Example 1: Find the roof overhang $L$ of a south-facing window of height $H = 1$ m, such that the window is completely shaded at solar noon on May 1, but not shaded at all at noon on November 1. Assume the roof extends far beyond the window on either side. Location: Gainesville, FL (Latitude 29° 41’ N).
Profile angle, $\alpha_p$:

\[
\tan \alpha_p = \frac{\tan \alpha_s}{\cos (\gamma_s - \gamma)}
\]
**Example 2:** A multiple-row array of solar collectors is arranged as shown in the figure below. The collectors are 2.10 m in height and sloped 60°. At a time when the profile angle is 25°, estimate the fraction of the area of a collector that will be shaded by a collector in front of it. Assume the rows are long so that end effects are not significant.