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The Simulation and Fitting of Experimental Data

1   Problem 1 - Calculating the Speed of Light

We are given the following data from experiments measuring the speed of light and we are asked to calculate the weighted average and its accompanying internal and external errors:

- Bergstrang (1948) (299 793 $\pm$2.0) km/s

- Essen et al. (1947) (29 792 $\pm$ 4.5) km/s

- Jones (1947) (299 782 $\pm$ 25) km/s