1. Diffraction Grating as multiple, evenly spaced sources

\[ \sin \theta_1 = \sin \theta_2 \]

The 2nd order is when the path length difference is the same.

\[ \theta_1 = \theta_2 \]

2. A condition where the arms of the interferometer are exactly parallel and perpendicular to the Earth's motion, i.e., equator, full equinox, 12:00 pm.