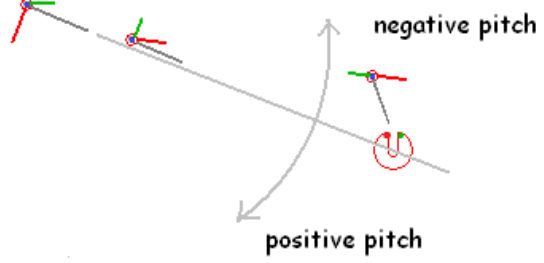


## Ayse Docking Checklist

	Flight	Engineering & GUIDO	FIDO
1	a) Set NAV mode = app targ b) Set targ = AYSE c) Set ref=celestial body around which the HAB and AYSE are orbiting d) NAVmode = MAN e) confirm $\theta$ Pch displayed (p) f) display target data (l) "R" notations disappear h) RCSP at 100 and recharges after use	g) Engineer: main engines ON h) RCSP ON	i) confirm steps a to g j) confirm RCSP operational
2	Center on AYSE and zoom in to see the docking port. Note the location of the AYSE docking port relative to the HAB.		
3	Rotate the HAB to a pitch of $5^\circ$ , either "+" or "-" depending on which side the docking port is.		
4	a) apply 10% thrust until ACC = 0.2		b) confirm ACC=0.2 c) confirm negative Vcen, Vtan~0
5	a) rotate HAB to $\theta$ Pch = $\pm 90$ sign of $\theta$ Pch must match step 3		b) confirm correct orientation as in diagram in step 3
6	a) display $\theta$ Vtarg (p) b) apply $\pm 5\%$ engine until $\theta$ Vtarg = $\pm 5.0$ sign of $\theta$ Vtarg must match step 5		b) display $\theta$ Vtarg (p) d) confirm correct flight profile
7	Select NAV mode = "retr Vtrg"		

8	<p>Apply thrust to reduce <math>V_{tan}</math> to zero when target vector is nearly lined up with axis of docking port.</p> <p>- or -</p> <p>If the docking port was on the opposite side of AYSE from the HAB in step 3, then allow the HAB to drift a few km past AYSE before bringing it to a stop. Go back to step 3 and repeat.</p>		Confirm pilot is following correct flight profile.
9	Select NAV mode = "app targ"		
10	<p>a) <math>V_{cen}</math> should be slightly negative.</p> <p>b) if not, use foward RCS thrust.</p> <p>c) confirm attitude, velocity, and target vectors are aligned with axis of docking port.</p>		d) confirm attitude, velocity, and target vectors are aligned with axis of docking port.
11	<p>a) use RCS thrust to shift the HAB sideways until both docking lights show green.</p> <p>b) use opposite thrust to zero out the <math>V_{tan}</math> when you are properly aligned.</p>		c) confirm HAB is correctly aligned with docking port.
12		<p>a) shut down Agrav</p> <p>b) confirm with EECOM minimum RAD shield setting and shut down if possible</p> <p>c) confirm that all temps are within limits</p> <p>d) confirm HAB reactor &lt; 100 A</p>	
13		Isolate RAD1, RAD2, RAD3	
14		Retract RAD1, RAD2, RAD3	
15	a) forward RCS thruster until $V_{cen} = -1.0$		

16	a) monitor $V_{tan}$ HAB will drift sideways due to different in ref $V_o$ for HAB and AYSE b) use sideways RCS to $V_{tan} = 0$ c) if a docking light changes to yellow, use RCS thrusters to push HAB towards opposite side of docking port Continue this procedure after HAB enters the docking port.		d) confirm correct alignment and track e) confirm proper actions to correct track deviations
17	a) when end of docking port turns green, use reverse RCS thruster to bring $V_{cen}$ to zero. b) if the green indicator goes back to red, reverse slightly until it turns green again and stop motion.	c) confirm HAB is in docking position	d) confirm HAB is in docking position
18		a) arm docking latch b) activate docking latch c) disarm docking latch	
19	Continue with Launch Checklist		