DIFFRACTION--

A large board containing three rows of double pinholes faces the audience. A source of bright light directly behind the board illuminates the pinholes. The pinholes in each row have a separation of 5, 10 and 15 mm, respectively. Members of the audience sitting close to the board will distinguish the pinholes in each row as separate point sources. As the distance increases, the separation of adjacent pinholes becomes less distinct. At about 45 m, only the set with a 15 mm separation can be resolved.
Eye Resolution
Light through Pinholes.

Bright white light is shone through three sets of two pinholes each at 5mm, 10mm, and 15mm separation respectively. People in the audience closer than 15m to the board will distinguish the two distinct holes at 5mm separation. At 30m, they will distinguish the 10mm separation. At ~45 m, they will only see the 15mm separation and the other sets as if they were only a single hole.

Equipment:
- Board w/ pinholes & right angle supports
- Lowell lights
- Table clamp, 90° clamp
- two rods

\[ \text{$L=4m$} \]
\[ \text{$a=6.2 \, \text{mm}$} \]