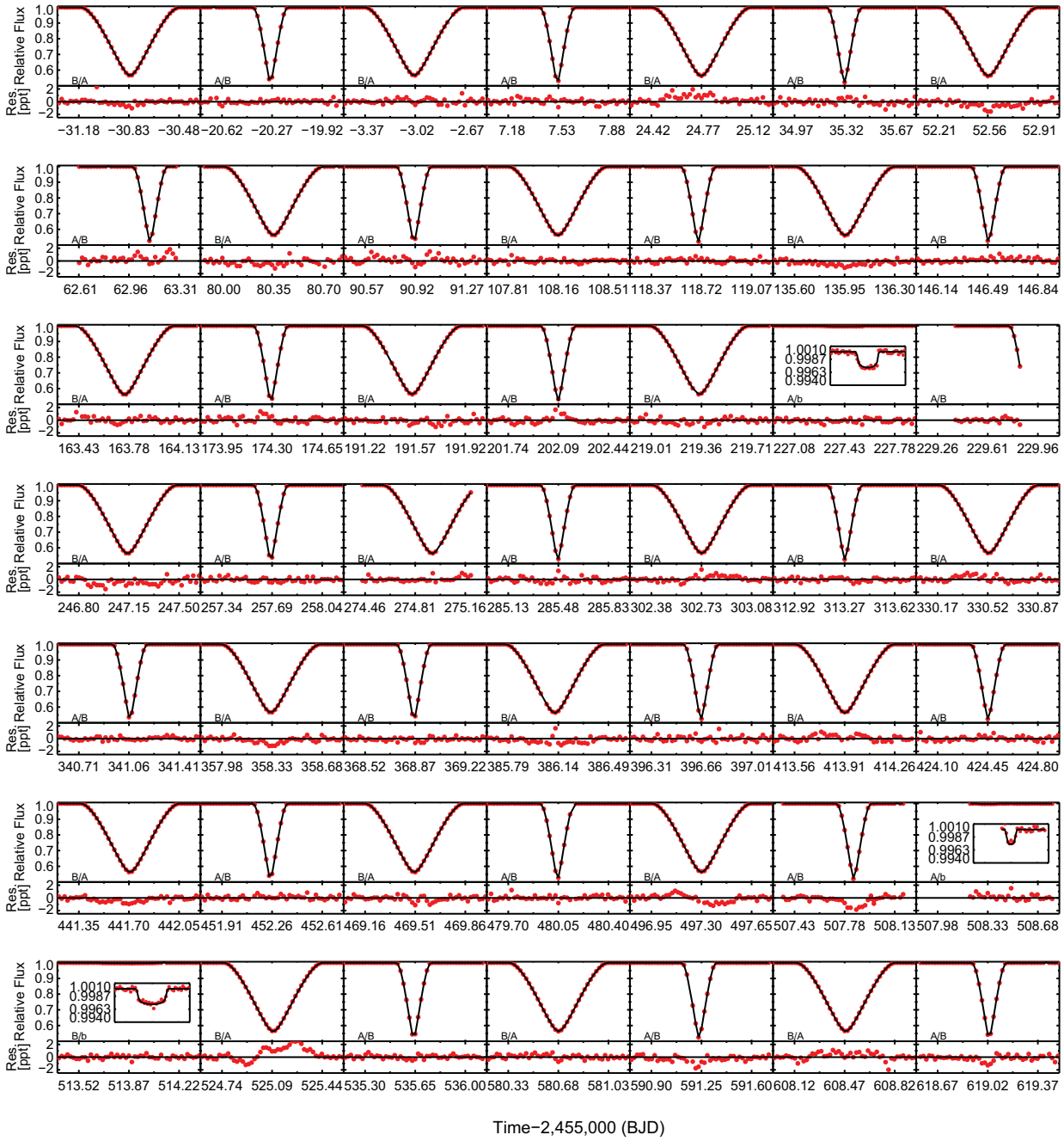

Supplementary Figure 9 | **Light curves and photodynamical model for Kepler-34.** Individual eclipse events for Kepler-34 (red circles) and the best-fitting photodynamical model (black line). Primary eclipses are marked with "A/B" and secondary eclipses marked with "B/A". Planet crossings of the primary star are marked with "A/b" and planet crossings of the secondary star are marked with "B/b". The corresponding residuals are shown in the thin panels below each eclipse plot. The large residuals seen in the primary eclipse near day 525.09 are most likely due to a spot crossing the primary during the eclipse.