

## Sundials 2

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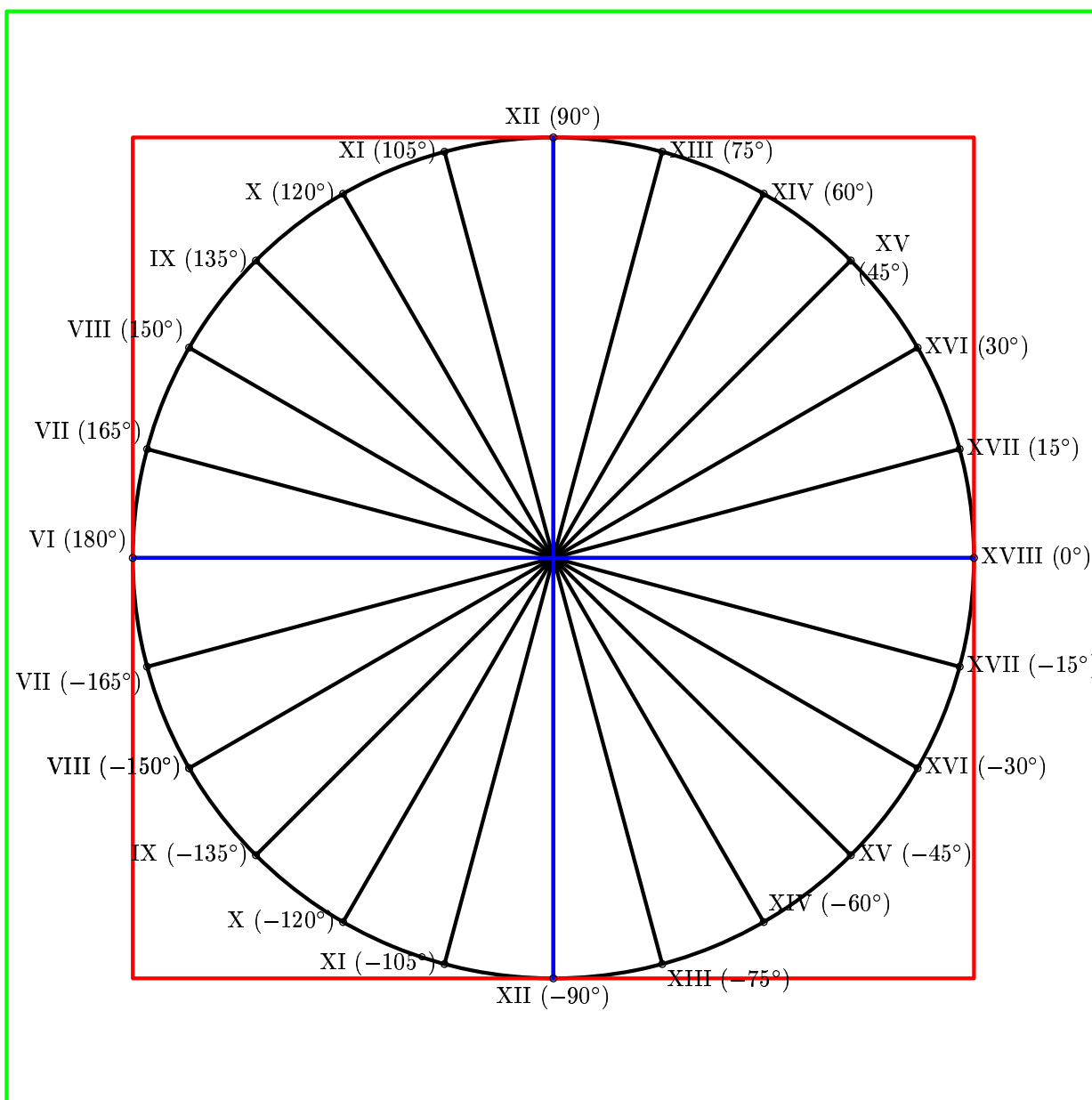
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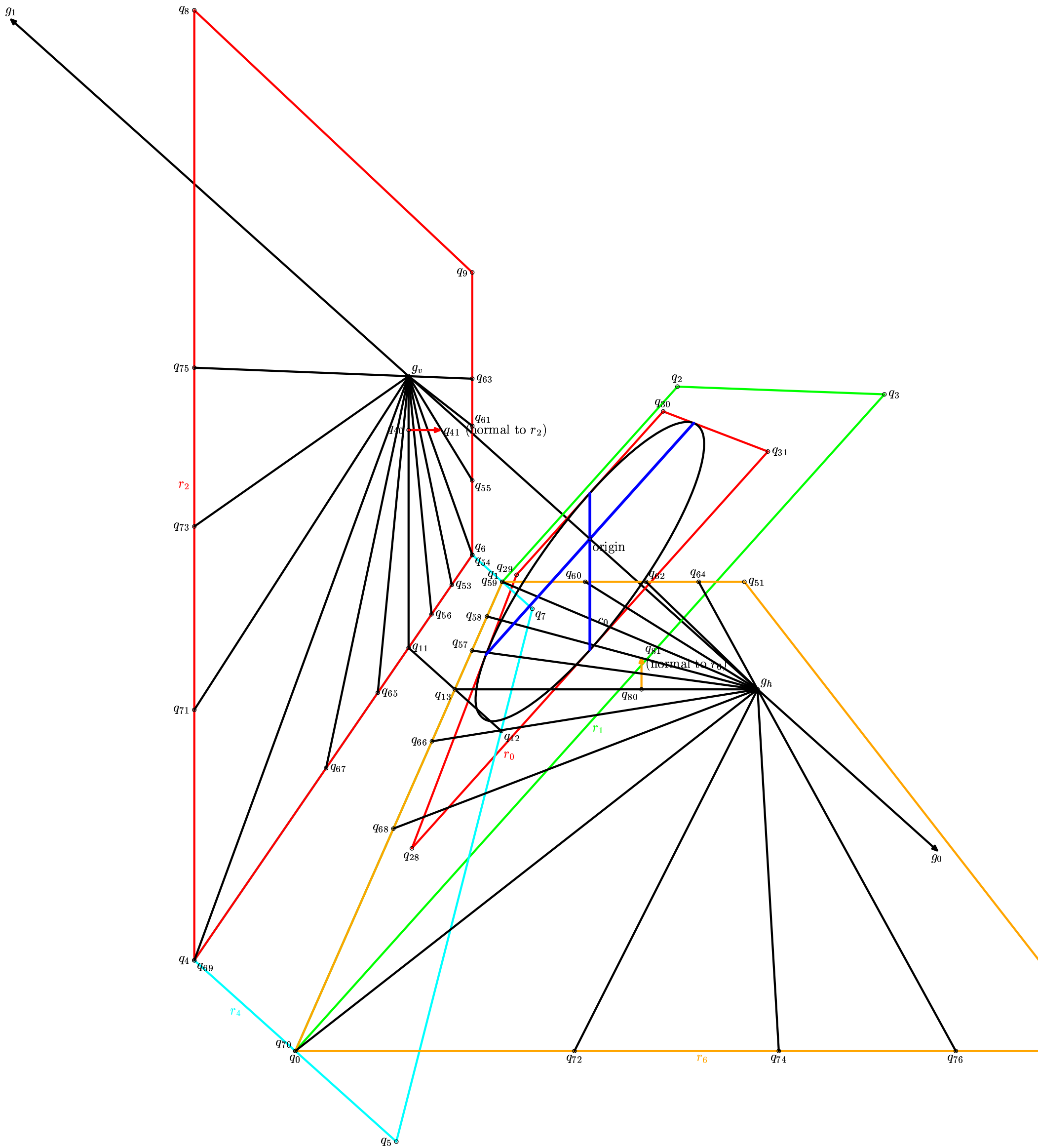
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Parallel projection onto plane of equatorial dial (plane of  $c_0$ ,  $r_0$  and  $r_1$ )  
 Same for any latitude

Chicago, Illinois, USA 41° 54' N, 87° 39' W

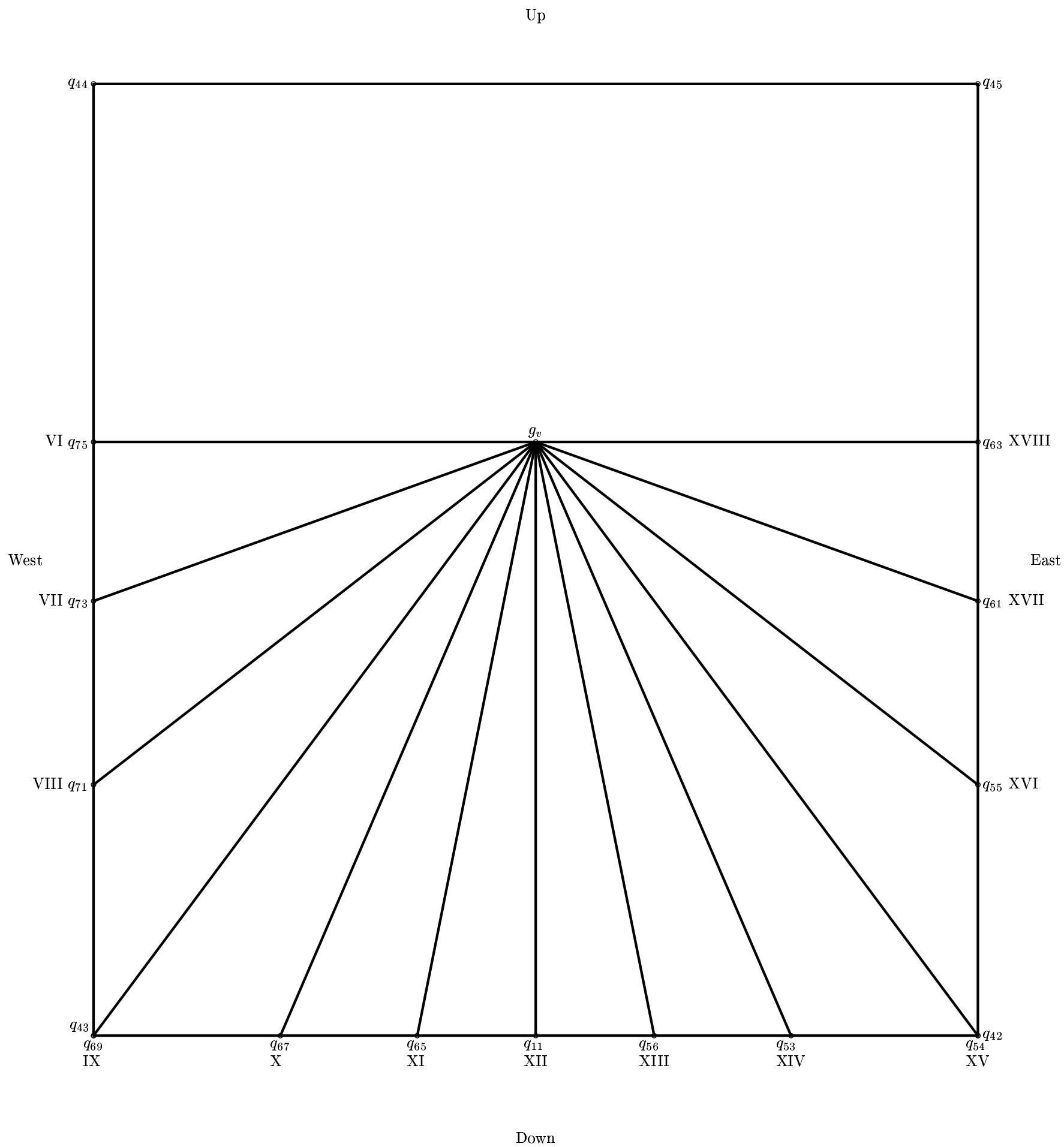


**Perspective projection**

Latitude 41° 54' N (Chicago, Illinois, USA)

Focus: position = (0, 5, -12), direction = (0, 5, 10), distance = 10  
(dimensions in centimeters)

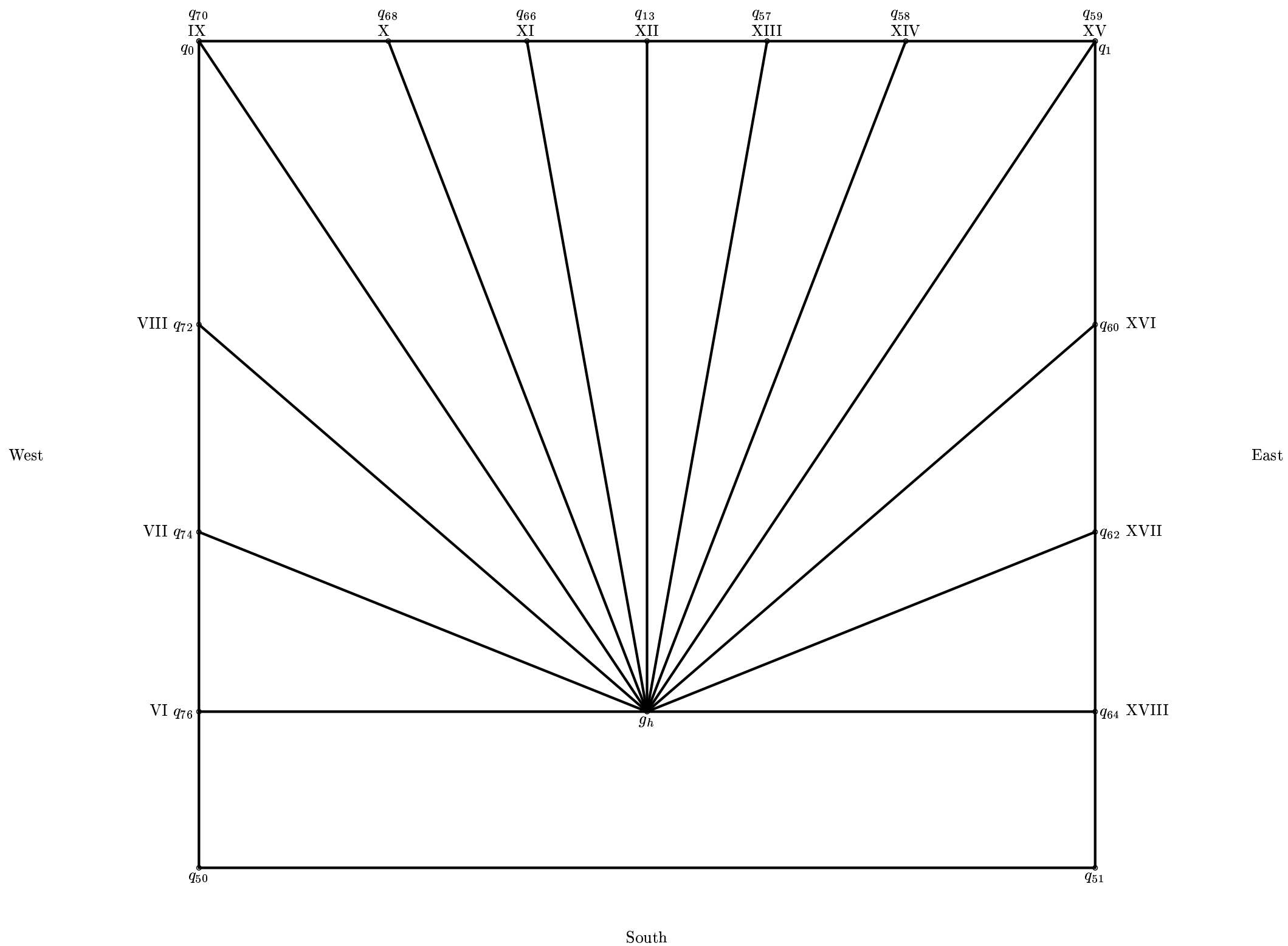
Chicago, Illinois, USA 41° 54' N, 87° 39' W



**Parallel projection onto the vertical plane** (plane of  $r_1$ )  
 Vertical dial facing due south  
 Latitude 41° 54' N (Chicago, Illinois, USA)

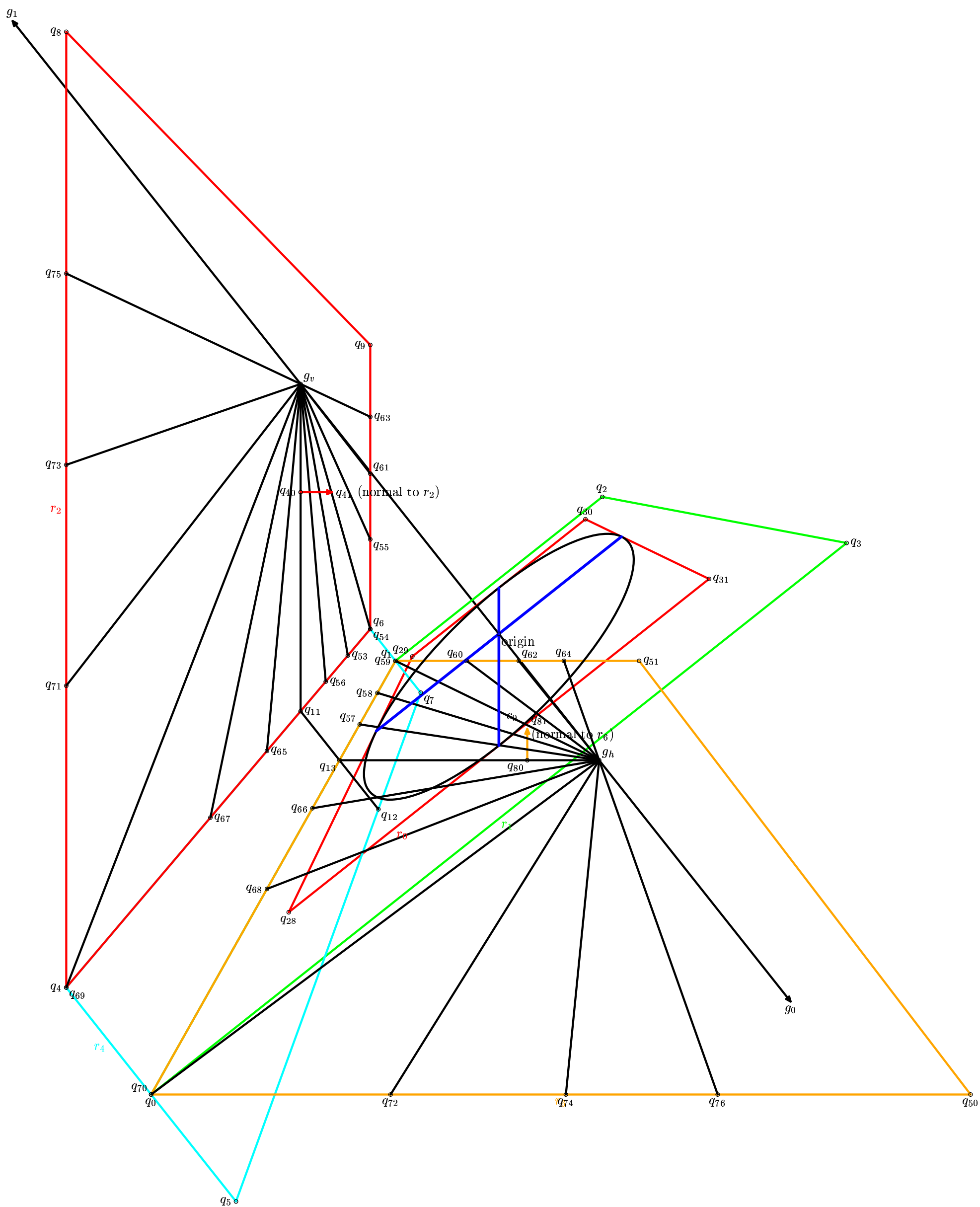
Chicago, Illinois, USA 41° 54' N, 87° 39' W

North



Parallel projection onto the horizontal plane (plane of  $r_6$ )  
Horizontal dial  
Latitude 41° 54' N (Chicago, Illinois, USA)

London, UK 51° 30' 28" N, 0° 7' 41" W

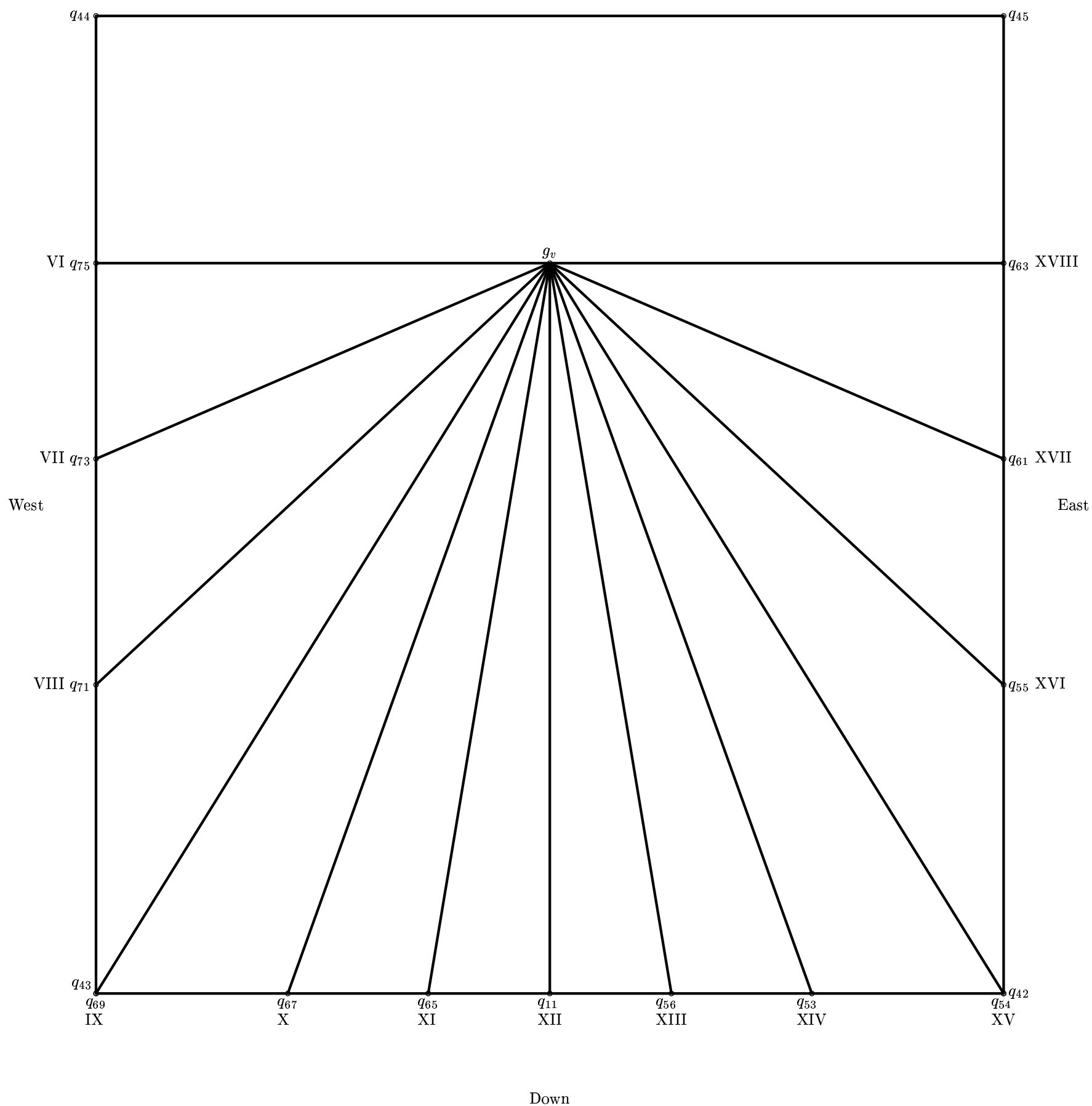


**Perspective projection**

Latitude 51° 30' 28" N (London, UK)  
 Focus: position = (0, 5, -12), direction = (0, 5, 10), distance = 10  
 (dimensions in centimeters)

London, UK 51° 30' 28" N, 0° 7' 41" W

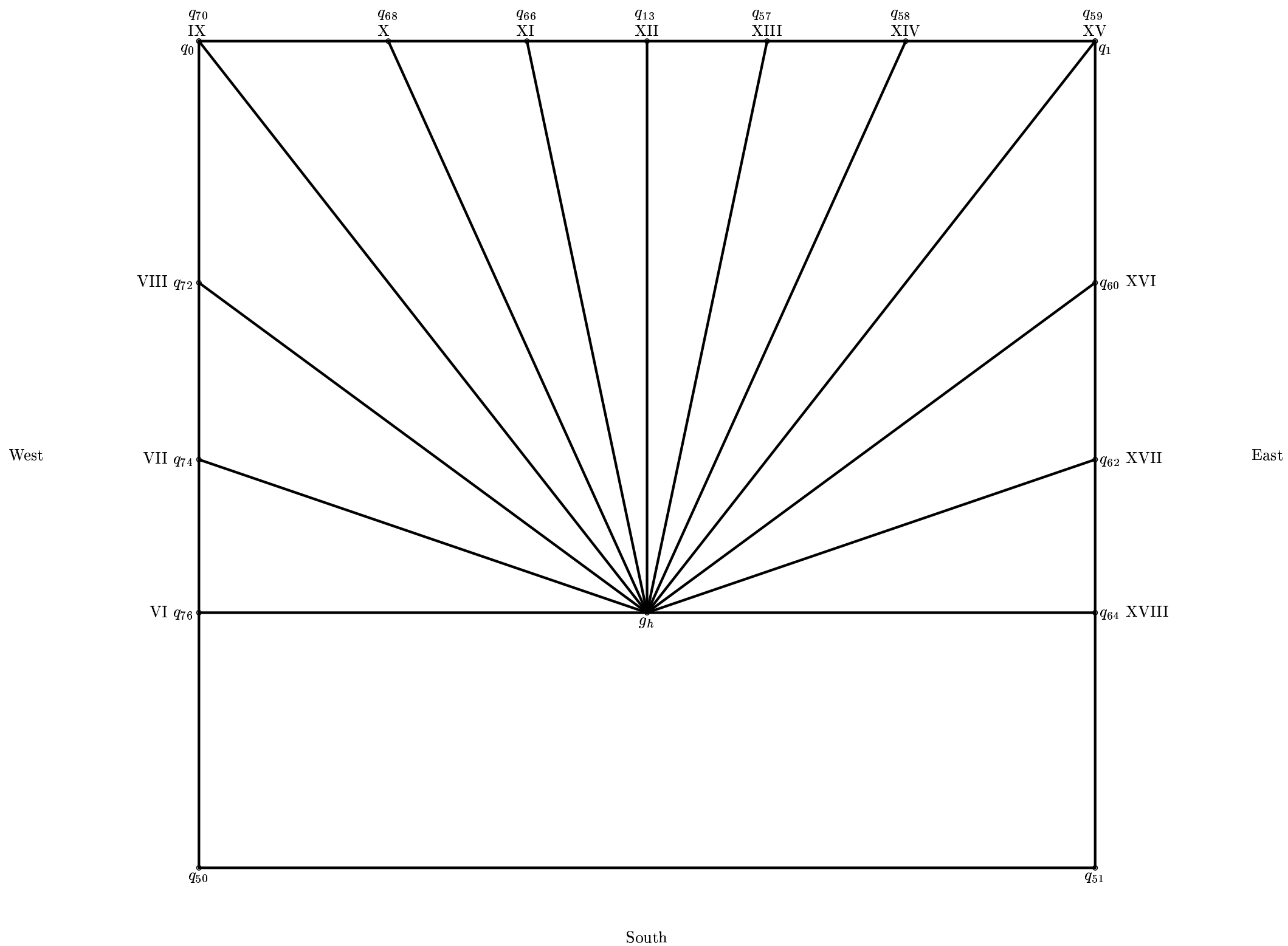
Up



**Parallel projection onto the vertical plane** (plane of  $r_1$ )  
 Vertical dial facing due south  
 Latitude 51° 30' 28" N (London, UK)

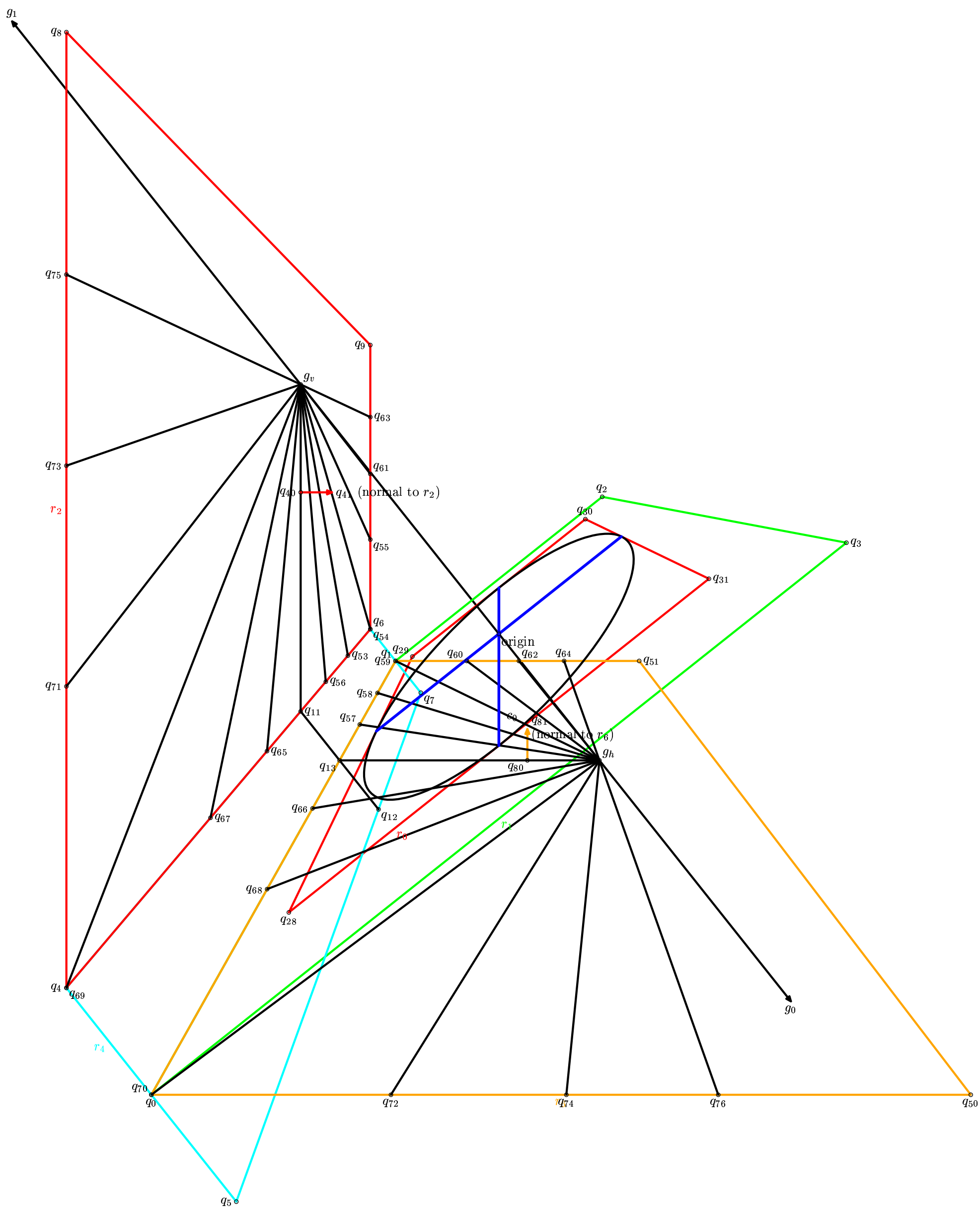
London, UK 51° 30' 28" N, 0° 7' 41" W

North



Parallel projection onto the horizontal plane (plane of  $r_6$ )  
Horizontal dial  
Latitude 51° 30' 28" N (London, UK)

Göttingen, Germany 51° 32' N, 9° 56' E

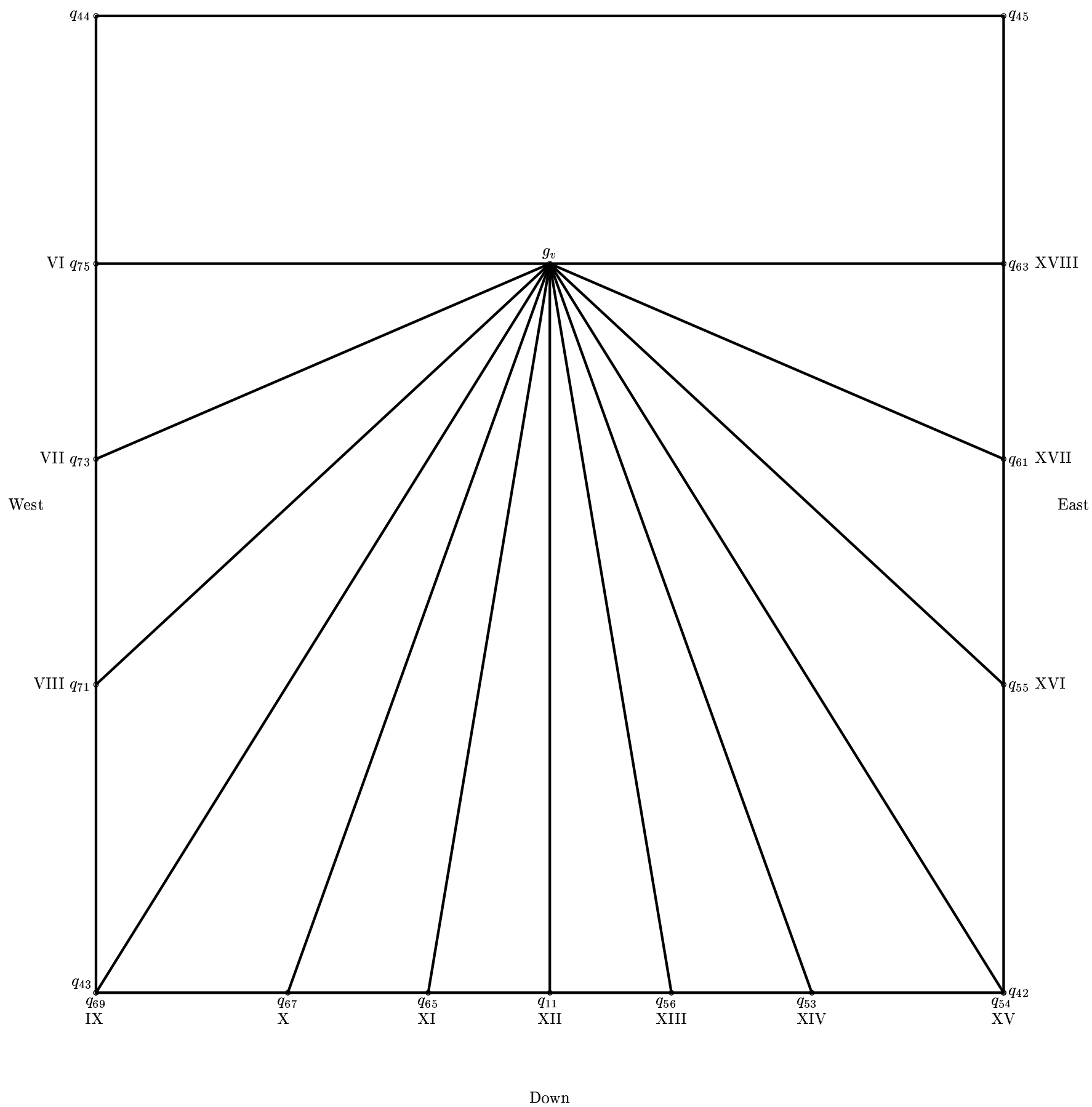


**Perspective projection**

Latitude 51° 32' N (Göttingen, Germany)  
 Focus: position = (0, 5, -12), direction = (0, 5, 10), distance = 10  
 (dimensions in centimeters)

Göttingen, Germany 51° 32' N, 9° 56' E

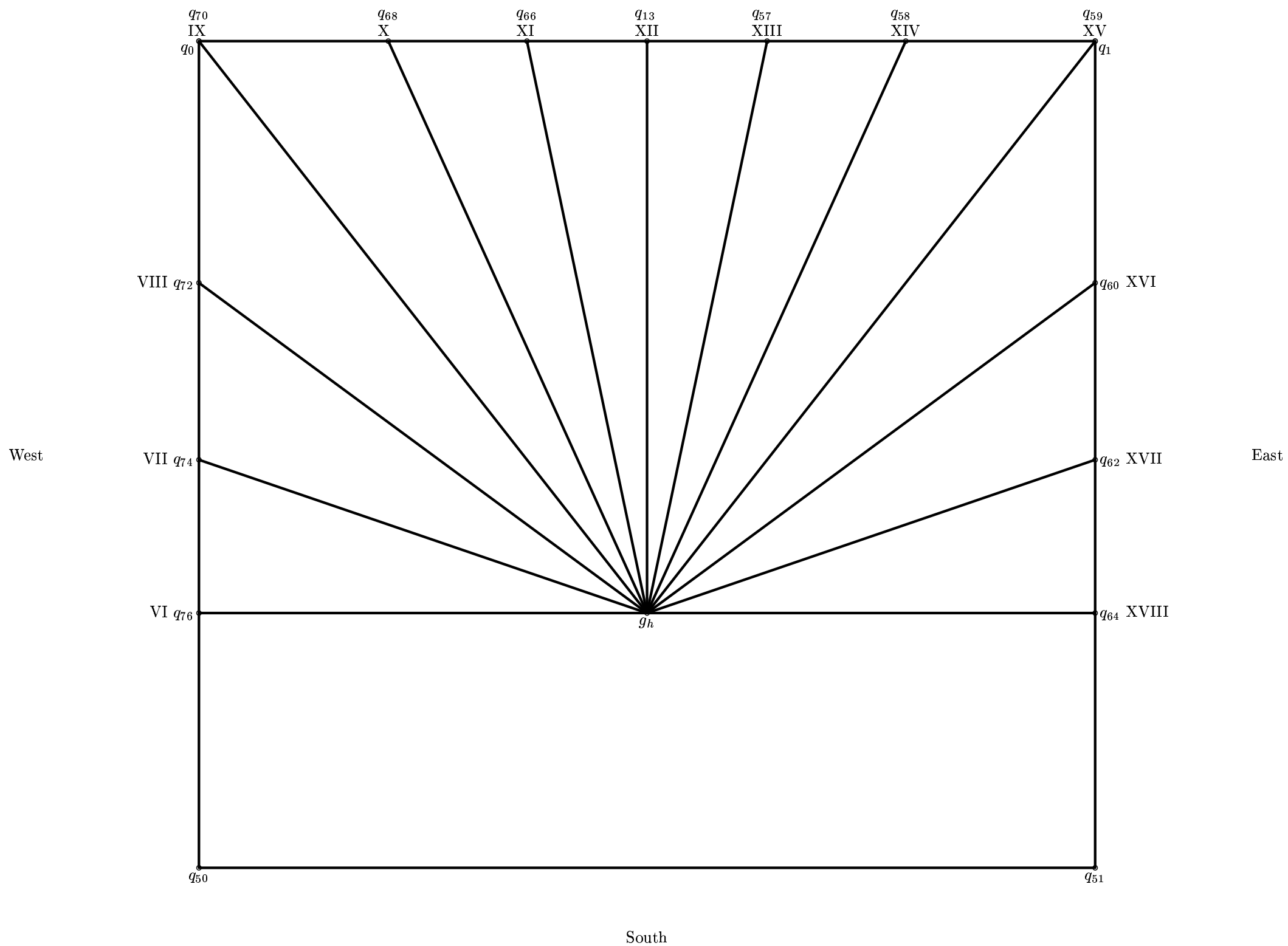
Up



**Parallel projection onto the vertical plane** (plane of  $r_1$ )  
 Vertical dial facing due south  
 Latitude 51° 32' N (Göttingen, Germany)

Göttingen, Germany 51° 32' N, 9° 56' E

North



Parallel projection onto the horizontal plane (plane of  $r_6$ ).  
 Horizontal dial  
 Latitude 51° 32' N (Göttingen, Germany)