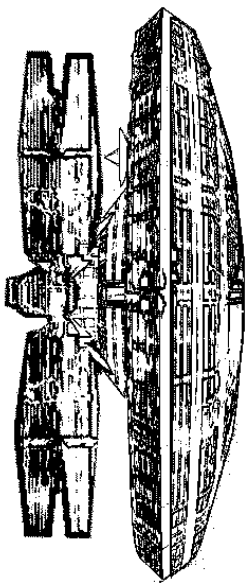
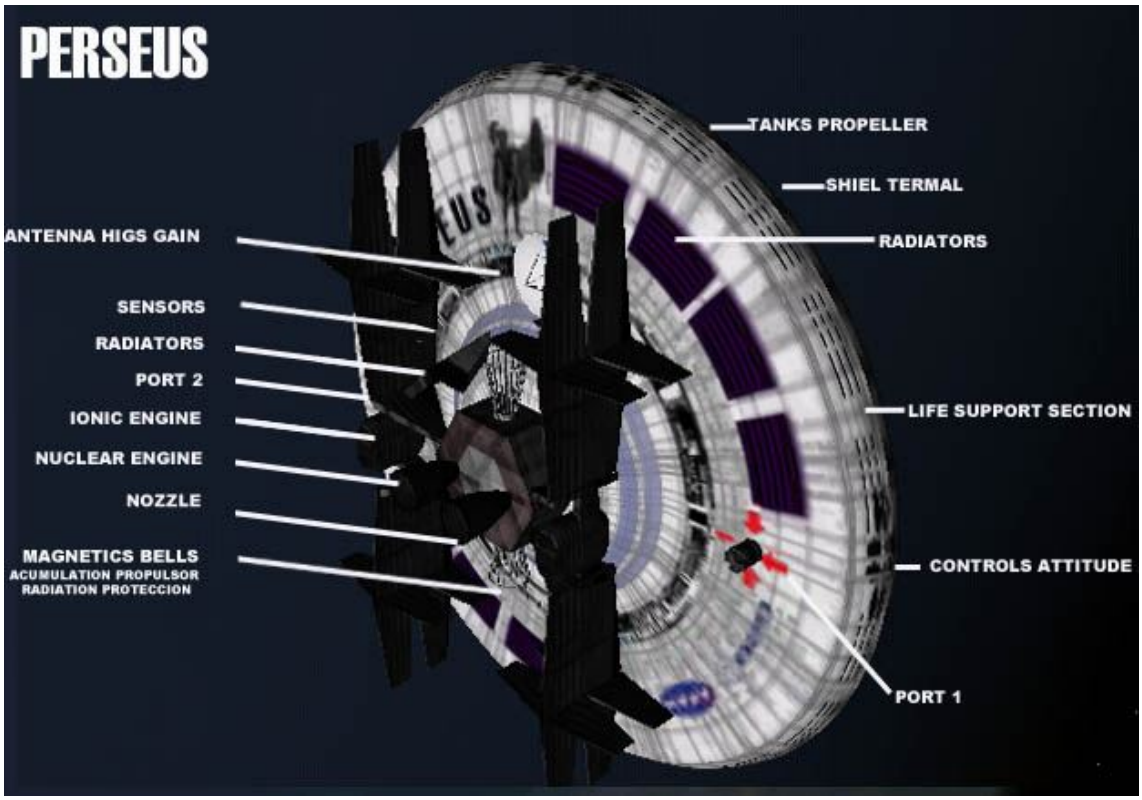


PERSEUS D.S.S.

Characteristics techniques

type	Deep Space Ship manned explorer
Longitude	26.5 m
Span	62m
Cross section	xy 2207m^2 yz 771,3 m^2 zx690 m^2
Volume	28851 m^3
Empty mass	650000Kg
Fuel mass	3900000Kg
Total mass	4550000Kg
Main thrust	50.5e5 Nw
Retro thrust	20.4e5 Nw
Attitude thrust	2e5 Nw
Isp	38353 m/s
Tripulation	5
Autonomic	8 ages



Perseus Version 1.0 for Orbiter Space Flight Simulator

Perseus: Deep Space Ship for journeys to planets and beyond uses technology of Aero-Brake for the orbital insert.

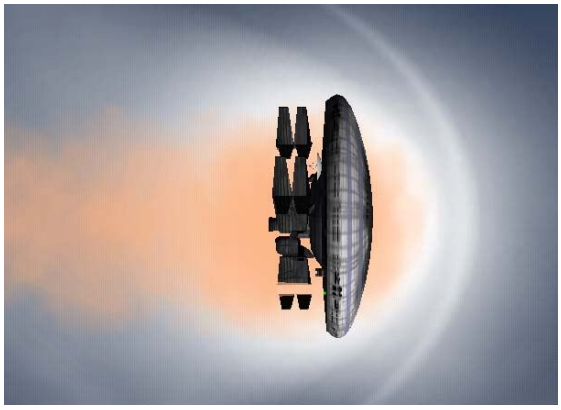
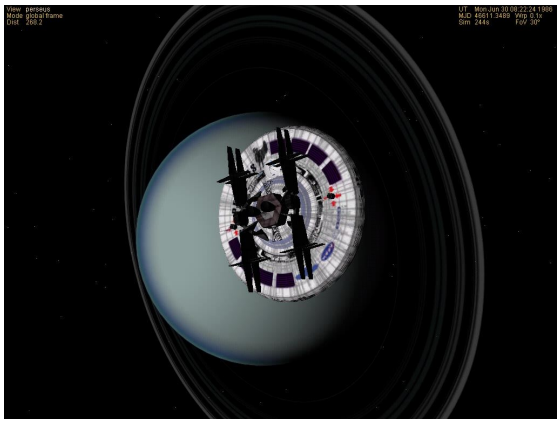
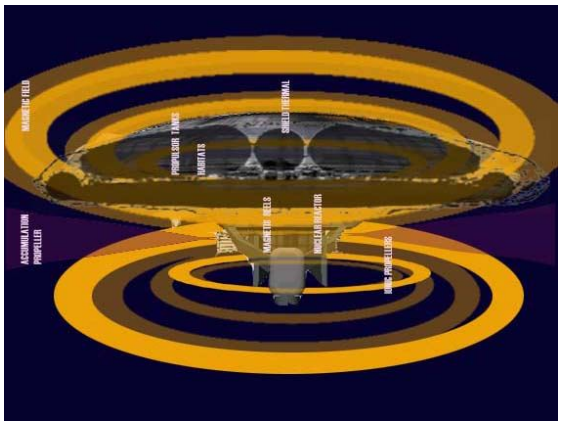
Perseus derives from the experience gained from previous ships like the Intrepid, with the aim of increasing the efficiency of thermal performance 72.5%, the surface of Radiored has been increased, this will also get a lower temperature for the working fluid.

Besides its size has been increased by 20% to bring greater resources and equipment. minimize the installation of large radiators.

Installation: Unzip this file into your main Orbiter directory overwriting the existing files. If you are unzipping using WinZIP then make sure 'Use folder names' is selected.

Legal: You may use these files in any way you want except for making money. You are free to distribute this package provided you give proper credit.

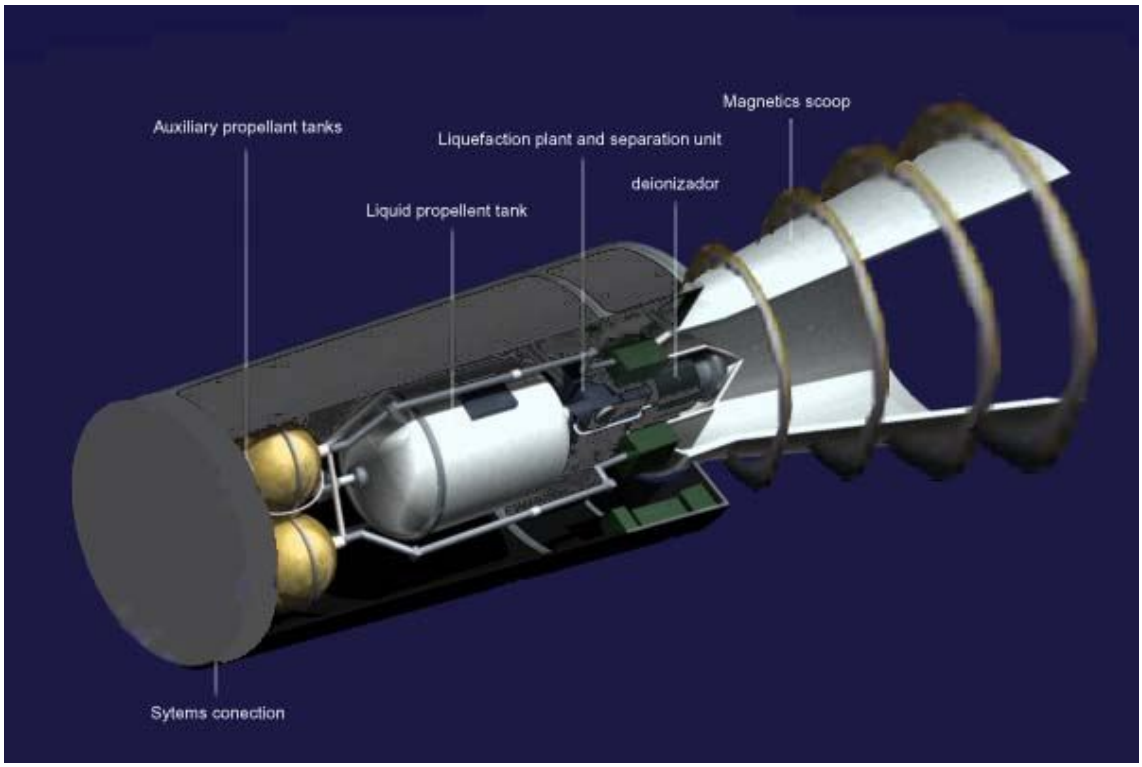
Advisable to use AerobrakeMFD

Docking Landers	AeroBrake
	
Perseus Uranus	**Magnetic protection for loaded particles**
	

REFUELING

Orbiting in the outer fringes of Earth's atmosphere, at an altitude of perhaps 74.5 miles (120km), the unit scoops up the residual air, compresses and cools it by both ramjet compression and more conventional compressors, separates out the liquid oxygen and uses leftover nitrogen in a nuclear electric propulsion system to make up for the atmospheric drag. Most of the outside of the vehicle is a radiator area, both for waste heat from the powerplant and heat from the compressors and liquefier.

The fluid is used to be quick it uses a double system nuclear thermal for high truths and ionic for long time, but the energy source is material fissionable uranium they have a high power density in a small volume; some run on low-enriched uranium (requiring frequent refuelling), others run on highly enriched uranium (>20% U-235, varying from



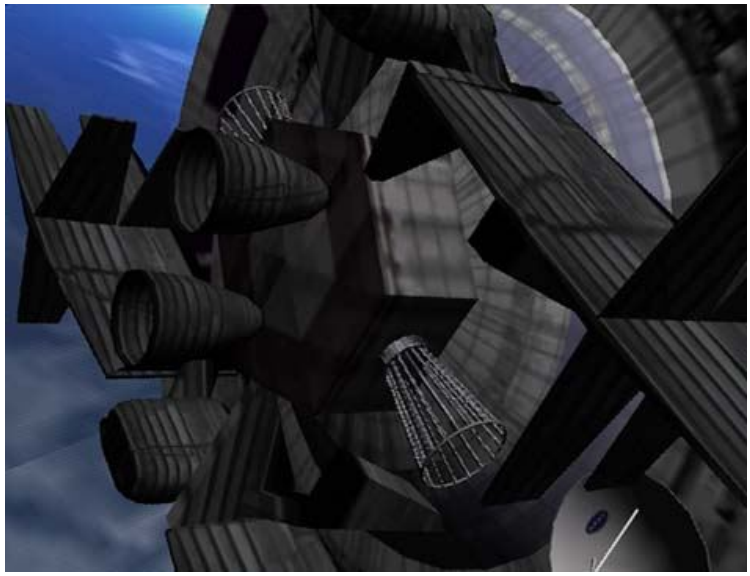
over 96% in U.S. submarines [no refuelling are necessary during the submarine's service life] to between 30-40% in Russian submarines to lower levels in some others), the fuel is not UO2 but a metal-zirconium alloy (c15%U with 93% enrichment, or more U with lower enrichment),
the design enables a compact pressure vessel while maintaining safety.
The long core life is enabled by the relatively high enrichment of the uranium and by incorporating a "burnable poison" in the cores which is progressively depleted as fission products and Minor actinides accumulate, leading to reduced fuel efficiency. The two

effects cancel one another out. One of the technical difficulties is the creation of a fuel which will tolerate the very large amount of radiation damage. It is known that during use the properties of nuclear fuel change; it is quite possible for fuel to crack and for fission gas bubbles to form.

Long-term integrity of the compact reactor pressure vessel is maintained by providing an internal neutron shield. (This is in contrast to early Soviet civil PWR designs where embrittlement occurs due to neutron bombardment of a very narrow pressure vessel.)

Reactor sizes range up to 190 MW in the larger submarines and surface ships. The French Rubis class submarines have a 48 MW reactor which needs no refueling for 30 years

POWER



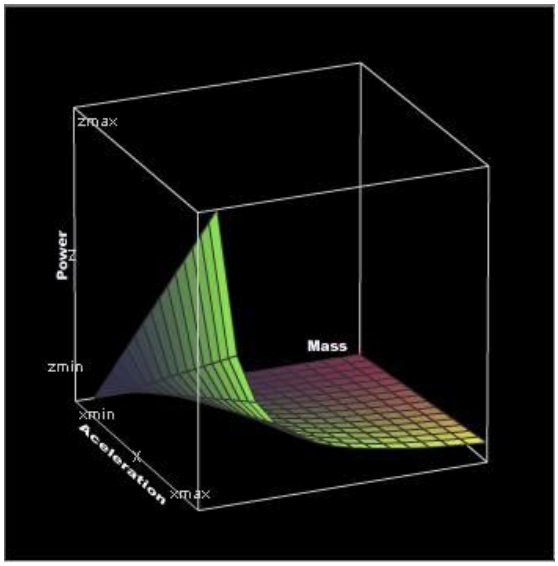
THERMODYNAMICS

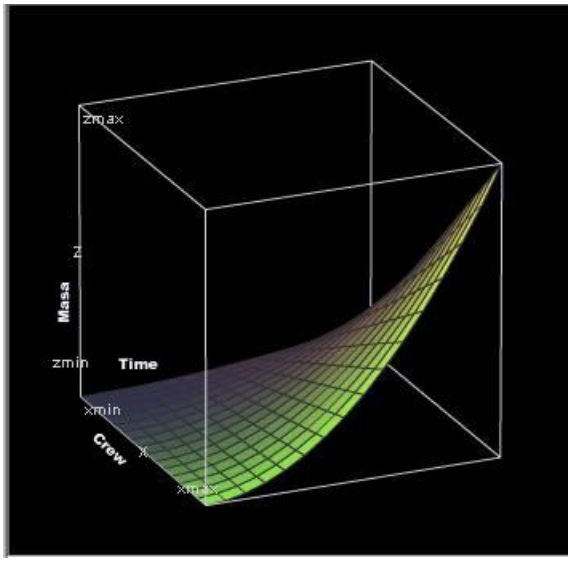
Potencia libre disponible, F	***F = Q*ηε = *Q*η *(1 - T1/ T2)***
El calor inútil, H, es Q - F	***H = Q (1 -* η + η*T1/T2)***
σ***=5.67E-8***	***H = F*T / (1 -T)***

RADIADORES

Efficiency	*Tc*	*Tf*	*Tf/Tc*	nº Radiator
5/7	1000 Kº	274,12 Kº	0,27	1
Potencia irradiada			SURFACE	λ
4,33E+005 w		1,11 Cº	1353m2	1,06E-005 m
Efficiency machine thermic		72,59%	Radiators	***converge***
Pw. Util	1,15E+006 w	**Pw. Total**	1,58E+006 w	1,00

Basic dynamics and power parameters





PROPULSION

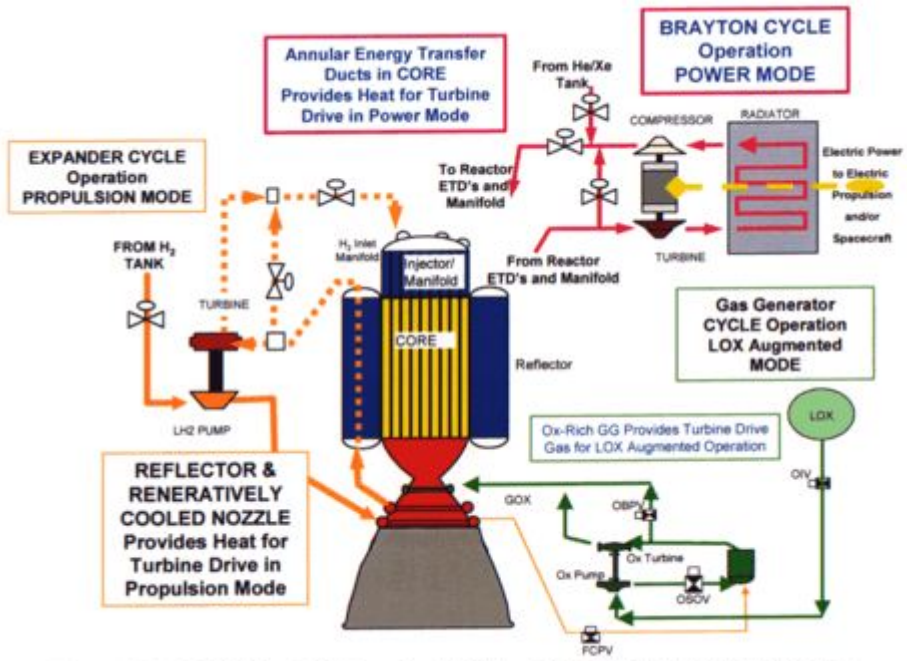
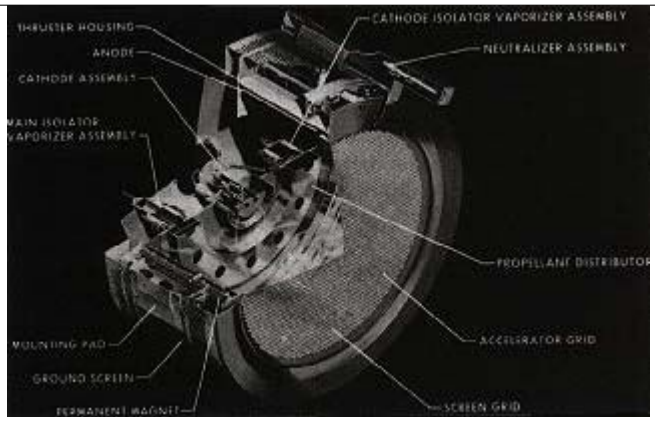
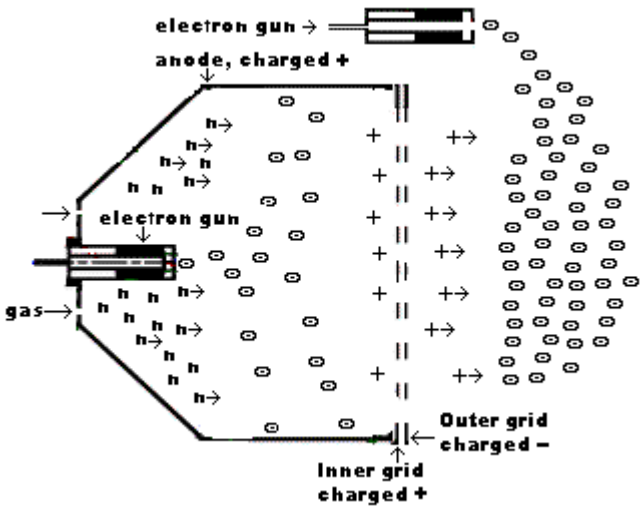
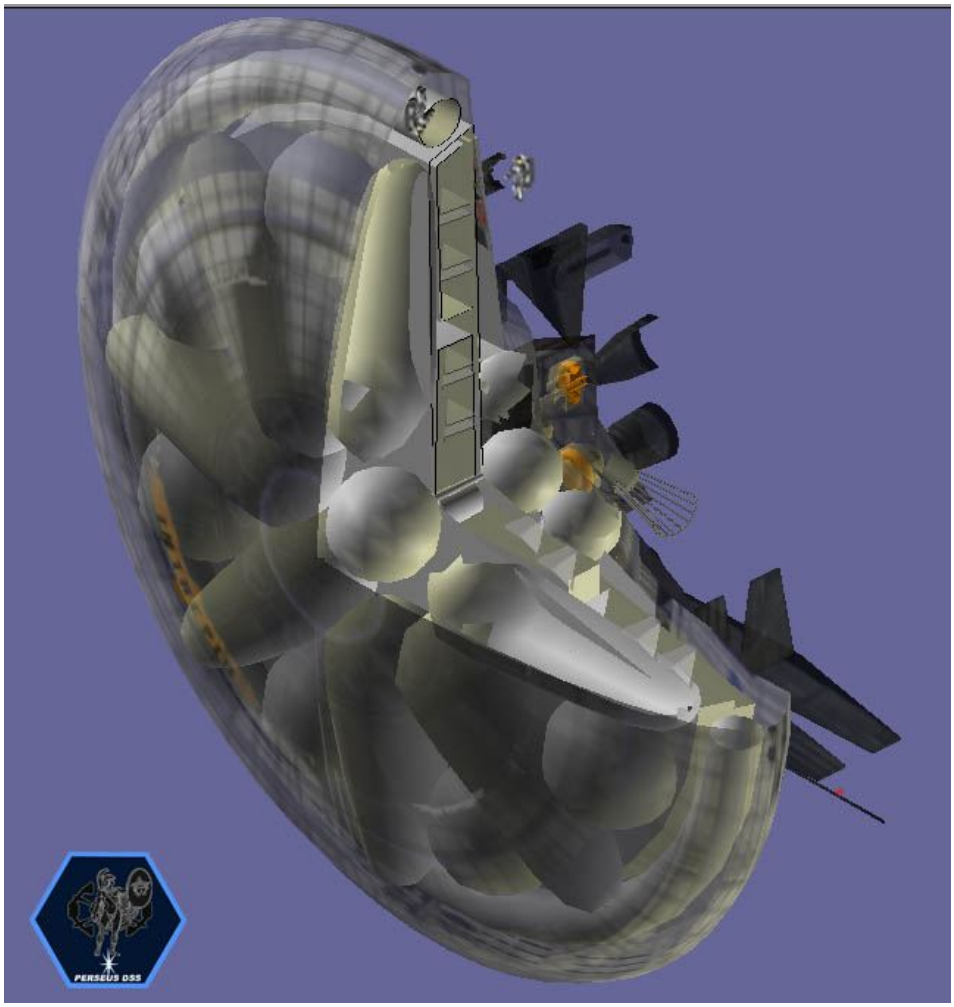


Figure 1 – TRITON Trimodal Schematic with Notional LANTR Gas Generator Flowpath.





SYSTEMS



Performances characteristics

Vs 75586 m/s (Thermal and ionic combined ISP)
Mass Total Kg
crew 5
flow 131,67 Kg/s
Time ignition max 29619,15 s (8,23 horas)
speed mission 75586,44 m/s (75,59 Km/s)
Power 131,58 Mw
Autonomy 7 years
acceleration 0.9 m/s2
W angular 0,41 rad/s (3,8 rpm) - Gravity 0,5g

Standard disclaimer

I not responsible for anything and you use and install at your own risk .

I wish to thank Martin Schweiger for Orbiter.

R. Steven Glanville for Anim8or.

Vinka for 3ds2msh and spacecraft

have fun .

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