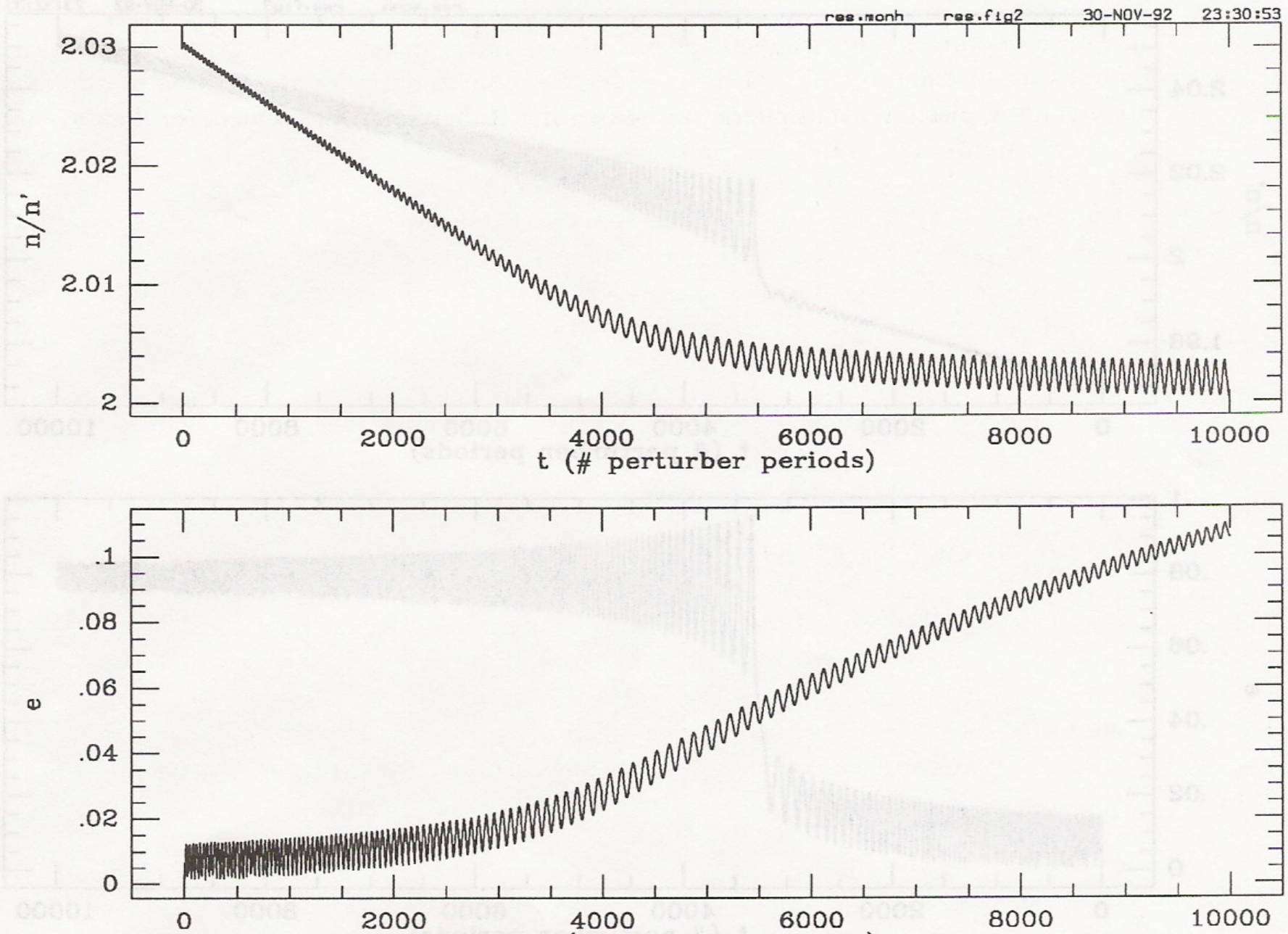

Fig. 2. RESONANCE TRAPPING: A plot of the orbital evolution determined by equations (2b,c and 3) for physically realistic parameters $\beta = 10^{-4}; A_1 = A_2 = 1; \dot{n}_{drag} = 10^{-6} n'^2$. Plotted against time are the mean motion ratio n/n', the eccentricity e, and the resonant angle ϕ. Initial conditions are $n = 2.03n', e = 0$, and $\phi = 0$. Notice that the mean motion is decreasing as the orbit evolves away from the planet either toward the perturbing satellite (gravitational resonance) or toward synchronous orbit (Lorentz resonance). The effect of the 2:1 resonance is to change the secular reduction of the orbit's mean motion into a secular increase in its eccentricity. The resonant angle ϕ librates with small amplitude around a slightly negative value which can be found by setting equation (3) to zero and solving for ϕ.