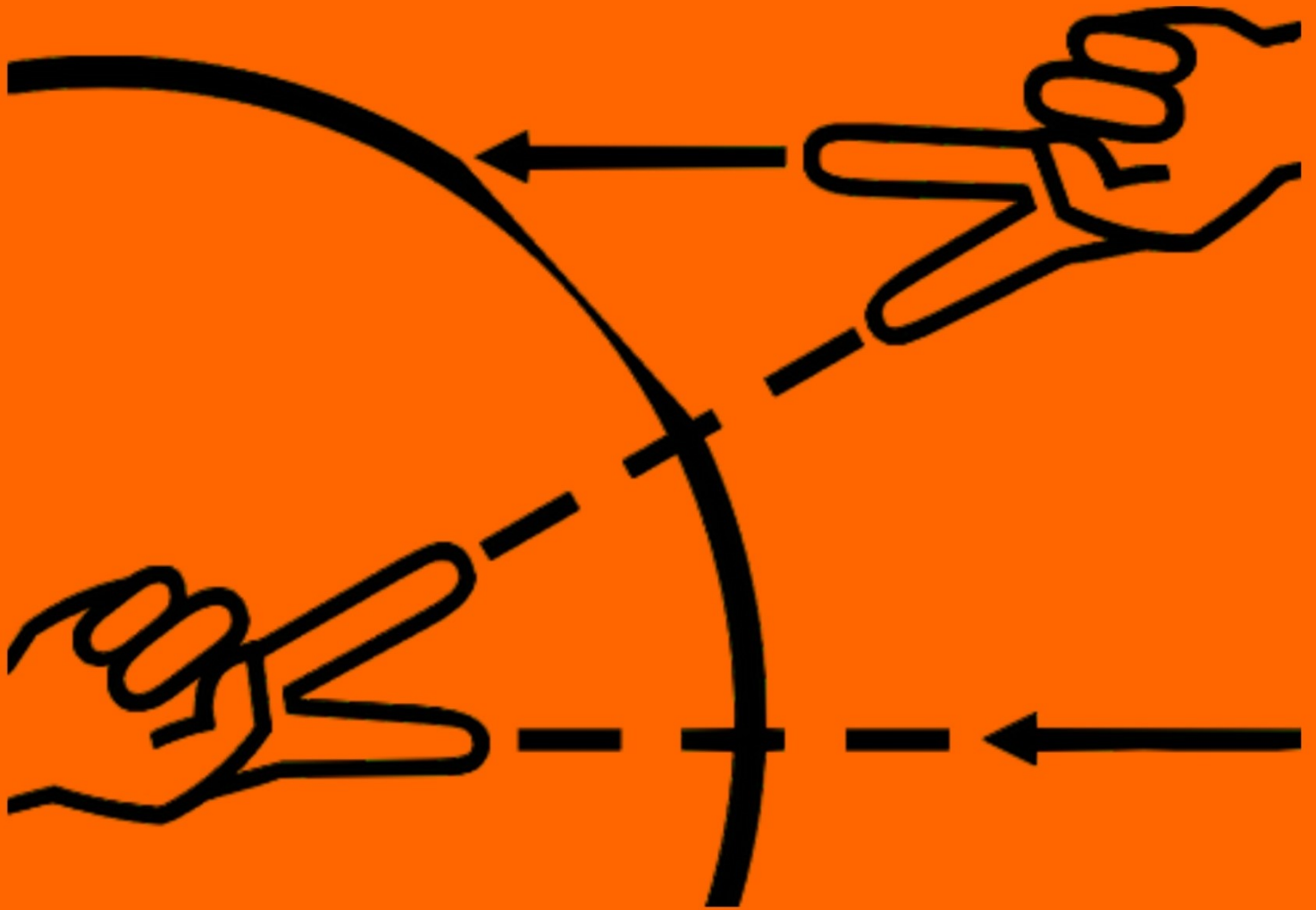


Eratostrhenes



3 Continents

7 Countries

13 Schools

47 Measures

3 Continents

7 Countries

13 Schools

47 Measures

BRAZIL (2)

Piranguinho, Rio de Janeiro

COLOMBIA (1)

Guarne

FRANCE (2)

Lafrançaise, Sainte Marie

GREECE (2)

Aigio, Athens

ROMANIA (4)

Busteni, Dorohoi, Mărgineni, Pogana

SPAIN (1)

Úbeda

TUNISIA (1)

Bizerte

Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Aigio	Greece	1st High School of Aigio	38.252	22.079
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726
	Bizerte	Tunisia	Ecole Primaire Raouabi	37.284	9.868
	Busteni	Romania	Colegiul Ion Kalinderu	45.416	25.535
	Dorohoi	Romania	Grigore Ghica National College	47.953	26.394
	Guarne	Colombia	Grupo Astrofanáticos	6.274	-75.449
	Lafrançaise	France	Collège Antonin Perbosc	44.127	1.237
	Mărgineni	Romania	Gh. Popescu School	44.533	24.554
	Piranguinho	Brazil	Universidade Federal de Itajubá	-22.411	-45.535
	Pogana	Romania	Scoala Gimnaziala Nr.1 Pogana	46.313	27.575
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317
	Sainte Marie	France	Ecole primaire	43.661	0.874
	Úbeda	Spain	Colegio Salesiano Santo Domingo Savio	38.017	-3.367

Aigio, Greece

February 2019

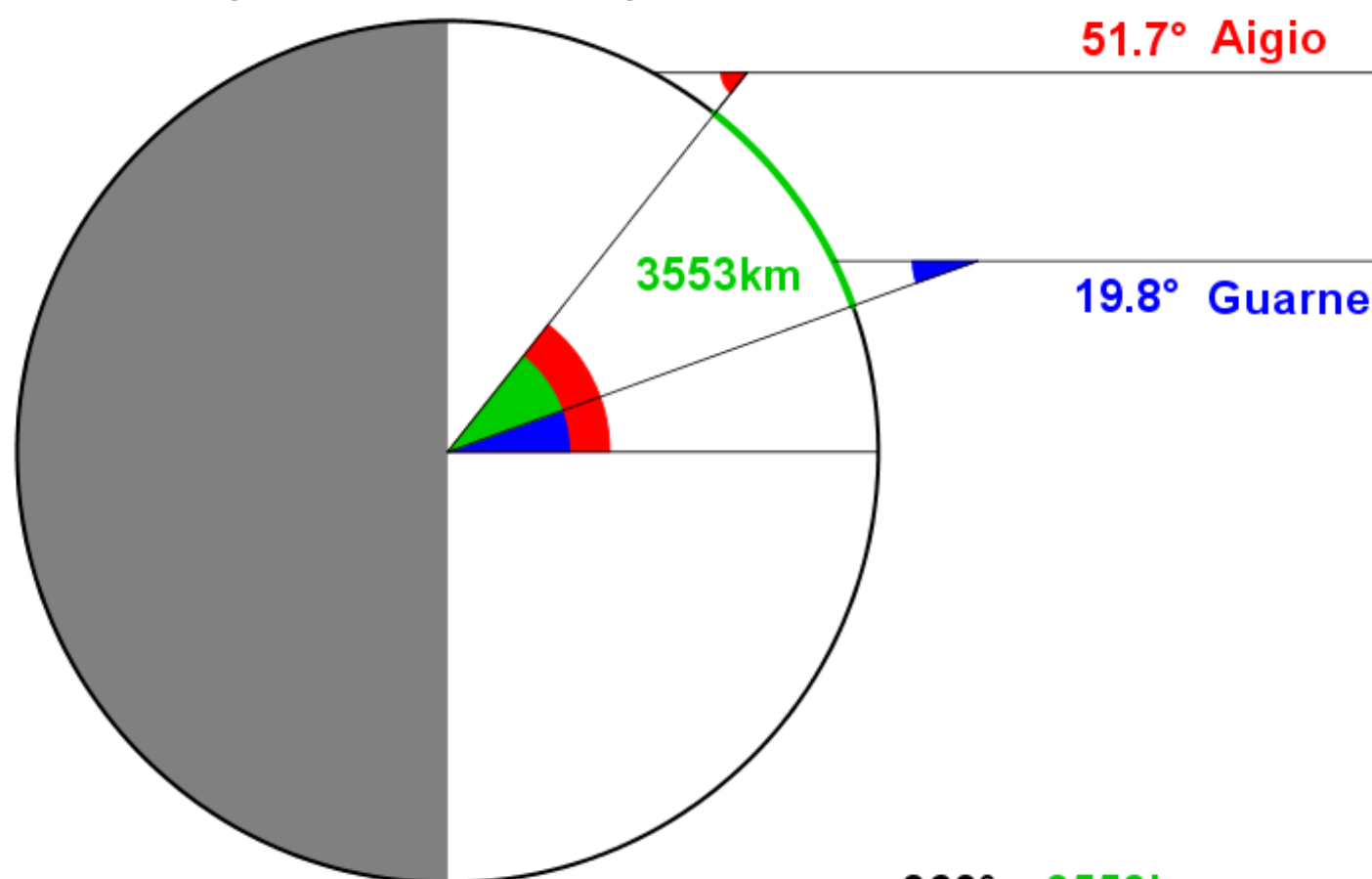


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Aigio	Greece	1st High School of Aigio	38.252	22.079

Date	Gnomon	Shadow	Angle
07 February 2019	30 cm	41.2 cm	53.9 °
11 February 2019	30 cm	38 cm	51.7 °
18 February 2019	30 cm	36 cm	50.2 °

11/02/2019 (Aigio-Greece) Latitude: 38.252°

11/02/2019 (Guarne-Colombia) Latitude: 6.274°



Distance	Angle
circumference	360°
3553km	51.7° - 19.8°

$$\text{circumference} = \frac{360^\circ \times 3553\text{km}}{51.7^\circ - 19.8^\circ} = 40097 \text{ km}$$



Athens, Greece

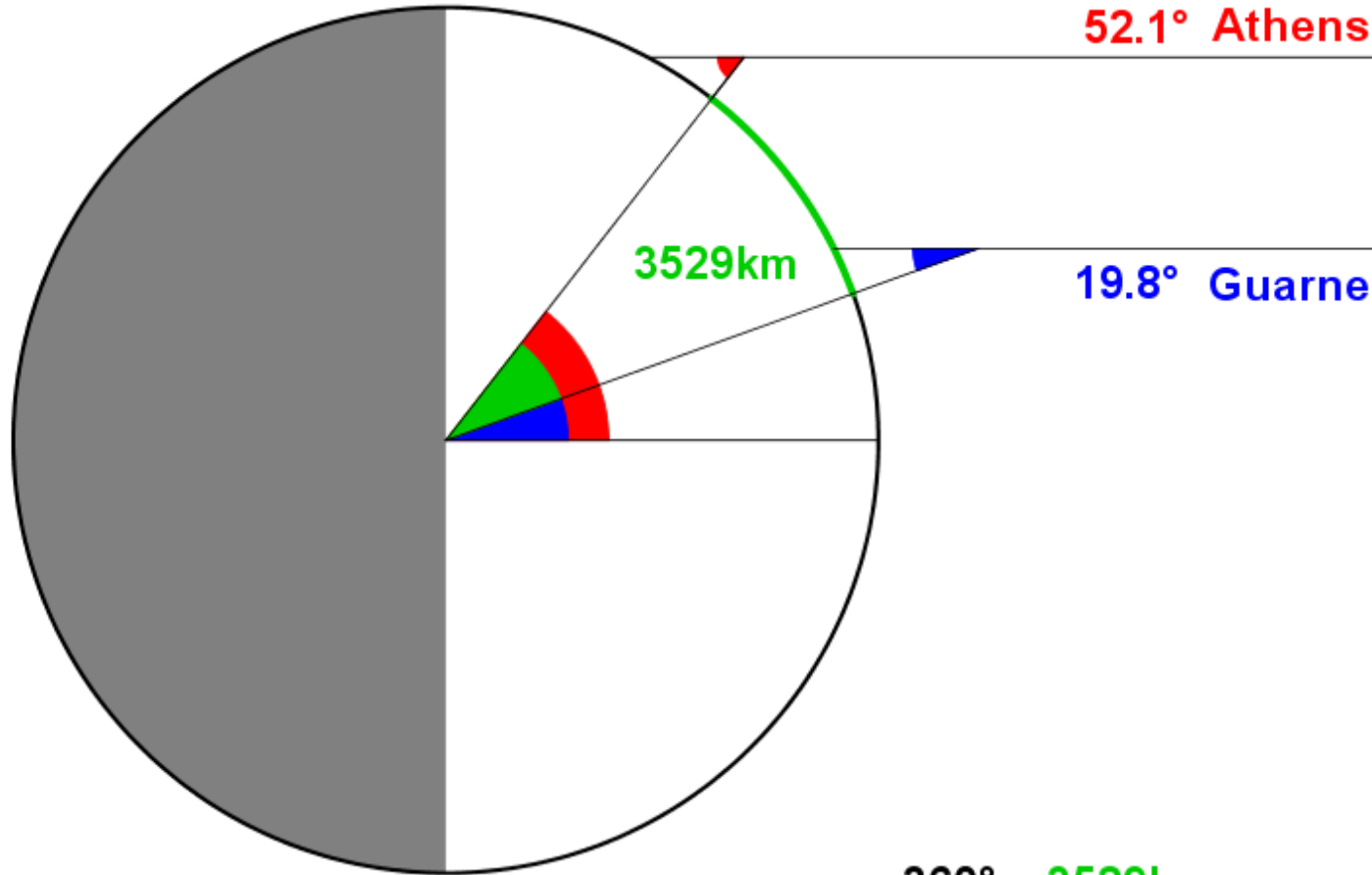
February 2019



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726

Date	Gnomon	Shadow	Angle
11 February 2019	49.0 cm	63.0 cm	52.1 °

11/02/2019 (Athens-Greece) Latitude: 38.037°
11/02/2019 (Guarne-Colombia) Latitude: 6.274°



Distance	Angle
circumference	360°
3529km	52.1° - 19.8°

circumference = $\frac{360^\circ \times 3529\text{km}}{52.1^\circ - 19.8^\circ} = 39333 \text{ km}$



Bizerte, Tunisia

February 2019

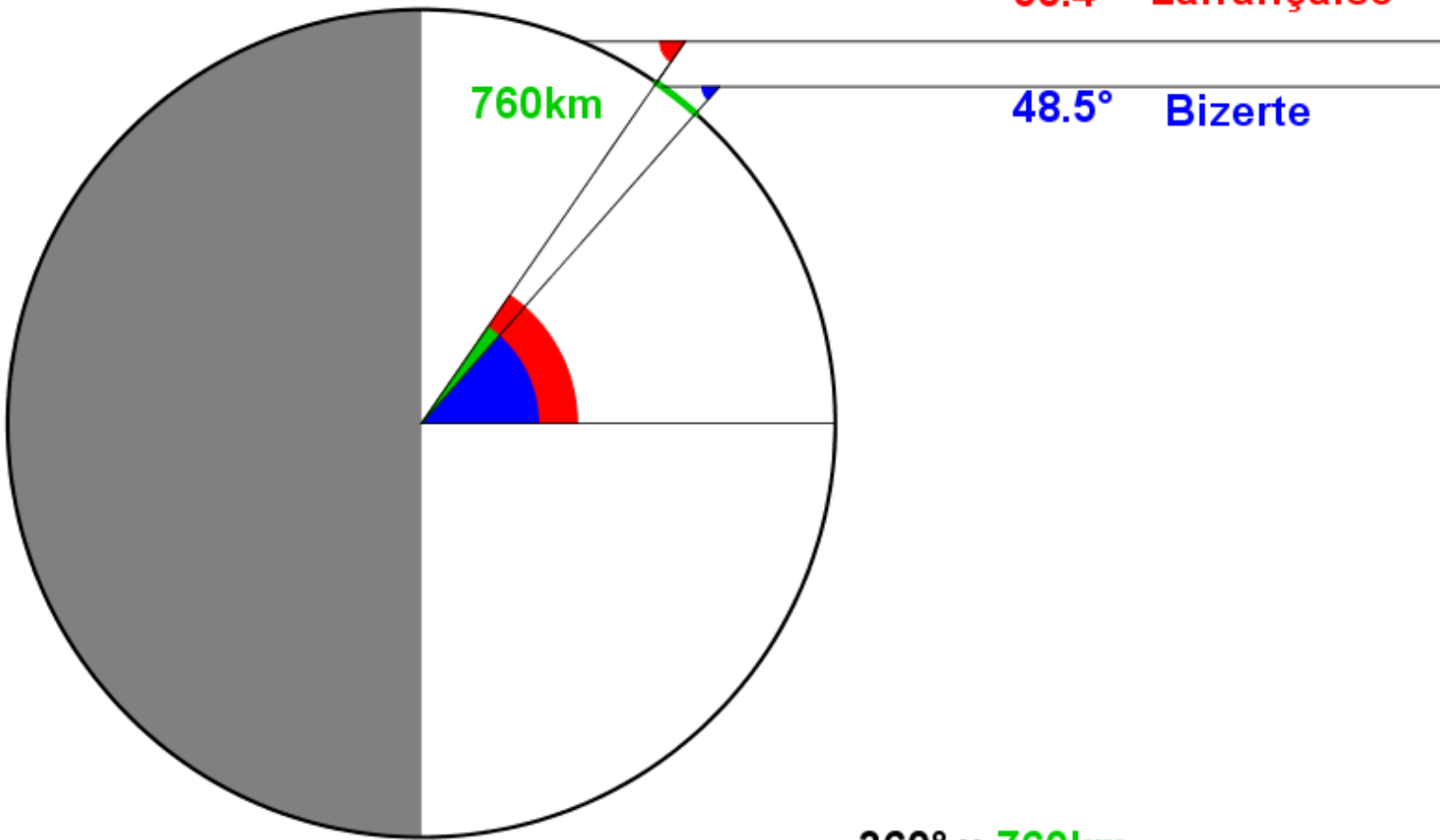


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Bizerte	Tunisia	Ecole Primaire Raouabi	37.284	9.868

Date	Gnomon	Shadow	Angle
18 February 2019	15.5 cm	17.5 cm	48.5 °
19 February 2019	29.0 cm	36.0 cm	51.1 °
25 February 2019	29.0 cm	36.0 cm	51.1 °

18/02/2019 (Lafrançaise-France) Latitude: 44.127°

18/02/2019 (Bizerte-Tunisia) Latitude: 37.284°



Distance	Angle
circumference	360°
760km	55.4° - 48.5°

circumference = $\frac{360^\circ \times 760\text{km}}{55.4^\circ - 48.5^\circ} = 39652 \text{ km}$



Busteni, Romania

February 2019

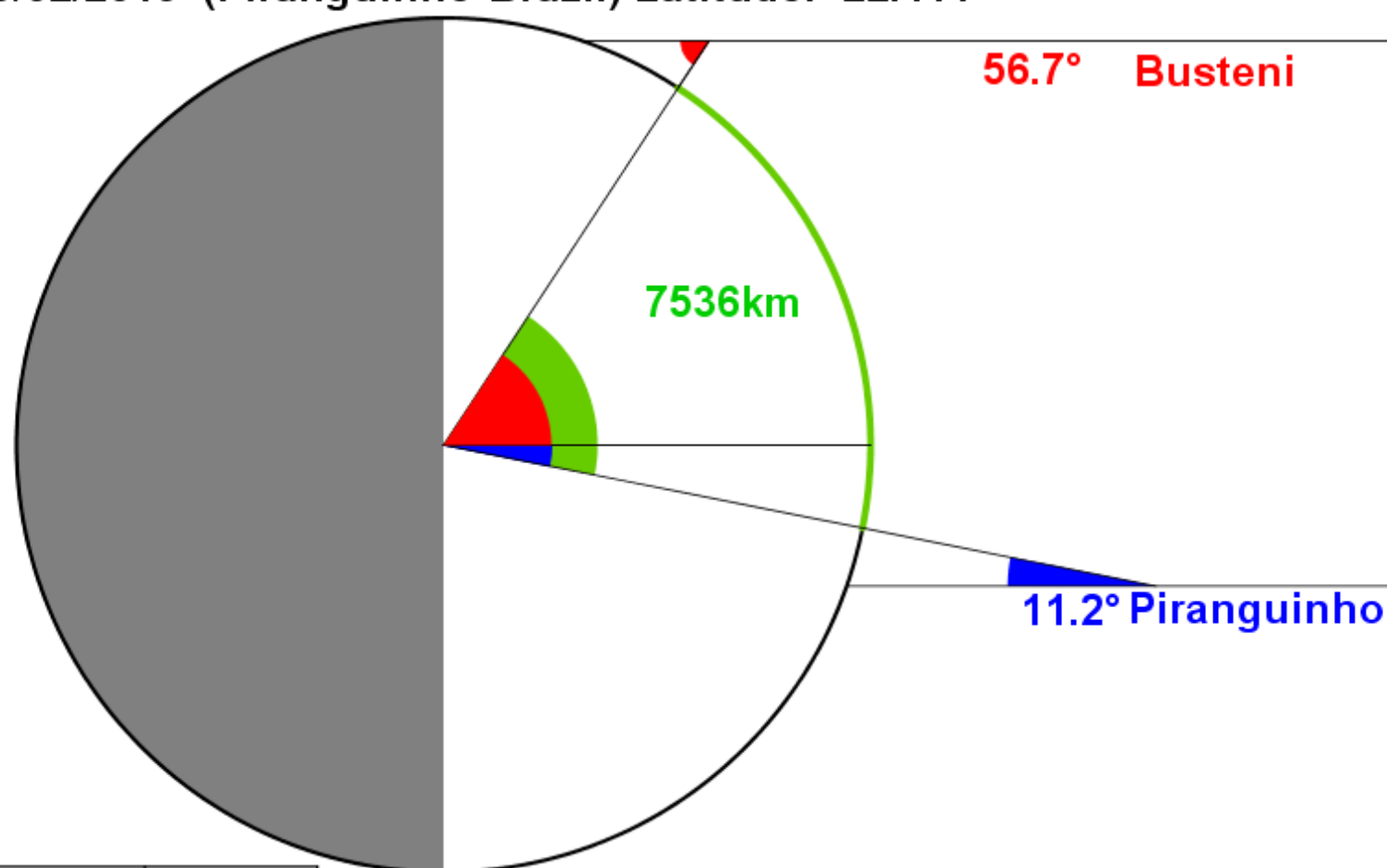


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Busteni	Romania	Colegiul Ion Kalinderu	45.416	25.535

Date	Gnomon	Shadow	Angle
01 February 2019	18.2 cm	35.0 cm	62.5 °
02 February 2019	9.0 cm	17.1 cm	62.2 °
04 February 2019	4.3 cm	8 cm	61.7 °
11 February 2019	50 cm	84.3 cm	59.3 °
13 February 2019	50 cm	82.6 cm	58.8 °
14 February 2019	50 cm	81.6 cm	58.5 °
18 February 2019	50.0 cm	77.4 cm	57.1 °
19 February 2019	9.0 cm	13.7 cm	56.7 °
20 February 2019	50.0 cm	74.8 cm	56.2 °
21 February 2019	50.0 cm	74.3 cm	56.1 °
25 February 2019	50.0 cm	70.4 cm	54.6 °
26 February 2019	50.0 cm	69.4 cm	54.2 °

19/02/2019 (Busteni-Romania) Latitude: 45.416°

19/02/2019 (Piranguinho-Brazil) Latitude: -22.411°



Distance	Angle
circumference	360°
7536km	56.7° + 11.2°

$$\text{circumference} = \frac{360^\circ \times 7536\text{km}}{56.7^\circ + 11.2^\circ} = 39955 \text{ km}$$



Dorohoi, Romania

February 2019

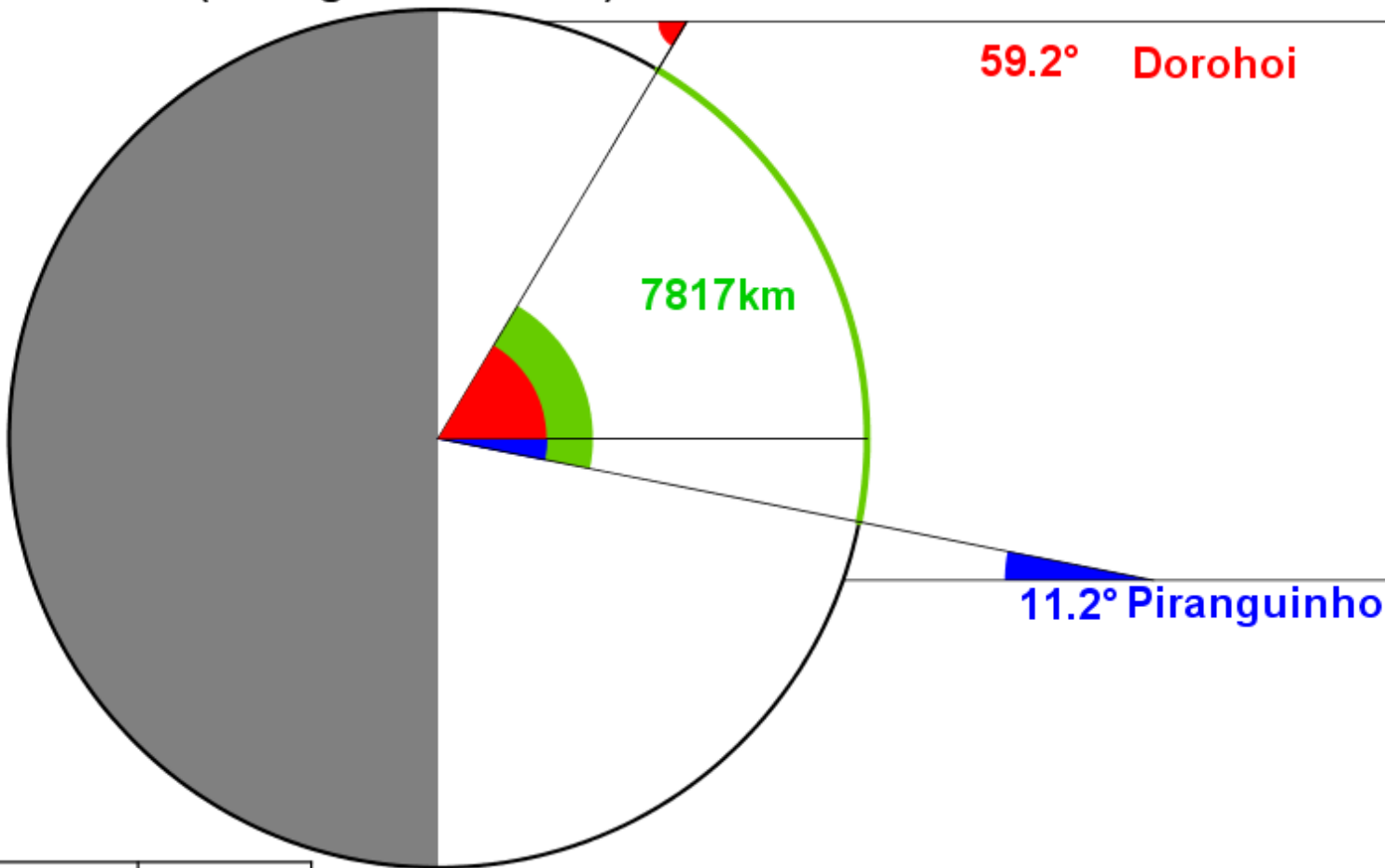


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Dorohoi	Romania	Grigore Ghica National College	47.953	26.394

Date	Gnomon	Shadow	Angle
19 February 2019	100.0 cm	168.0 cm	59.2 °

19/02/2019 (Dorohoi-Romania) Latitude: 47.953°

19/02/2019 (Piranguinho-Brazil) Latitude: -22.411°



Distance	Angle
circumference	360°
7817km	59.2°+ 11.2°

circumference = $\frac{360^\circ \times 7817\text{km}}{59.2^\circ + 11.2^\circ} = 39973 \text{ km}$



Guarne, Colombia

February 2019

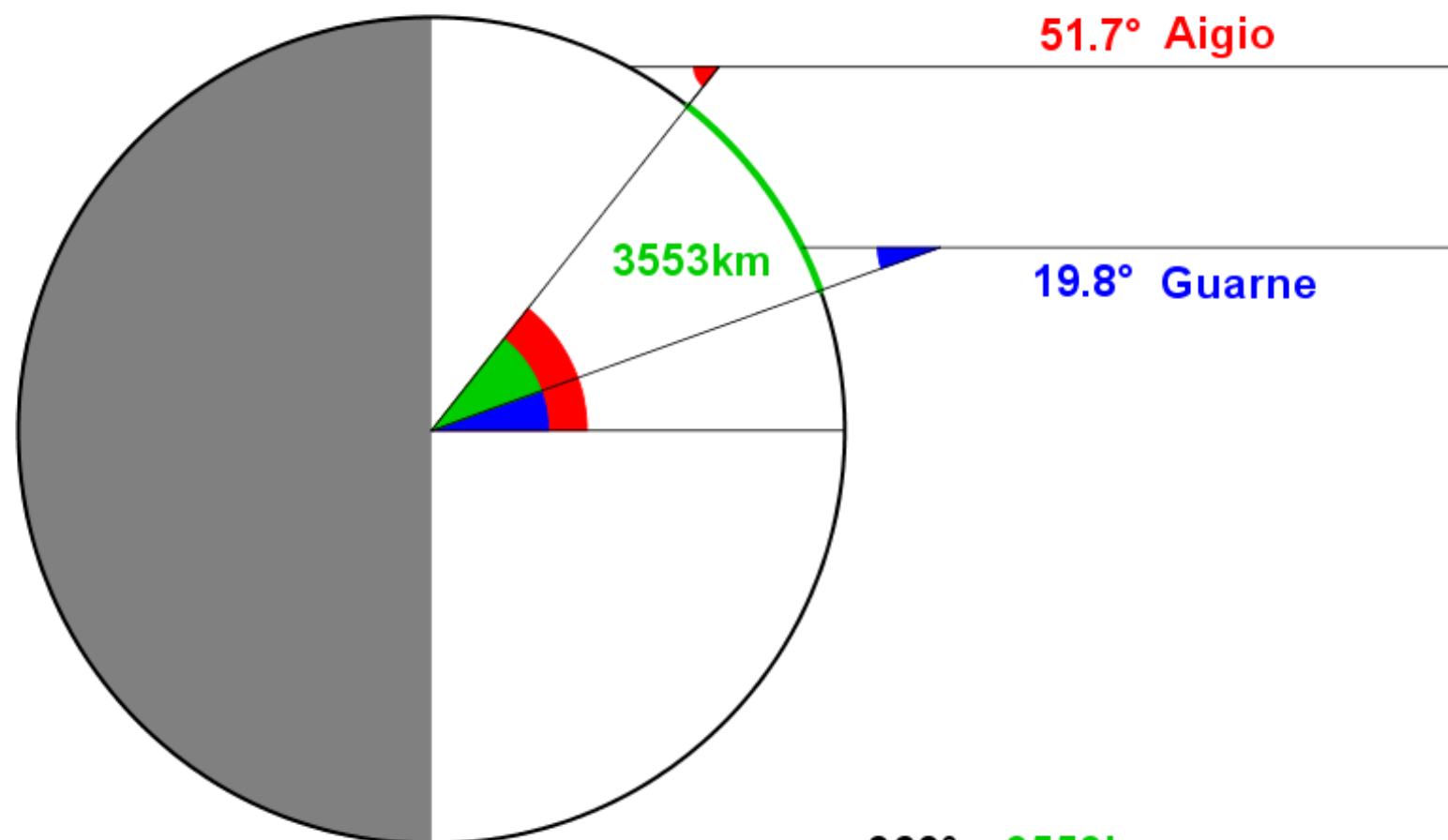


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Guarne	Colombia	Grupo Astrofanáticos	6.274	-75.449

Date	Gnomon	Shadow	Angle
11 February 2019	94.5 cm	34 cm	19.8 °
13 February 2019	94.5 cm	32.8 cm	19.1 °

11/02/2019 (Aigio-Greece) Latitude: 38.252°

11/02/2019 (Guarne-Colombia) Latitude: 6.274°



Distance	Angle
circumference	360°
3553km	51.7° - 19.8°

$$\text{circumference} = \frac{360^\circ \times 3553\text{km}}{51.7^\circ - 19.8^\circ} = 40097 \text{ km}$$



Lafrançaise, France

February 2019



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Lafrançaise	France	Collège Antonin Perbosc	44.127	1.237

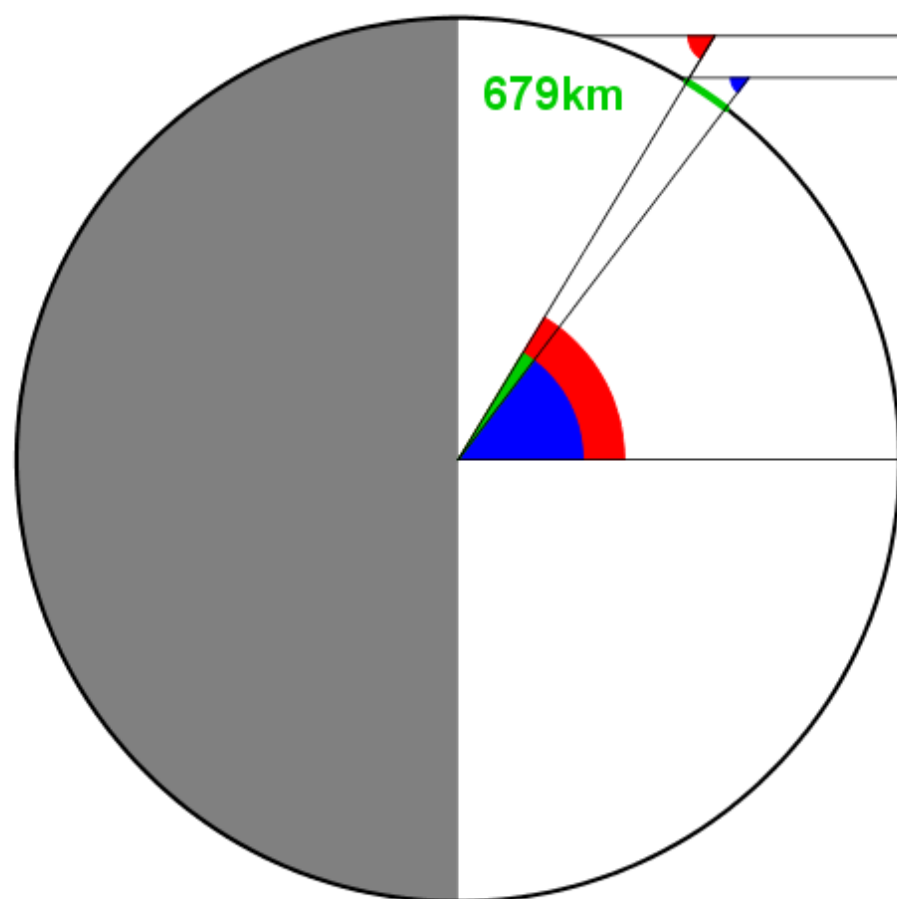
Date	Gnomon	Shadow	Angle
01 February 2019	100.0 cm	180.3 cm	61.0 °
04 February 2019	100 cm	174.8 cm	60.2 °
07 February 2019	100 cm	171.3 cm	59.7 °
08 February 2019	100 cm	165.4 cm	58.8 °
11 February 2019	100 cm	159.9 cm	58 °
14 February 2019	100 cm	152.6 cm	56.8 °
15 February 2019	100.0 cm	152.0 cm	56.7 °
18 February 2019	100 cm	145 cm	55.4 °
21 February 2019	100.0 cm	139.7 cm	54.4 °
22 February 2019	100.0 cm	138.0 cm	54.1 °

08/02/2019 (Lafrançaise-France) Latitude: 44.127°

08/02/2019 (Úbeda-Spain) Latitude: 38.017°

58.8° Lafrançaise

52.7° Úbeda



Distance	Angle
circumference	360°
679km	58.8° - 52.7°

$$\text{circumference} = \frac{360^\circ \times 679\text{km}}{58.8^\circ - 52.7^\circ} = 40072 \text{ km}$$



Mărgineni, Romania

February 2019

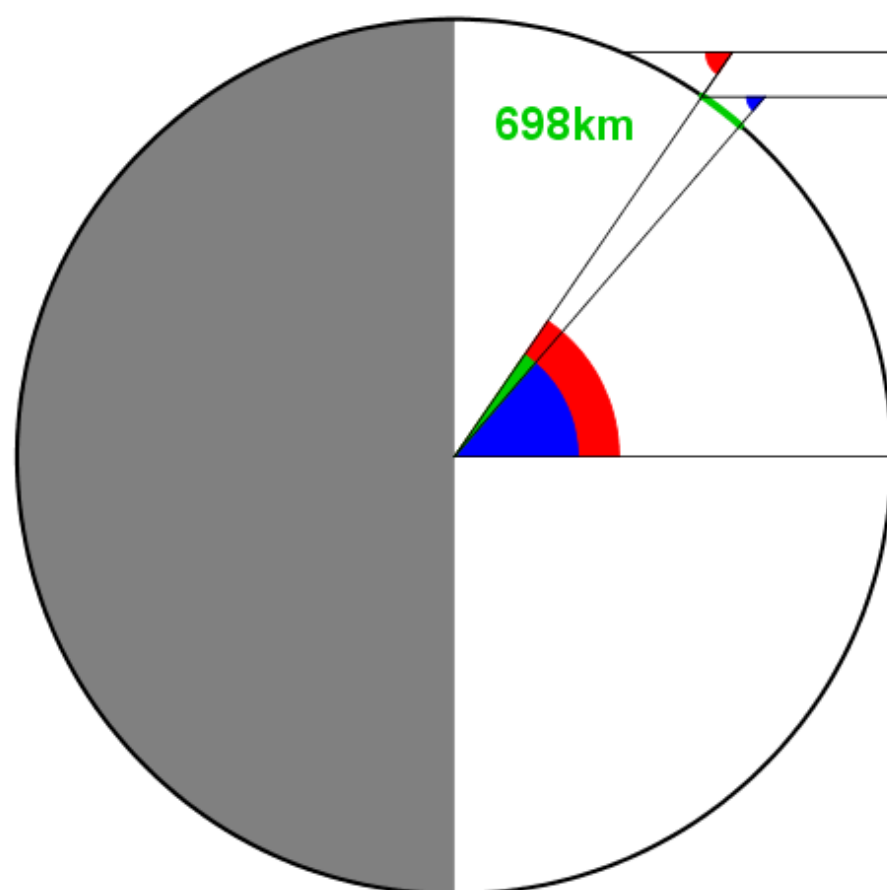


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Mărgineni	Romania	Gh. Popescu School	44.533	24.554

Date	Gnomon	Shadow	Angle
21 February 2019	100.0 cm	145.5 cm	55.5 °

21/02/2019 (Margineni-Romania) Latitude: 44.533°

21/02/2019 (Aigio-Greece) Latitude: 38.252°



55.5° Margineni

49.2° Aigio

Distance	Angle
circumference	360°
698km	55.5° - 49.2°

$$\text{circumference} = \frac{360^\circ \times 698\text{km}}{55.5^\circ - 49.2^\circ} = 39886 \text{ km}$$



Secondary School
Gh. Popescu
Romania

Experiment ERATOSTENE 2019
21.02.2019

Piranguinho, Brazil

February 2019

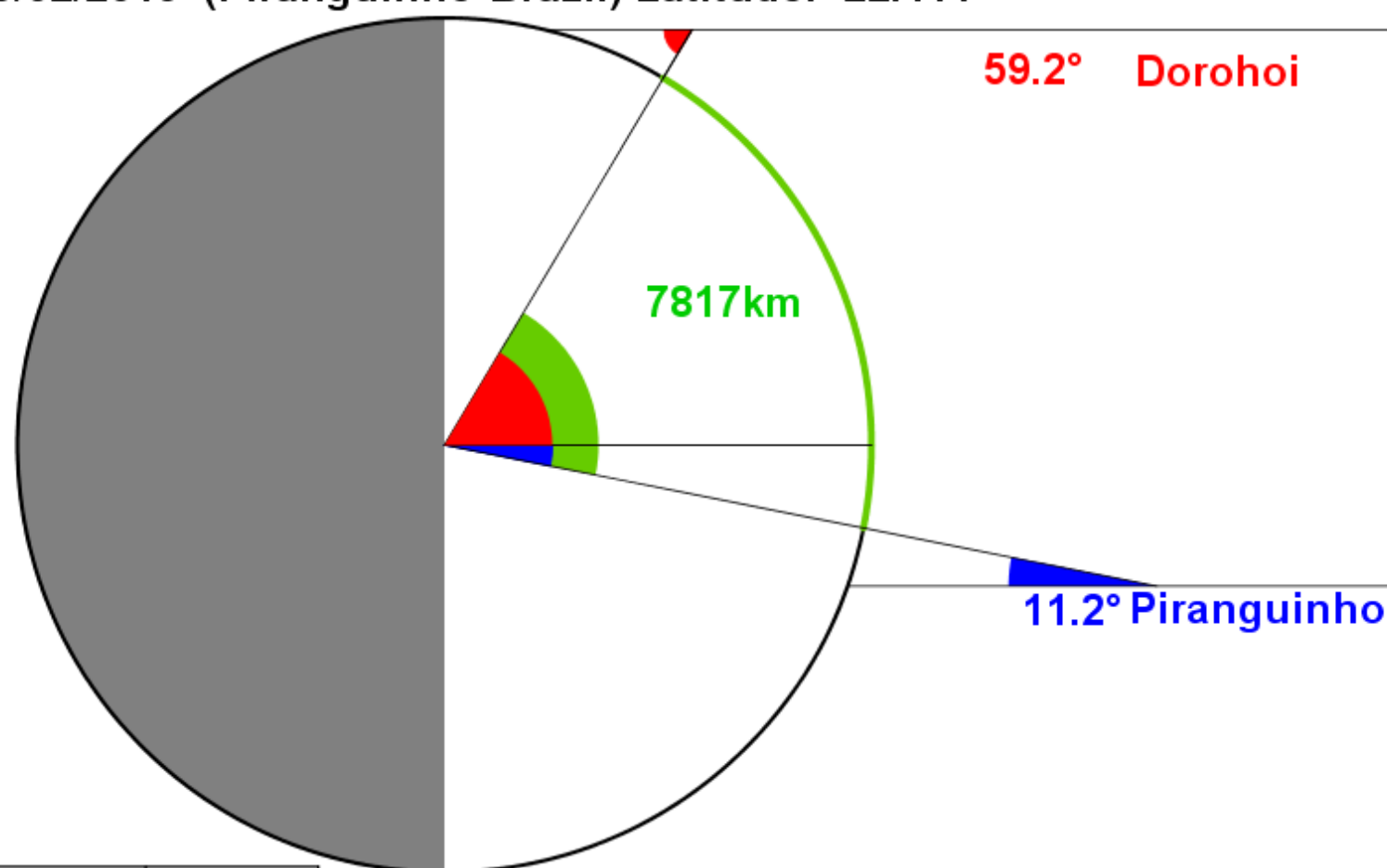


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Piranguinho	Brazil	Universidade Federal de Itajubá	-22.411	-45.535

Date	Gnomon	Shadow	Angle
19 February 2019	70.0 cm	-13.9 cm	-11.2 °
27 February 2019	70.0 cm	-17.1 cm	-13.7 °

19/02/2019 (Dorohoi-Romania) Latitude: 47.953°

19/02/2019 (Piranguinho-Brazil) Latitude: -22.411°



Distance	Angle
circumference	360°
7817km	59.2° + 11.2°

$$\text{circumference} = \frac{360^\circ \times 7817\text{km}}{59.2^\circ + 11.2^\circ} = 39973 \text{ km}$$



19.02.2019



27.02.2019

Pogana, Romania

February 2019



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Pogana	Romania	Scoala Gimnaziala Nr.1 Pogana	46.313	27.575

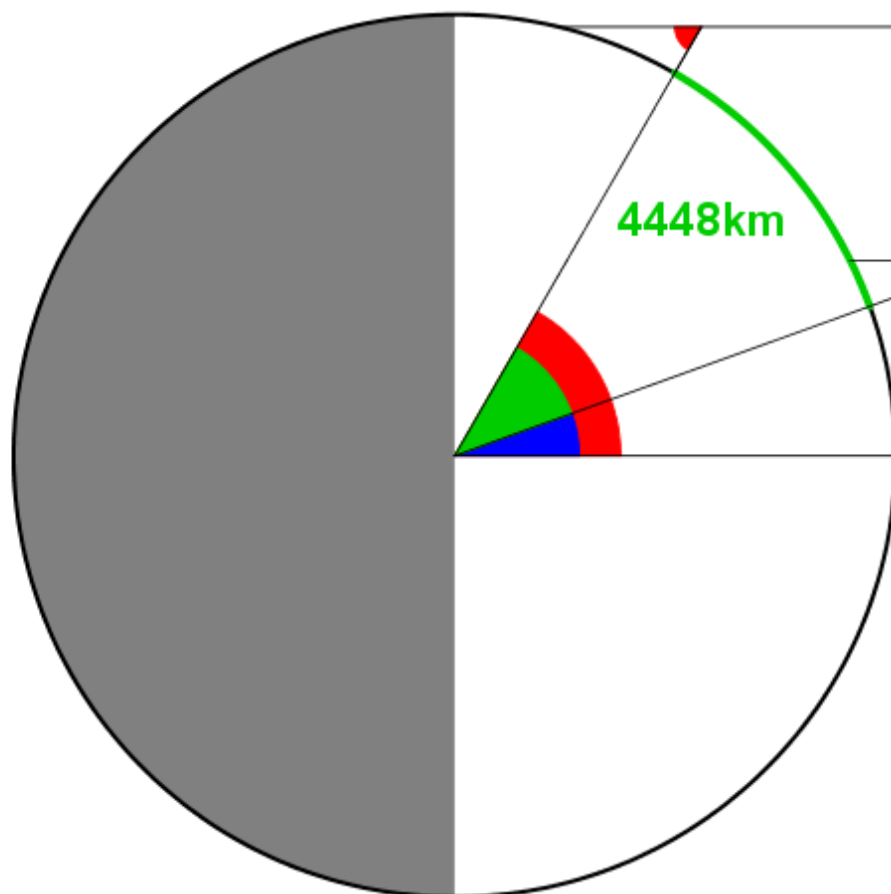
Date	Gnomon	Shadow	Angle
11 February 2019	39.6 cm	69.0 cm	60.1 °
13 February 2019	39.6 cm	68 cm	59.8 °
19 February 2019	33.0 cm	53.0 cm	58.1 °

11/02/2019 (Pogana-Romania) Latitude: 46.313°

11/02/2019 (Guarne-Colombia) Latitude: 6.274°

60.1° Pogana

19.8° Guarne



Distance	Angle
circumference	360°
4448km	60.1° - 19.8°

$$\text{circumference} = \frac{360^\circ \times 4448\text{km}}{60.1^\circ - 19.8^\circ} = 39734 \text{ km}$$



Rio de Janeiro CENOM, Brazil

February 2019

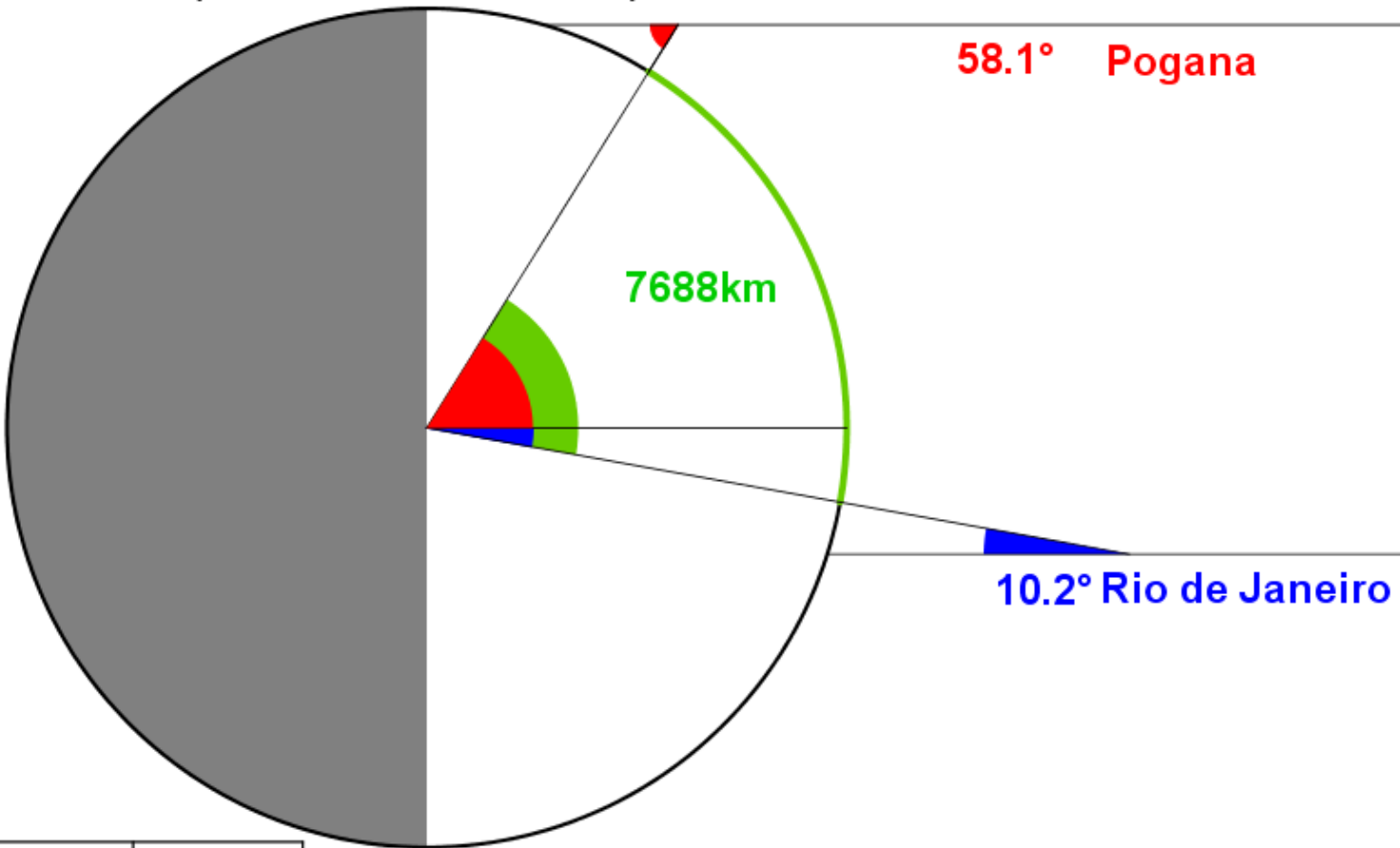


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317

Date	Gnomon	Shadow	Angle
12 February 2019	100 cm	-15 cm	-8.5 °
14 February 2019	110.0 cm	-15.0 cm	-7.8 °
19 February 2019	100.0 cm	-18.0 cm	-10.2 °
20 February 2019	100.0 cm	-18.0 cm	-10.2 °

19/02/2019 (Pogana-Romania) Latitude: 46.313°

19/02/2019 (Rio de Janeiro-Brazil) Latitude: -22.89°



Distance	Angle
circumference	360°
7688km	58.1°+ 10.2°

circumference = $\frac{360^\circ \times 7688\text{km}}{58.1^\circ + 10.2^\circ} = 40522 \text{ km}$



Sainte Marie, France

February 2019

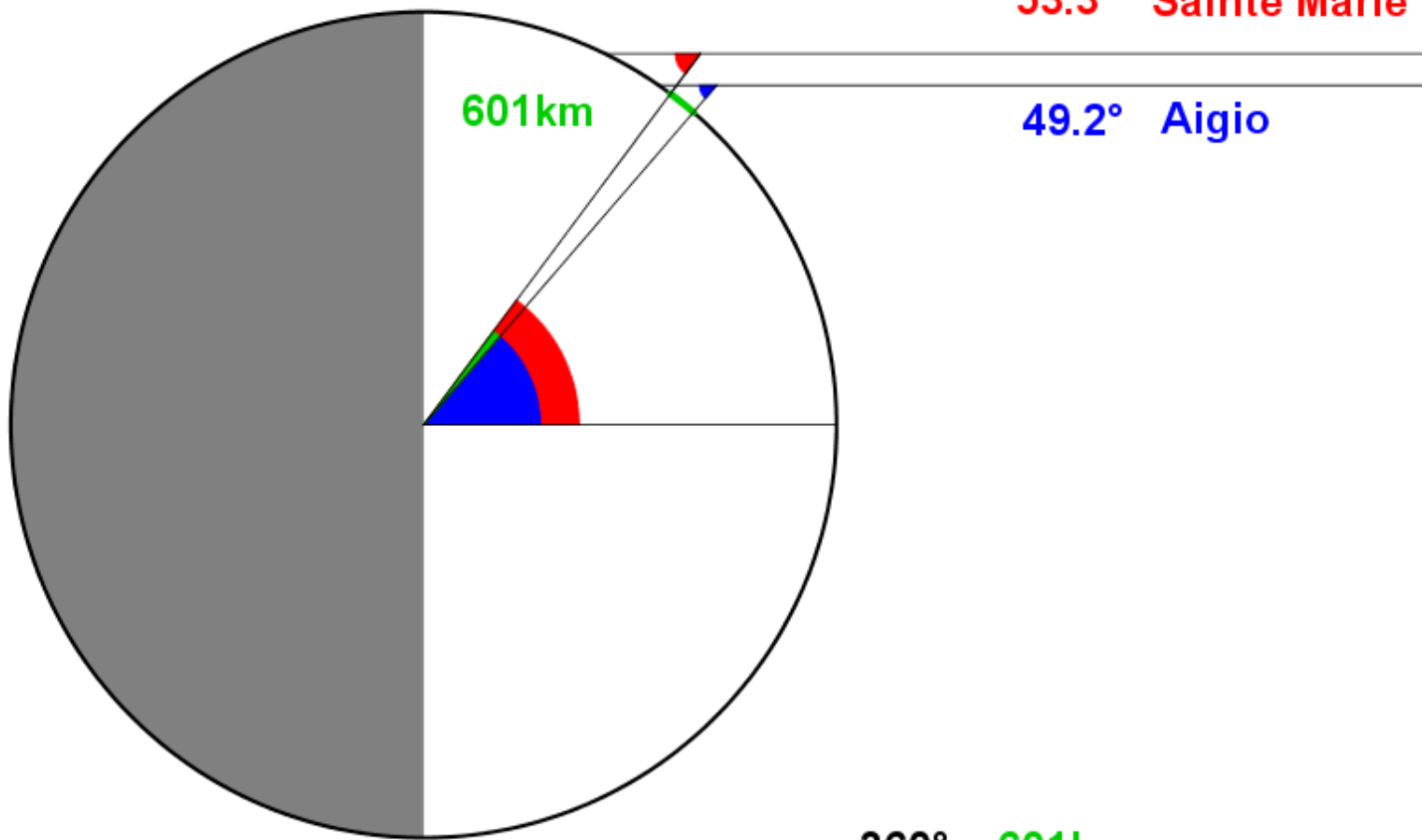


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Sainte Marie	France	Ecole primaire	43.661	0.874

Date	Gnomon	Shadow	Angle
21 February 2019	153.0 cm	205.0 cm	53.3 °

21/02/2019 (Sainte Marie-France) Latitude: 43.661°

21/02/2019 (Aigio-Greece) Latitude: 38.252°



Distance	Angle
circumference	360°
601km	53.3° - 49.2°

circumference = $\frac{360^\circ \times 601\text{km}}{53.3^\circ - 49.2^\circ} = 52771 \text{ km}$



Úbeda, Spain

February 2019



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Úbeda	Spain	Colegio Salesiano Santo Domingo Savio	38.017	-3.367

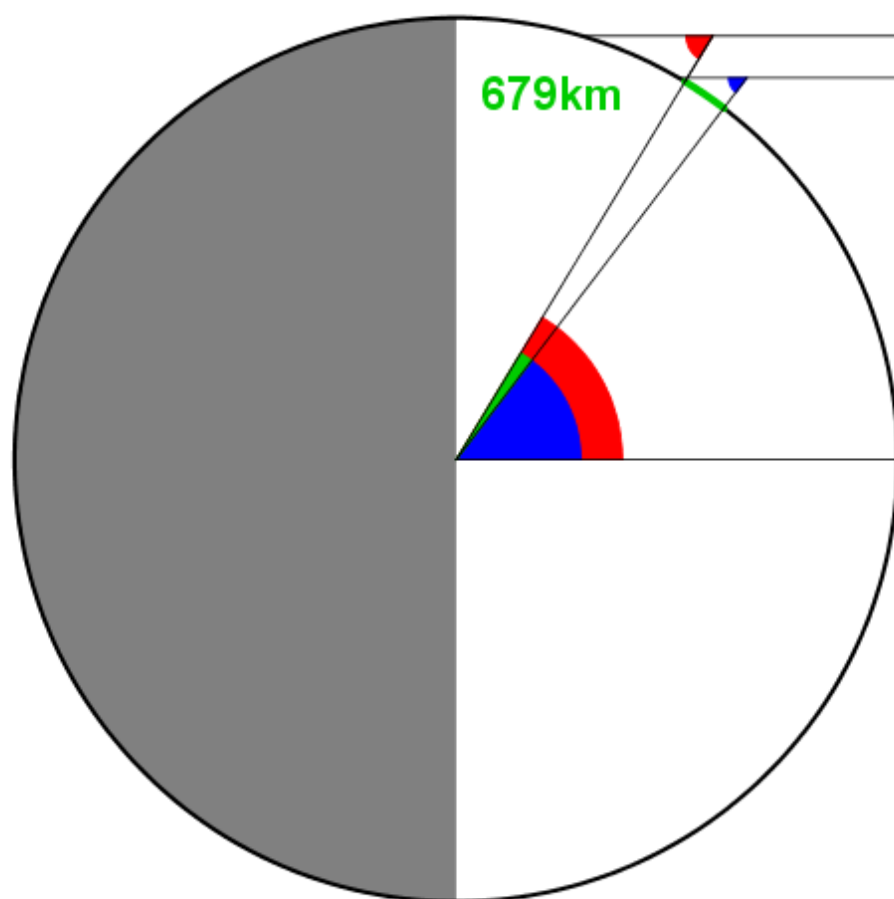
Date	Gnomon	Shadow	Angle
08 February 2019	87.1 cm	114.5 cm	52.7 °
15 February 2019	87.1 cm	105.5 cm	50.5 °
22 February 2019	207.5 cm	229.0 cm	47.8 °

08/02/2019 (Lafrançaise-France) Latitude: 44.127°

08/02/2019 (Úbeda-Spain) Latitude: 38.017°

58.8° Lafrançaise

52.7° Úbeda



Distance	Angle
circumference	360°
679km	58.8° - 52.7°

$$\text{circumference} = \frac{360^\circ \times 679\text{km}}{58.8^\circ - 52.7^\circ} = 40072 \text{ km}$$



