E_AUV	AUV battery capacity, selected from Bluefin-9	1900	[Wh]	Parameter	
t_service	duration of time that AUV is connected to platform recharging and offloading data (time that platform is in "service" mode)	12	[hours]	Parameter	Should this be >=X? Given that each AUV takes X hours to charge? Or related to # of AUVs charged per day and charging time?
t_mission	total duration of the mission of the platform	24	[hours]	Parameter	
t_comms	total time data is transmitting data per mission	4	[hours]	Parameter	
t_move	total time the platform is moving per mission (assume 5% of t_mission for now)	1.2	[hours]	Parameter	
rho	density of seawater	1023	[kg/m^3]	Parameter	
C_d	drag coefficient of PEARL	1		Parameter	estimated for now
eta_m	propulsion efficiency	75%		Parameter	
m_comms	mass of communication system	50	[kg]	Parameter	
m_propulsion	mass of the propulsion system on the platform	50	[kg]	Parameter	
mu_battery	battery specific energy density, taken to be for Li-ion for now	200	[Wh/kg]	Parameter	
nu_battery	battery volumetric energy density		[Wh/L volume]	Parameter	
DOD	the depth of discharge of the battery, nominally taken to be 70% and can range from 50-90%. DOD depends on the lifetime of the battery and battery type selected, which affects the battery specific volume, mass, and cost.	70%		Parameter	
eta_battery	transmission efficiency between the battery and the load	85%		Parameter	
N	number of batteries	1		Parameter	
L_l	transmitter to antenna line loss		[dB]	Parameter	set by terminal, check Iridium
L_s	space loss		[dB]	Parameter	set by terminal, check Iridium
L_a	transmission path loss		[dB]	Parameter	set by terminal, check Iridium
G_nr	nominal receiver antenna gain		[dB]	Parameter	set by terminal, check Iridium
k	Boltzmann constant	1.38065E-23	[J/K]	Parameter	
T_s	system noise temperature		[dBK]	Parameter	
R	data rate	50	[Mbps]	Parameter	
E_b	energy per bit		[Ws]	Parameter	set by terminal, check Iridium
N_o	noise spectral density		[W/Hz]	Parameter	set by terminal, check Iridium
T_max	maximum time the satellite would be in view		[s]	Parameter	
T_initiate	time required to initiate a communication pass		[s]	Parameter	
M	margin used to account for missed passes			Parameter	
F	fractional reduction in viewing time due to a satellite passing at an angle away from the ground (not directly overhead)			Parameter	
D_AUV	data to be transmitted per AUV		[Mb]	Parameter	