



Wedge Measures Parallax Separations . . . on large-scale 70-mm. aerial photographs

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One of the major advantages of 70-mm. aerial photography is that the film can be viewed stereoscopically in an uncut roll. This feature allows easy storage and reduces handling of photographs for a particular job.

Parallax differences on large-scale aerial photographs can be measured by wedges with a minimum separation of 2 inches. But the film must be cut and placed far enough apart along the base line to accommodate the wedge. And the wedge may be too wide to measure the parallax separation of 1.5 inches often found on uncut rolls of 70-mm. transparencies at 1:1,584 scale and 60 percent overlap. Despite the narrow separation between images, photo interpreters have not experienced any particular difficulty in making measurements. Nor have they had any impairment of visual acuity. Nevertheless, there has been a need for a wedge that overcomes present limitations.

We have developed a new parallax wedge (range: 1.5 to 2 inches) that users of aerial photographs should find useful as a practical photo aid. The wedge is designed primarily to measure tree heights and elevation differences on large-scale 70-mm. aerial photography.

ABSTRACT: A new parallax wedge (range: 1.5 to 2 inches) has been designed for use with large-scale 70-mm. aerial photographs. The narrow separation of the wedge allows the user to measure small parallax separations that are characteristic of large-scale photographs.

RETRIEVAL TERMS: Photogrammetry; aerial photography; parallax; mensuration; photo interpretation.

Weber¹ reported on a modified parallax bar to measure tree heights on 70-mm. color transparencies, but such parallax bars are often not available to foresters in the field.

The new wedge was developed from an existing parallax wedge designed by Moessner.² We made a copy negative of the existing wedge and from this a print made a 6X enlargement. The print was then cut apart and rescaled to fit the requirements of the new wedge. This procedure saved many hours of costly drafting and etching.

If the reader does not have dark-room facilities available to copy figure 1 onto positive film, a transparent template can be ordered from the Division of Engineering, Forest Service, U.S. Department of Agriculture, Washington, D. C. 20250, Price: \$1.75 (Prepaid).

The 0.001-foot rule printed on the side of the wedge can be used to measure lengths of lines as well as distances between points or plot centers.

¹Weber, F. P. *Aerial volume table for estimating cubic foot losses of white spruce and balsam fir in Minnesota.* J. Forestry 63(1): 25-29. 1965.

²Moessner, Karl E. *Parallax wedge improved.* U.S. Forest Serv. Intermountain Forest & Range Exp. Sta. Res. Note 94, 2 pp., illus. 1962.

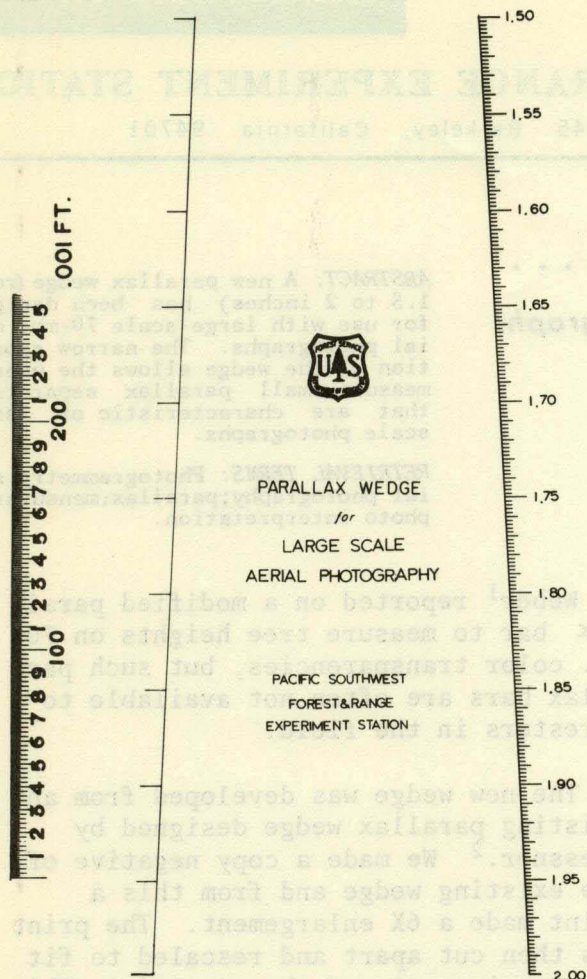


Figure 1.--Parallax wedge developed for use with large-scale 70 mm. photography.

The rule is particularly adapted to measuring slope percent when photo scale is known. The photo interpreter first measures the differences in elevation between two points using the parallax wedge, and then the horizontal distance with the 0.001-foot rule. Each graduation of the rule represents a ground distance equal to:

Photo-scale reciprocal/1,000.

By dividing the vertical distance by the horizontal distance, the interpreter can calculate slope percent. And he needs to handle fewer photo aids because the 0.001-foot rule is included on the wedge.

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