

Not all these stars will necessatily escape, depending on their encourters on their way out of the classeer. So, Einit on the fraction This is because at Stated, W=0.0074

and $T_{evap} = -\frac{N}{d\nu} > T_{rel} = 1.35.10^2 T_{rel}$ Ue rate et loss et stars is $\left|\frac{dN}{dt}\right| \leq \left|-0.0074\frac{N}{Tree}\right|$ Escape of stars w/ Lifferent masses: There are a few competing effects when we consider the escape of low mass us high mass Stors: low in stars aquive larger velocitées blet Tree ~ m- 2 is longer for dese stars.

As a result stars w/ m ≈ 0,42m> hove the maximum rate of escape. Cluster retours virtually all stors with

DEPOS.

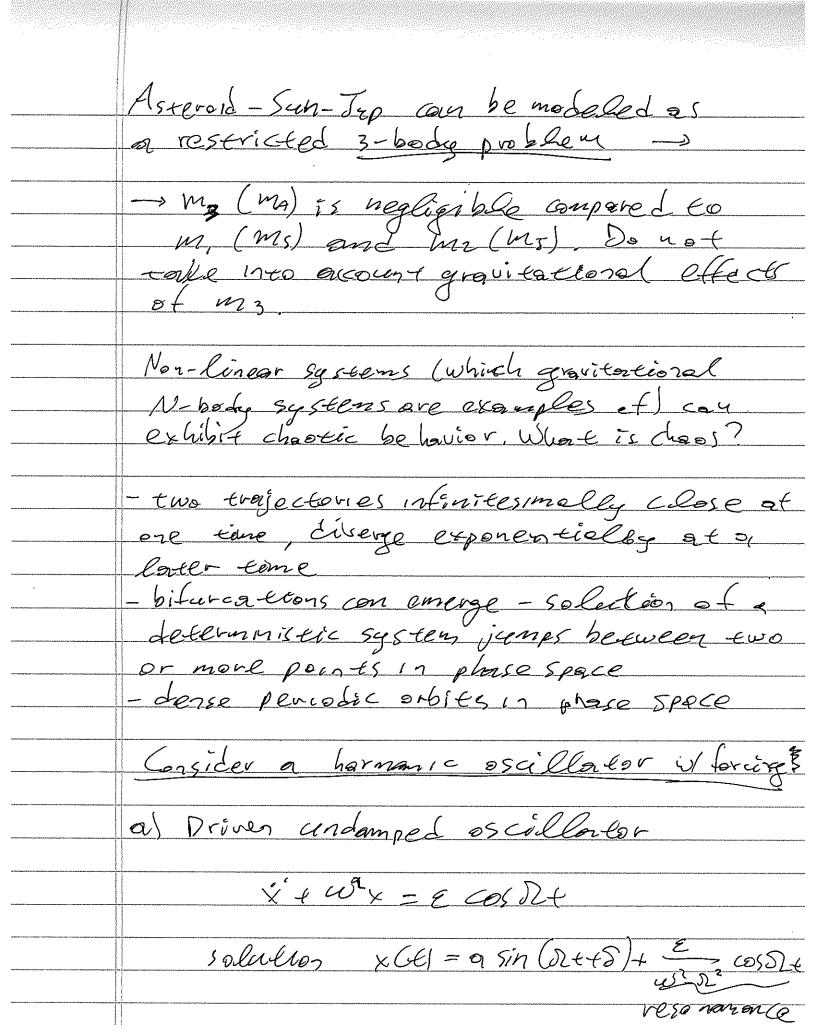
The least massive stars probably one verained as they are owas from equilibrian A larger papertion of Stars w/ mno, 42ms
are lost. Solar System Depromics Une solare Existen: Sum: $M=2.10^{37}$ g 51.44

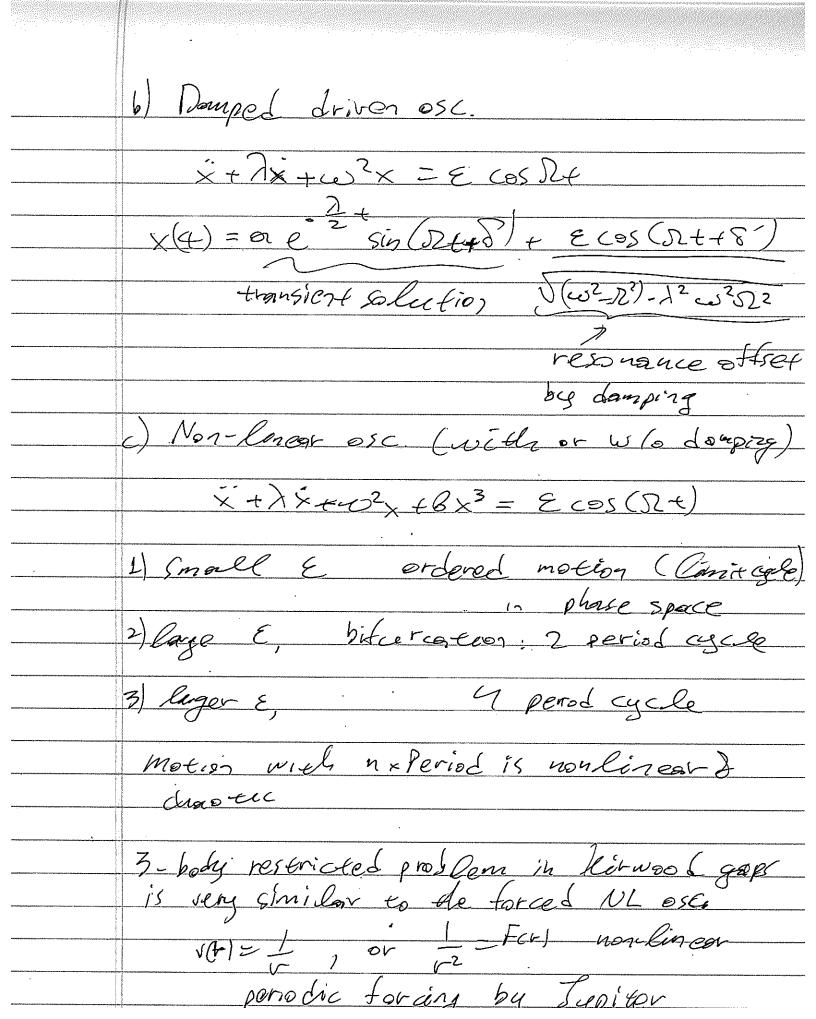
Saucen: $M=5.10^{25}$ g 5.44

Saucen: $M=5.10^{25}$ g, 35 A, 4

Napture: $M=10^{25}$ g, 30 A, 4 - Assersid belt between Mars & Tyriter The Kniper belt is a dish-straped region past the orbit of Vepteme, 30-50 ACe - many small icy bodies - socievce of short period comets. Orbits of heiper belt objects susceptible to distription perturbations by the giant planets, and con have close encounters with Nepture. - Oort Cloud; 1950 Jan Oort noticed that
comet orbits originate from ~50,000 Ay
w/o preferential direction = I indivect evidence
for a cloud of 1012 gnall objects

1	The asteroid belt is on interesting location in
	which denamical chois can be sometwork
	(1) (4 is thought that a planet never formed
	Letwen Mars & Jupiter or was destroyed
	shartly after formation due to grav.
	effects of J
	D Kartwood gaps: In 1867 Kirkwood obsald gaps to the spatial distribution of ascerois (see histogram)
	gaps to the spatial distribution of ascerois
	(see histogram)
	The gaps occur at resonances between de
	orbits of the asserbit and J. E.g. ele
	3:1 Virlusod gap is locoted, where the
And the second s	mutio of the orsteroid's orbital pariod
) 	to PJ is 1/2 3 avoits of the artaroid
	Son 1 oubté ét J.
	Replev's low P2 = 23, 50
	(D=) (a-13)
	$\left(\frac{P_{A}}{P_{A}}\right) = \left(\frac{a_{T}}{a_{A}}\right)^{2} \Rightarrow 9 = \left(\frac{O(T)}{a_{A}}\right)^{2} \Rightarrow O_{A} = 2.49 \cdot 2.5$
	7 49
	The location
	of the Lits f
	gap





Landing to eccertnicity jewps Changes in exentricity put asteroids in orbits going close to orbits of Earth & Mas - 2 get licked out vith close encourters e>0.3 are In resonance greas orbits become unsstable to inversed eccentricty orbits - s transition to hearby stable orbits or are fided and by close encourtons with planets.