

Sundials 2

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Last updated: October 7, 2007

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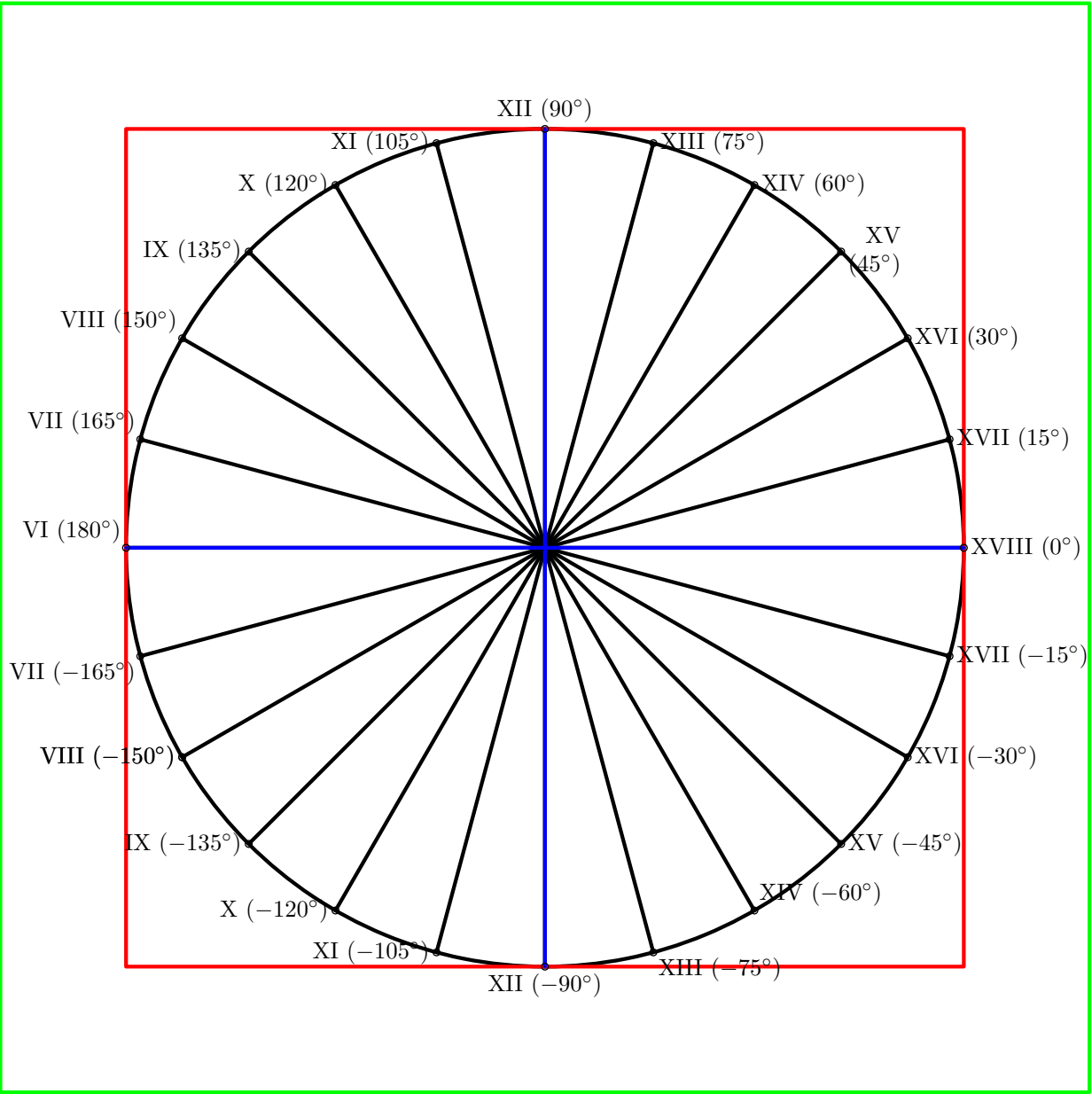
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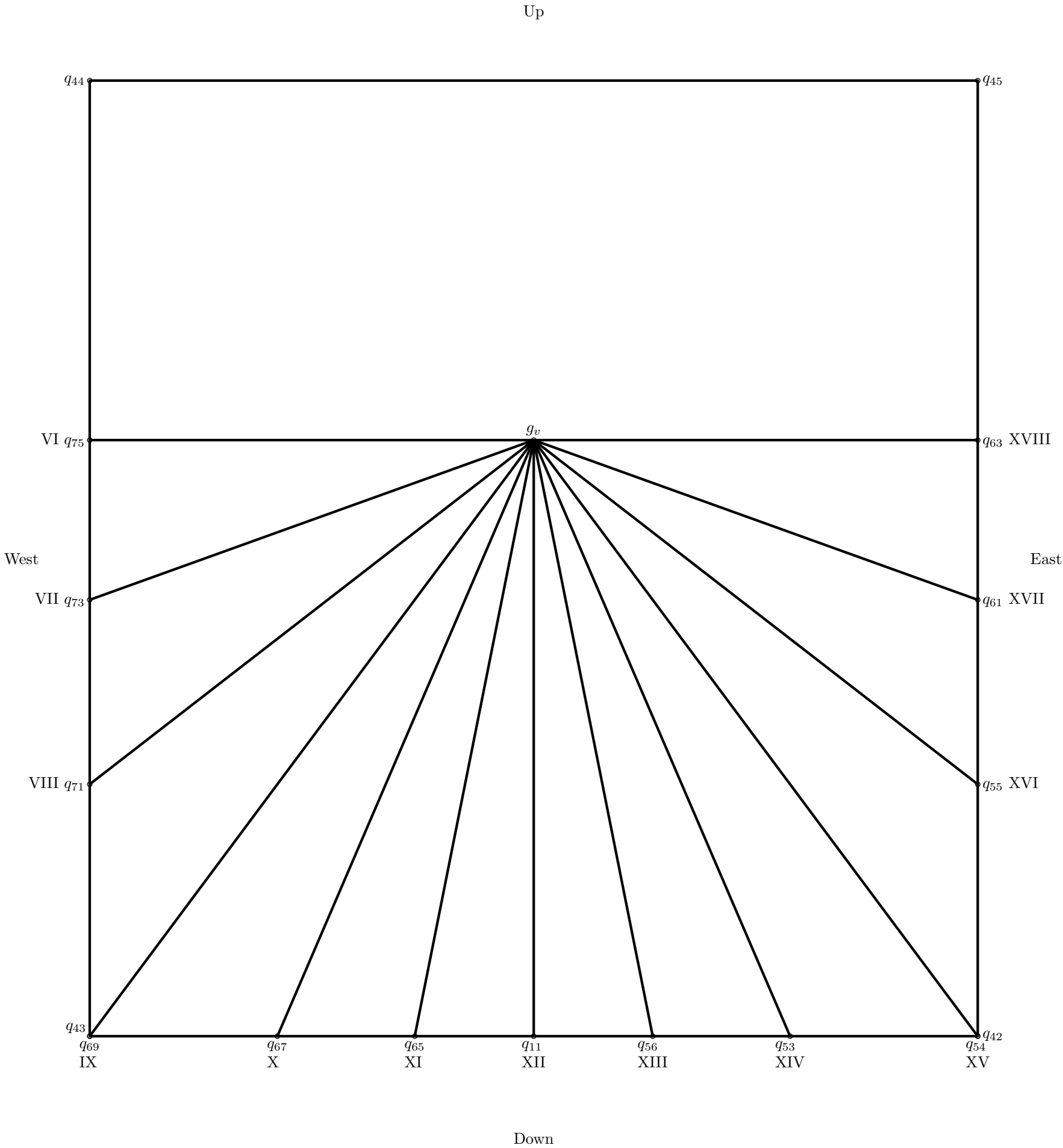
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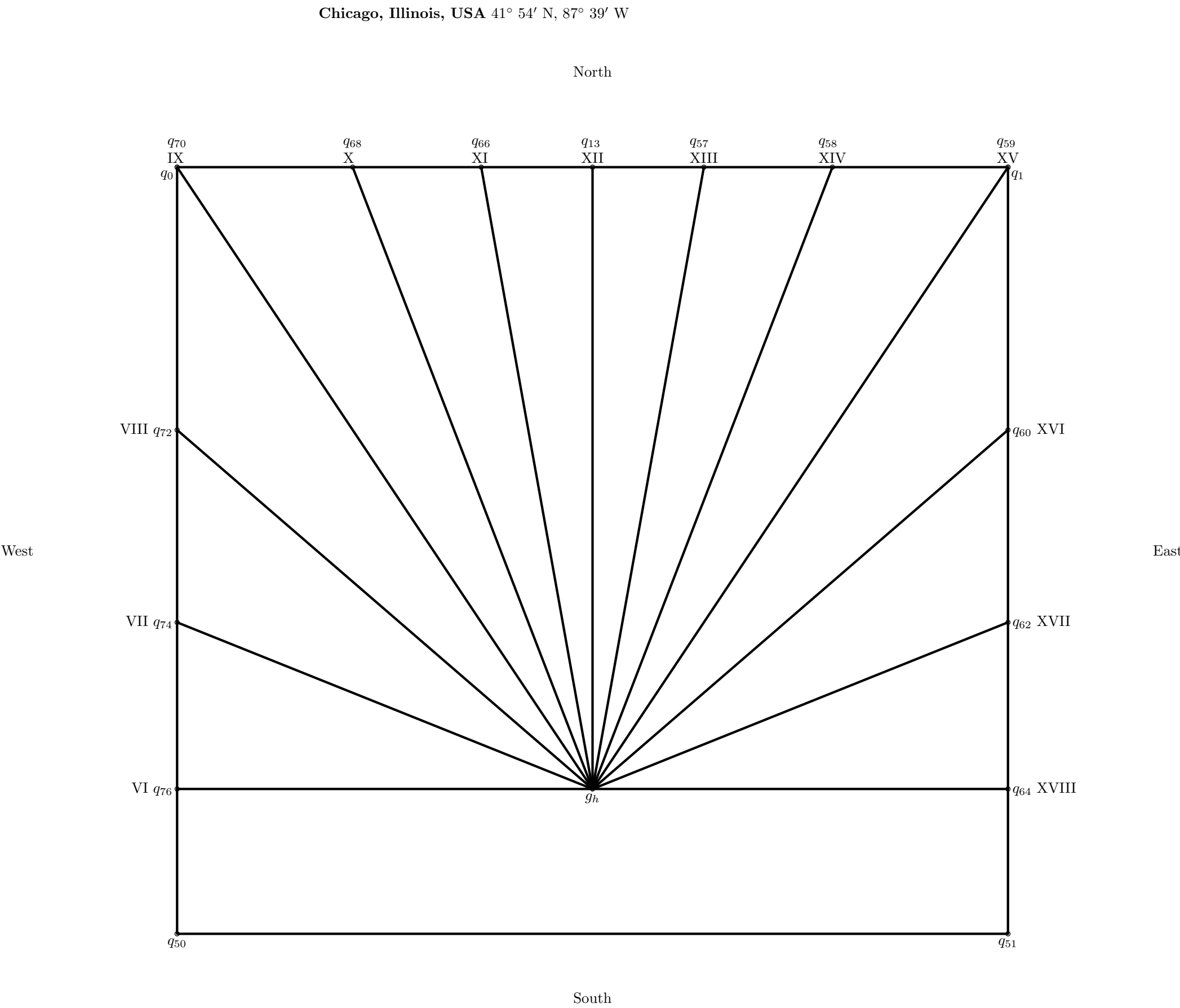
Parallel projection onto plane of equatorial dial (plane of  $c_0$ ,  $r_0$  and  $r_1$ )  
Same for any latitude



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

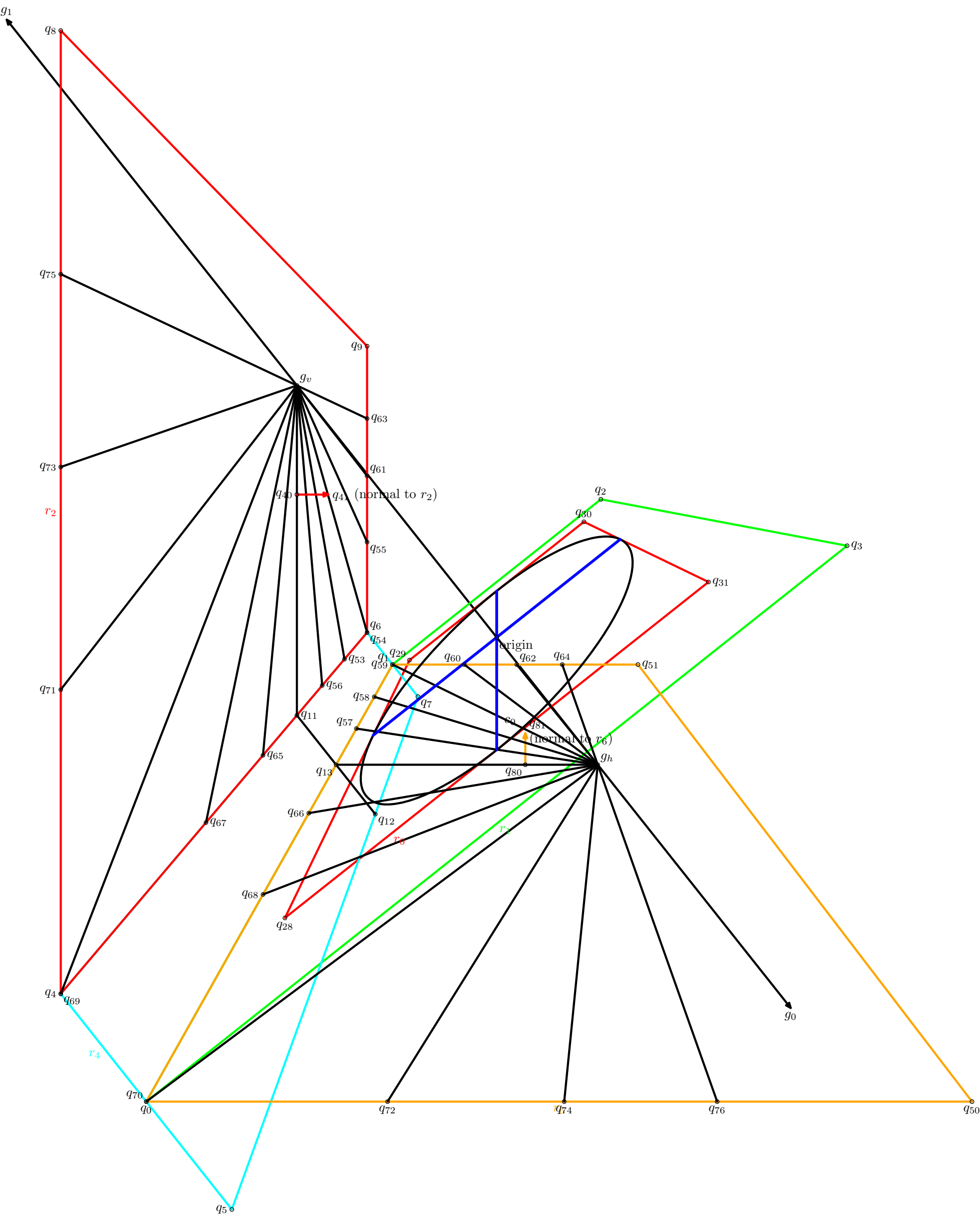


Parallel projection onto the vertical plane (plane of  $r_1$ )  
Vertical dial facing due south  
Latitude 41° 54' N (Chicago, Illinois, USA)

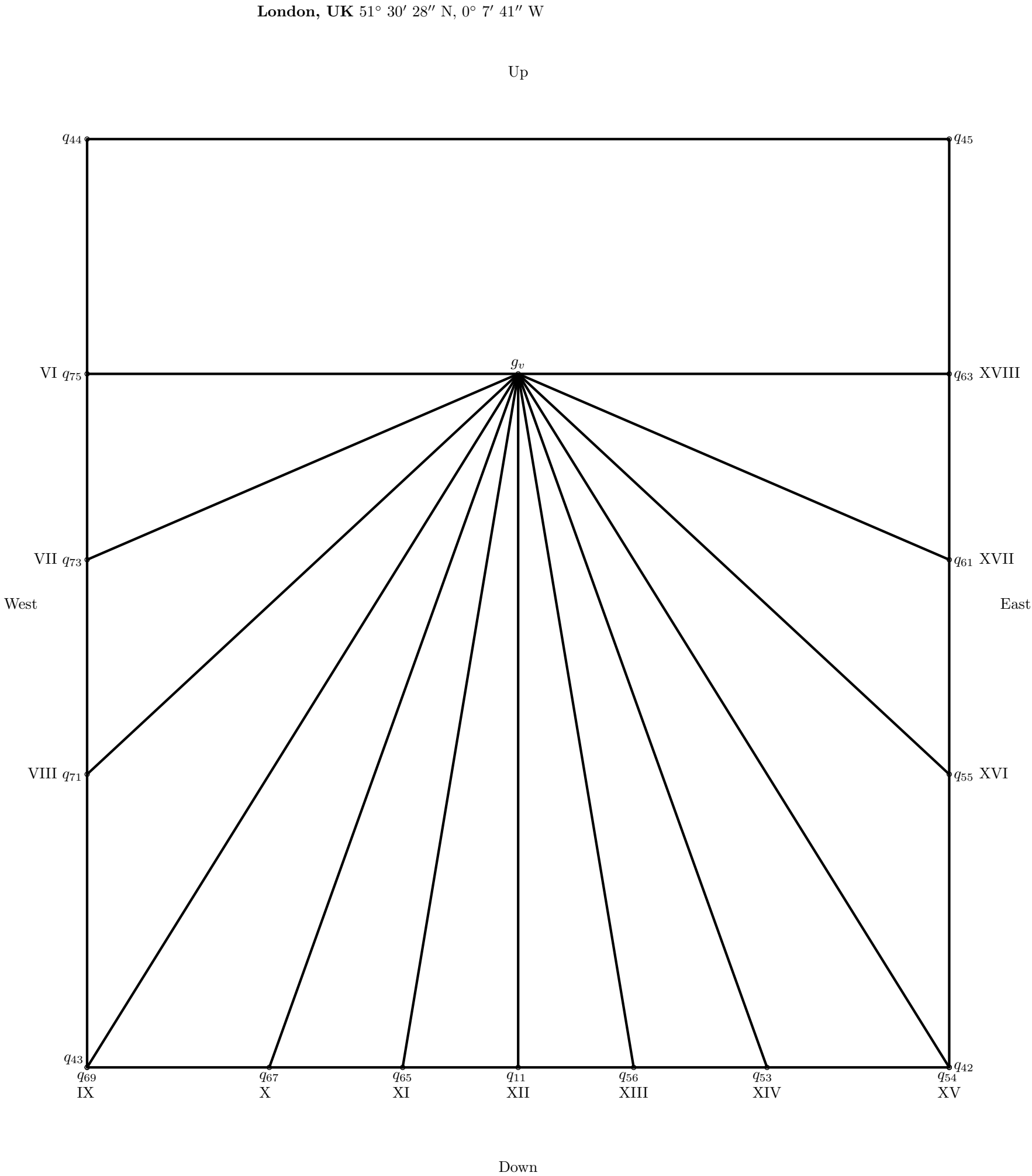


Parallel projection onto the horizontal plane (plane of  $r_6$ )  
Horizontal dial  
Latitude 41° 54' N (Chicago, Illinois, USA)

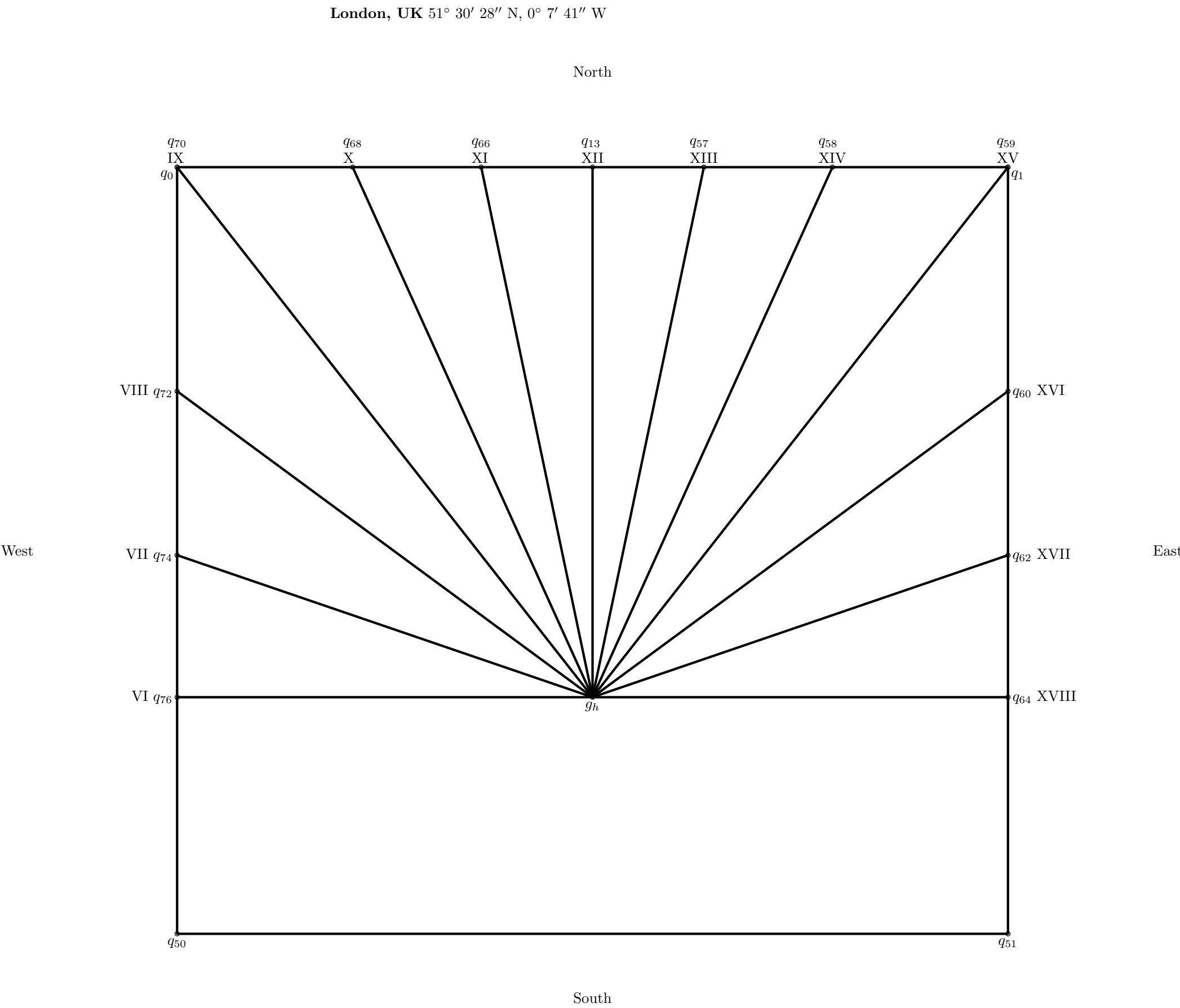
London, UK 51° 30' 28'' N, 0° 7' 41'' W



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



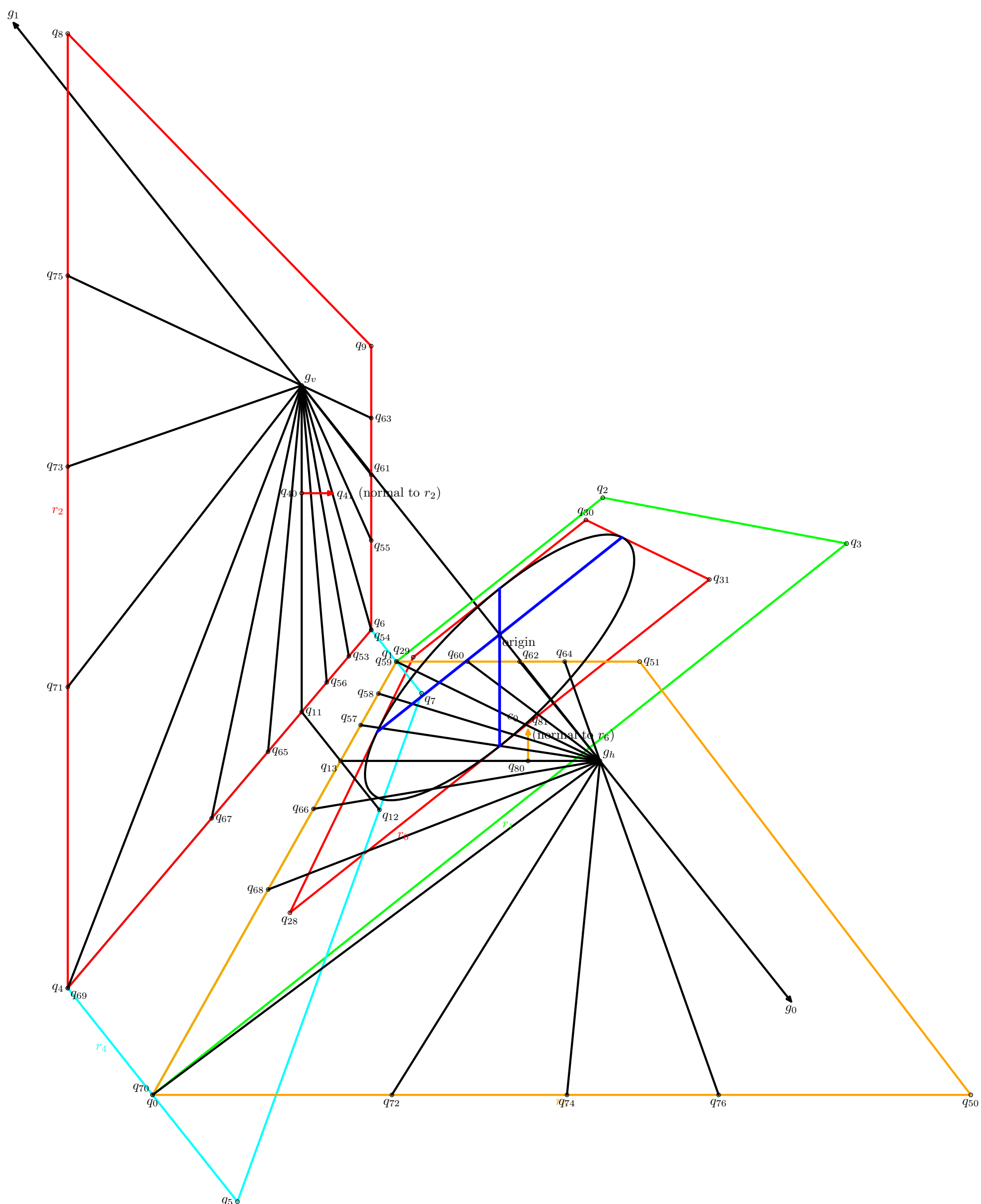
**Parallel projection onto the vertical plane** (plane of  $r_1$ )  
Vertical dial facing due south  
Latitude 51° 30' 28'' N (London, UK)



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

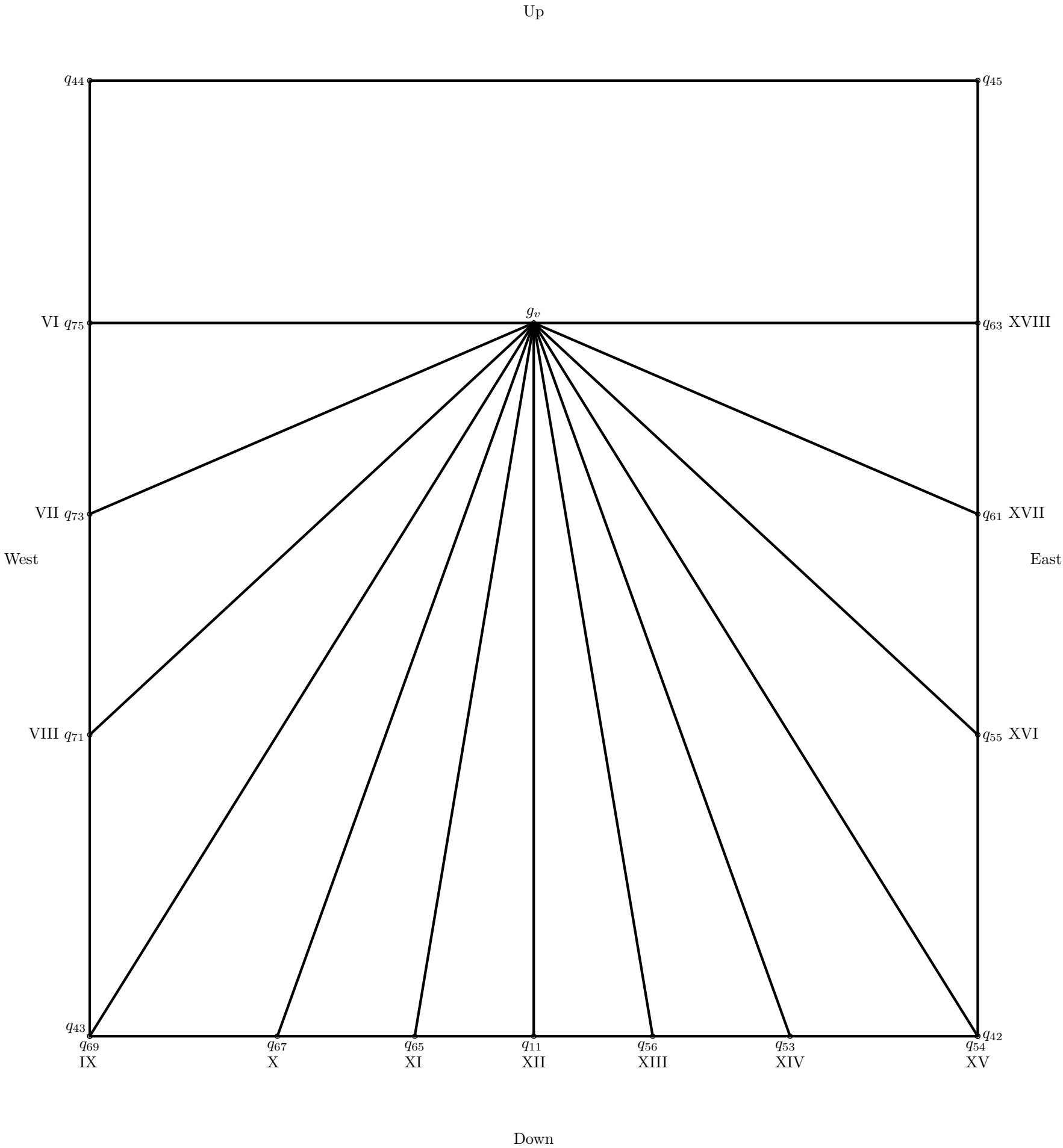


## Perspective projection

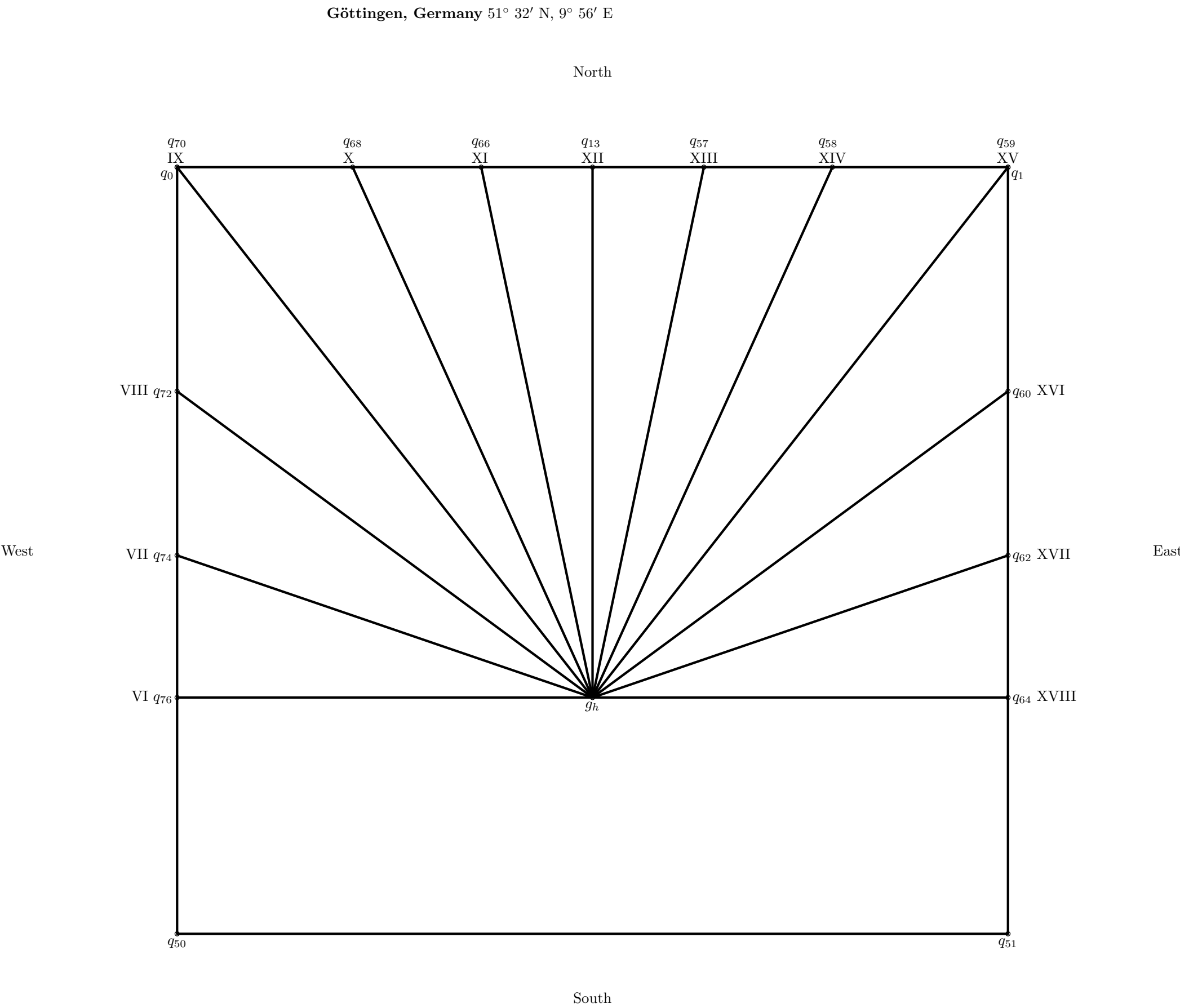
Latitude 51° 32' N (Göttingen, Germany)

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

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



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



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