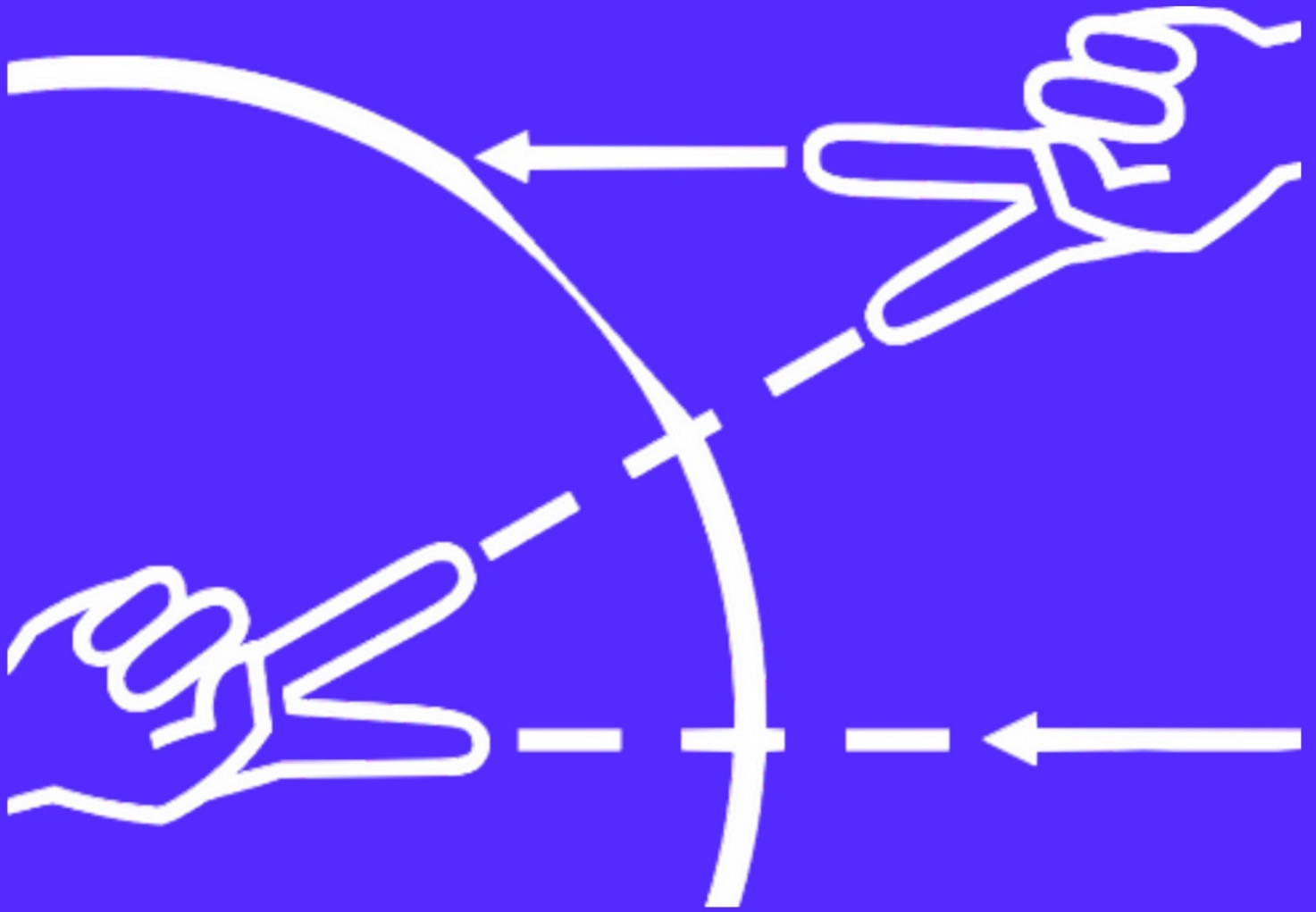


Eratosthenes



3 Continents

8 Countries

15 Schools

66 Measures

N°70

October 2021

3 Continents

8 Countries

15 Schools

66 Measures

Europe (7)

Greece

Aigio – Ilion - Athens

France

Lafrançaise -Montcuq

Romania

Busteni

Italy

Merlara

America (7)

Brazil

Rio de Janeiro CENOM

Rio de Janeiro Méier - Santarém

Argentina

Alta Gracia – Chivilcoy - Rio Cuarto















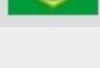
Colombia

Guarne

Africa (1)


Tunisia

Bizerte

Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Aigio	Greece	1st High School of Aigio	38.252	22.079
	Alta Gracia	Argentina	Fundación Caminos de Anisacate	-31.659	-64.417
	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
	Chivilcoy	Argentina	Parque Cielos del Sur	-34.911	-60.014
	Guarne	Colombia	Grupo Astrofanáticos	6.274	-76.522
	Ilion	Greece	11th JuniorHigh School of Ilion	38.033	23.697
	Lafrançaise	France	Collège Antonin Perbosc	44.127	1.237
	Méier	Brazil	Escola Municipal Bento Ribeiro	-22.904	-43.280
	Merlara	Italy	Lower Secondary School "Dante Alighieri"	45.166	11.445
	Montcuq	France	Fondation La main à la pâte	44.340	1.210
	Rio Cuarto	Argentina	Colegio Concordia	-33.149	-64.351
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317
	Santarém	Brazil	Santarém Adventist College	-2.439	-54.699

Aigio, Greece



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

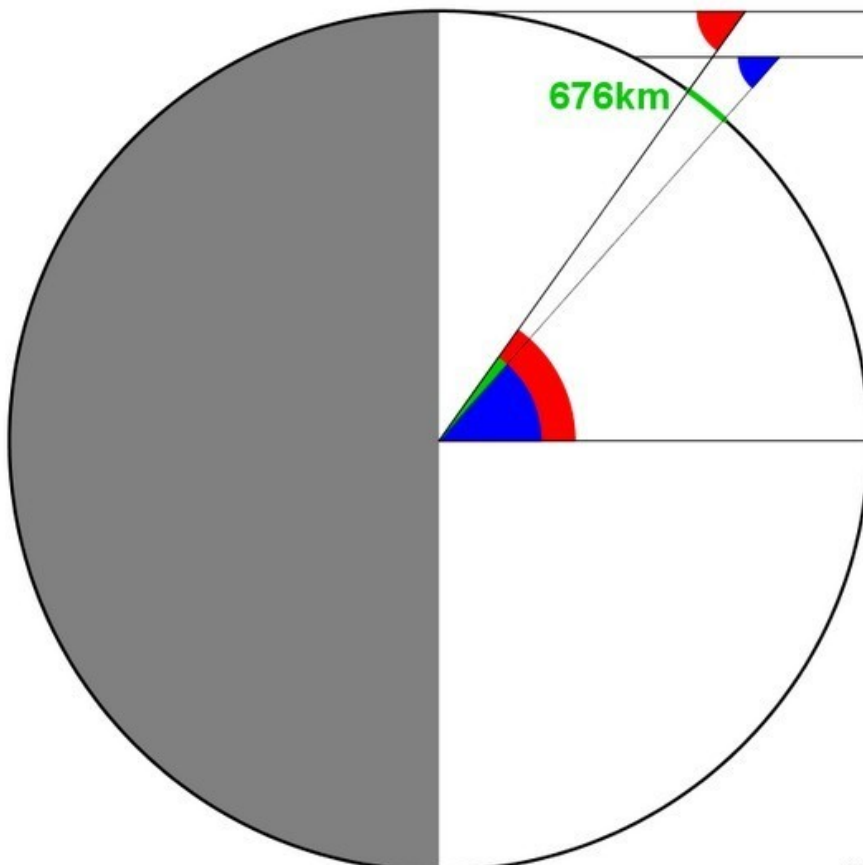
Date	Gnomon	Shadow	Angle
19 October 2021	30cm	33.8cm	48.4°

19/10/2021 (Montcuq-France) Latitude: 44.34°

19/10/2021 (Aigio-Greece) Latitude: 38.252°

 54.5° Montcuq

 48.4° Aigio



Distance	Angle
circumference	360°
676km	54.5° - 48.4°

$$\text{circumference} = \frac{360^\circ \times 676\text{km}}{54.5^\circ - 48.4^\circ} = 39895 \text{ km}$$



Alta Gracia, Argentina

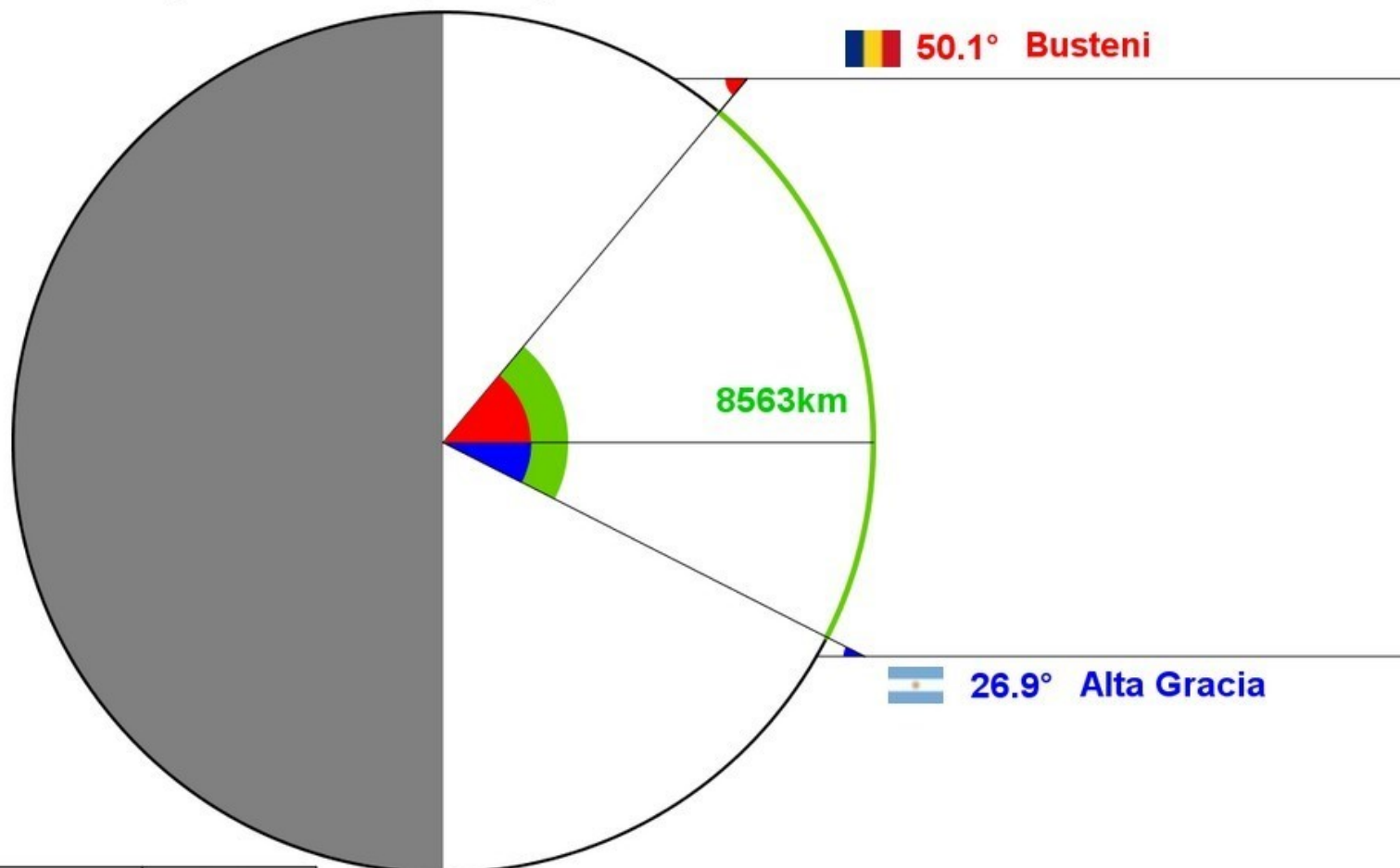


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Alta Gracia	Argentina	Fundación Caminos de Anisacate	-31.659	-64.417

Date	Gnomon	Shadow	Angle
04 October 2021	13.0cm	-6.6cm	-26.9°
11 October 2021	13cm	-6.0cm	-24.8°
13 October 2021	13.0cm	-5.7cm	-23.7°
21 October 2021	13.0cm	-4.8cm	-20.3°

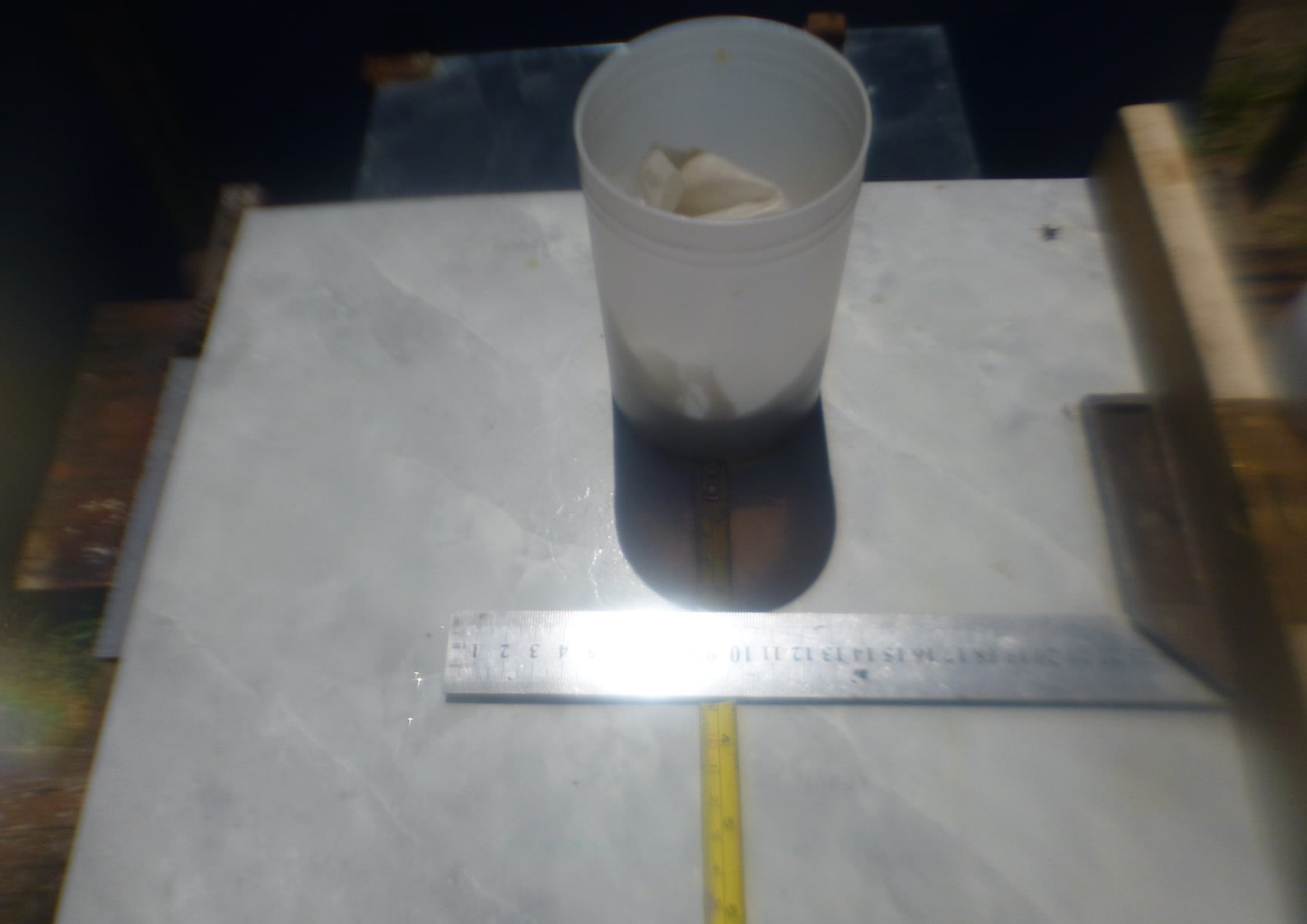
04/10/2021 (Busteni-Romania) Latitude: 45.416°

04/10/2021 (Alta Gracia-Argentina) Latitude: -31.656°



Distance	Angle
circumference	360°
8563km	50.1° + 26.9°

$$\text{circumference} = \frac{360^\circ \times 8563\text{km}}{50.1^\circ + 26.9^\circ} = 40035 \text{ km}$$



Athens, Greece



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

Date	Gnomon	Shadow	Angle
12 October 2021	15cm	14.9cm	44.8°





Bizerte, Tunisia

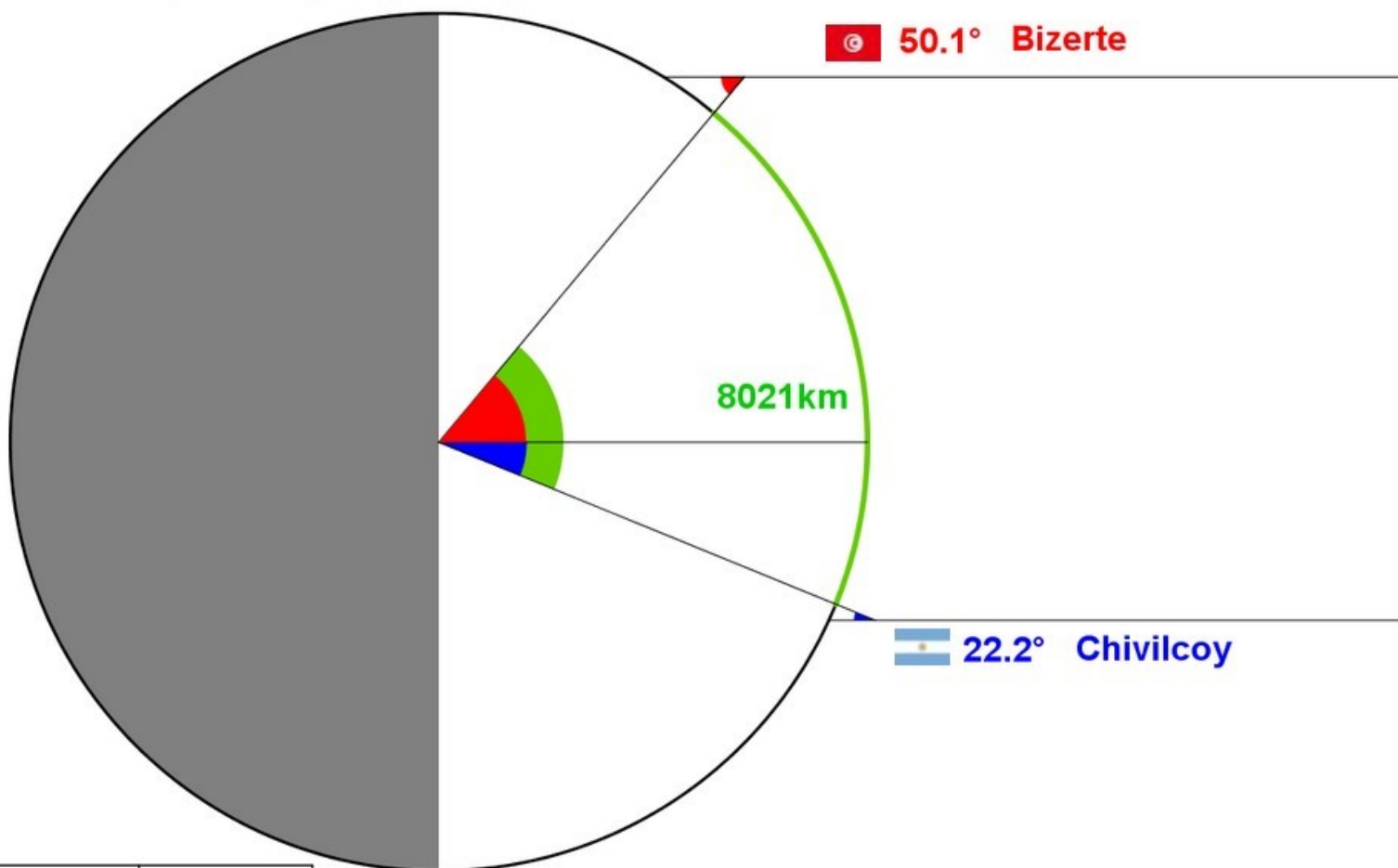


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Bizerte	Tunisia	Ecole Primaire Raouabi	37.284	9.868

Date	Gnomon	Shadow	Angle
01 October 2021	49.0cm	43.5cm	41.6°
06 October 2021	49.0cm	47.3cm	44.0°
22 October 2021	49.0cm	58.0cm	49.8°
26 October 2021	16.3cm	19.5cm	50.1°
29 October 2021	16.3cm	20cm	50.8°

26/10/2021 (Bizerte-Tunisia) Latitude: 37.284°

26/10/2021 (Chivilcoy-Argentina) Latitude: -34.911°




Distance	Angle
circumference	360°
8021km	50.1° + 22.2°

$$\text{circumference} = \frac{360^\circ \times 8021\text{km}}{50.1^\circ + 22.2^\circ} = 39939 \text{ km}$$



Busteni, Romania

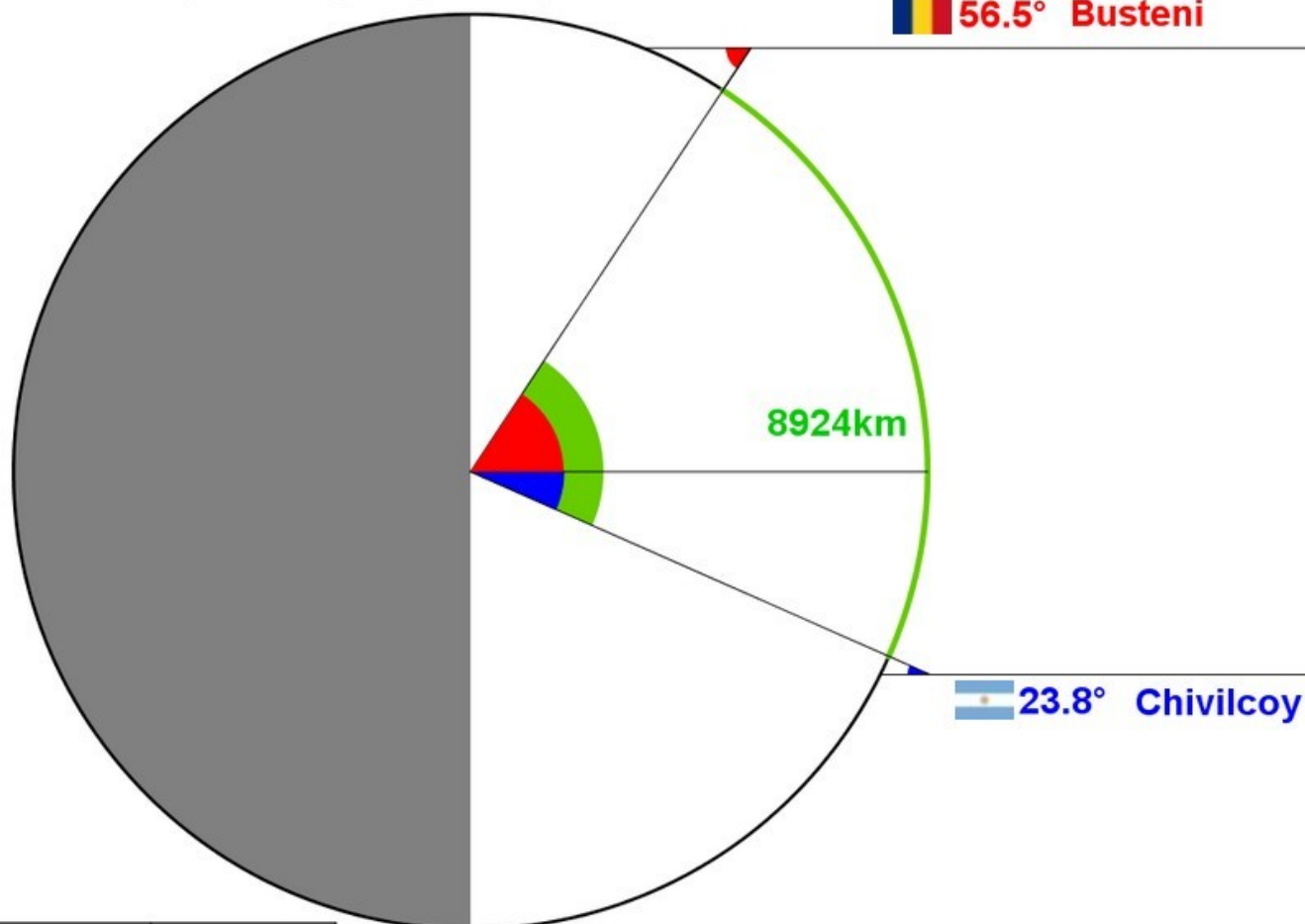


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Busteni	Romania	Colegiul Ion Kalinderu	45.416	25.535

Date	Gnomon	Shadow	Angle
04 October 2021	28.0cm	33.5cm	50.1°
11 October 2021	46.0cm	60.6cm	52.8°
20 October 2021	30.0cm	44.8cm	56.2°
21 October 2021	23.0cm	34.8cm	56.5°

21/10/2021 (Busteni-Romania) Latitude: 45.416°

21/10/2021 (Chivilcoy-Argentina) Latitude: -34.911°




Distance	Angle
circumference	360°
8924km	56.5° + 23.8°

$$\text{circumference} = \frac{360^\circ \times 8924\text{km}}{56.5^\circ + 23.8^\circ} = 40008 \text{ km}$$



Chivilcoy, Argentina



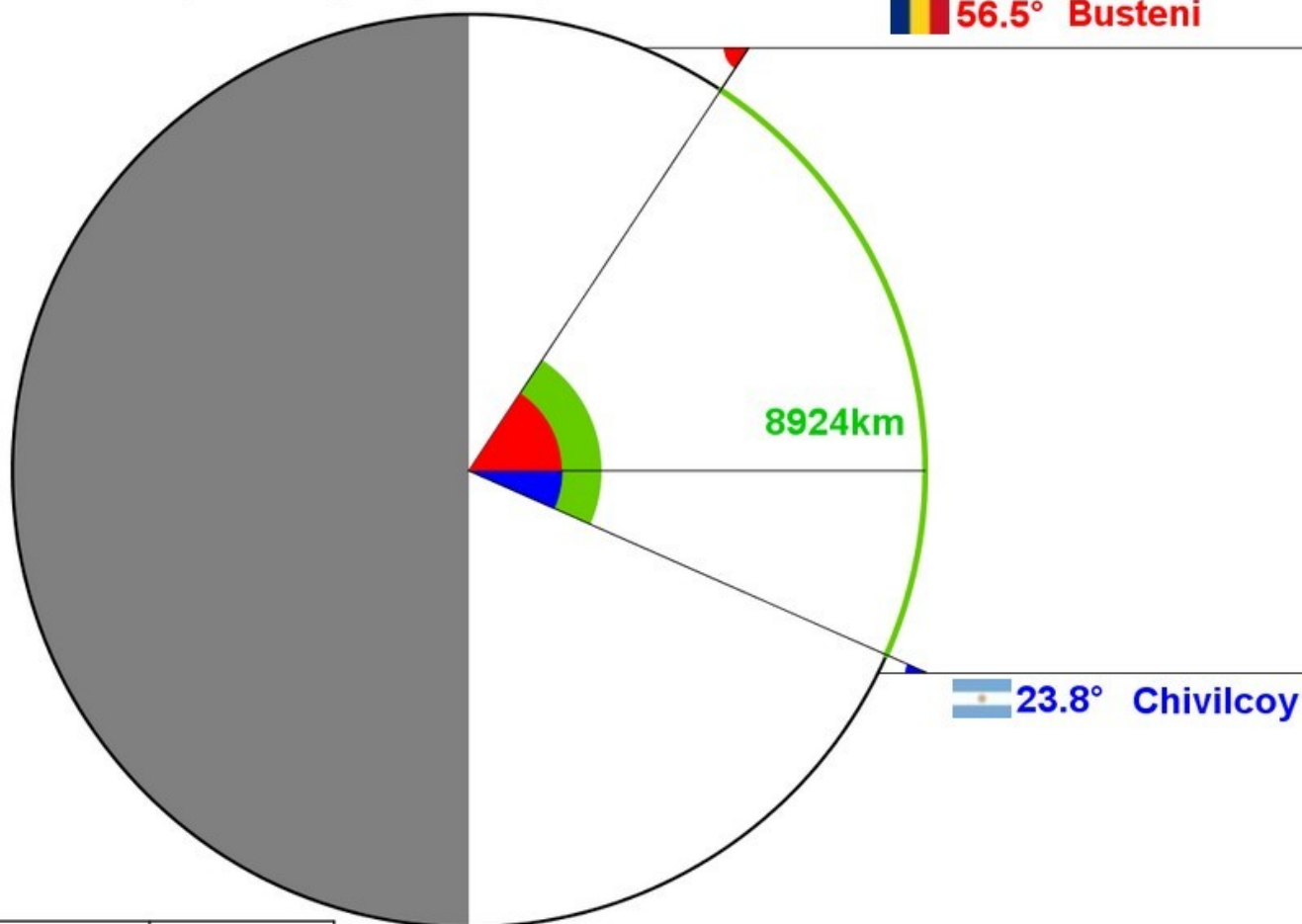
Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Chivilcoy	Argentina	Parque Cielos del Sur	-34.911	-60.014

Date	Gnomon	Shadow	Angle
05 October 2021	12.0cm	-6.9cm	-29.9°
06 October 2021	12.0cm	-6.8cm	-29.5°
07 October 2021	12.0cm	-6.7cm	-29.2°
09 October 2021	12.0cm	-6.5cm	-28.4°
15 October 2021	12cm	-5.9cm	-26.2°
16 October 2021	12.0cm	-5.8cm	-25.8°
21 October 2021	12.0cm	-5.3cm	-23.8°
26 October 2021	12.0cm	-4.9cm	-22.2°
27 October 2021	12.0cm	-4.8cm	-21.8°
29 October 2021	12.0cm	-4.6cm	-21.0°

21/102021 (Busteni-Romania) Latitude: 45.416°

21/10/2021 (Chivilcoy-Argentina) Latitude: -34.911°

 56.5° Busteni



Distance	Angle
circumference	360°
8924km	56.5° + 23.8°

$$\text{circumference} = \frac{360^\circ \times 8924\text{km}}{56.5^\circ + 23.8^\circ} = 40008 \text{ km}$$



Guarne, Colombia



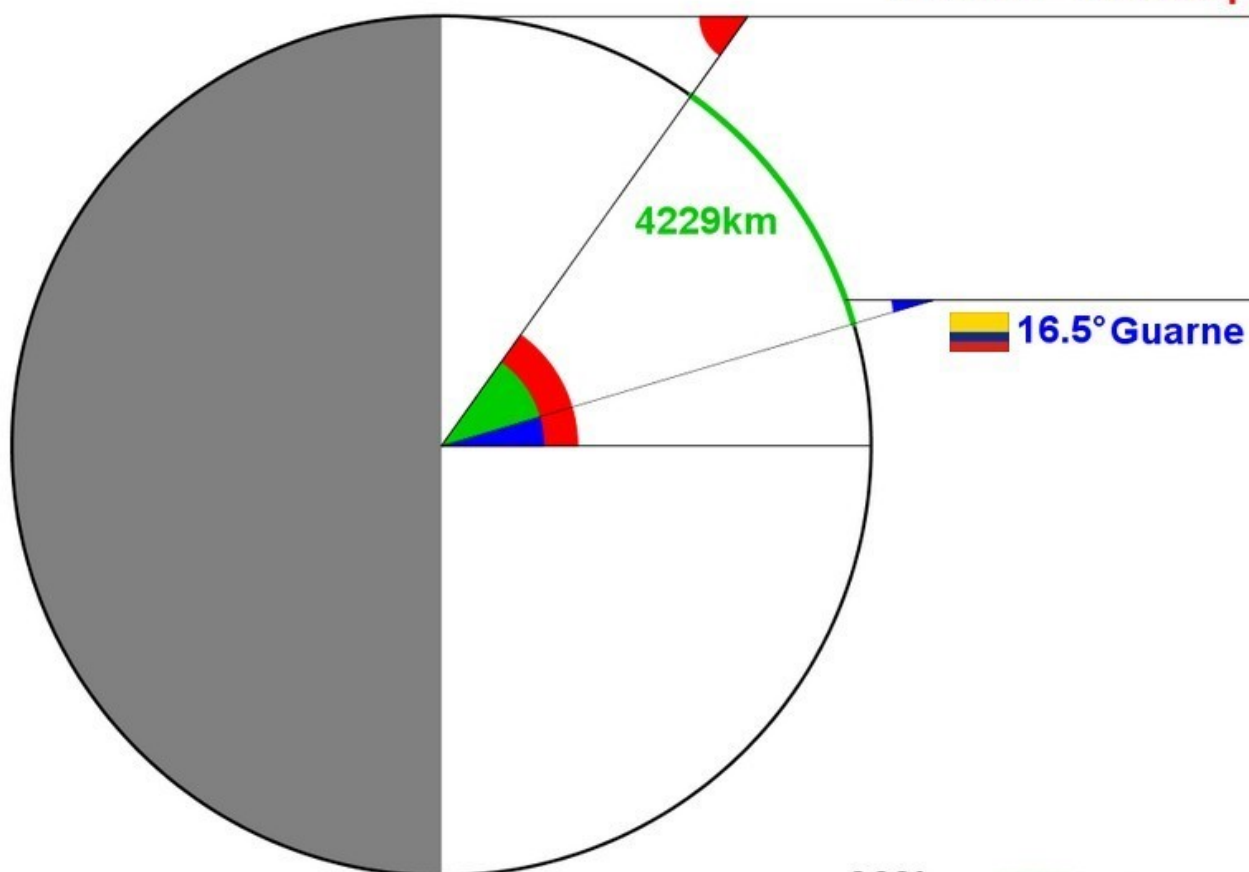
Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Guarne	Colombia	Grupo Astrofanáticos	6.274	-76.522

Date	Gnomon	Shadow	Angle
07 October 2021	15.2cm	3.2cm	11.9°
19 October 2021	15.2cm	4.5cm	16.5°
28 October 2021	15.2cm	5.6cm	20,2°

19/10/2021 (Montcuq-France) Latitude: 44.34°

19/10/2021 (Guarne-Colombia) Latitude: 6.274°

 54.5° Montcuq



Distance	Angle
circumference	360°
4229km	54.5° - 16.5°

$$\text{circumference} = \frac{360^\circ \times 4229\text{km}}{54.5^\circ - 16.5^\circ} = 40064 \text{ km}$$



ASTRO FANÁTICOS
ASTRONOMIA DIDÁCTICA

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Ilion, Greece

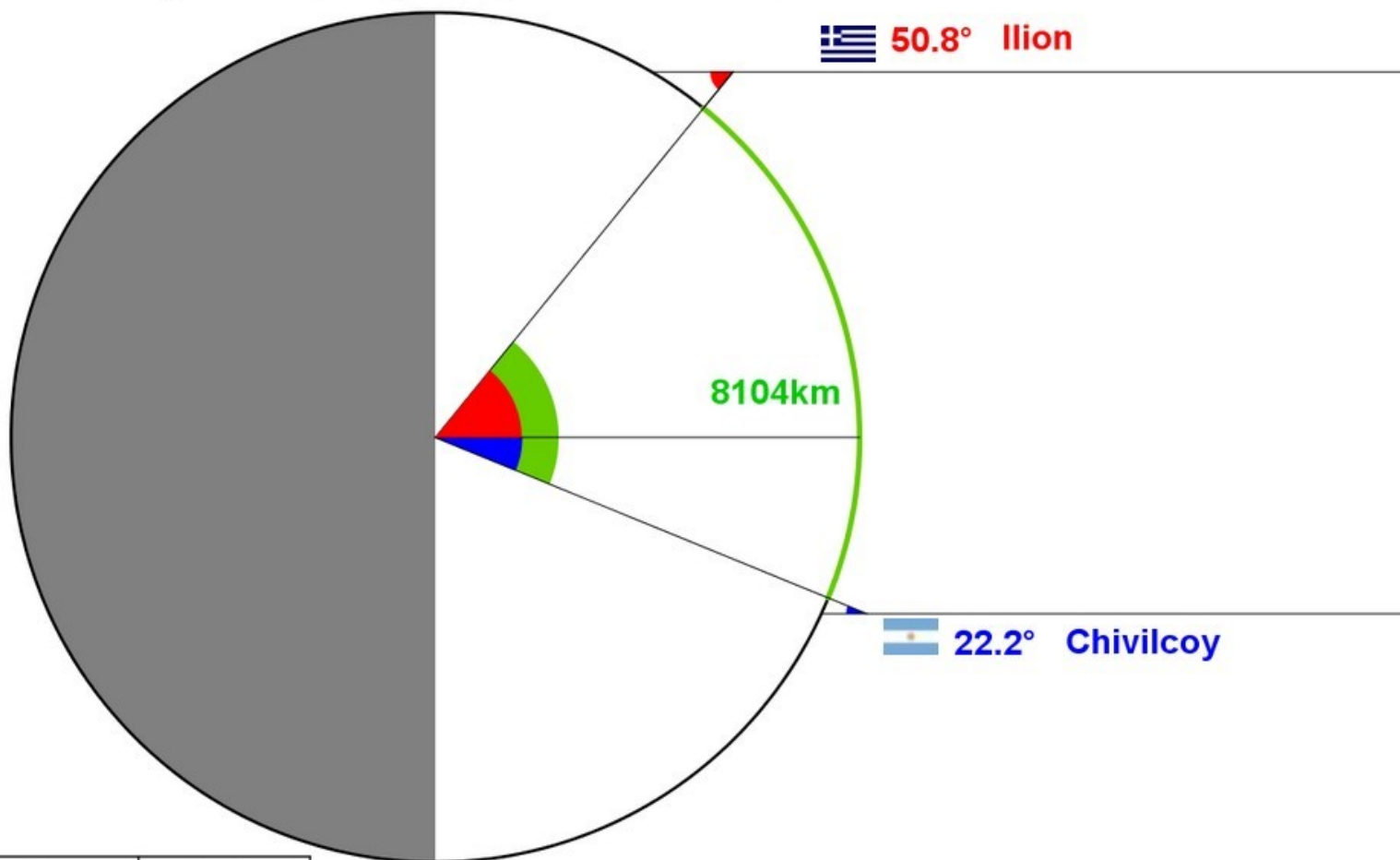


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Ilion	Greece	11th JuniorHigh School of Ilion	38.033	23.697

Date	Gnomon	Shadow	Angle
05 October 2021	100.0cm	93.8cm	43.2°
12 October 2021	40.0cm	41.0cm	45.7°
16 October 2021	22cm	23.6cm	47.0°
19 October 2021	40.0cm	45.0cm	48.4°
26 October 2021	40.0cm	49.0cm	50.8°

26/10/2021 (Ilion-Greece) Latitude: 38.033°

26/10/2021 (Chivilcoy-Argentina) Latitude: -34.911°



Distance	Angle
circumference	360°
8104km	50.8° + 22.2°

$$\text{circumference} = \frac{360^\circ \times 8104\text{km}}{50.8^\circ + 22.2^\circ} = 39965 \text{ km}$$



Lafrançaise, France



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

Date	Gnomon	Shadow	Angle
10 October 2021	200.0cm	291.0cm	55.5°





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MYLAR

Meier, Brazil

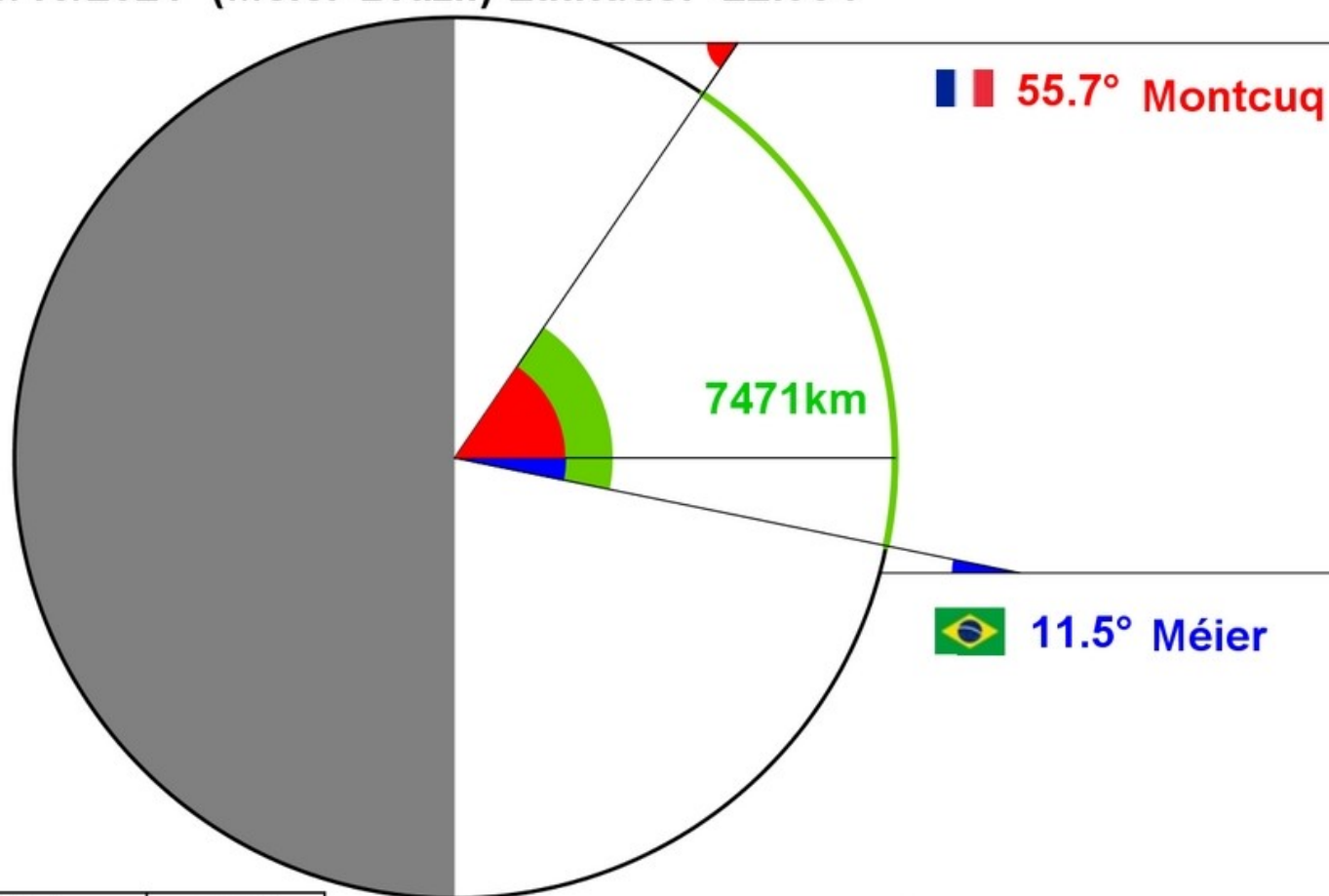


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Méier	Brazil	Escola Municipal Bento Ribeiro	-22.904	-43.280

Date	Gnomon	Shadow	Angle
01 October 2021	54.0cm	-23.0cm	-23.1°
03 October 2021	54.0cm	-22.0cm	-22.2°
08 October 2021	54.0cm	-19.0cm	-19.4°
13 October 2021	54.0cm	-12.0cm	-12.5°
14 October 2021	54.0cm	-14.5cm	-15.0°
15 October 2021	54cm	-14.0cm	-14.5°
23 October 2021	54.0cm	-11.0cm	-11.5°

23/10/2021 (Montcuq-France) Latitude: 44.34°

23/10/2021 (Méier-Brazil) Latitude: -22.904°



Distance	Angle
circumference	360°
7471km	55.7°+11.5°

$$\text{circumference} = \frac{360^\circ \times 7471\text{km}}{55.7^\circ + 11.5^\circ} = 40023 \text{ km}$$



Merlara, Italy



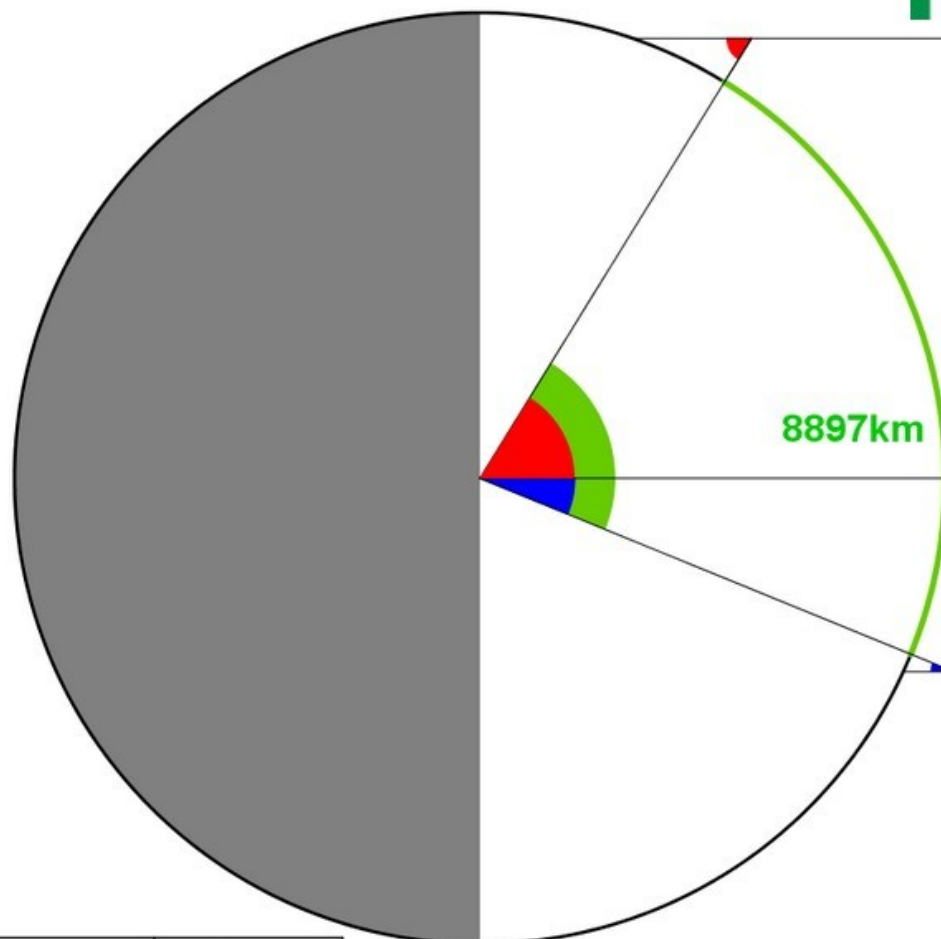
Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Merlara	Italy	Lower Secondary School "Dante Alighieri"	45.166	11.445

Date	Gnomon	Shadow	Angle
26 October 2021	39.5cm	64.0cm	58.3°

26/10/2021 (Merlara-Italia) Latitude: 45.166°

26/10/2021 (Chivilcoy-Argentina) Latitude: -34.911°

 **58.3° Merlara**



 **22.2° Chivilcoy**

Distance	Angle
circumference	360°
8897km	58.3° + 22.2°

$$\text{circumference} = \frac{360^\circ \times 8897\text{km}}{58.3^\circ + 22.2^\circ} = 39788 \text{ km}$$



Montcuq, France

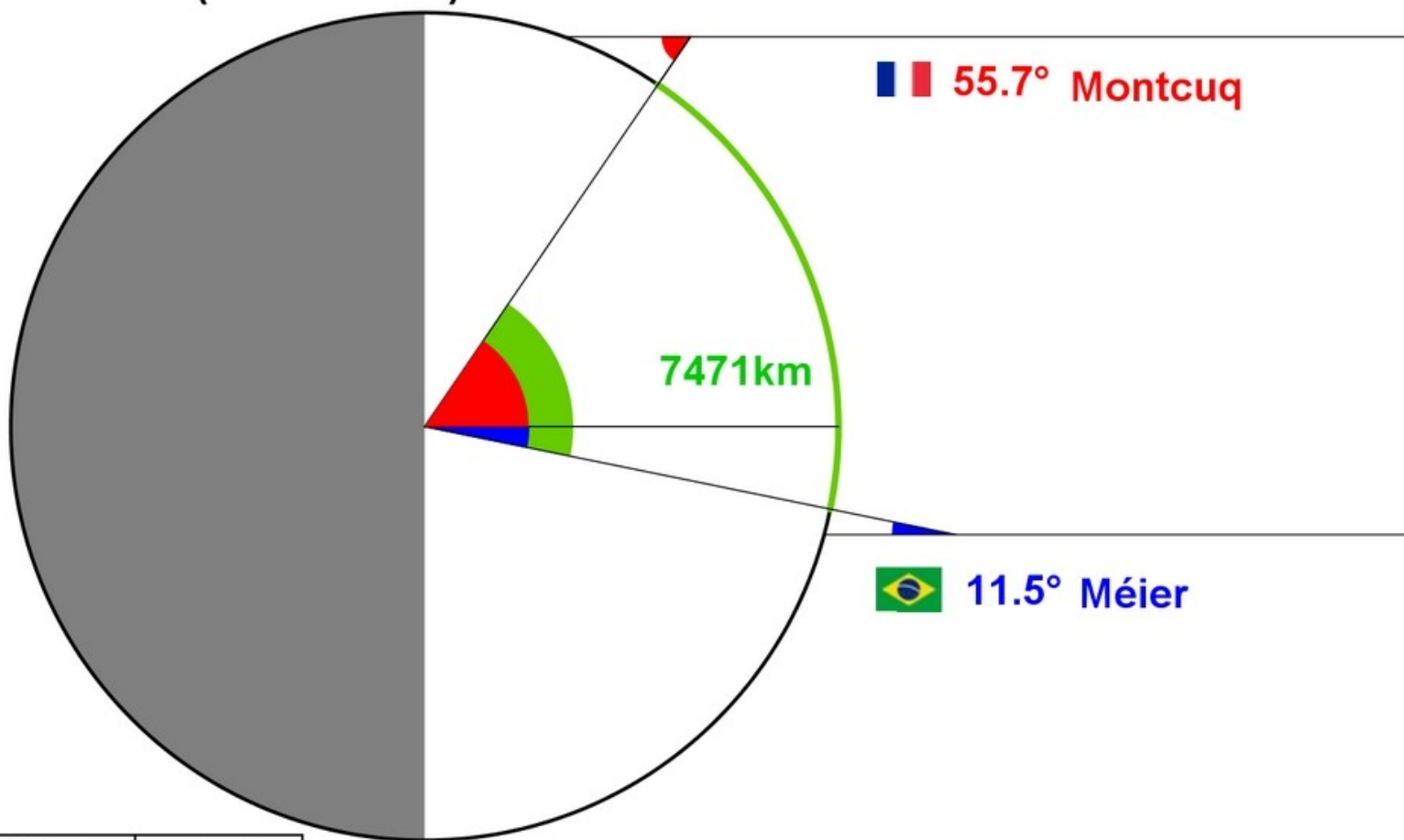


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Montcuq	France	Fondation La main à la pâte	44.340	1.210

Date	Gnomon	Shadow	Angle
17 October 2021	25.0cm	34.0cm	53.7°
19 October 2021	25.0cm	35.0cm	54.5°
20 October 2021	25.0cm	35.0cm	54.5°
21 October 2021	25.0cm	36.0cm	55.2°
22 October 2021	25.0cm	36.5cm	55.6°
23 October 2021	25.0cm	36.7cm	55.7°

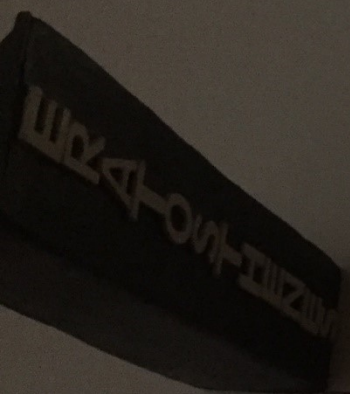
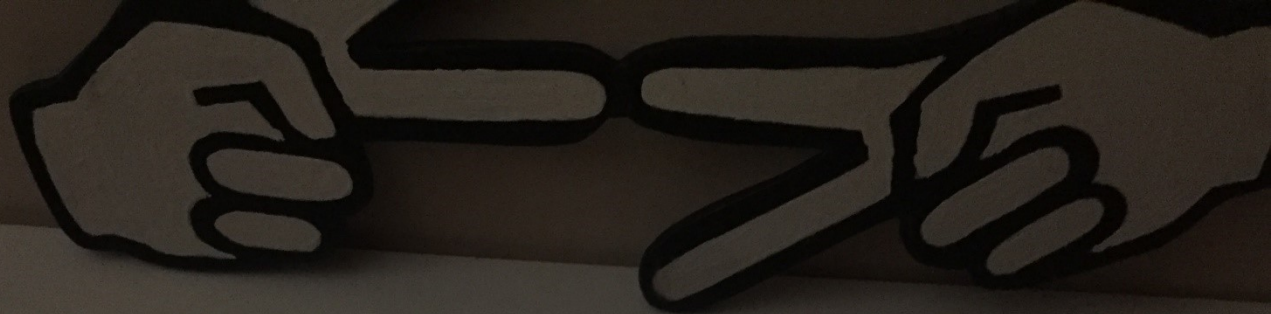
23/10/2021 (Montcuq-France) Latitude: 44.34°

23/10/2021 (Méier-Brazil) Latitude: -22.904°



Distance	Angle
circumference	360°
7471km	55.7°+11.5°

$$\text{circumference} = \frac{360^\circ \times 7471\text{km}}{55.7^\circ + 11.5^\circ} = 40023 \text{ km}$$



Rio Cuarto, Argentina

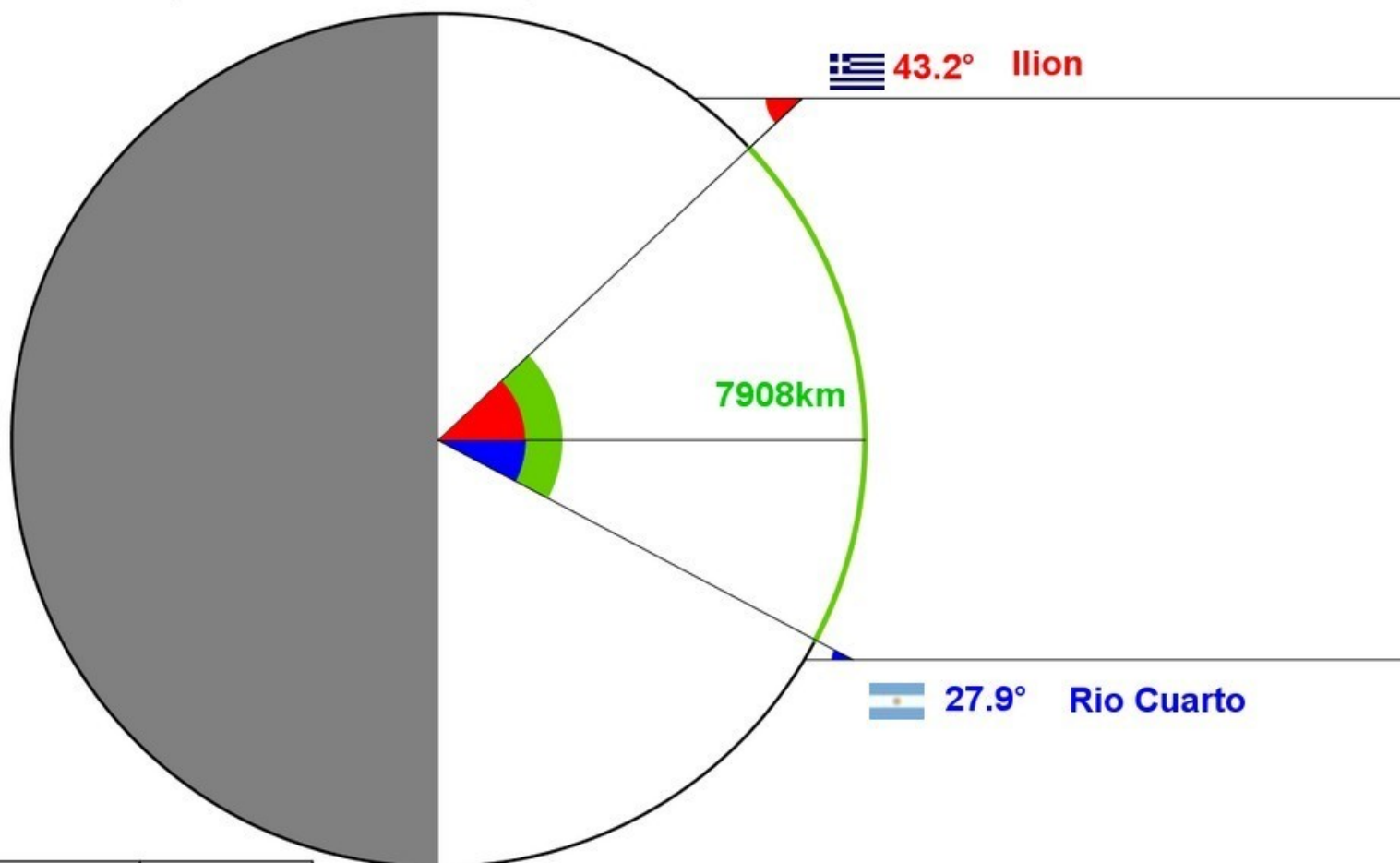


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Rio Cuarto	Argentina	Colegio Concordia	-33.149	-64.351

Date	Gnomon	Shadow	Angle
04 October 2021	52.5cm	-30.0cm	-29.7°
05 October 2021	52.5cm	-27.8cm	-27.9°
07 October 2021	52.5cm	-27.5cm	-27.6°

05/06/2021 (Ilion-Greece) Latitude: 38.033°

05/10/2021 (Rio Cuarto-Argentina) Latitude: -33.149°



Distance	Angle
circumference	360°
7908km	43.2° + 27.9°

$$\text{circumference} = \frac{360^\circ \times 7908\text{km}}{43.2^\circ + 27.9^\circ} = 40041 \text{ km}$$




Código
Condición

100 100 100

Rio de Janeiro CENOM, Brazil

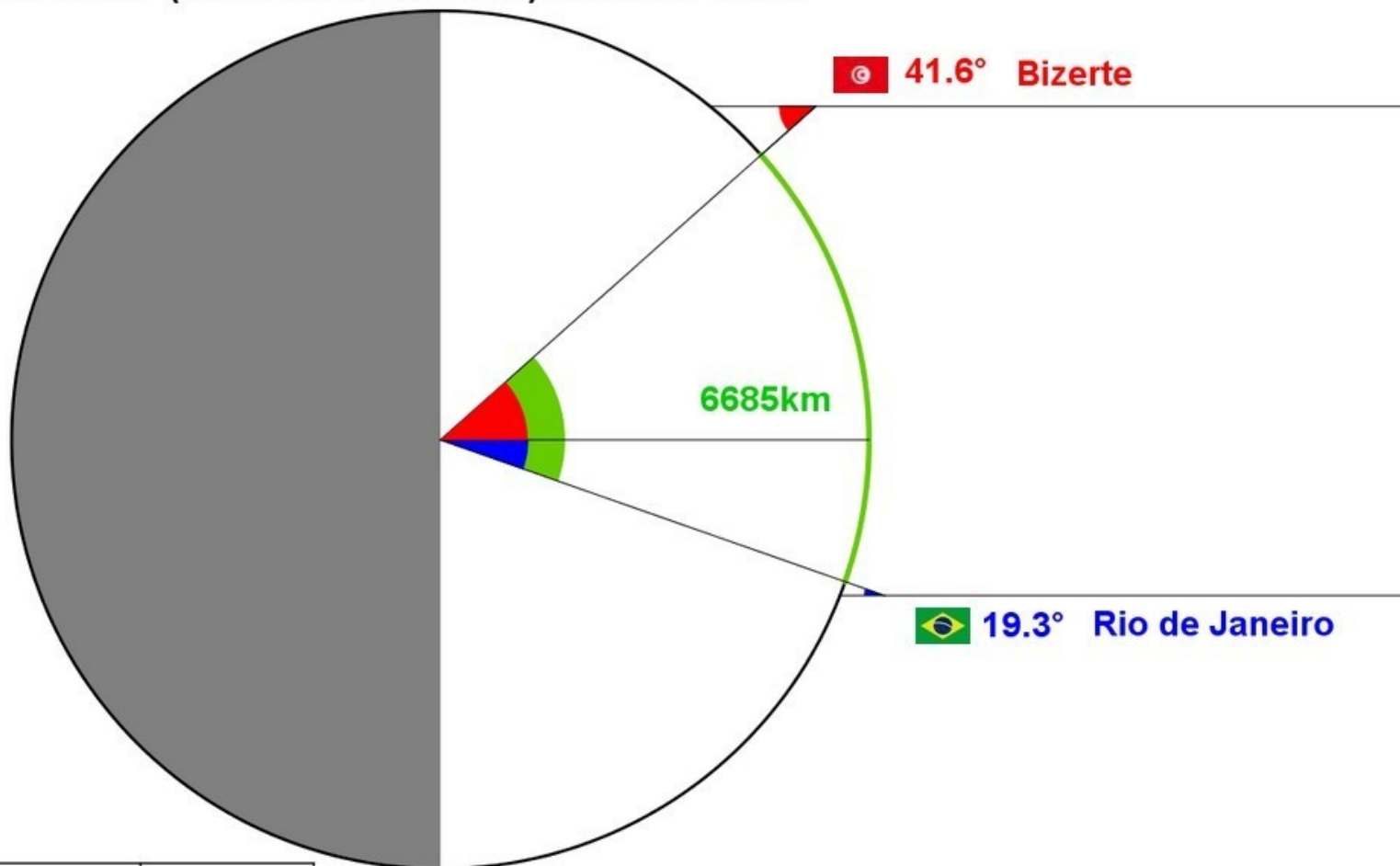


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317

Date	Gnomon	Shadow	Angle
01 October 2021	20.0cm	-7.0cm	-19.3°

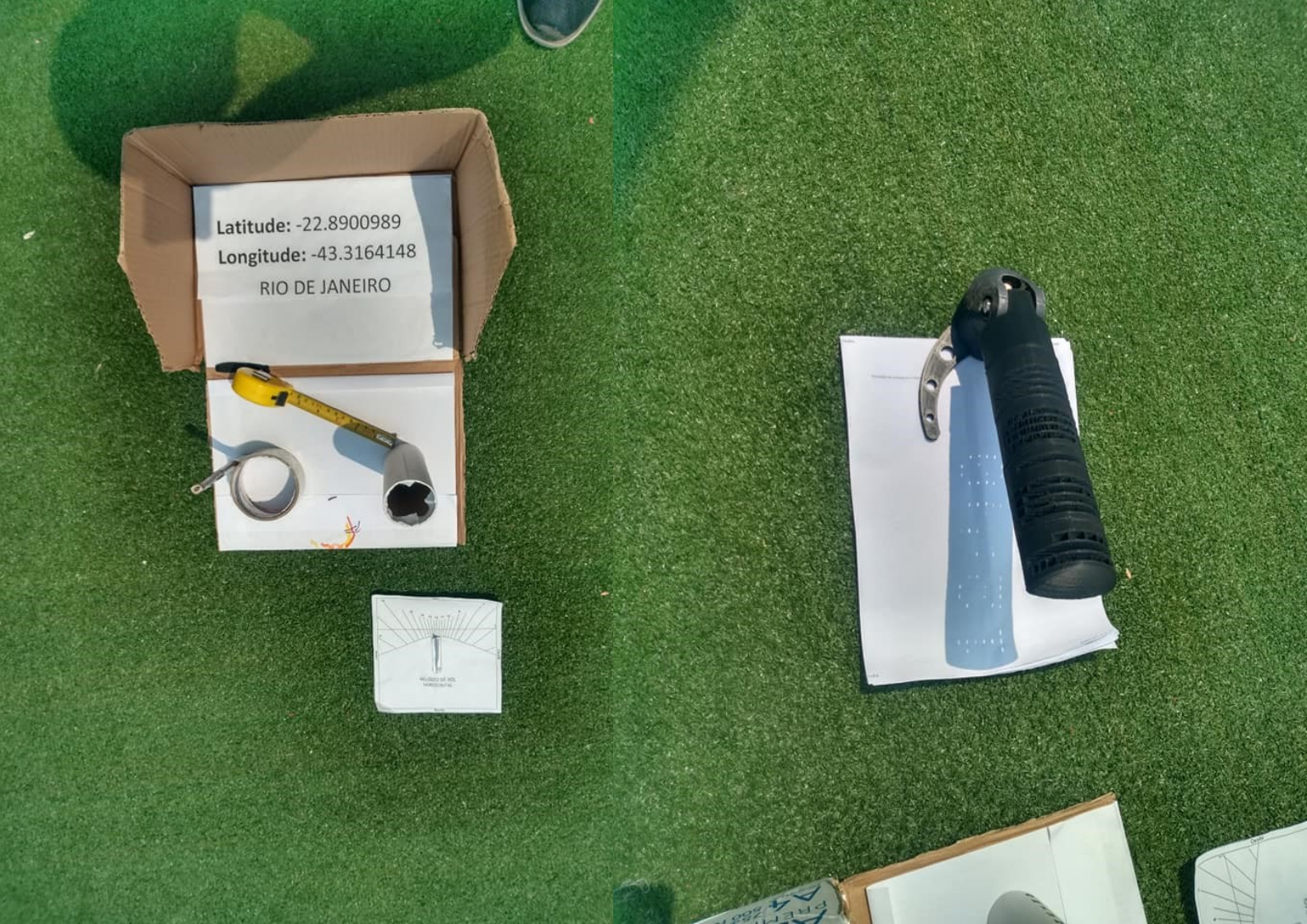
01/10/2021 (Bizerte-Tunisia) Latitude: 37.284°

01/10/2021 (Rio de Janeiro-Brazil) Latitude: -22.89°



Distance	Angle
circumference	360°
6685km	41.6° + 19.3°

$$\text{circumference} = \frac{360^\circ \times 6685\text{km}}{41.6^\circ + 19.3^\circ} = 39517 \text{ km}$$



Santarém, Brazil

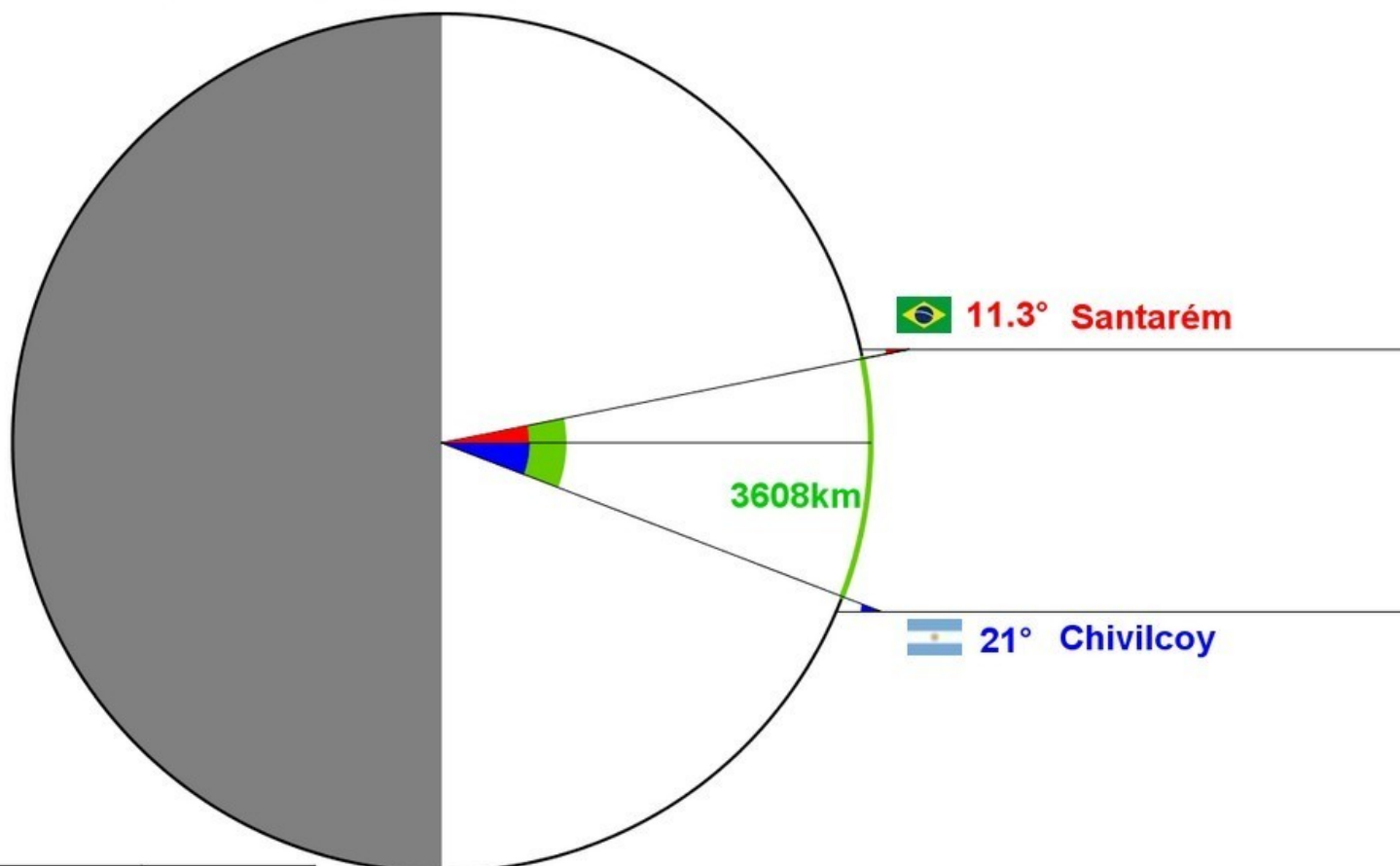


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Santarém	Brazil	Santarém Adventist College	-2.439	-54.699

Date	Gnomon	Shadow	Angle
01 October 2021	11.0cm	-2.1cm	-10.8°
04 October 2021	11.0cm	-2.3cm	-11.8°
05 October 2021	11.0cm	-2.3cm	-11.8°
06 October 2021	11.0cm	-2.0cm	-10.3°
08 October 2021	10.0cm	-1.3cm	-7.4°
13 October 2021	10.0cm	1.0cm	5.7°
14 October 2021	10.0cm	1.0cm	5.7°
17 October 2021	10.0cm	1.0cm	5.7°
19 October 2021	10cm	2.5cm	14.0°
20 October 2021	10.0cm	1.3cm	7.4°
25 October 2021	10.0cm	1.4cm	8.0°
29 October 2021	10.0cm	2.0cm	11.3°

29/10/2021 (Santarém-Brazil) Latitude: -2.439°

29/10/2021 (Chivilcoy-Argentina) Latitude: -34.911°



Distance	Angle
circumference	360°
3608km	11.3° + 21°

$$\text{circumference} = \frac{360^\circ \times 3608\text{km}}{11.3^\circ + 21^\circ} = 40213 \text{ km}$$



