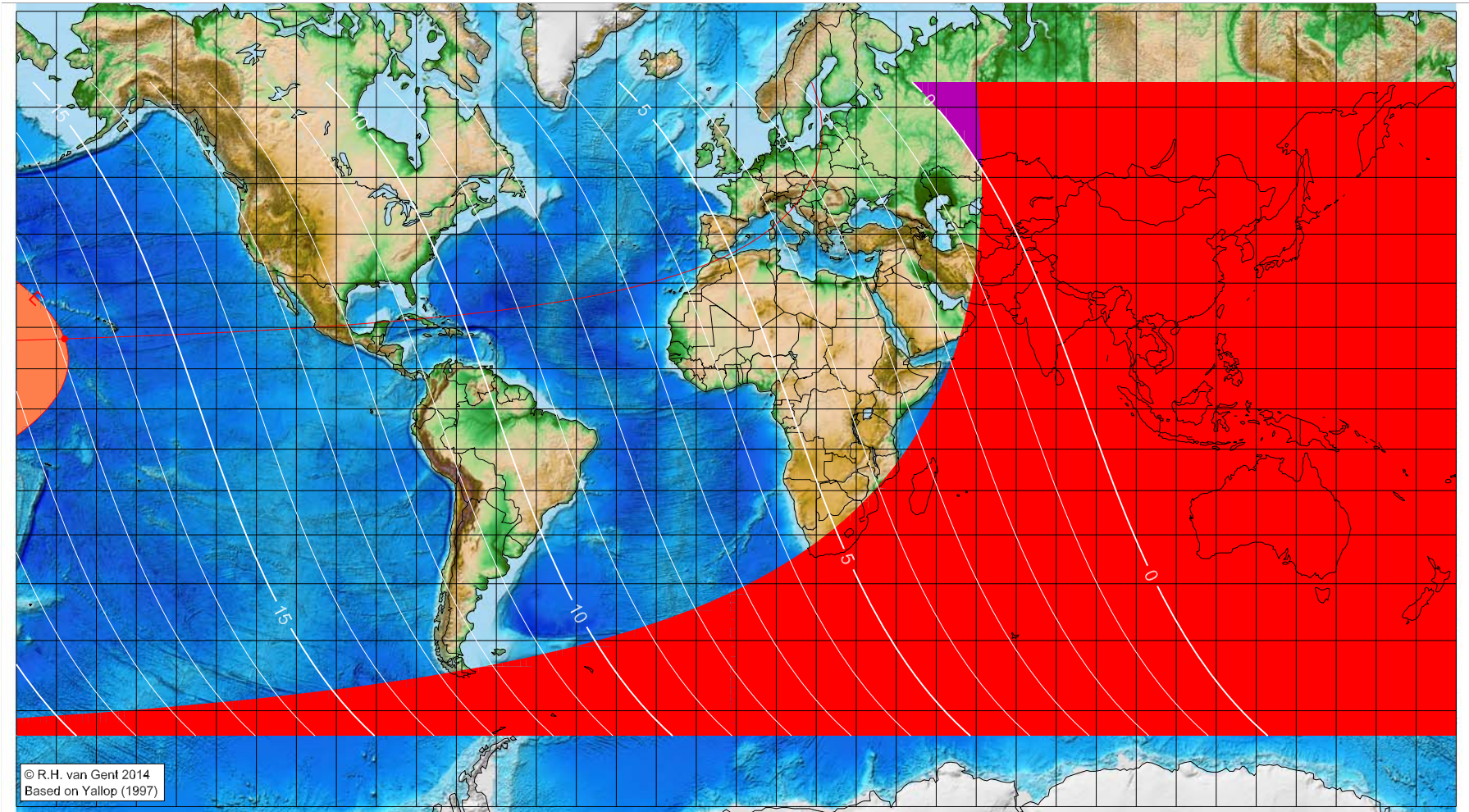
Astronomical (Brown) Lunation Number = -16091
Islamic Lunation Number = -6
TT – UT [= ΔT] = 1.27 h

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 0 AH (proleptic)

Global visibility map for 17 January 622 [Sunday]
Day of luni-solar conjunction



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Based on Yallop (1997)

Astronomical New Moon: 17 January 622, 12h 25.4m (UTC)

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
-167.96	17.26	16.88

Astronomical (Brown) Lunation Number = -16090
Islamic Lunation Number = -5
TT - UT [= ΔT] = 1.27 h

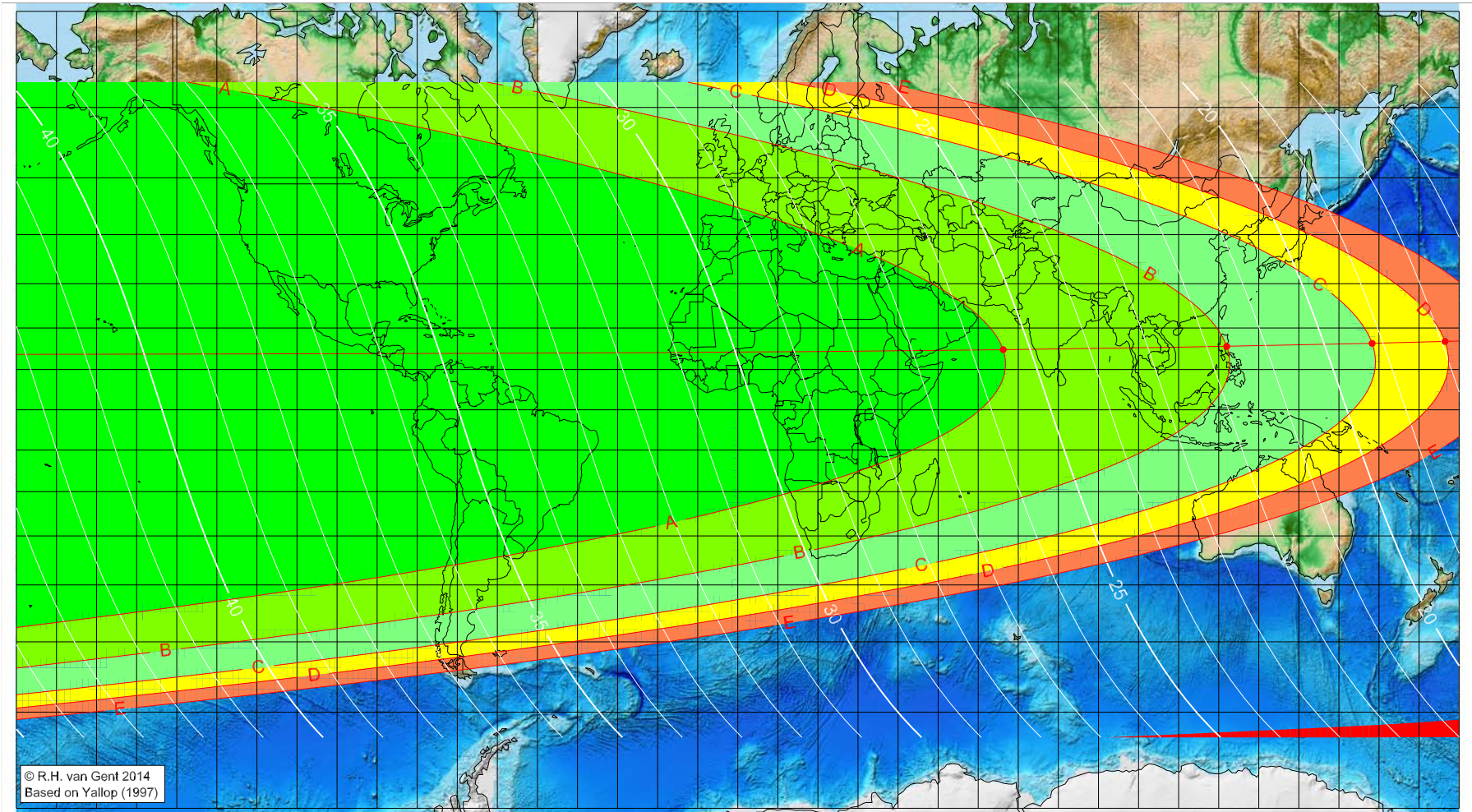
Lunar age (in hours) is given for the 'best time', defined as the moment 4/9ths between sunset and moonset

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

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

First visibility lunar crescent for Rajab 0 AH (proleptic)

Global visibility map for 18 January 622 [Monday]
Day after luni-solar conjunction



Astronomical New Moon: 17 January 622, 12h 25.4m (UTC)

First visibility (●)

Astronomical (Brown) Lunation Number = -16090
Islamic Lunation Number = -5
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

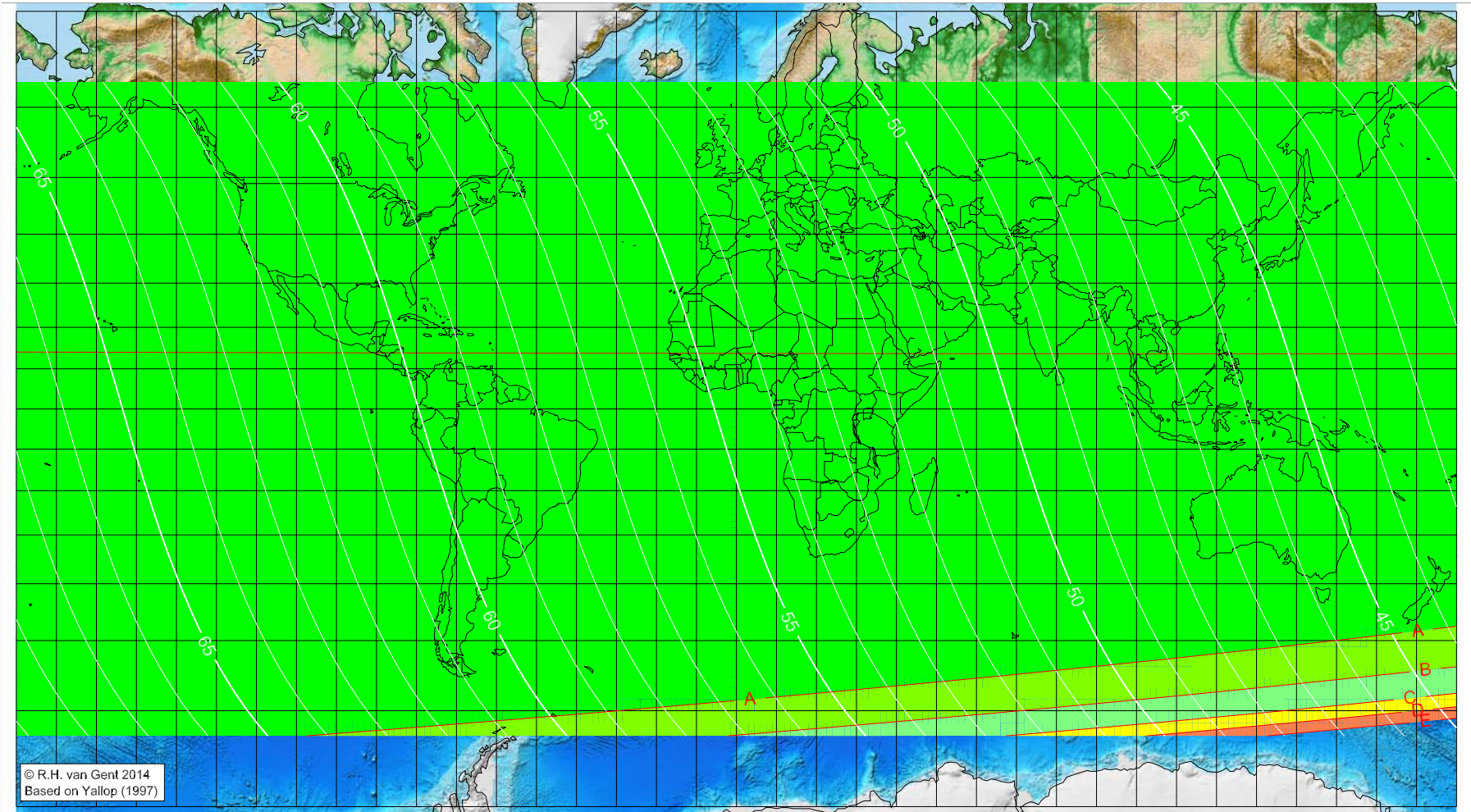
Longitude (°)	Latitude (°)	Lunar age (h)
66.23	14.84	25.46
122.00	15.61	21.66
158.29	16.34	19.19
176.48	16.80	17.94

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

First visibility lunar crescent for Rajab 0 AH (proleptic)

Global visibility map for 19 January 622 [Tuesday]
Second day after luni-solar conjunction



Astronomical New Moon: 17 January 622, 12h 25.4m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

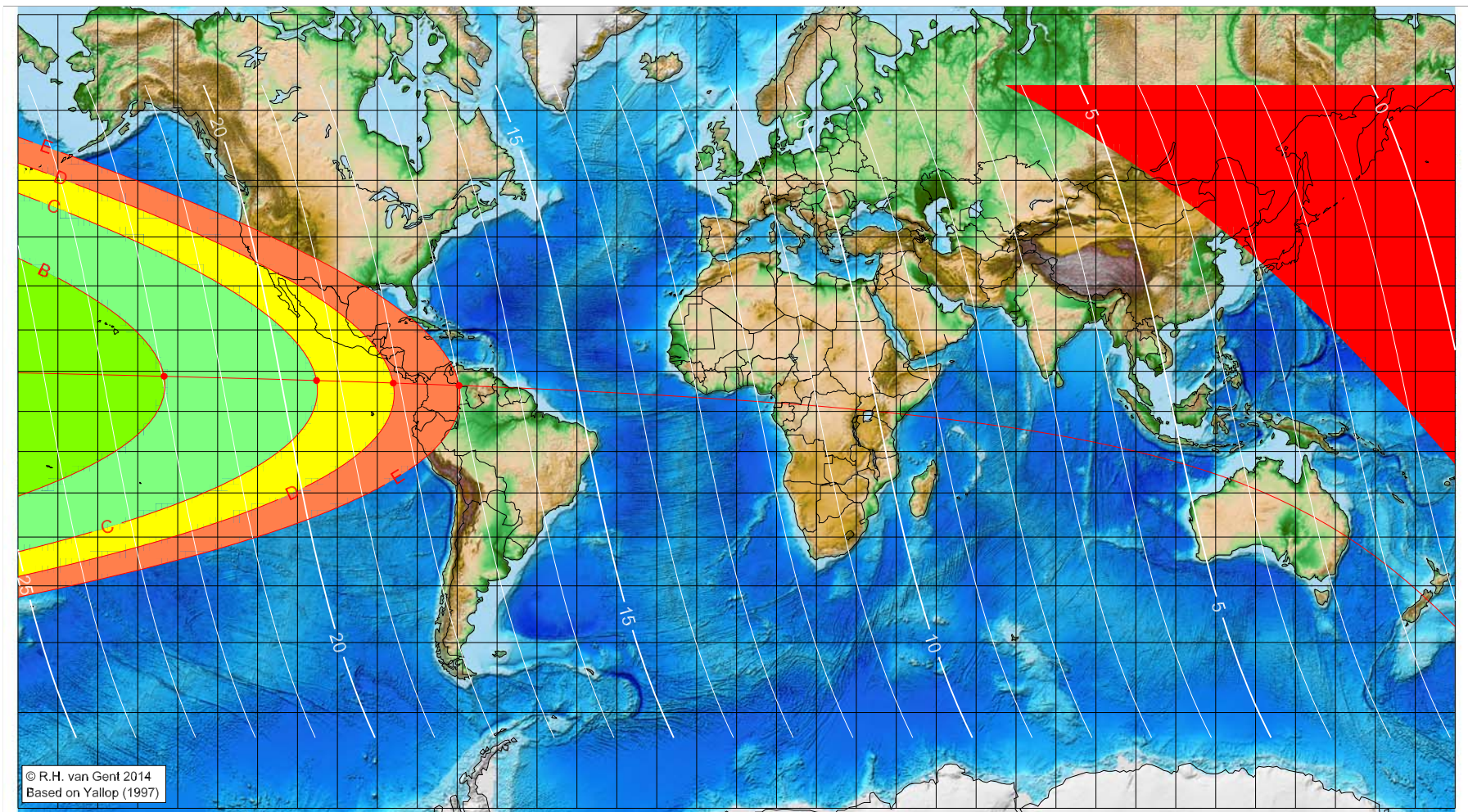
Astronomical (Brown) Lunation Number = -16090
Islamic Lunation Number = -5
 $TT - UT [= \Delta T] = 1.27 \text{ h}$

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 Shaʿbān 0 AH (proleptic)

Global visibility map for 16 February 622 [Tuesday]
Day of luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 16 February 622, 6h 5.2m (UTC)

First visibility (●)

Longitude (°)	Latitude (°)	Lunar age (h)
-143.41	8.78	21.97
-105.22	7.72	19.40
-86.01	7.08	18.11
-69.53	6.47	17.00

Astronomical (Brown) Lunation Number = -16089
Islamic Lunation Number = -4
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)

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

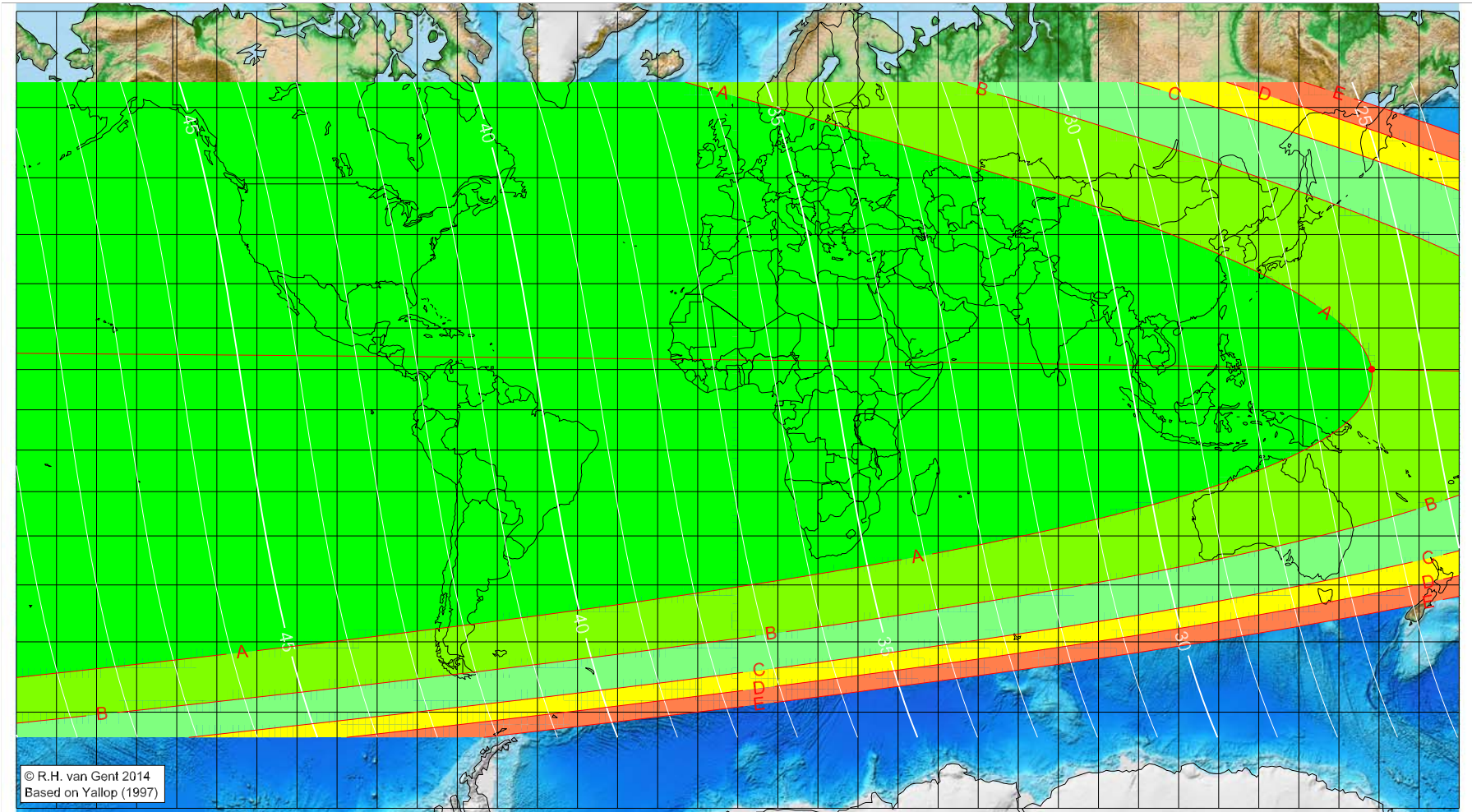
■ moonset before sunset

■ before conjunction (astronomical new moon)

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

First visibility lunar crescent for Sha'bān 0 AH (proleptic)

Global visibility map for 17 February 622 [Wednesday]
Day after luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 16 February 622, 6h 5.2m (UTC)

First visibility (•)

Longitude (°)	Latitude (°)	Lunar age (h)
158.18	10.06	25.90

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

Astronomical (Brown) Lunation Number = -16089
Islamic Lunation Number = -4
TT - UT [= ΔT] = 1.27 h

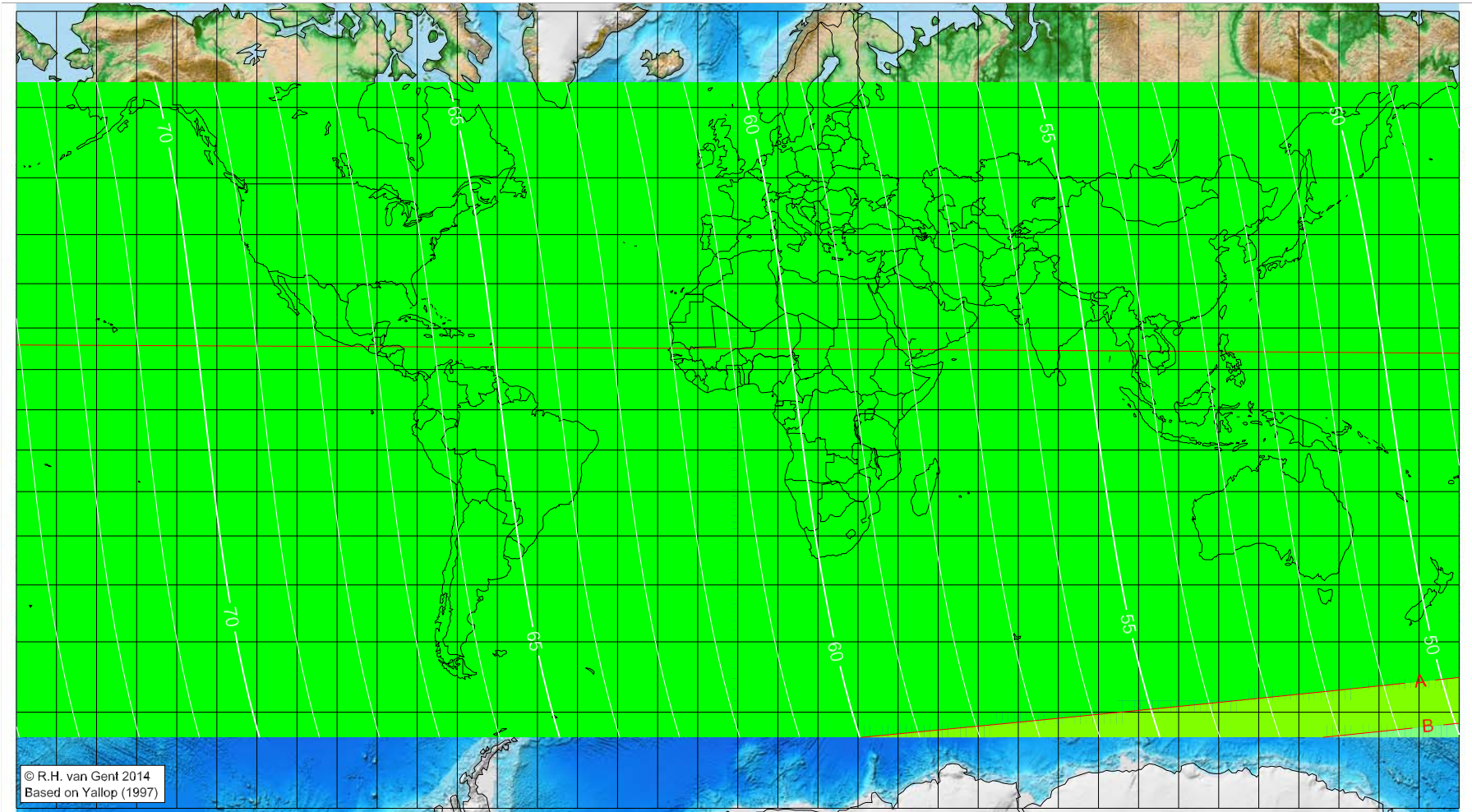
Lunar age (in hours) is given for the 'best time',
defined as the moment 4/9ths between sunset
and moonset

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

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

First visibility lunar crescent for Shaʿbān 0 AH (proleptic)

Global visibility map for 18 February 622 [Thursday]
Second day after luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 16 February 622, 6h 5.2m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

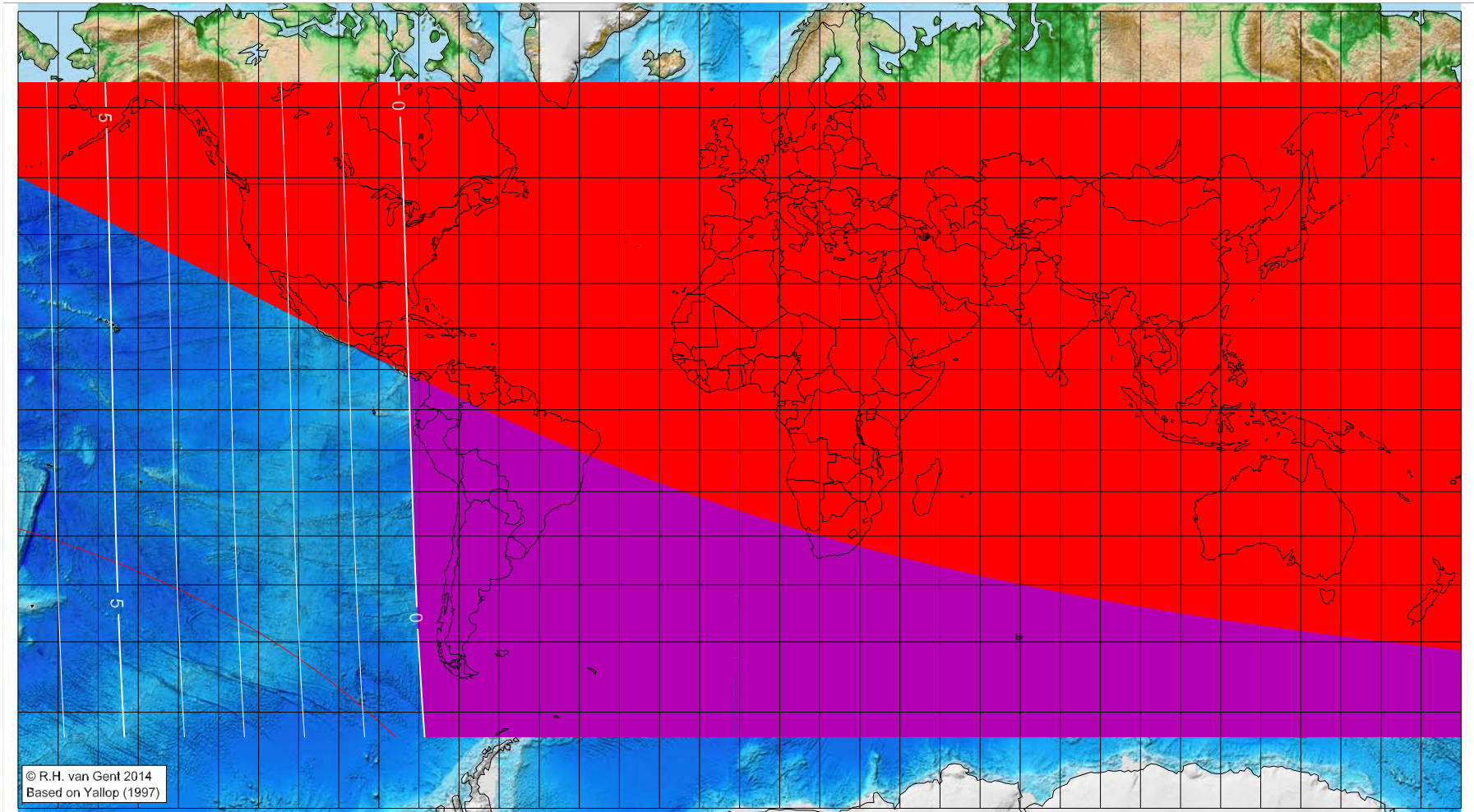
Astronomical (Brown) Lunation Number = -16089
Islamic Lunation Number = -4
 $TT - UT [= \Delta T] = 1.27 \text{ h}$

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 0 AH (proleptic)

Global visibility map for 17 March 622 [Wednesday]
Day of luni-solar conjunction



Astronomical New Moon: 17 March 622, 23h 41.4m (UTC)

First visibility (•)

Astronomical (Brown) Lunation Number = -16088
Islamic Lunation Number = -3
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

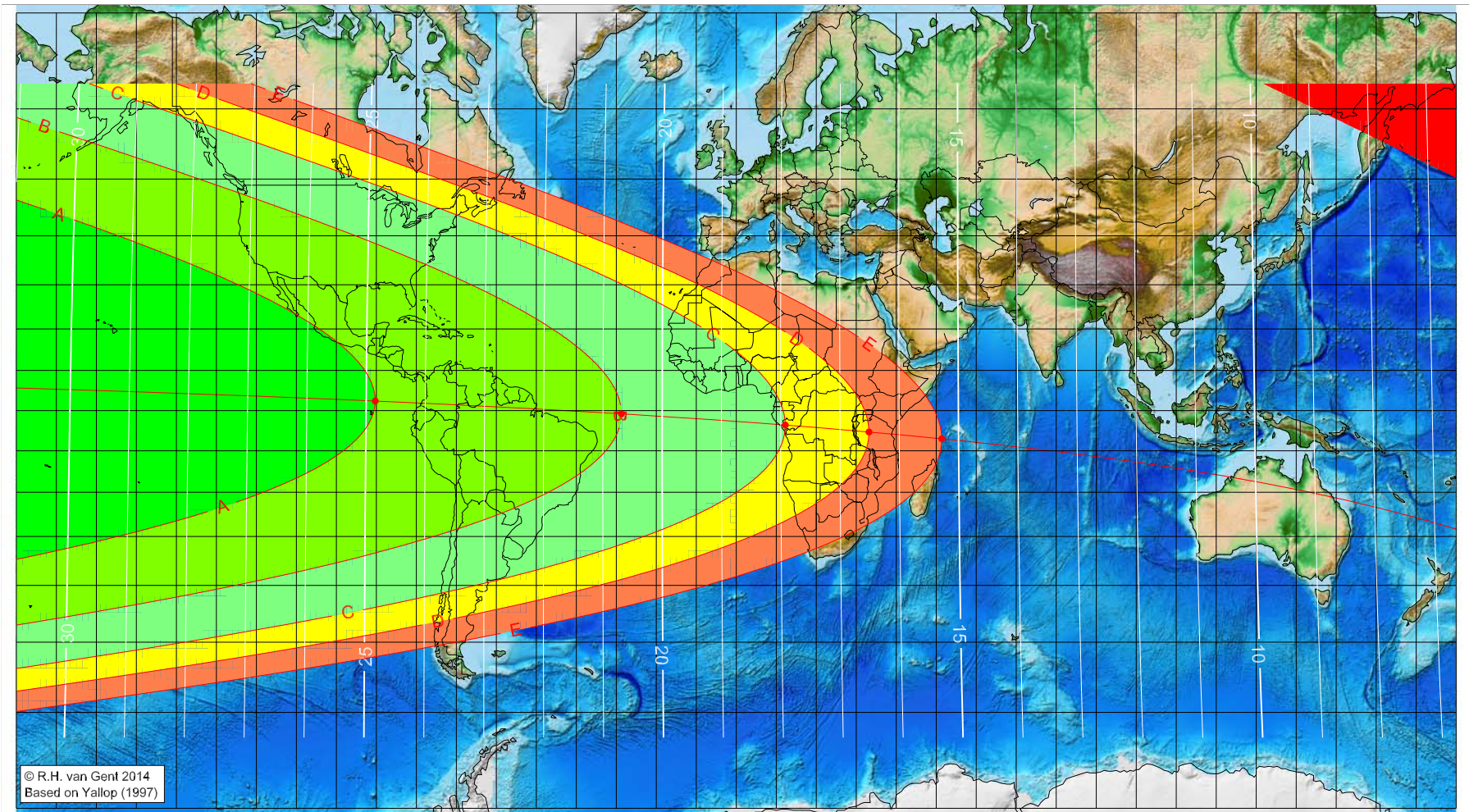
Longitude (°)	Latitude (°)	Lunar age (h)
		not visible until the next evening
		not visible until the next evening
		not visible until the next evening
		not visible until the next evening

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 0 AH (proleptic)

Global visibility map for 18 March 622 [Thursday]
Day after luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 17 March 622, 23h 41.4m (UTC)

First visibility (•)

Longitude (°)	Latitude (°)	Lunar age (h)
-90.28	2.39	24.85
-28.72	-0.81	20.69
12.26	-3.61	17.92
33.18	-5.34	16.51
51.37	-7.03	15.28

Astronomical (Brown) Lunation Number = -16088
Islamic Lunation Number = -3
TT - UT [= ΔT] = 1.27 h

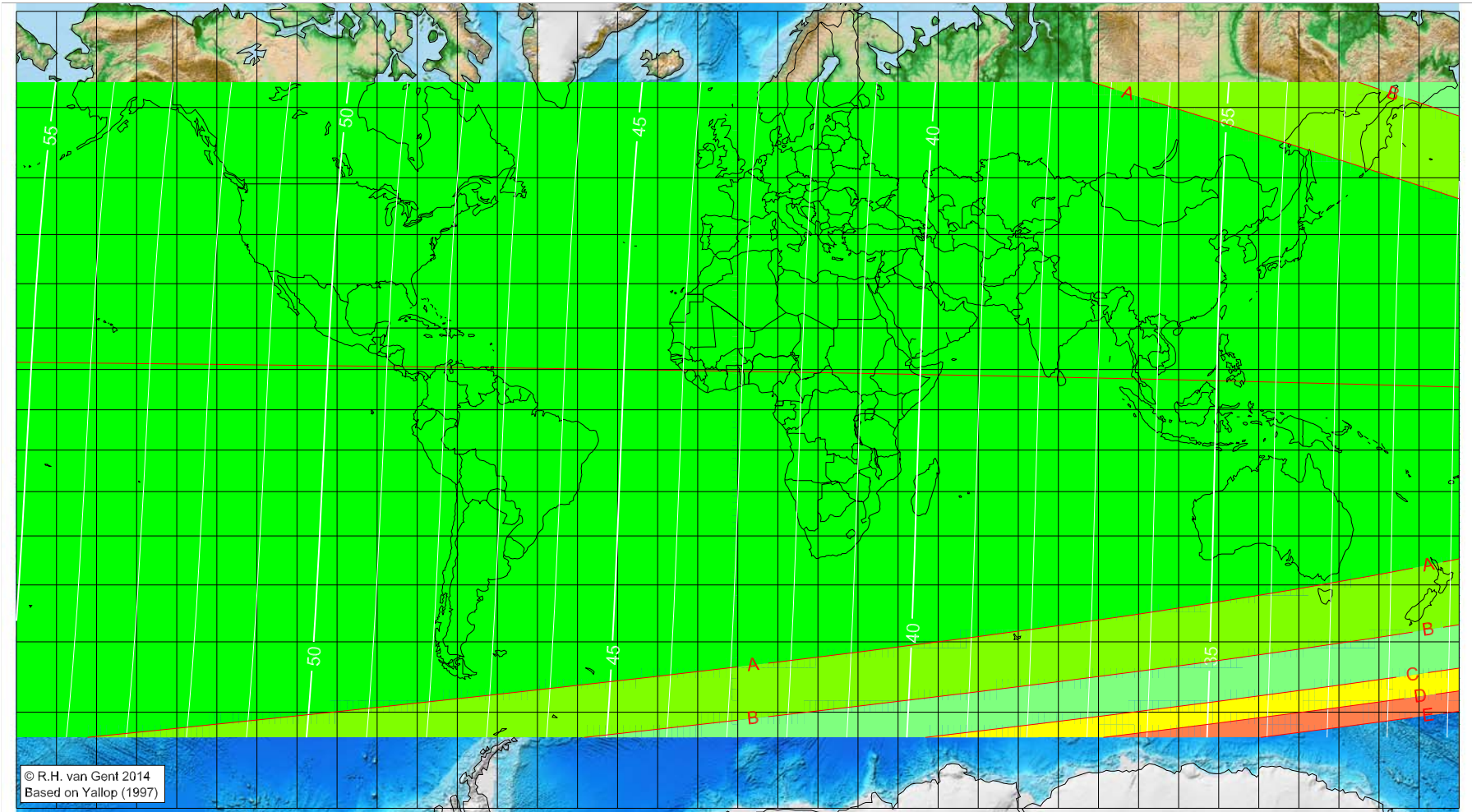
- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

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 0 AH (proleptic)

Global visibility map for 19 March 622 [Friday]
Second day after luni-solar conjunction



Astronomical New Moon: 17 March 622, 23h 41.4m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

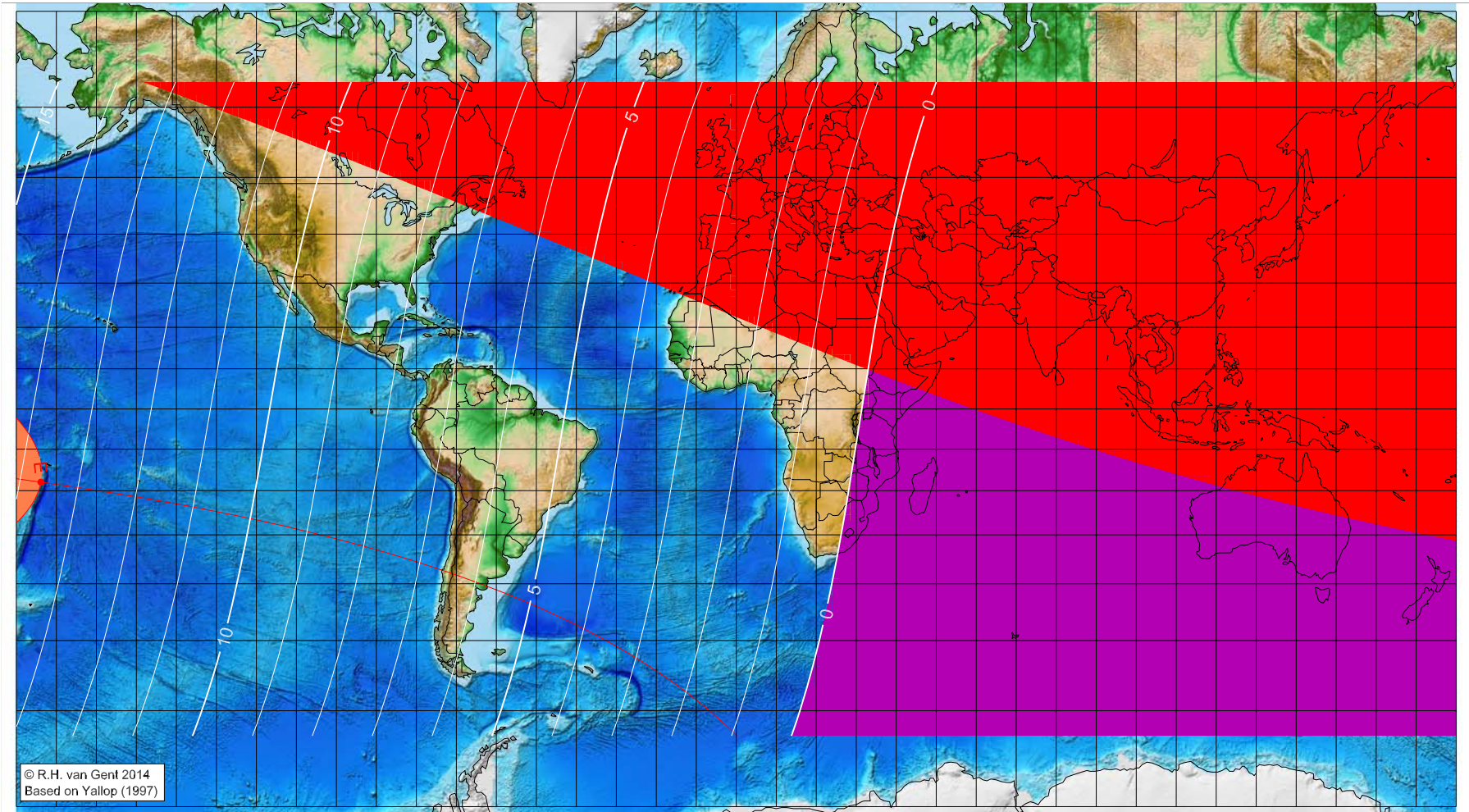
Astronomical (Brown) Lunation Number = -16088
Islamic Lunation Number = -3
 $TT - UT [= \Delta T] = 1.27 \text{ h}$

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 0 AH (proleptic)

Global visibility map for 16 April 622 [Friday]
Day of luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 16 April 622, 15h 57.3m (UTC)

First visibility (•)

Longitude (°)	Latitude (°)	Lunar age (h)
-173.88	-17.99	13.64

Astronomical (Brown) Lunation Number = -16087
Islamic Lunation Number = -2
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)

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

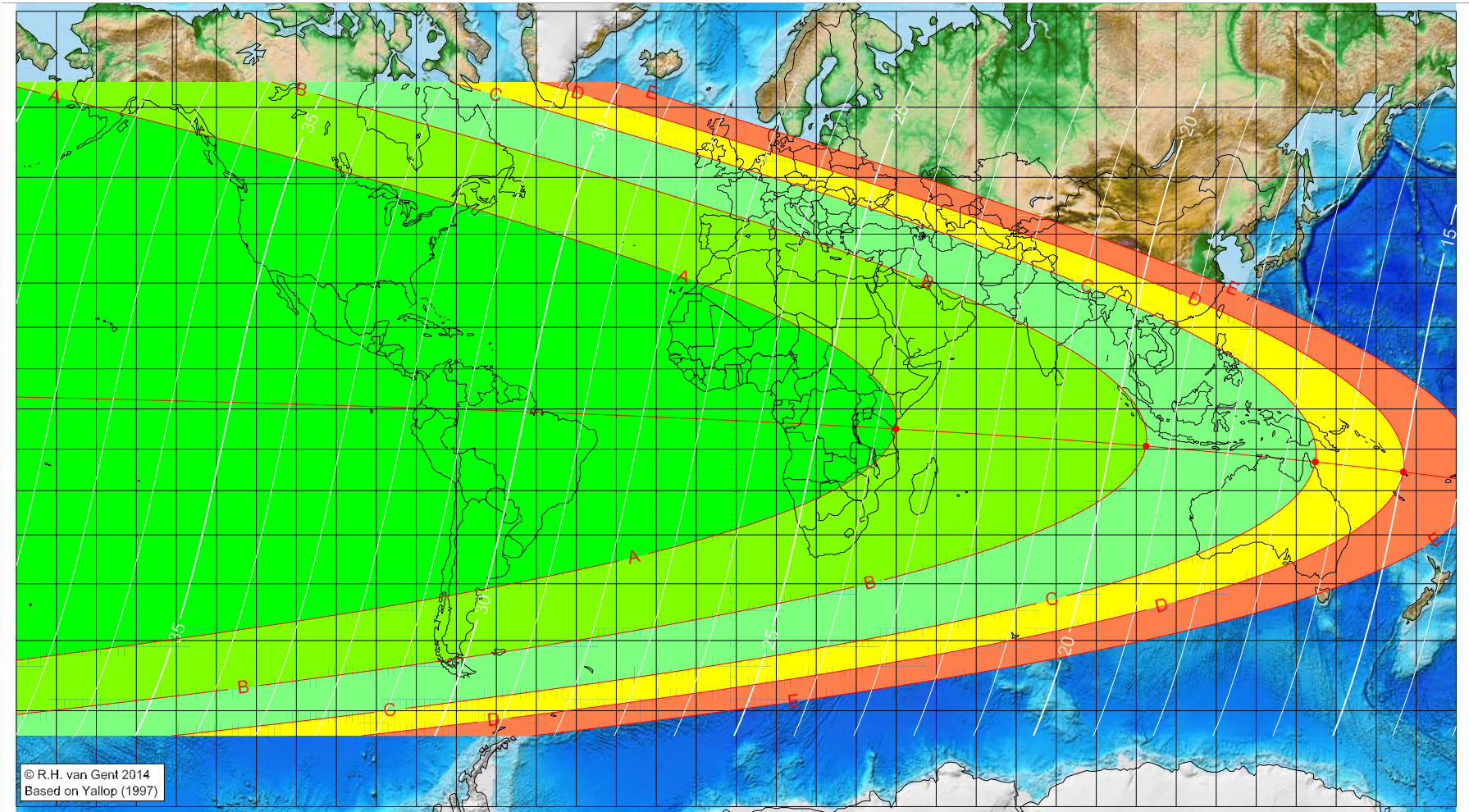
■ moonset before sunset

■ before conjunction (astronomical new moon)

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

First visibility lunar crescent for Shawwāl 0 AH (proleptic)

Global visibility map for 17 April 622 [Saturday]
Day after luni-solar conjunction



Astronomical New Moon: 16 April 622, 15h 57.3m (UTC)

First visibility (•)

Astronomical (Brown) Lunation Number = -16087
Islamic Lunation Number = -2
TT - UT [= ΔT] = 1.27 h

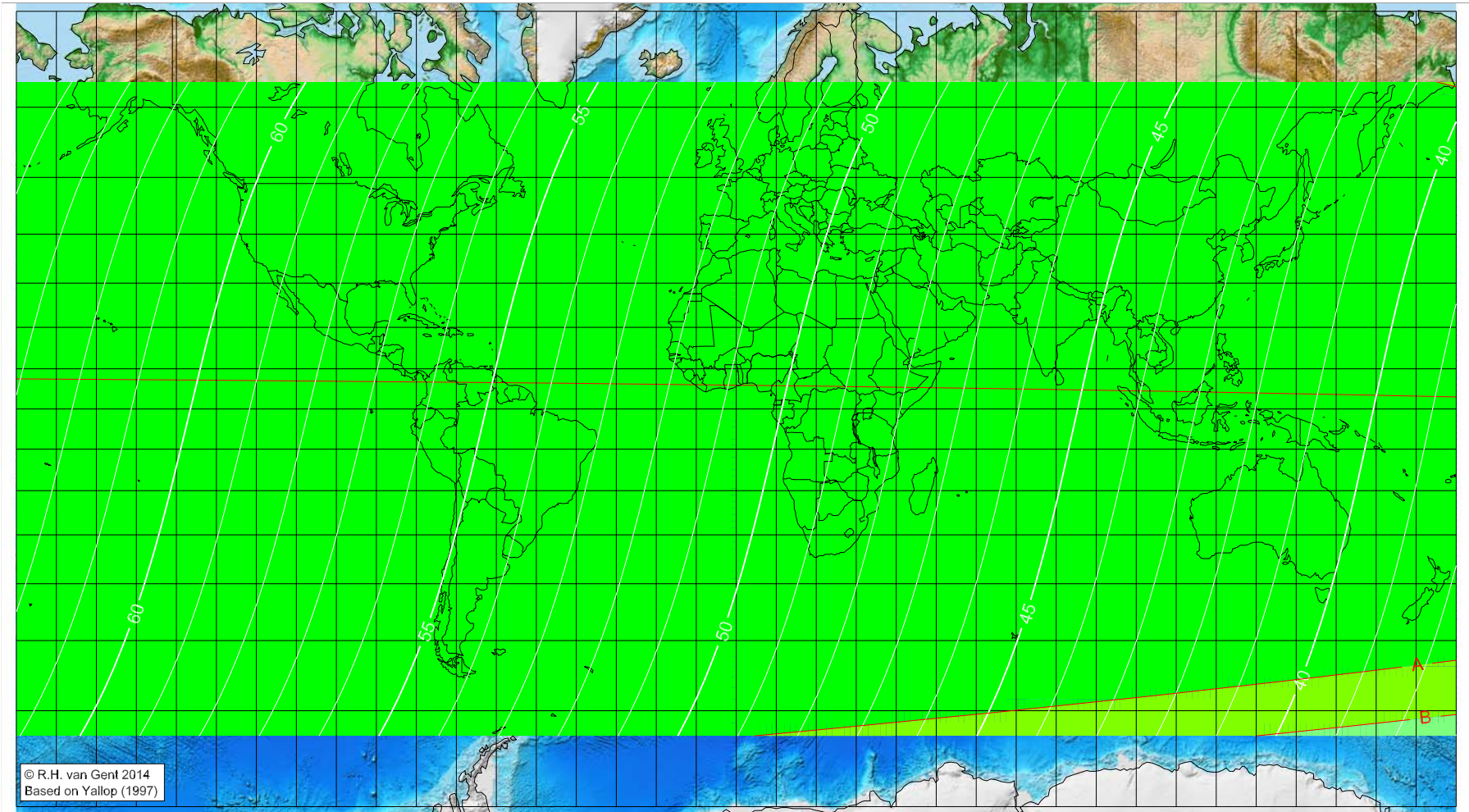
- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

Longitude (°)	Latitude (°)	Lunar age (h)
39.95	-4.98	23.67
102.44	-9.25	19.40
144.78	-13.11	16.49
166.75	-15.54	14.98

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

First visibility lunar crescent for Shawwāl 0 AH (proleptic)

Global visibility map for 18 April 622 [Sunday]
Second day after luni-solar conjunction



Astronomical New Moon: 16 April 622, 15h 57.3m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

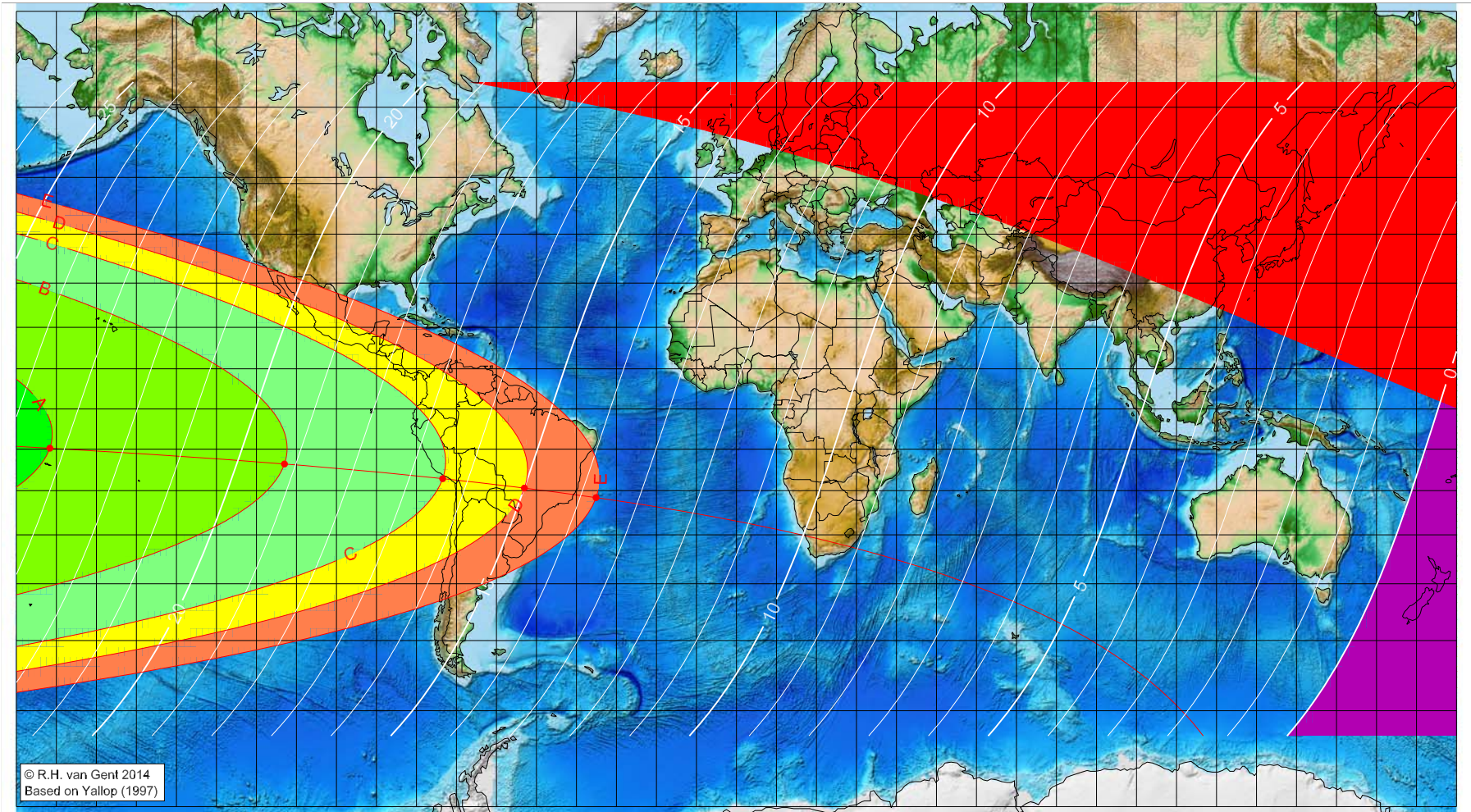
Astronomical (Brown) Lunation Number = -16087
Islamic Lunation Number = -2
 $TT - UT [= \Delta T] = 1.27 \text{ h}$

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 0 AH (proleptic)

Global visibility map for 16 May 622 [Sunday]
Day of luni-solar conjunction



© R.H. van Gent 2014
Based on Yallop (1997)

Astronomical New Moon: 16 May 622, 6h 16.0m (UTC)

First visibility (●)

Astronomical (Brown) Lunation Number = -16086
Islamic Lunation Number = -1
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

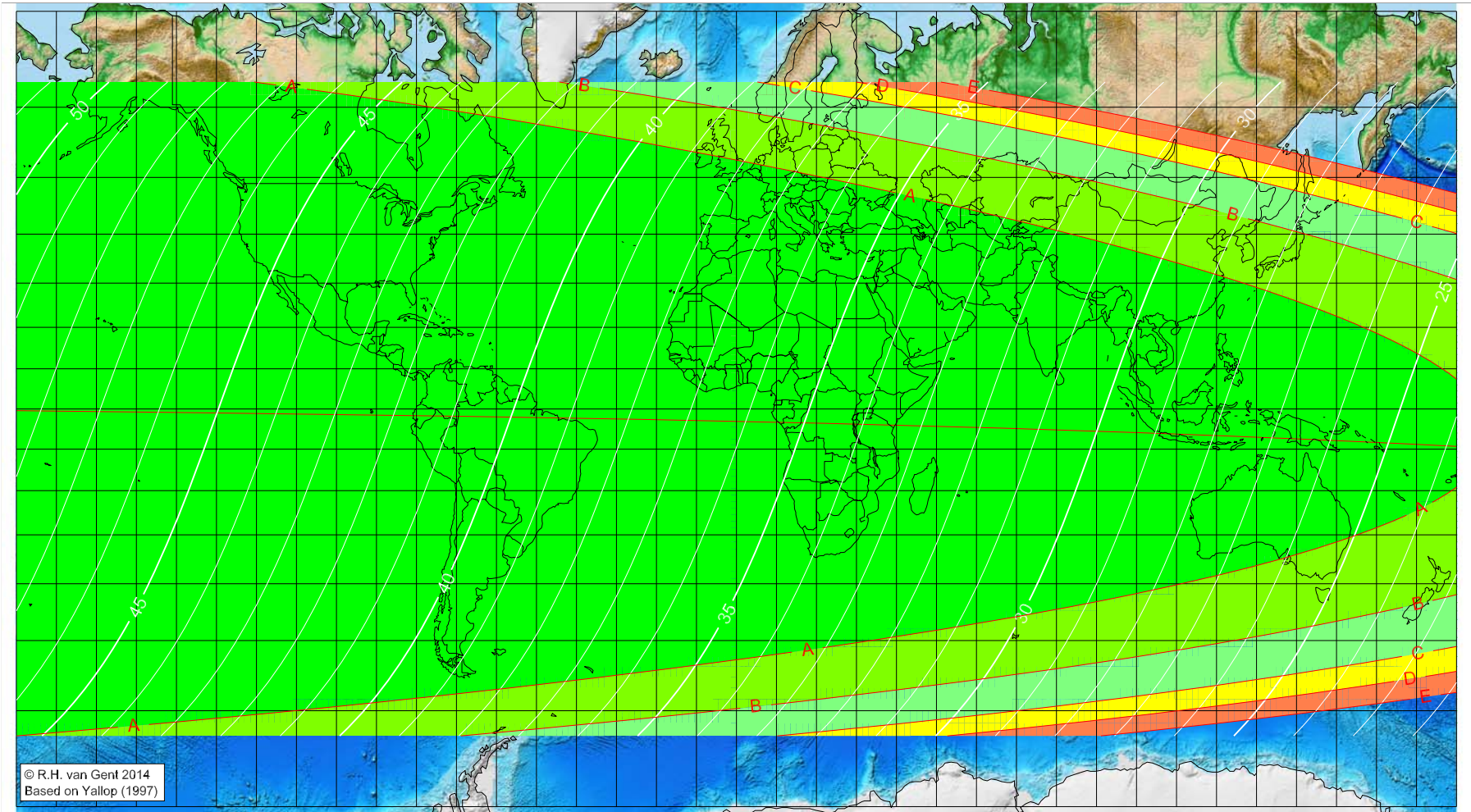
Longitude (°)	Latitude (°)	Lunar age (h)
-171.64	-9.76	23.25
-112.99	-13.63	19.19
-73.44	-17.16	16.43
-53.02	-19.39	15.00
-35.10	-21.63	13.73

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 0 AH (proleptic)

Global visibility map for 17 May 622 [Monday]
Day after luni-solar conjunction



Astronomical New Moon: 16 May 622, 6h 16.0m (UTC)

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

Astronomical (Brown) Lunation Number = -16086
Islamic Lunation Number = -1
TT - UT [= ΔT] = 1.27 h

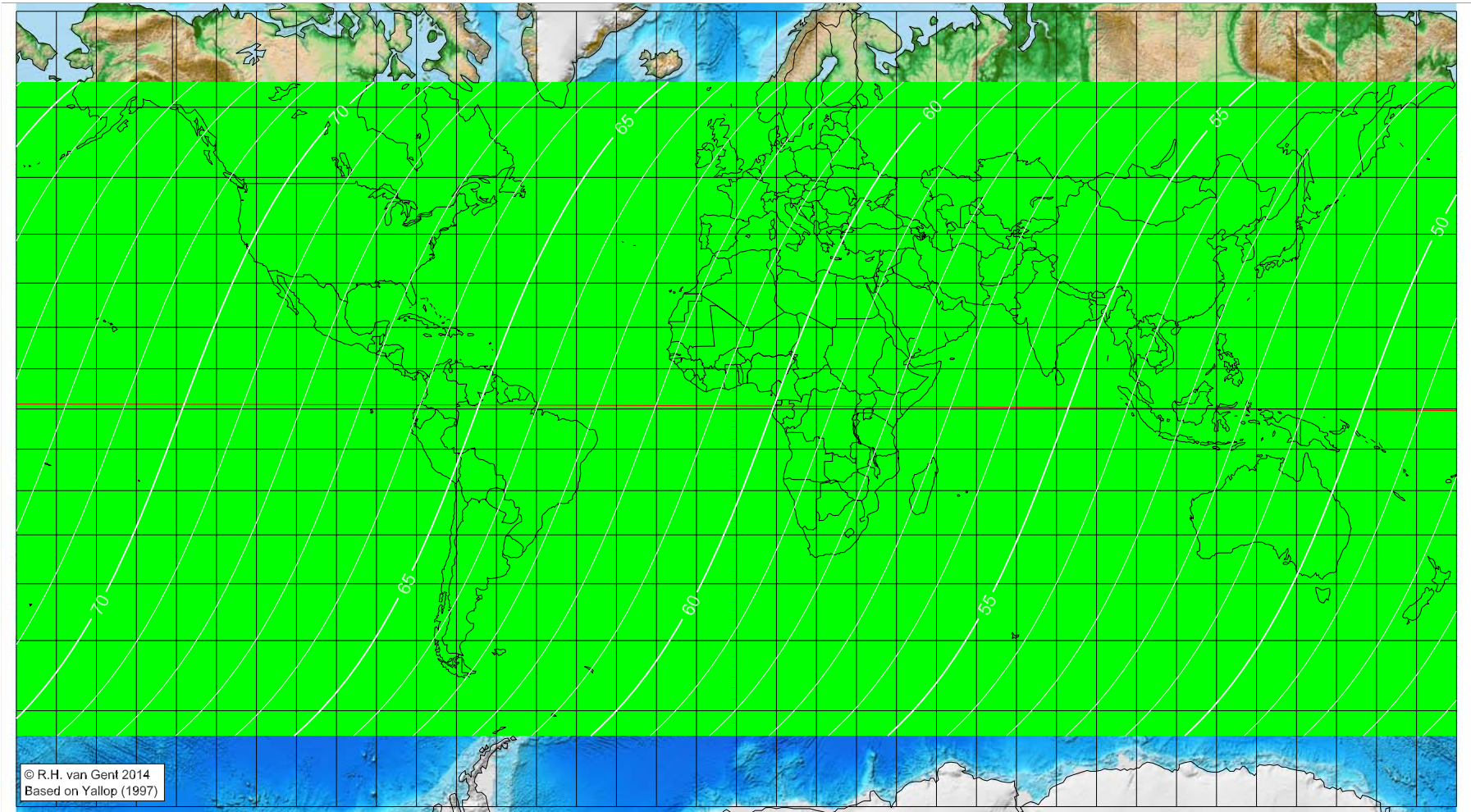
- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

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 0 AH (proleptic)

Global visibility map for 18 May 622 [Tuesday]
 Second day after luni-solar conjunction



Astronomical New Moon: 16 May 622, 6h 16.0m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

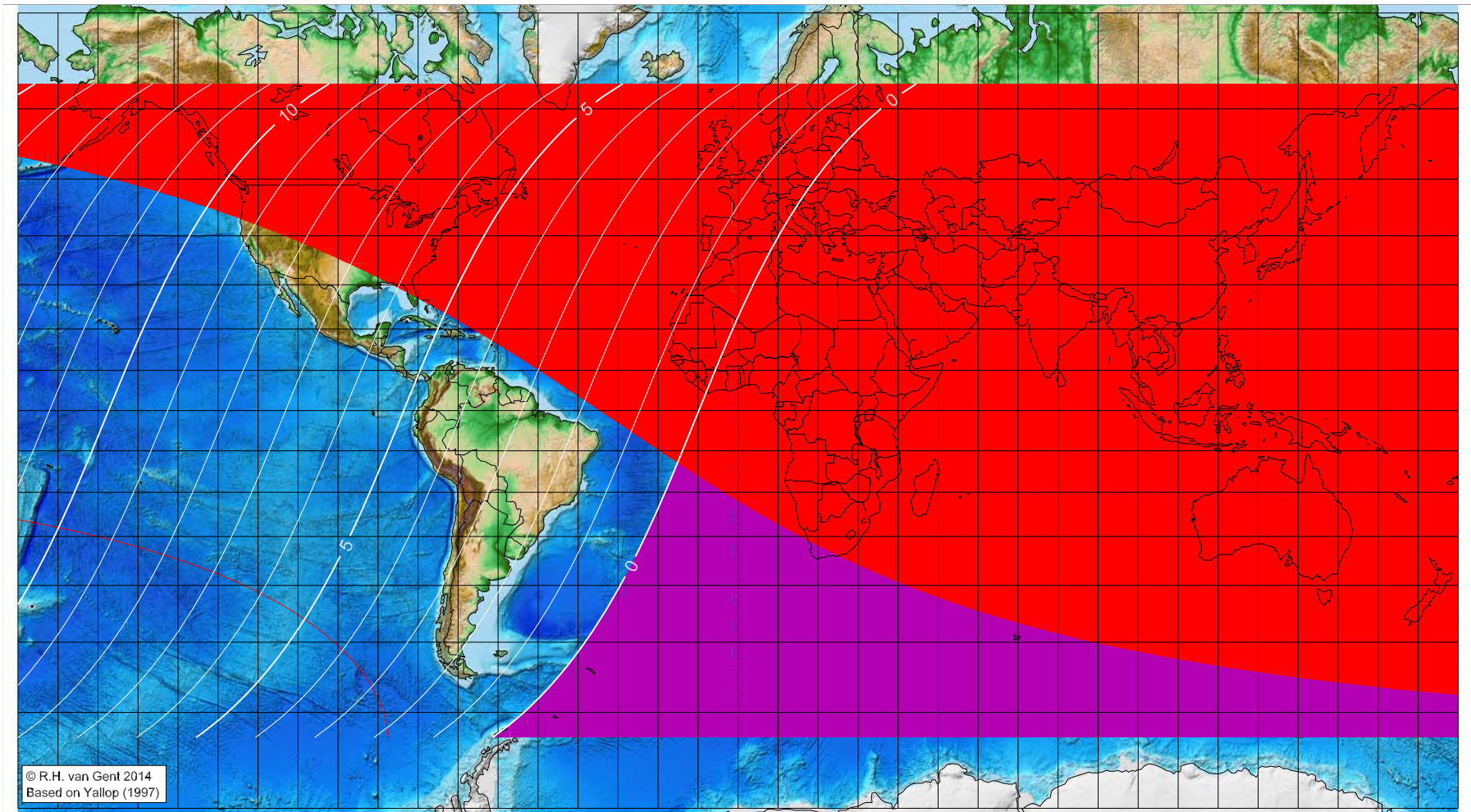
Astronomical (Brown) Lunation Number = -16086
 Islamic Lunation Number = -1
 $TT - UT [= \Delta T] = 1.27 \text{ h}$

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 0 AH (proleptic)

Global visibility map for 14 June 622 [Monday]
Day of luni-solar conjunction



Astronomical New Moon: 14 June 622, 18h 38.6m (UTC)

First visibility (•)

Astronomical (Brown) Lunation Number = -16085
Islamic Lunation Number = 0
TT - UT [= ΔT] = 1.27 h

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset

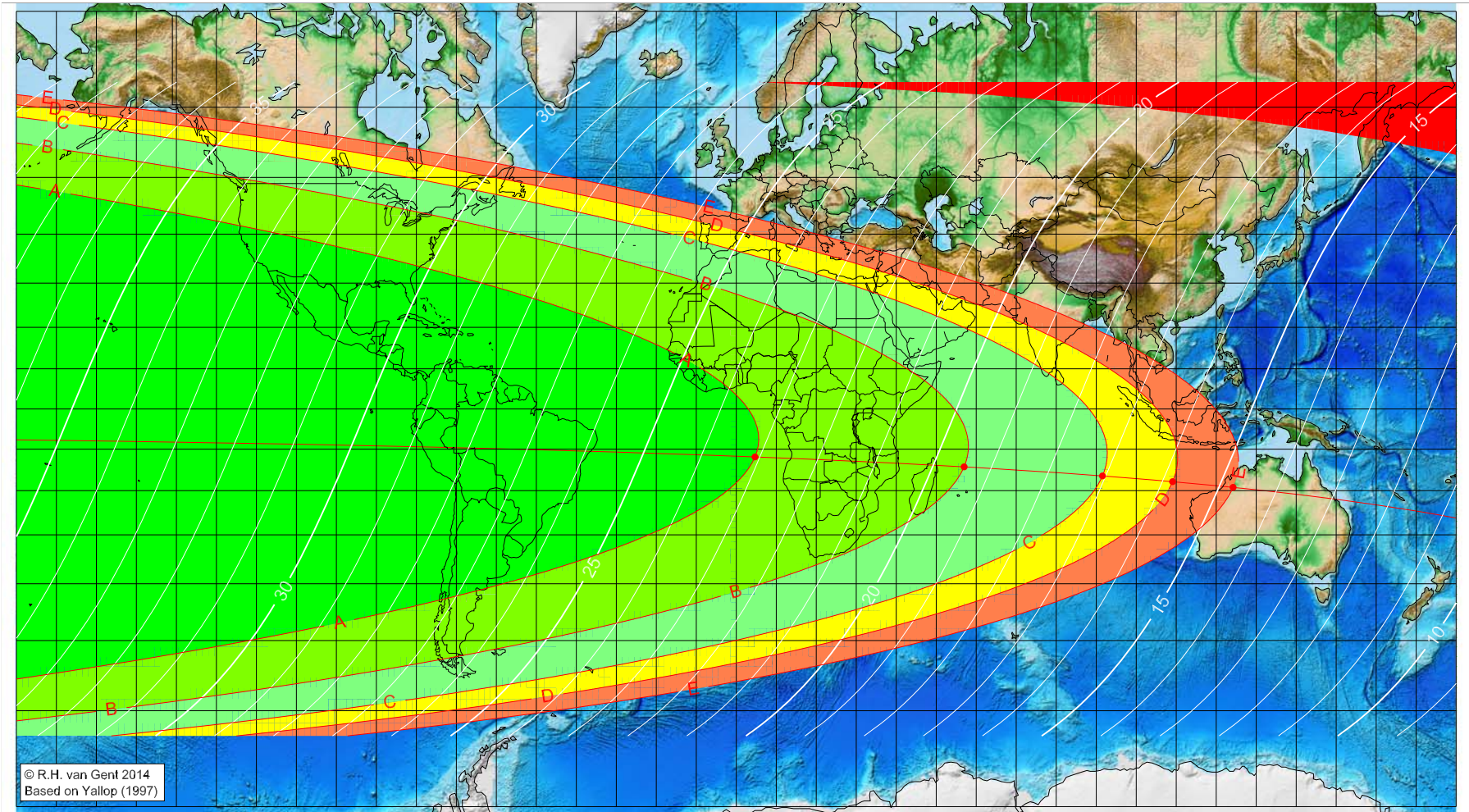
Longitude (°) Latitude (°) Lunar age (h)
not visible until the next evening
not visible until the next evening
not visible until the next evening
not visible until the next evening
not visible until the next evening

■ before conjunction (astronomical new moon)

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

First visibility lunar crescent for Dhū 'l-Hijja 0 AH (proleptic)

Global visibility map for 15 June 622 [Tuesday]
Day after luni-solar conjunction



Astronomical New Moon: 14 June 622, 18h 38.6m (UTC)

First visibility (●)

Astronomical (Brown) Lunation Number = -16085
Islamic Lunation Number = 0
TT - UT [= ΔT] = 1.27 h

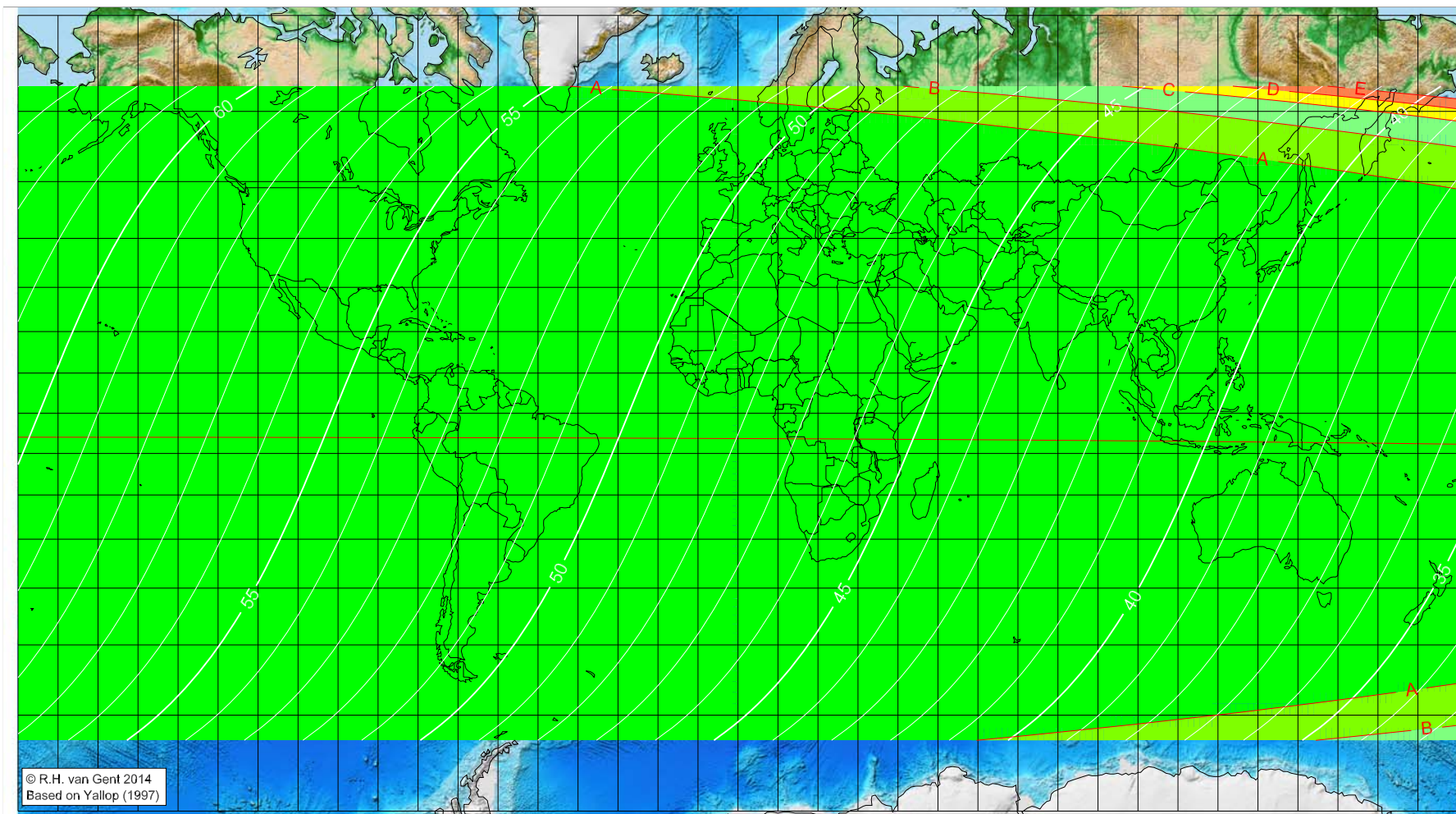
- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

Longitude (°)	Latitude (°)	Lunar age (h)
4.68	-11.91	23.08
56.98	-14.32	19.47
91.56	-16.51	17.06
109.09	-17.88	15.83
124.23	-19.23	14.76

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

First visibility lunar crescent for Dhū 'l-Hijja 0 AH (proleptic)

Global visibility map for 16 June 622 [Wednesday]
 Second day after luni-solar conjunction



Astronomical New Moon: 14 June 622, 18h 38.6m (UTC)

- A – easily visible to the unaided eye
- B – visible under perfect atmospheric conditions
- C – visible to the unaided eye after found with optical aid
- D – only visible with binoculars or conventional telescopes
- E – not visible with conventional telescopes
- F – below Danjon limit (7°)
- moonset before sunset
- before conjunction (astronomical new moon)

Astronomical (Brown) Lunation Number = -16085
 Islamic Lunation Number = 0
 $TT - UT [= \Delta T] = 1.27 \text{ h}$

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/>