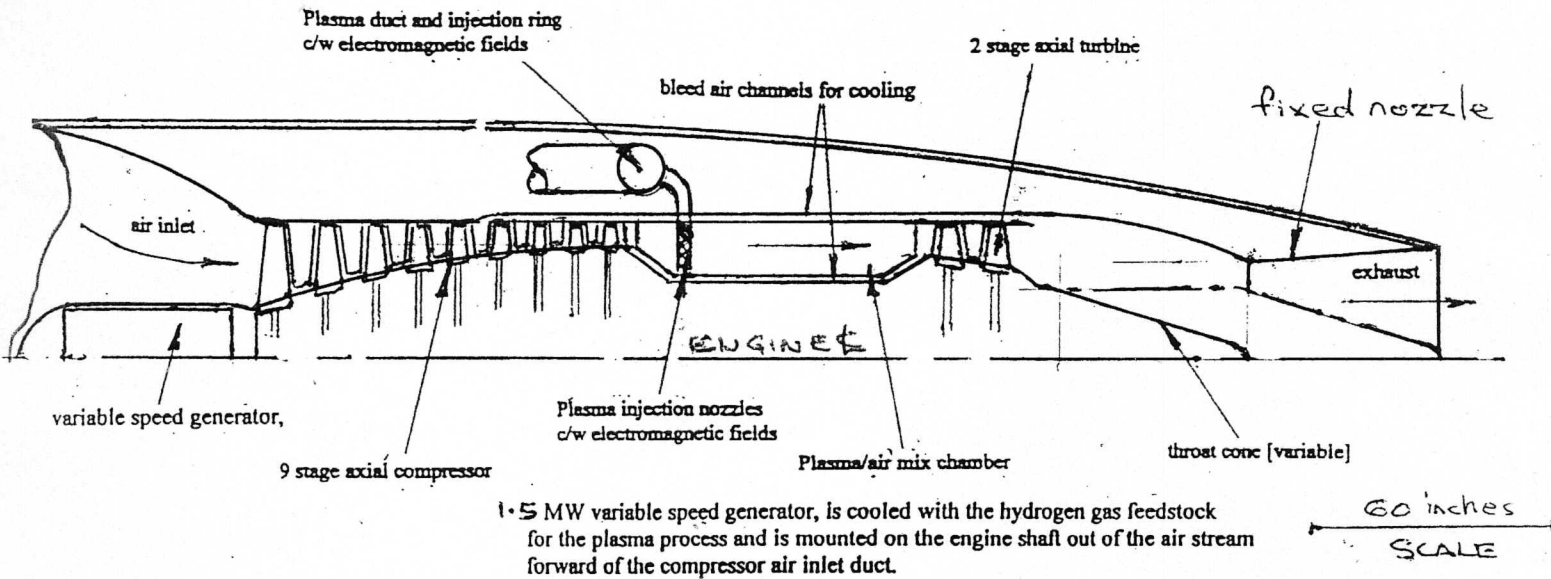


# THE PLASMA TURBOJET FOR A SPACE TOUR BUS

[for propulsion through the atmosphere]

Designed by J Varney June 14<sup>th</sup>. 2010



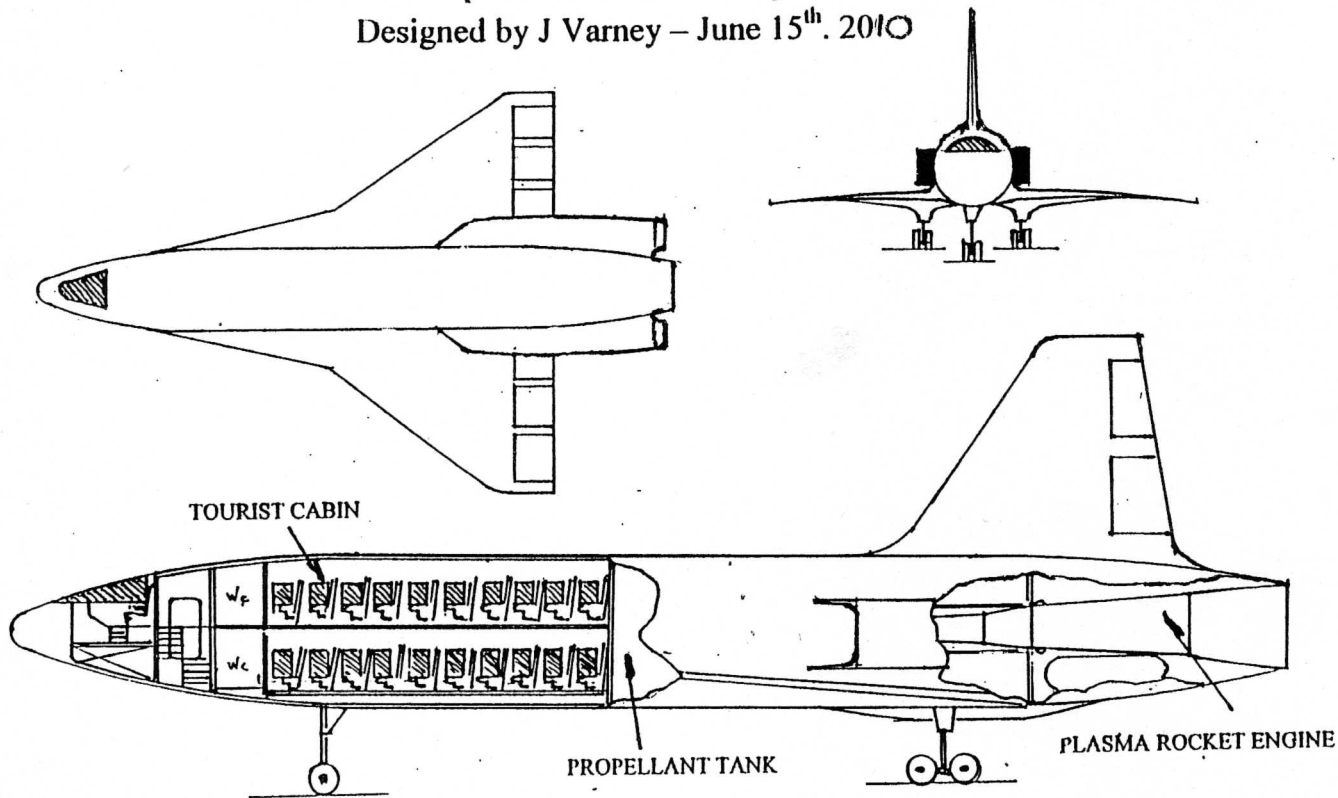
**Spacecraft details:** 100 passengers [on 2 decks]: All-up weight 220,000 lbs: Wing area 2420 sq.ft. Fuel tank for turbojets [liq. hyd] 1000 lbs.: Fuel tank for rocket engine [liq. Hyd.]24,000 lbs. Fuselage O.D 180 inches: Construction - Carbon composites Air intake system [both sides of fuselage] incorporates two-dimensional ducts with profiling and ramps to accommodate intake air for both turbojet engines, to vehicle speeds up to mach.3. Each turbojet exhaust system [positioned either side of the central rocket engine] is integrated into the tail section of the fuselage and to include a variable throat cone and a fixed exhaust nozzle that will effect a supersonic condition throughout operating envelope. Performance per turbojet engine:

	Take-off @ 60% RPM.	Transonic @ 40,000 ft.	Mach.3 cruise @ 70,000 ft..
Air rate to engine lbs/sec	714	383	254.5
Total compression ratio	4	14.15	94.4
Compressor PR	4	7.5	2.57
Temp to Turb. Deg.F	1907	3000	3059
Turbine PR [outlet/inlet]	0.5682	0.5682	0.5682
Exhaust vel. ft/sec.	2214	4041	5142
Thrust generated lbs. F	49,093	36500	17,515
Plasma rate lbs/sec.	0.0284	0.0264	0.0142

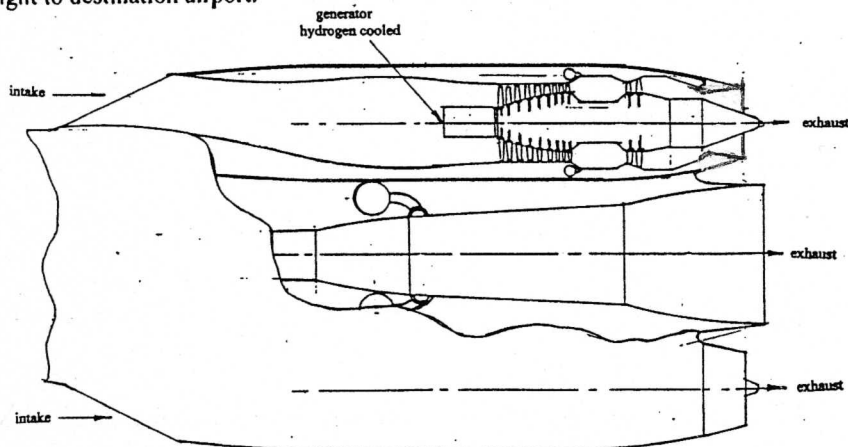
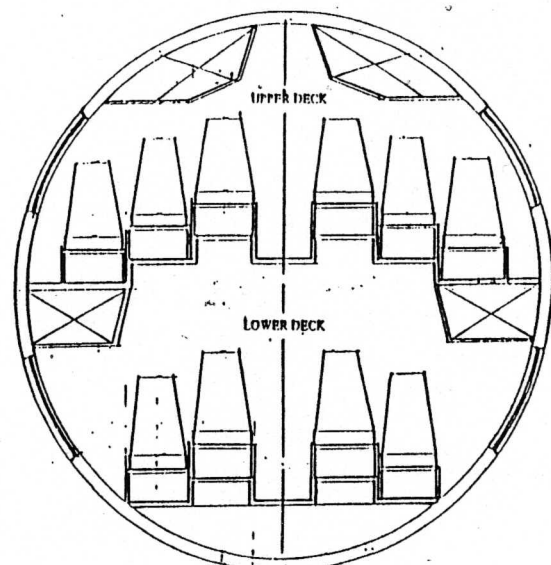
Note- heat in the pure hydrino plasma is assumed @ ten million btu/lb.[200 times LHV of hydrogen]

# THE SPACE TOUR BUS - MOON ORBITER [2 DAY ROUND TRIP]

Designed by J Varney - June 15<sup>th</sup>. 2010



During deceleration mode, the vehicle will be oriented in the backwards position such that the plasma rocket functions as a retro-rocket. As the vehicle negotiates re-entry, deceleration to less than mach 1 at the upper atmosphere, will ensure that no excessive frictional heating occurs. The craft will then re-orientate to the forward position and, after glide to 70,000 ft., will start-up the plasma turbojet for powered flight to destination airport.



PLAN OF TWIN PLASMA TURBOJET ENGINES AND SINGLE PLASMA ROCKET ENGINE

**Space Tour Bus data**  
 Plasma rocket thrust - 500,000 lbs.f.  
 Number of passengers - 100 on 2 decks  
 Cruise in space at 30,000 M.P.H. max.  
 Construction - carbon composites  
 All-up weight - 220,000 lbs  
 Hydrogen tank - 5,650 cu.ft. [25,000 lbs.]  
 Length - 120 ft. Fuselage O D 15 ft.  
 Wing span - 85 ft. Wing area - 2420 sq.ft.