Sundials 2

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Contents

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

Up

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

q_{70} q_{68} q_{66} q_{13} q_{57} q_{58} q_{59}
IX   X   XI   XII   XIII   XIV   XV
q_0 q_1

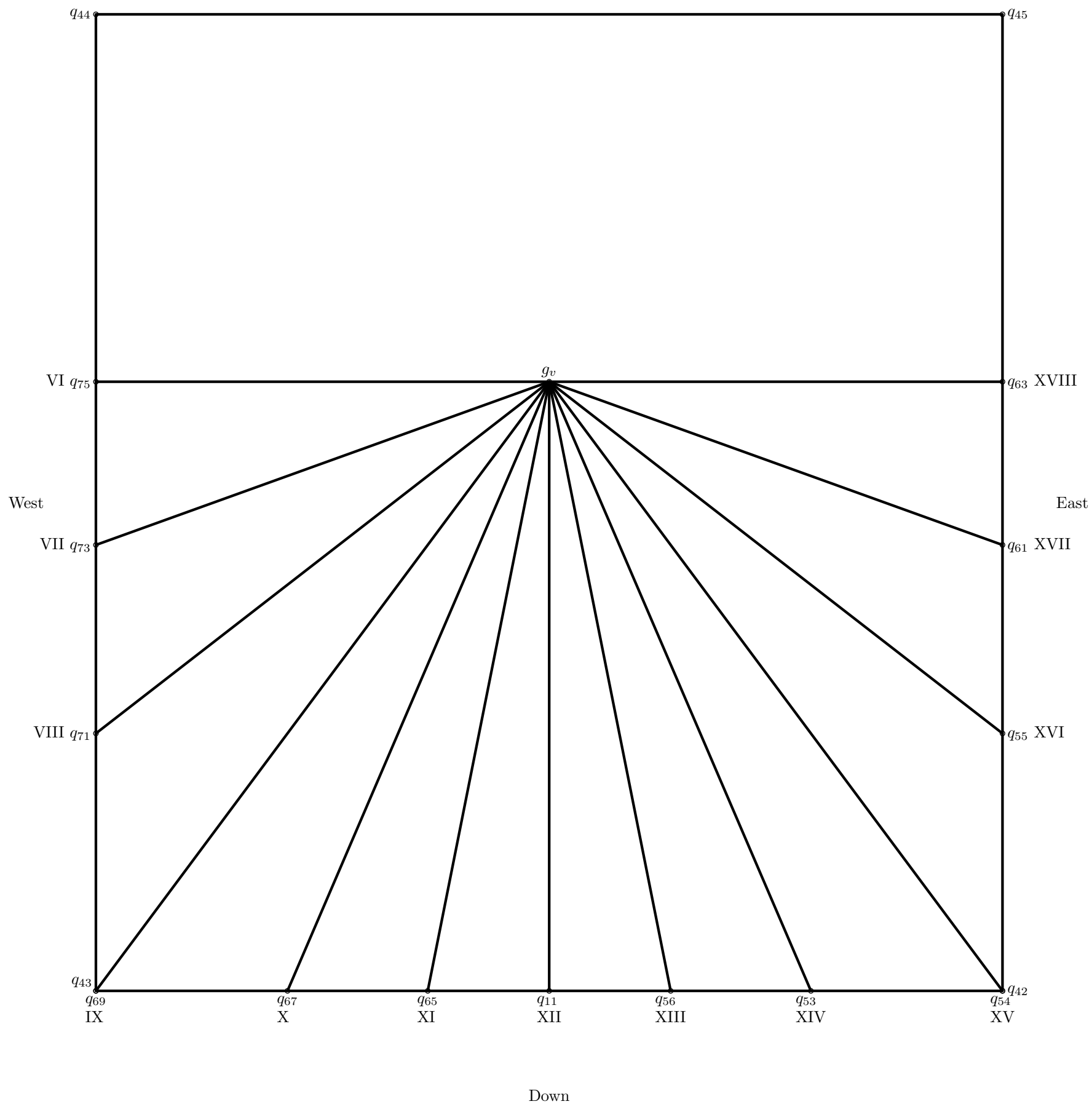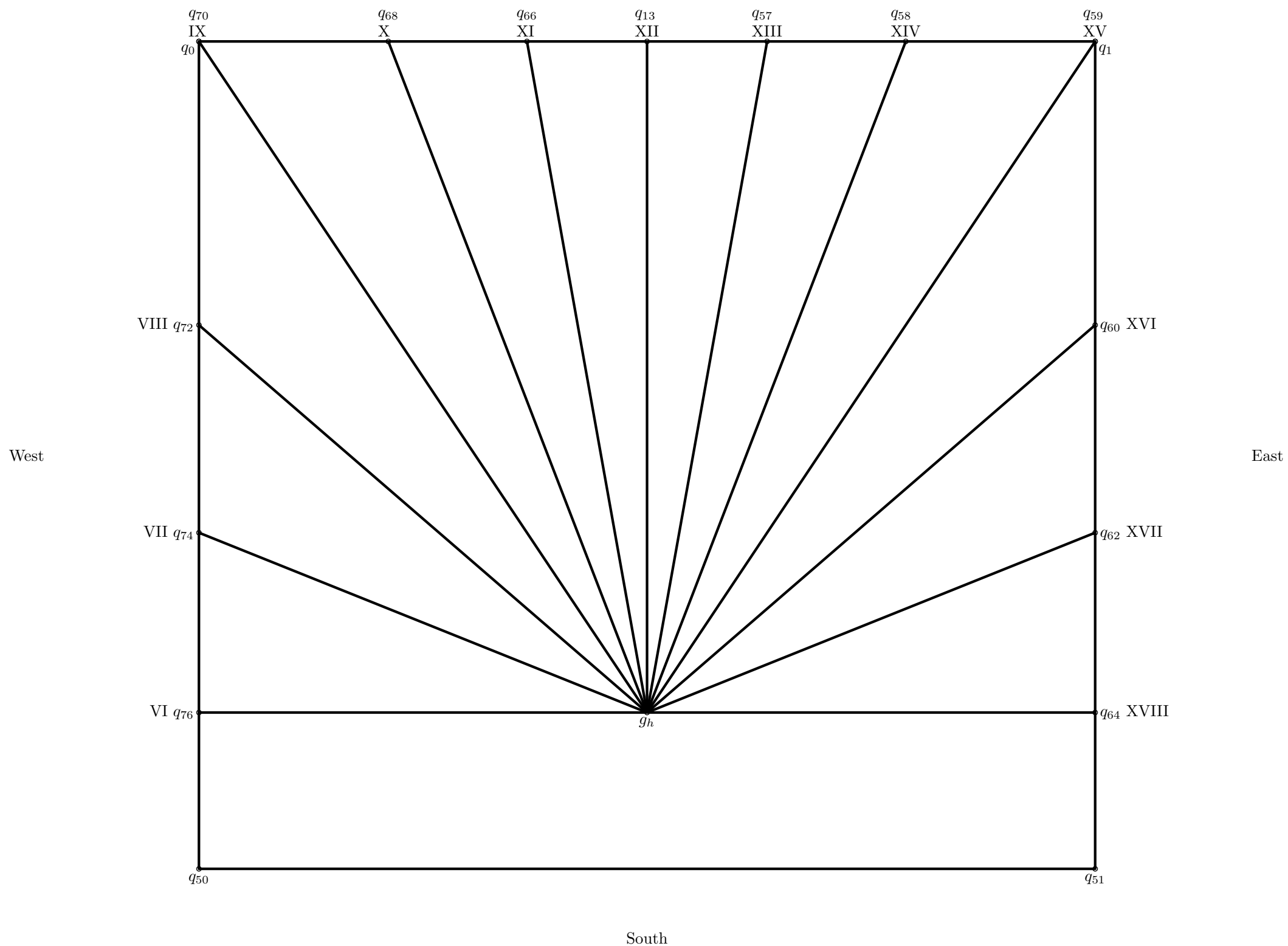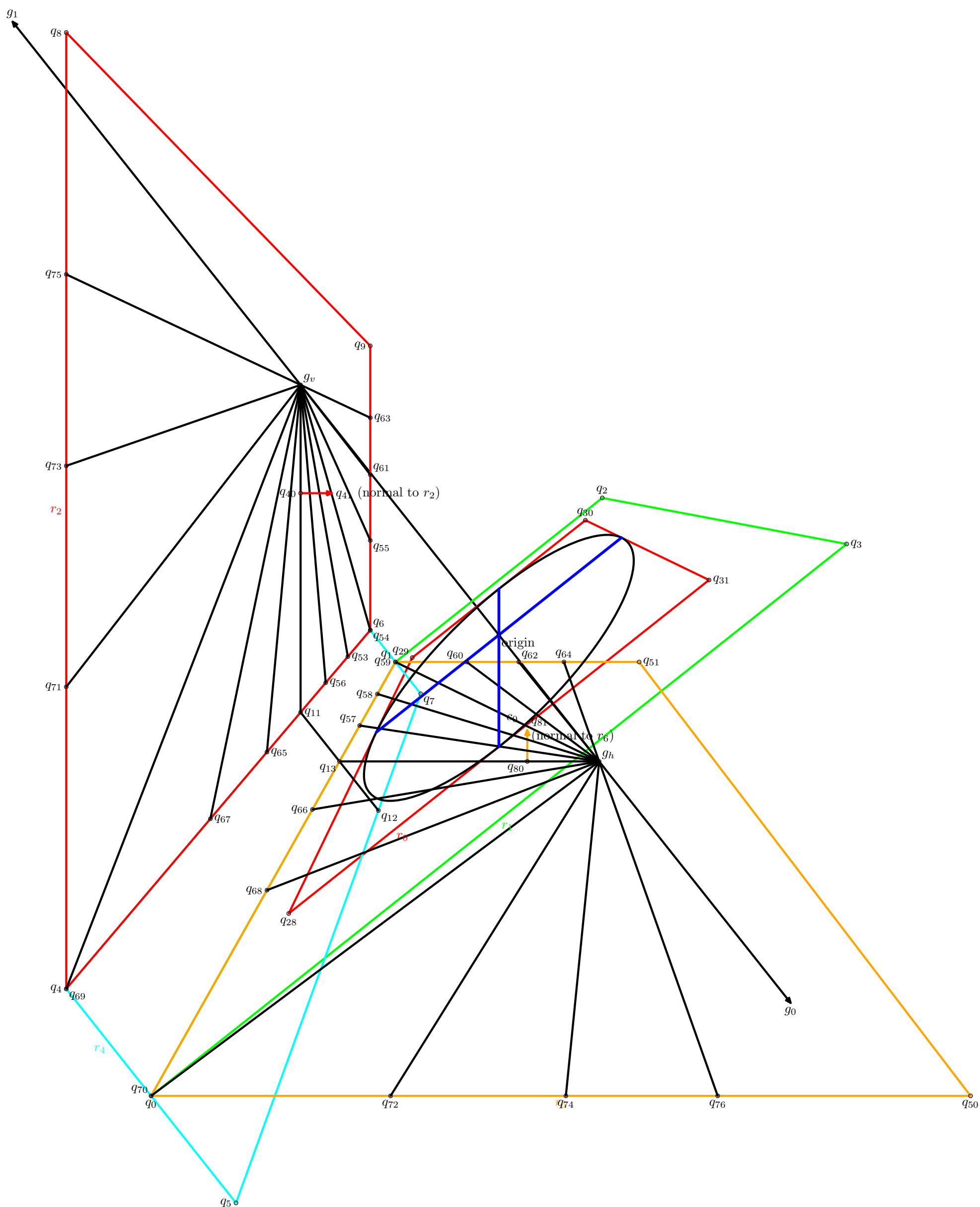VIII q_{72} q_{60} XVI

West   East

VII q_{74} q_{62} XVII

VI q_{76} q_{64} XVIII
                              g_h

q_{50} q_{51}

South

Parallel projection onto the horizontal plane (plane of r_6)
Horizontal dial
Latitude 41° 54′ N (Chicago, Illinois, USA)
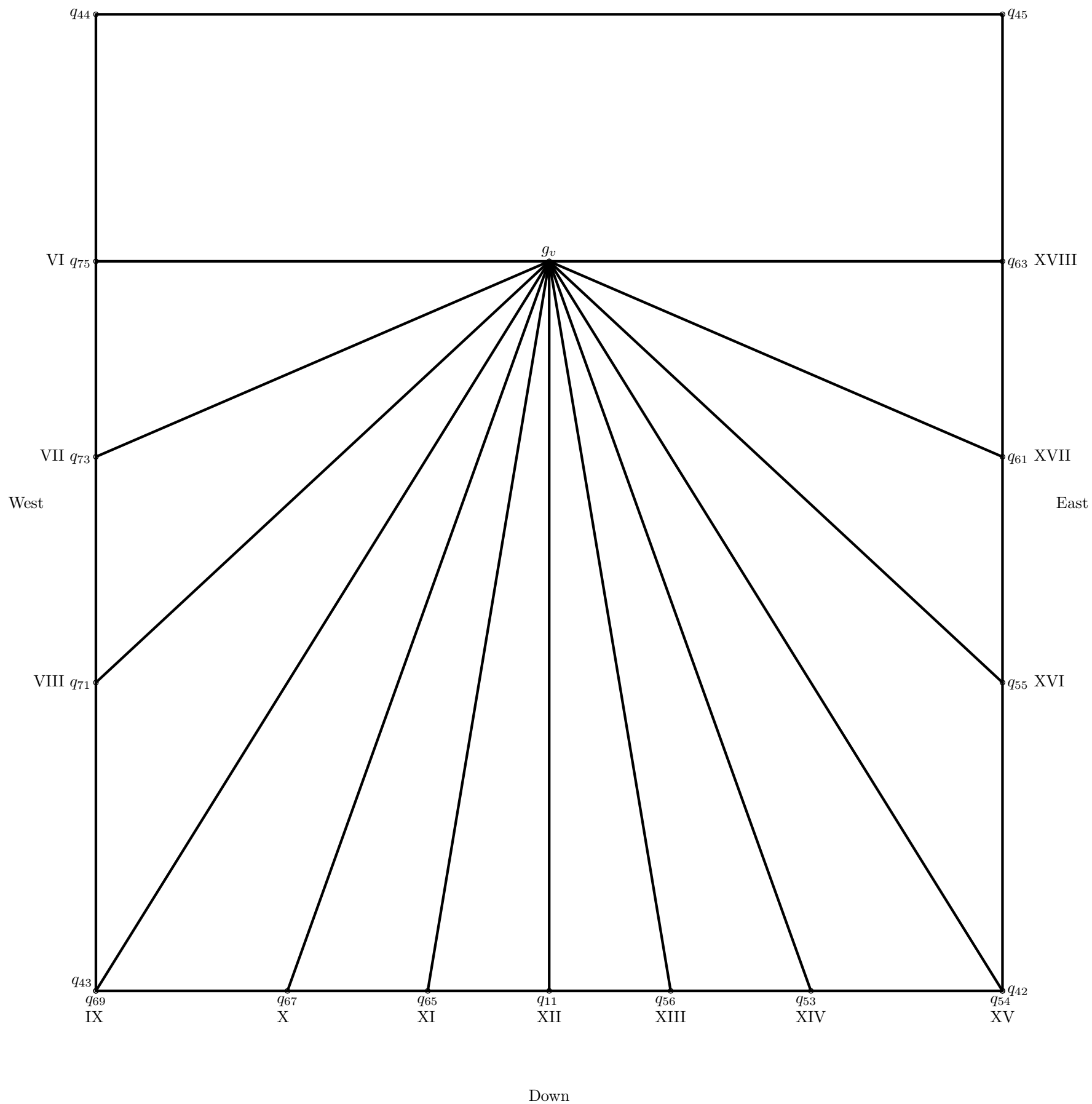
London, UK 51° 30′ 28″ N, 0° 7′ 41″ W

Perspective projection
Latitude 51° 30′ 28″ N (London, UK)
Focus: position = $(0, 5, -12)$, direction = $(0, 5, 10)$, distance = 10
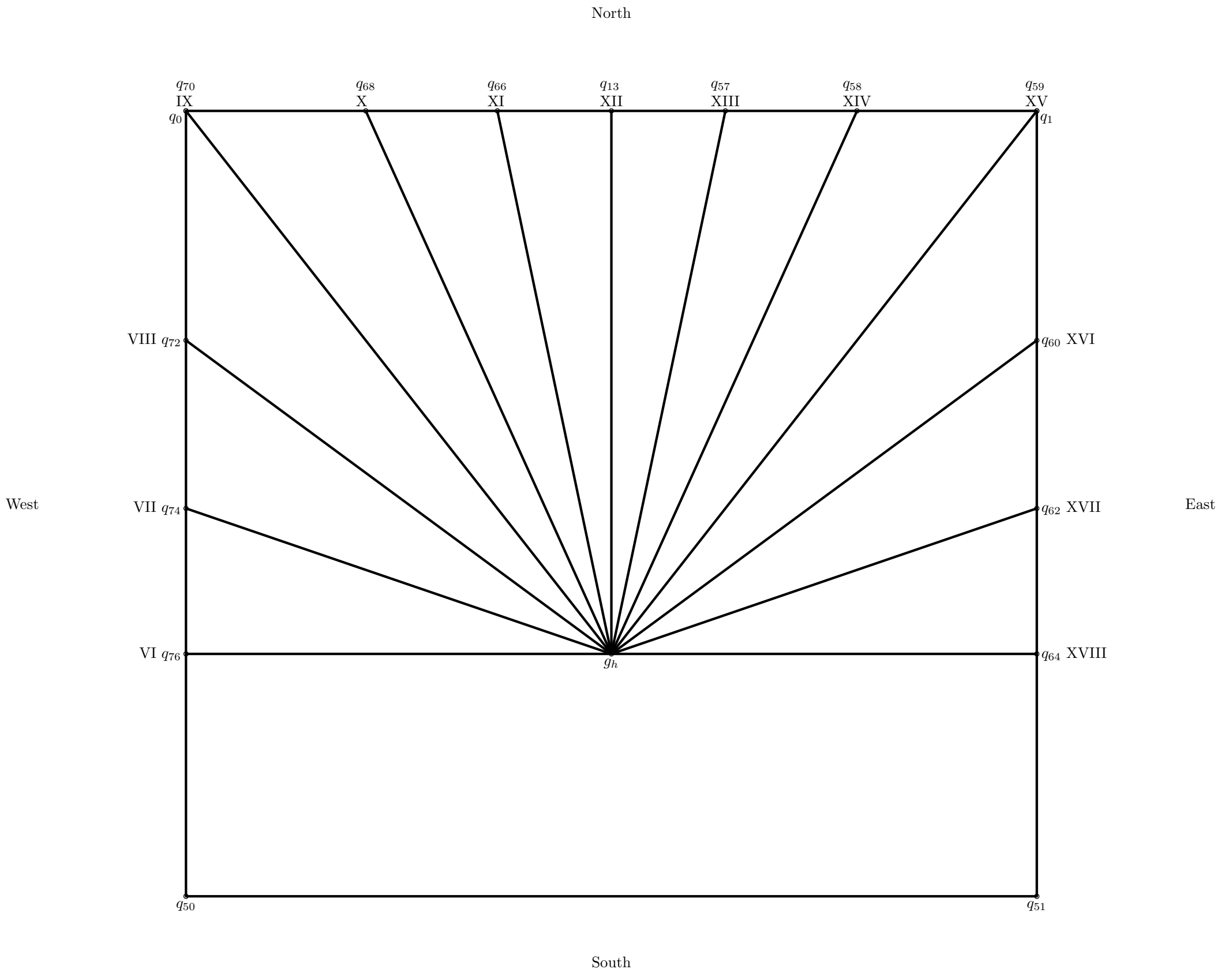(dimensions in centimeters)
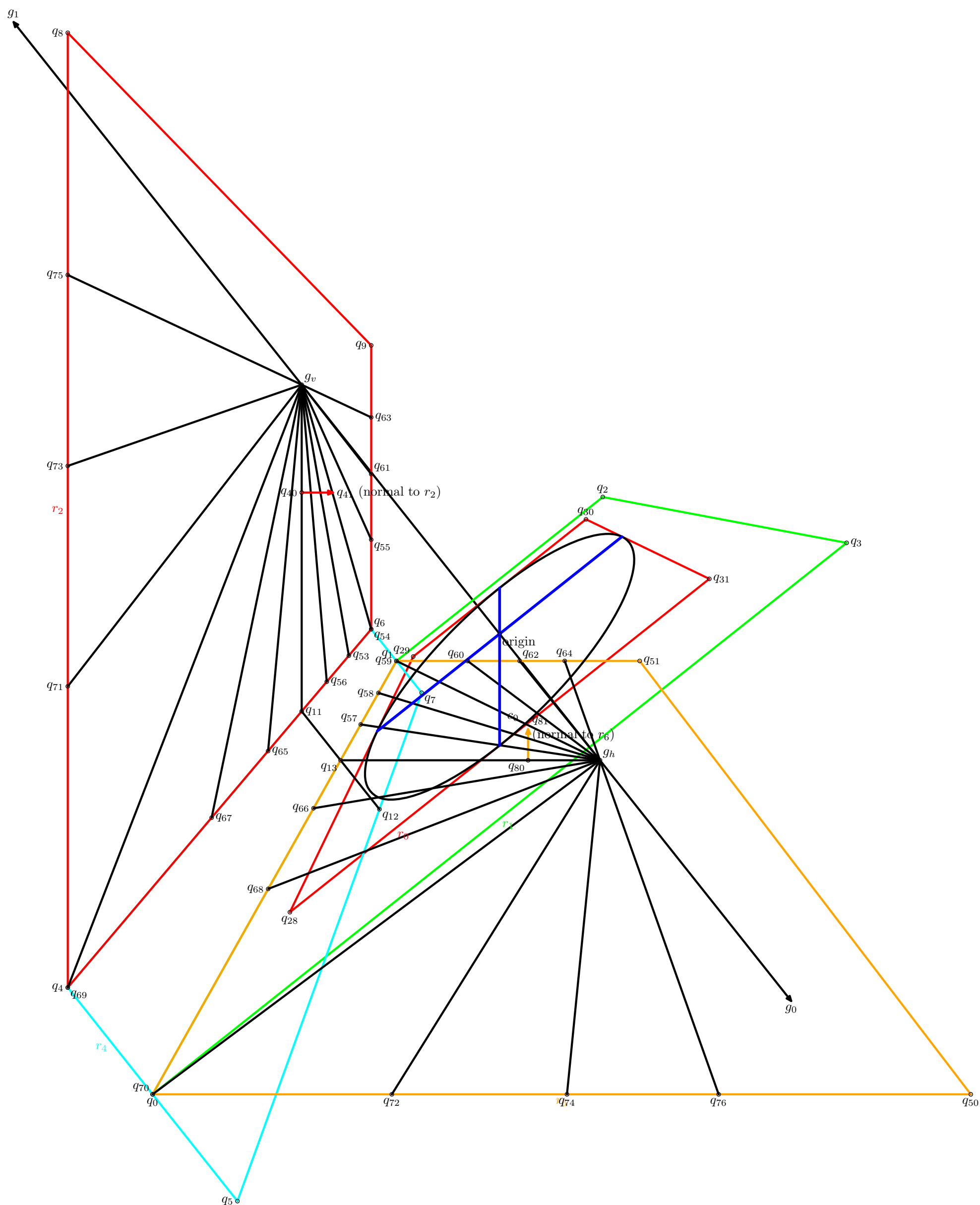
London, UK 51° 30′ 28″ N, 0° 7′ 41″ W

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

West

East

South

Parallel projection onto the horizontal plane (plane of r_6)
Horizontal dial
Latitude 51° 30′ 28″ N (London, UK)
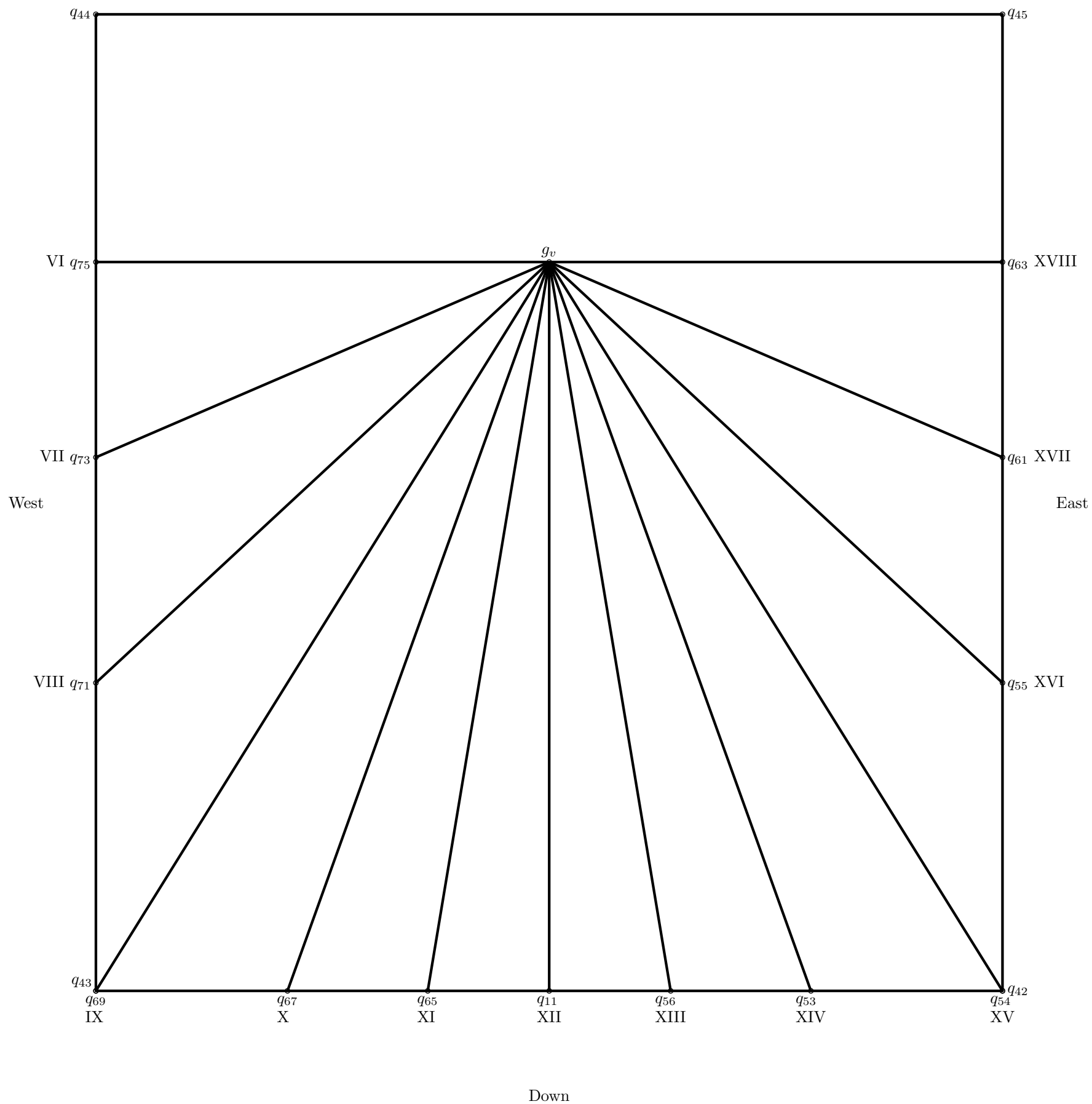
Göttingen, Germany 51° 32′ N, 9° 56′ E

Perspective projection
Latitude 51° 32′ N (Göttingen, Germany)
Focus: position = (0, 5, −12), direction = (0, 5, 10), distance = 10
(dimensions in centimeters)
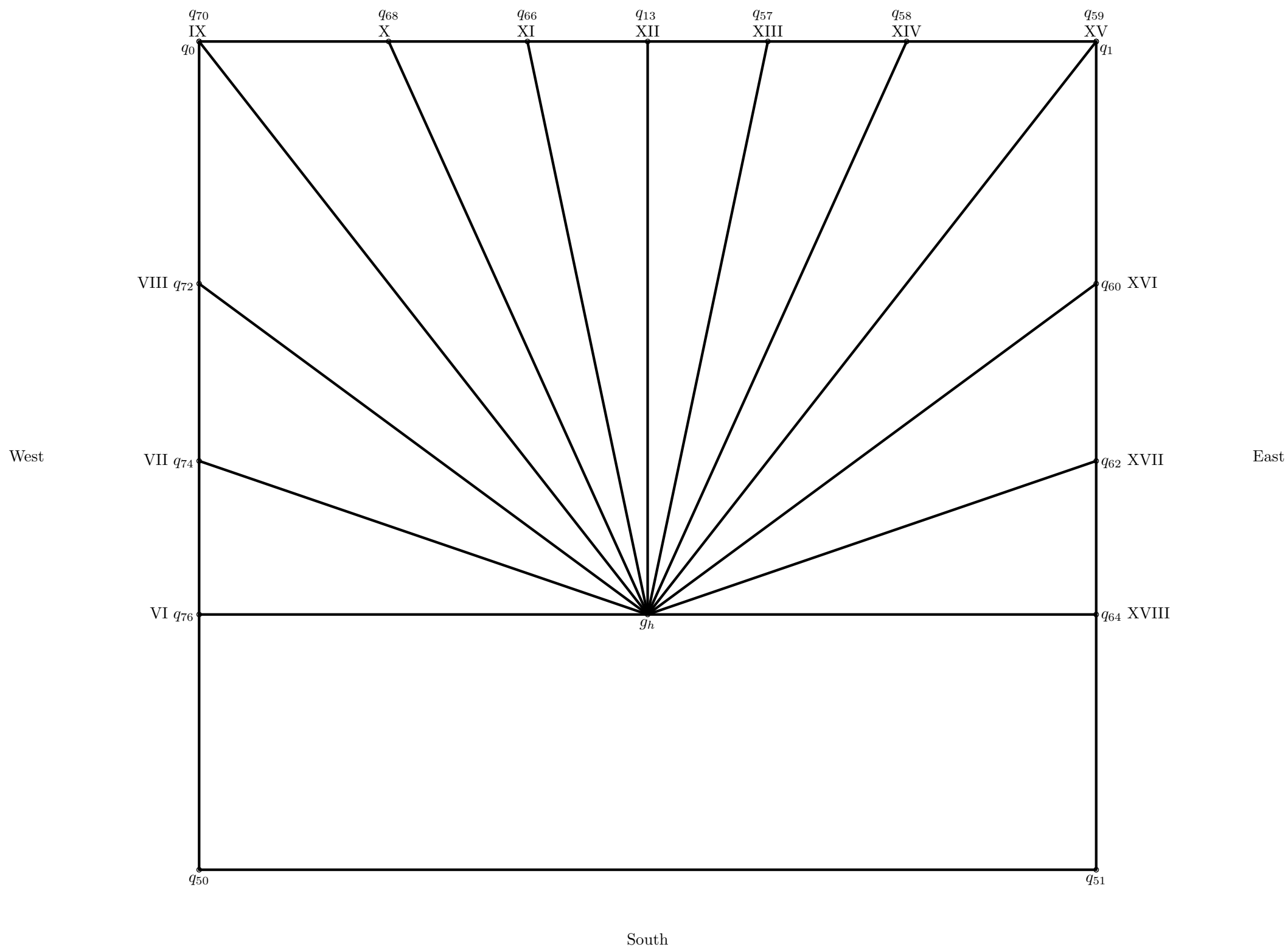
Göttingen, Germany 51° 32′ N, 9° 56′ E

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

West

East

South

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