RAMP CALCULATION PROGRAM
(MODELLED AFTER CONTROL ROOM APPLICATION)

Instructions:

Cut and paste the desired ramp segments into the ramp

Modify the "user" parameters for each segment as needed

Note: "User" adjustable values in large bold font with green backround fields

For initial Pdot, power supply voltage (I small): Vps = L(di/dt) +I*R, pdot = (Vps-P(i)(amps/gev)*R)/(L*(amp/gev))

Calculator helper R= 0.28600 amps/gev= 58.76 P(i)= 22.00

L= 0.69500 PS ramp V= 10000.00

Then, Pdot(i)= ***235.82095***

For constant power supply voltage during ramp (approximate): Pdot(i) = -R/L*(P(i)-p(i-1)) +Pdot(i-1)

Calculator helper P(i-1)= 19000.00 Pdot(i-1)= -395.00

P(i)= 2000.00

Then, Pdot(i)= ***6600.68345***

For initial Pdot in invert, power supply voltage: Vps=L(di/dt) + I*R, pdot = (Vps-P(i)(amps/gev)*R)/(L*(amp/gev))

Calculator helper P(i)= 119.70 PS invert V= -9694.00

Then, Pdot(i)= ***-286.63888***

THE RAMP SEGMENT TYPES:

#####	VPARAB	***2.98667***	***2.98667***	8.96	6.00	***2.01***	
#####	CAPDEP	0.49900	***3.48567***	***8.96***	***0.00***	***0.00***	

THE RAMP:

Seq.	Type	Delta t	Time	Momentum	Pdot	Pddot	PS Volt
1	INITI	0.34000	***0.34000***	8.889	***0.00***	***0.00***	149.38
2	VPARAB	***0.02367***	***0.36367***	8.96	6.00	***253.52***	395.60
3	VPARAB	***0.04154***	***0.40521***	9.5	20.00	***337.04***	976.39
4	VPARAB	***0.08333***	***0.48854***	22	280.00	***3120.00***	11804.15
5	VPARAB	***0.23551***	***0.72405***	85	255.00	***-106.15***	11841.93
6	VPARAB	***0.15504***	***0.87909***	115	132.00	***-793.35***	7323.10
7	VPARAB	***0.07121***	***0.95030***	119.7	0.00	***-1853.62***	2011.56
8	CAPDEP	0.02000	***0.97030***	***119.7***	***0.00***	***0.00***	2011.56
9	VPARAB	***0.09188***	***1.06218***	105	-320.00	***-3482.99***	-11303.41
10	VPARAB	***0.14516***	***1.20734***	60	-300.00	***137.78***	-11242.89
11	VPARAB	***0.18846***	***1.39580***	11	-220.00	***424.49***	-8799.35
12	VPARAB	***0.03909***	***1.43489***	6.7	0.00	***5627.91***	112.59
13	VPARAB	***0.04864***	***1.48354***	7.7945	45.00	***925.08***	1968.66
14	VPARAB	***0.04864***	***1.53218***	8.889	0.00	***-925.08***	149.38
15	CAPDEP	0.00100	***1.53318***	***8.889***	***0.00***	***0.00***	149.38