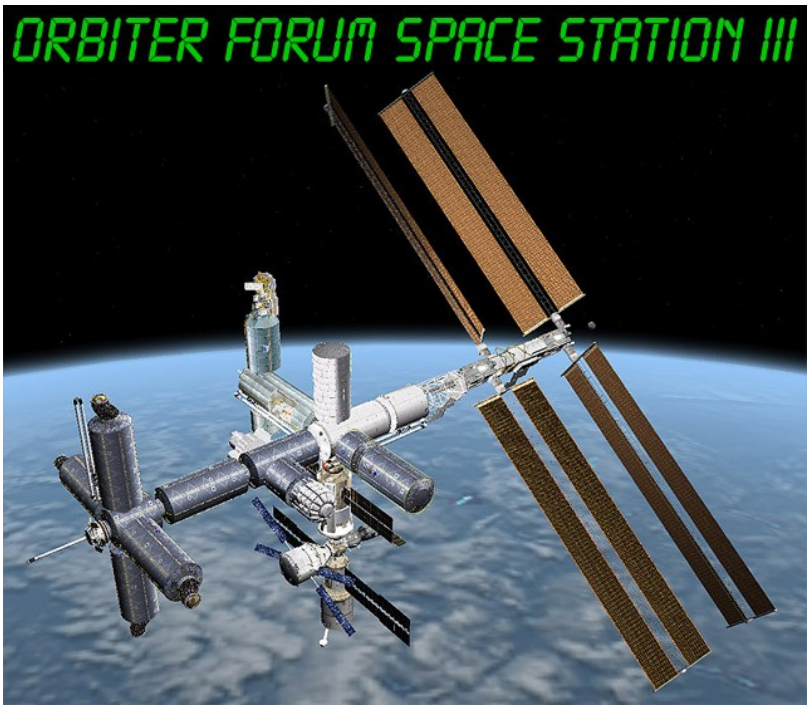



## I. Intro:

Orbiter Forum Space Station III (OFSS) is a relatively high altitude space station at 500km, compared to ISS, but it has the same orbital inclination as ISS at 51.60. The station begins with the Russian Proton-K lifter delivering Zarya followed by Zvezda a few flights later. The XR5 Vanguard with the Canadian Space Agency, European Space Agency, and NASA is the work horse of operations there after. NASA has also brought the shuttle fleet out of retirement for a handful of flights to OFSS! ESA's Crew Transfer Vehicle and Russian SoyuzTMA flights bring crew members and supplies to the space station rotated every 6 months. Shuttle flights also include MPLM missions. Modules and parts being carried up in the XR5 attach to the XR5 payload bay correctly, so the ship registers payload mass as appropriate. Please read this documentation which has extensive info about this package.

| | **Completed Station Specs** |
|---|---|
| Altitude: | 500 km / 310 miles |
| Inclination: | 51.60 |
| Total Mass: | 543929 kg / 599 tons |
| CBM Docking Ports: | 4 |
| Soyuz Docking Ports: | 5 |
| # of URMS: | 4 |
| Total Modules: | 18 |
| Solar Arrays: | 2 |
| Total # of Flights: | 24 |

*Each flight has its own page in this document with details such as the launch date, payload, flight objectives, screen shot & mission patch (when available). This document will be updated with each new flight scenario released, so refer back to it for your flight objectives. You will also find flight objectives in the launch scenario description, viewed from the Orbiter launch pad.

## II. Contents:

**Package Change Log:**

V16 – Flight #16 released.
V15 – Flight #15 released.
V14 – Flight #14 released.
*OFSS-HabitateModule4 config file edited.
*Fuel added to OFSS-Core
V13 – Flight #13 released.
V12 – Flight #12 released.
V11 – Flight #11 released.
V10 – Flight #10 released.
V9.0 – Flight #9 released.
*Typo in flight #8 objectives fixed.
V8.0 – Flight #8 released.
V7.0 – Flight #7 released.
*Due to current inclination, Ariane5 guidance config has been edited. Extract entire package!
V6.0 – Flight #6 released.
V5.0 – Flight #5 released.
*URMS grapple bug added to document in 'Problems & Solutions' on page 6.
*Neesys2.cfg edited for less attitude thrust, hopefully a bit more "realistic".
V4.0 – Flight #4 released.
V3.0 – Flight #3 released.
V2.0 – Flight #2 released.
V1.1 – Fixed first scenario guidance file.
V1.0 – Package Released.

## III. Getting Started:

- Create a new Orbiter 2010-P1 installation and install Orbiter Sound 3.5; You can also install Earth L11/(L14) textures if you plan to use them.

- Install every addon in the order listed below to the clean Orbiter installation.

- After the required addons have been installed, extract the OFSS-III package into your Orbiter installation.

****Addons Required / Installation Order****

1. Various Space Station Modules (by Piper)
2. Module Quest v1 (by Momo)
3. Eranda v1 (by Siriusfett)
4. Neesys v1.3 (by Siriusfett)
5. Solar Modules ITS (by Mustard, BrianJ, RussH)
6. Comet V2 (by Mustard)
7. Pulsar V2 (by Mustard)
8. MPLM (by Piper)
9. Cupola v2 (byMomo)
10. Node-Artemis-Themis-PMA (by Well)
11. Universal RMS (by Kulch)
12. Universal Cargo Deck (by Kulch)
13. Jarvis (by Loru)
14. Wideawake (by WHAP)
15. Launch MFD (by Enjo)
16. Universal MMU 2.0 (by Dan Steph)
17. Ariane5 v5 (by Well & NoMatter)
18. Crew Transfer Vehicle v2.1 (by Well & NoMatter)
19. Stage DLL Fix (by BrianJ)
20. XR5 Vanguard (by Doug Beachy & Russell Hicks)
21. XR5 Canadian Space Agency Skin (by PennyBlack)
22. XR5 ESA-Final Skin (by PennyBlack)
23. XR5 Nasa-Final Skin (by PennyBlack)
24. Proton Launch Vehicle v2.2 (by Thorton)
25. Soyuz_FG(U) v1.2 (by Thorton)
26. Shuttle Fleet v4.7 (by David413)
27. ISS v3.2 (by Thorton)

**Optional Addons:**

Baikonur Surface Tiles v1.1 (by mcwgogs)
Alternate XR5 Textures (by PennyBlack)
XR5 Cargo bay v2 Light (by PennyBlack)

****Don't forget to extract the OFSS-III package last!****

## IV. Pre-Flight Notes:

### ✓ 'OFSS-Core' (Neesys Module):

This is the primary module of the space station launched on the second flight which uses the Neesys v1.3 addon. The 'OFSS-Core' includes RCS thrusters so you can maneuver it and dock it to other vessels. It's also one of 4 vessels with a URMS attached to it.

### ✓ Station Spotlights:

There are two spotlights attached to the 'OFSS-Core' module which light up the station at night. Two Baylight vessels, which also attach to Shuttle Fleet, were used for the station spotlights. They're attached to the Core module with Universal Cargo Deck, so re-positioning them is an easy process in the sim. Toggling the lights ON/OFF or adjusting their brightness is very similar to the space shuttle. Press 'F3' to open the vessel dialog, then change to 'OFSS-Light1' and 'OFSS-Light2'. After changing to one of the light vessels, pressing spacebar will open the light controls. Disregard the docking light switch; it is of no use on the station itself.

### ✓ Universal RMS:

The completed space station includes 4 Universal RMS. Each flight was carefully planned so you should be able to use each URMS as they are, however, it is very easy to edit any of them using the scenario editor if needed.

- URMS1 – Attached to 'OFSS-Core'. Launched on Flight #2.
- URMS2 – Attached to 'OFSS-Eranda'. Launched on Flight #5.
- URMS3 – Attached to 'OFSS-Artemis'. Launched on Flight #9.
- URMS4 – Attached to 'OFSS-HabitatModule1'. Launched on Flight #15.

### ✓ Station Docks:

When docking to OFSS with any vessel (except CTV or Soyuz) you need to select one of the PMA docking adapters ('OFSS-Dock1', 'OFSS-Dock2', etc.) as a target on the Docking MFD. *Be sure to select the **second** port for all of the PMA adapters because the first port is currently docked to the station!

- OFSS-Dock1 (Maximum clearance; reserved for XR5 & STS.)
- OFSS-Dock2 (Medium clearance up to STS, no XR5.)
- OFSS-Dock3 (Low Clearance dock for smaller vessels.)
- OFSS-Dock4 (Alternate XR5/STS dock with clearance for both.)

*CTV and SoyuzTMA flights must be docked to 'Zarya' docking port 3; 'Zvzeda' docking ports 2, 3, 4; or the 'OFSS-SoyuzDock' adapter.

### ✓ Docking Tips:

Each flight will give you docking tips under the flight's objectives. These tips refer to which attitude auto-pilots can be used to help you dock. Engaging the appropriate attitude auto-pilot on both the 'OFSS-Core' module and the vessel coming in to dock, will help to hold the correct angular alignment with the docking port. This reduces your workload as you translate towards the station for docking.

### ✓ Operating the Solar Panels:

The solar panels 'P3P4' can be rotated manually in order to move them during construction. Change vessels to 'P3P4' and hop into the glass cockpit to find key assignments displayed on the screen. 'K' enables/disables sun tracking mode, allowing you to manually control them. Rotate the base left and right with 1 and 3 on the numpad, pressing 2 on the numpad stops the rotation.

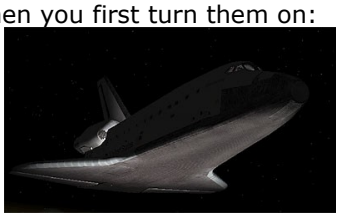
### ✓ XR5 Skin & Textures:

All XR5 flight scenarios use different skins made by PennyBlack, including the NASA 'Enterprise' skin, Canadian Space Agency, and ESA. While they are listed as required addons, you don't actually have to install PennyBlack's skins in order to play the scenario. If they are not installed, the scenario will revert to your default XR5 skin. The additional textures listed in the optional addons simply improve the overall appearance of the XR5.

## V. Problems & Solutions:

- **URMS Grapple Bug:** It should be noted that closing the simulation or saving a scenario when you have anything grappled with URMS will cause problems when you attempt to reload that scenario. This includes ejecting your vehicle from the solar system faster than the speed of light. Avoid this by un-grappling, saving or exiting, then re-grappling as soon as you reload the scenario.

- **Shuttle Baylights:** Because I used the shuttle baylight vessel to light up the space station as well, there is a small draw back for STS flights. The shuttles will still have Baylights and the RMSlight, however they may look like this when you first turn them on:



Notice the underside of the space shuttle is illuminated from the baylights. To fix this, simply quit the session, then reload the (Current state) scenario. This at least gets the Baylights back into the cargo bay, but the cargo won't be illuminated. You can use the RMSlight and position it over the cargo which illuminates it nicely. Unfortunately I wasn't able to find a better solution for the spotlights on the space station, so I settled for this option. If you'd rather not use the spotlights on the shuttle or space station, then you can turn them off or you can remove them from the scenario all together.

- **Scenario Bug:** For some reason, I occasionally run into a bug when I attempt to rearrange any of the URMS code around other vessels inside of the scenario file. The bug causes URMS1 to re-position itself on the Core module. Also, the lights on the space station no longer work and it causes a CTD if you attempt to change vessels to any of the Core lights. Make sure you don't re-arrange your scenario file; simply paste the contents from (Current state).scn after your flight to ensure no problems.

- **Docking Modules Together:** When moving modules into position with Universal RMS, they have to be positioned and aligned with the docking port precisely in order for it to dock automatically when you release it. This can be very tricky and is time consuming just like reality. You can always use the scenario editor to dock modules together if you have no luck aligning them perfectly. I generally move each module into position, do a

spacewalk to inspect the module and connection, then release it from URMS. If it didn't dock automatically, I pull up the scenario editor and dock the pieces together.

- **Grappling Docked Modules:** If you want to grapple a module already docked to another, then you must first undock the module you wish to grapple. You can do this by switching to the vessel and pressing Ctrl+D or by using the scenario editor.

- **UMMU / Spacewalks:** Unfortunately you can't really off-load UMMU crew members into the space station because it's comprised of many different vessels, including the docking ports you actually dock to with the XR5, space shuttle, etc. The Quest module is the "airlock" for the station; however it's not UMMU compatible. It normally comes with its own EVA space suit which is considered a vessel you're able to control for spacewalks, similar to UMMU, but we're not going to include it with the scenarios. When you'd like to spacewalk, its best to use UMMU from your construction vessels such as the XR5 and the Space Shuttle, and after flight 7 you could use crew members from CTV.

- **Attaching P6 solar panels to P5 (Flight #12):** I had no luck attaching P6 to P5 on flight #12, so I moved it into position with URMS1 and released it. I then quit the sim and manually attached it by adding the following line shown in **RED** to the scenario file for P6:

```
P6:MBR_ITS/mbr_its6
  STATUS Orbiting Earth
  ATTACHED 3:0,P5
  AFCMODE 7
  NAVFREQ 0 0
  AUTOSUN 0
  DEPLOY 0
  MOTORS 0 0.0000
  SOLPAB 0 0.0000 0.0000
  SOLPCD 0 0.0000 0.0000
  RAD 0 0.0000
  SOLPROT 0 0.0000 0 0.0000
END
```

- **Re-deploying Zarya and Zvezda solar panels:** After stowing the solar panels on Zarya and Zvezda during construction, I was unable to re-deploy them in the sim. If you can't re-deploy them either, then quit the session and edit the following line shown in bold red text in your (Current state) scenario for both 'Zarya' and 'Zvezda':

```
Zarya:ISSR\Zarya
  STATUS Orbiting Earth
  RCSMODE 2
  AFCMODE 7
  PRPLEVEL 0:0.437277 1:0.410046
  DOCKINFO 0:0,Zvezda 1:0,OFSS-Core
  NAVFREQ 0 0
  XPDR 161
  ANT 0 1.0000 -1
  CAM 0
  SOL_DEP 0 1.0000 -1
  ControlMode 0
  SOL_ST 0.0000 0
  MSSTATE 1
  LIGHT 1 0
  BATTERY 621.0657 0.6211
  SHOWDATA 0
END
```

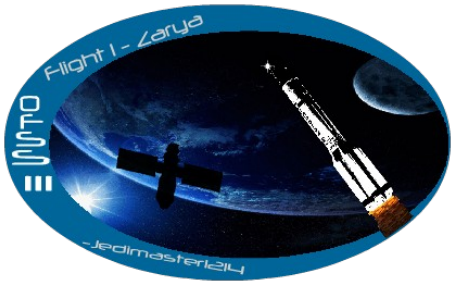
## VI. Flight Schedule:

***OFSS Pilots:** After you have completed your flight, copy everything from the (Current state) scenario and paste it into THIS thread between code tags.

*Example:* [code]paste your scenario here[/code]

### Flight #1

**Launch Date**: July 6, 2011
**Launch Time:** 01:00:59 UTC




**Pilot:** jedimaster1214
**Departure:** Baikonur
**Launch Vehicle:** Proton-K
**Payload:** Zarya

**Objectives:**

1.) The countdown clock is already running. Let the auto-pilot launch you into orbit with an inclination 51.60. You don't have to do or press anything for the launch.

2.) Aim to keep the orbit altitude relatively low so it's easier for 'Zvezda' to rendezvous on flight #4. The best way to do that is to disable the launch auto-pilot JUST as your ApA reaches 200km by quickly pressing 'M', then press * on the numpad twice, to kill all engines. 'Zarya' separation will then occur.

3.) Once in orbit, press Ctrl+1 and Ctrl+2 to deploy the solar panels and antennas on 'Zarya'.

4.) Raise the orbit altitude so it's at least 200km, but no higher than 230km at this point. We also don't need to worry about getting the eccentricity to 0, just relatively low.

## Flight #2

**Launch Date**: July 12, 2011
**Launch Time:** 14:30:17 UTC


**Pilot:** Artlav
**Departure:** Wideawake International
**Launch Vehicle:** XR5 Vanguard (European Space Agency)
**Payload:** Core (Neesys) Module + Cupola + PMA

**Objectives:**

1.) European Space Agency XR5 sitting on the runway at Wideawake, ready to go in 2 minutes. Take-off and turn to heading 143 degrees when time to intersection on the Launch MFD reaches 350 seconds. Rendezvous with 'Zarya' already in orbit.

2.) Release the 'OFSS-Core' (Neesys) module from the XR5 payload bay.

3.) Rotate the XR5 down and position 'CSS-Core' vertically above the payload bay.

4.) Grapple 'OFSS-Dock1' with URMS1 and dock it to 'OFSS-Core' docking port #4.

5.) Now grapple 'OFSS-Cupola' and dock it to 'OFSS-Core' docking port #2.

6.) Change vessels to 'OFSS-Core' and dock it to 'Zarya' docking port #2.

7.) Finally, dock the XR5 to 'OFSS-Dock1'.

8.) Return to Wideawake no later than July 24, 2011.

**Docking Tips:**
*Core = Retrograde
*Zarya = Prograde

**Core = Prograde
**XR5 = Prograde

## Flight #3

**Launch Date**: August 1, 2011
**Launch Time:** 22:50:23


**Pilot:** Diogom
**Departure:** Baikonur
**Launch Vehicle:** Soyuz
**Payload:** SoyuzTMA (3 Crew Members)

First long-term crew transport to remain on station for 6 months.

**Objectives:**

1.) The launch auto-pilot is enabled and the countdown clock is already running for launch. There is no need to press or do anything at this point.

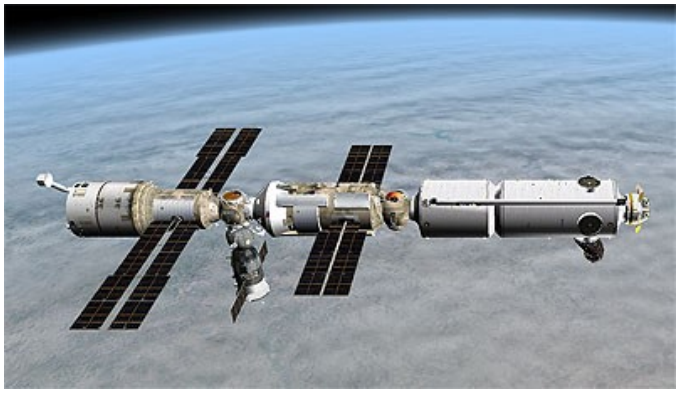
2.) Ride the launch auto-pilot up to orbit. Once in orbit the solar panels will extend automatically. Press E to open the engine cover afterwards.

3.) Dock SoyuzTMA to 'Zarya' docking port #3 and leave it on station. *Note, while you can use the (+) Normal auto-pilot to hold angular alignment, you will have to disable it and rotate to the left just before docking.

**Docking Tips:**
*Core = Prograde
*Soyuz = (+) Normal

## Flight #4

**Launch Date**: October 6, 2011
**Launch Time:** 18:33:06 UTC




**Pilot:** Wood
**Departure:** Baikonur
**Launch Vehicle:** Proton-K
**Payload:** Zvezda

**Objectives:**

1.) The countdown clock is already running for a launch in 2 minutes and 28 seconds after the scenario loads. Sit back and let the auto-pilot launch you into orbit.

2.) Once in orbit, press Ctrl+1 and Ctrl+2 to deploy the solar panels and antennas on 'Zvezda', then press Ctrl+E to open the engine cover and leave it open! Your fuel is very limited, so be careful - this is challenging! It takes a few days if you choose to chase down OFSS.

3.) After intercepting OFSS, change vessels to 'SoyuzTMA-8, undock it and grapple it with URMS1'.

4.) Now change vessels to 'Zarya', undock and maneuver it over to 'Zvezda' docking it to port #1 using the #2 port on 'Zarya'. (Press 'C' to change the camera to the Zvezda docking cam which makes this easier while maneuvering Zarya.)

5.) Once 'Zarya' and 'Zvezda' are docked, release 'SoyuzTMA-8' from URMS1 and maneuver 'OFSS-Core' over to 'Zarya'.

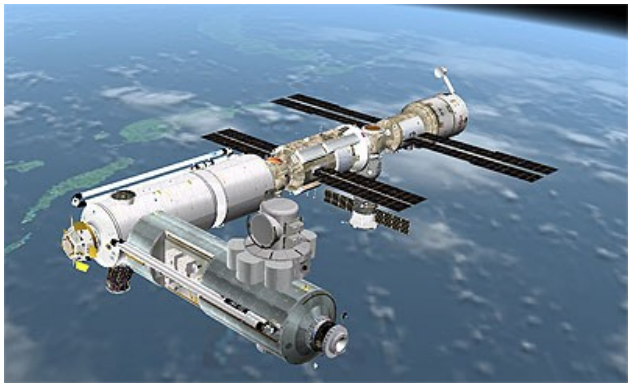
6.) Dock 'OFSS-Core' to 'Zarya' docking port #1 with the #1 port on OFSS-Core.

7.) Finally, dock 'SoyuzTMA-8' to 'Zvezda' docking port #3.

**Docking Tips:**
Zvezda = Prograde
Zayra = Prograde
OFSS -Core = Prograde
Soyuz = (+) Normal

## Flight #5

**Launch Date**: October 21, 2011
**Launch Time:** 09:48:55 UTC




**Pilot:** PhantomCruiser
**Departure:** KSC
**Launch Vehicle:** XR5 Vanguard (NASA)
**Payload:** Eranda + URMS2 + Questfin + SoyuzDock

**Objectives:**

1.) NASA's XR5 is sitting on the runway at KSC, ready to go in about 2 minutes. Take-off and turn to heading 137 degrees when time to intersection reaches 350 seconds.

2.) Rendezvous and dock to 'OFSS-Dock1'.

3.) While docked, but before unloading your cargo; gently nudge the orbital inclination to 51.60, then raise the station orbit to 500km with the XR5. Engage the prograde autopilot and use very little thrust from the main engines to raise the orbit.

4.) Grapple 'OFSS-Eranda' with URMS1 docking it to 'OFSS-Core' docking port #5.

5.) With URMS2, grapple 'OFSS-Questfin' and dock it to 'OFSS-Eranda' docking port #3.

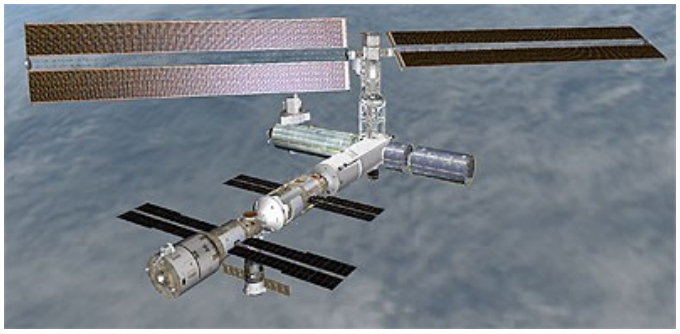
6.) Grapple 'OFSS-SoyuzDock' and dock it to 'OFSS-Eranda' docking port #2.

7.) Return to Kennedy Space Center by November 3, 2011.

**Docking Tips:**
OFSS-Core = Prograde
XR5 = Prograde

## Flight #6

**Launch Date**: November 24, 2011
**Launch Time:** 02:15:42 UTC




**Pilot:** Kevin580
**Departure:** Jarvis
**Launch Vehicle:** XR5 Vanguard (Canadian Space Agency)
**Payload:** P3P4/P5 + SensitiveMaterialsLab + SenMatLabCleanRoom

**Objectives:**

1.) Canadian Space Agency XR5 sitting on the runway at Jarvis, ready to go in about 3 minutes. Take-off when time to intersection reaches 350s and turn to heading 26.97 degrees.

2.) Rendezvous and dock to 'OFSS-Dock1'.

3.) Very carefully adjust the space station inclination to 51.60 degrees using the XR5. *Be sure to change the frame on the orbit MFD to equatorial first! Press the FRM button on the lower left side until it reads EQU. Also, make sure you keep the altitude around 500km. This is tricky and will take many orbits to complete, but if you're careful, you should have at least 30% main fuel remaining to get home.

4.) Grapple 'OFSS-SenMatLabCleanRoom' and dock it to 'OFSS-Core' port #6.

5.) Grapple 'OFSS-SensitiveMaterialsLab' and dock it to 'OFSS-SenMatLabCleanRoom' port #2.

6.) Grapple 'P3P4' and dock it to 'OFSS-Core' port #3. Deploy the solar panels by changing vessels to P3P4 and pressing G. Once deployed, press K to engage sun tracking.

7.) De-orbit and land at **Wideawake International** on December 8, 2011.

**Docking Tips:**
OFSS-Core = Prograde
XR5 = Prograde

## Flight #7

**Launch Date**: December 9, 2011
**Launch Time:** 00:49:09 UTC


**Pilot:** Nistenf
**Departure:** Jarvis
**Launch Vehicle:** Ariane 5
**Payload:** Crew Transfer Vehicle - Pegase

Second long-term crew transport to remain on station for 6 months.

**Objectives:**

1.) Ariane 5 is ready for launch in about 3 minutes. Press 'P' to activate the launch auto-pilot when time to intersection reaches 350 seconds. Lift off is at 00:49:09.

2.) Rendezvous and dock to 'Zvezda' docking port #4.

3.) Move 'OFSS-Cupola' to 'OFSS-Eranda' docking port #4.

4.) Leave CTV on station and post your flight scenario no later than December 16, 2011 for the next flight.

## Flight #8

**Launch Date**: December 20, 2011
**Launch Time:** 20:09:50 UTC


**Pilot:** IronRain
**Departure:** KSC
**Launch Vehicle:** STS-Discovery
**Payload:** HabModCore

**Objectives:**

1.) Launch approaching in about 3 minutes. When time to intersection reaches 288 seconds on the Launch MFD, press 'ITEM' on the GPC MFD and type 777, then press ENTER to activate the launch auto-pilot. Lift-off at 20:09:50.

2.) Dock Discovery to 'OFSS-Dock1'

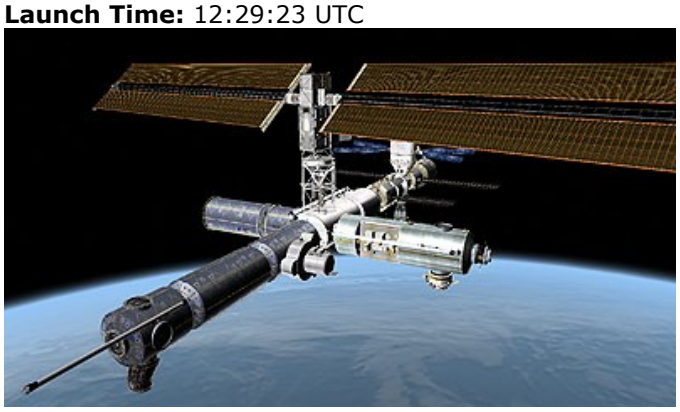
3.) Grapple and dock 'OFSS-HabModCore' to 'OFSS-Core' docking port #2.

4.) Return Discovery to Cape Canaveral by January 2, 2012

**Docking Tips:**
OFSS-Core = Prograde
Discovery = Prograde

## Flight #9

**Launch Date**: January 12, 2012
**Launch Time:** 12:29:23 UTC




**Pilot:** Scav
**Departure:** Wideawake International
**Launch Vehicle:** XR5 Vanguard (European Space Agency)
**Payload:** HabMod5 + Artemis + URMS3 + PMA

**Objectives:**

1.) It's 30 minutes until your launch window. Taxi to the runway and prepare for launch. Take-off when time to intersection reaches 350 seconds.

2.) This is very important!! After main engine shut down, discard the spent fuel containers from the cargo bay. Release them before you circulize the orbit so they fall back to Earth somewhere in the ocean south-east of New Zealand or over Antarctica. Complete the rendezvous and dock to 'OFSS-Dock1'.

3.) Very carefully adjust the space station inclination to 51.60 degrees using the XR5. *Be sure to change the frame on the orbit MFD to equatorial first!!! Press the FRM button on the lower left side until it reads EQU. Also, make sure you keep the altitude around 500km. This is tricky and will take many orbits to complete.

4.) Grapple 'OFSS-Artemis' with URMS2 and pull it out of the cargo bay.

5.) Now grapple 'OFSS-HabitatModule5' with URMS3.

6.) Dock 'OFSS-HabitatModule5' to 'OFSS-HabModCore' docking port #2.

7.) Dock 'OFSS-Artemis' to 'OFSS-HabitatModule5' docking port #2.

8.) Grapple 'OFSS-Dock4' and pull it out of the cargo bay.

9.) Undock the XR5 so you have room to dock 'OFSS-Dock4' to 'OFSS-Artemis' port #3. Now dock the XR5 to 'OFSS-Dock4'.

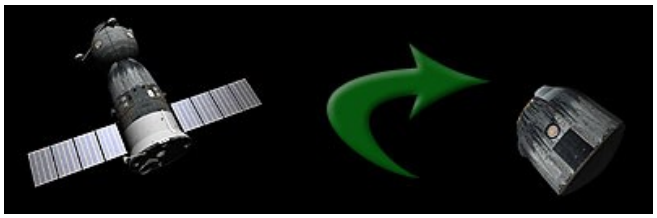
10.) Move 'OFSS-Cupola' to its final home, 'OFSS-Artemis' docking port #2.

11.) Return XR5 to Wideawake by January 24, 2012.

**Docking Tips:**
OFSS-Core = Prograde
XR5 = Prograde

## Flight #10

**Launch Date**: January 25, 2012
**Launch Time:** 06:53:45 UTC

**Pilot:** Izack
**Departure:** Baikonur
**Launch Vehicle:** Soyuz
**Payload:** SoyuzTMA (Crew Rotation)

Second long-term crew transport to remain on station for 6 months.

**Objectives:**

1.) The launch auto-pilot is enabled and the countdown clock is already running for launch. There is no need to press or do anything at this point.

2.) Ride the launch auto-pilot up to orbit. Once in orbit the solar panels will extend automatically. Press E to open the engine cover afterwards.

3.) Dock SoyuzTMA to 'Zarya' docking port #3 and leave it on station. *Note, while you can use the (+) Normal auto-pilot to hold angular alignment, you will have to disable it and rotate to the left just before docking.

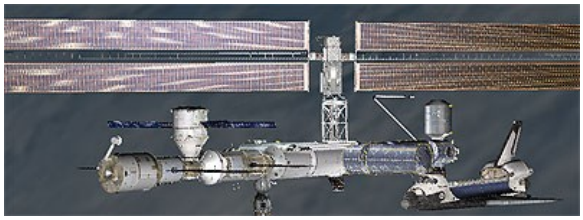
4.) Grapple 'OFSS-Questfin' and move it to 'OFSS-HabModCore' docking port #3.

5.) Once completed, paste your 'Current state' scenario on the forum so the previous Soyuz pilot (Diogom) can return 'SoyuzTMA-8' home.

**Docking Tips:**
Core = Prograde
Soyuz = (+) Normal

## Flight #11

**Launch Date**: March 5, 2012
**Launch Time:** 11:34:37 UTC



**Pilot:** Scruce
**Departure:** KSC
**Launch Vehicle:** STS-Columbia
**Payload:** Leonardo MPLM

**Objectives:**

1.) Launch approaching in about 5 minutes. When time to intersection reaches 288 seconds on the Launch MFD, press 'ITEM' on the GPC MFD and type 777, then press ENTER to activate the launch auto-pilot.

2.) Dock STS-Columbia to 'OFSS-Dock4'

3.) Grapple and dock Leonardo MPLM to 'OFSS-Artemis' docking port #4.

4.) After off loading the supplies, grapple Leonardo MPLM and move it back into the shuttle cargo bay.

*You will have to re-attach it to the shuttle manually by closing the sim and exiting the Orbiter launch pad. Un-grapple Leonardo MPLM before quitting the sim! Open (Current state).scn and replace the entry for the LeonardoMPLM vessel with:

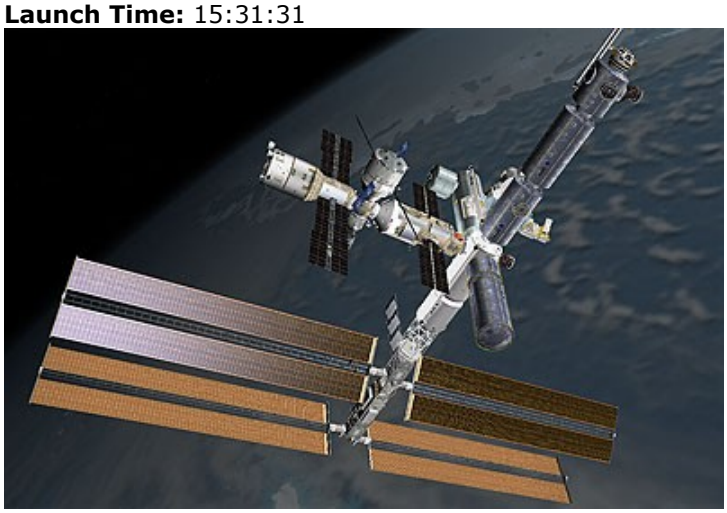
```
LeonardoMPLM:Spacecraft\Spacecraft3
  ATTACHED 0:0,STS-Columbia
END
```

5.) After saving (Current state).scn, reload it and return STS-Columbia with Leonardo MPLM to Cape Canaveral by March 18, 2012.

**Docking Tips:**
OFSS-Core = Prograde
Columbia = Prograde

## Flight #12

**Launch Date**: April 12, 2012
**Launch Time:** 15:31:31



**Pilot:** jangofett287
**Departure:** Wideawake International
**Launch Vehicle:** XR5 Vanguard (Canadian Space Agency)
**Payload:** P6 + Pulsar2 + Comet2

**Objectives:**
1. Launch is about 2 hours away. Re-fuel the XR5 and take off when time to intersection reaches 350s. Dock XR5 to 'OFSS-Dock4', then stow all solar panels on vessels; 'P3P4' , 'Zarya', and 'Zvezda'.

2. Use any URMS at your disposal to grapple and attach 'P6' to the top of 'P5'. (See the Problems & Solutions section of this doc for help.)

3. Undock CTV and move it to 'OFSS-SoyuzDock', then undock SoyuzTMA-9 and move it down so you can grapple it with URMS3.

4. Undock 'Zvezda' and grapple it with URMS1 passing it over to URMS2. Move it out of the way so you can then undock 'Zarya' and let it drift back for a moment while you complete the next step.

5. Undock 'P3P4' and grapple it with URMS1 moving it to 'OFSS-Core' port #1. Quickly change vessels to 'Zarya' and translate it close enough to grapple with URMS1. Move ‘Zarya’ so you can dock it to 'OFSS-Core' #3.

6. Now move ‘Zvezda’ into position with URMS2 & URMS1, docking it to ‘Zarya’ port #2.

7. Move CTV back to ‘Zvezda’ port #4 and SoyuzTMA-9 to ‘Zvezda’ port #3.

8. Grapple 'OFSS-Comet2' and dock it to 'OFSS-Eranda' port #3.

9. Grapple 'OFSS-Pulsar2' and dock it to 'OFSS-Eranda' port #4.

10. Deploy solar panels on 'Zarya', 'Zvezda', P3P4, and P6. (See the Problems & Solutions section of this doc for help.)

**Docking Tips:**
OFSS-Core = Prograde
XR5 = Prograde

## Flight #13

**Launch Date**: June 2, 2012
**Launch Time:** 20:49:10 UTC

**Pilot:** ADSWNJ
**Departure:** Jarvis
**Launch Vehicle:** Ariane 5
**Payload:** Crew Transfer Vehicle - Pegase

**Objectives:**

1.) Ariane 5 is ready for launch in about 10 minutes. Press 'P' to activate the launch auto-pilot when time to intersection reaches 350 seconds. Lift-off is at 20:49:10.

2.) Rendezvous and dock to 'OFSS-SoyuzDock'.

3.) Leave 'CTV-LEO6' on station and post your flight scenario on the forum so the previous pilot, "Nistenf" can return 'CTV-LEO6b' home.

## Flight #14

**Launch Date**: June 15, 2012
**Launch Time:** 10:40:18 UTC

**Pilot:** usmc3891
**Departure:** Wideawake International
**Launch Vehicle:** XR5 Vanguard (Canadian Space Agency)
**Payload:** RecMod + HabMod4

**Objectives:**

1.) The launch window is approaching in about 1 hour. Fuel up the XR5 and take off when time to intersection reaches 350s.

2.) Dock XR5 to 'OFSS-Dock4'.

3.) Grapple 'OFSS-HabitateModule4' and attach it to 'OFSS-Artemis' docking port #6.

4.) Grapple 'OFSS-RecMod' and attach it to 'OFSS-HabModCore' docking port #4.

5.) Return XR5 to Wideawake no later than July 2, 2012.

**Docking Tips:**
OFSS-Core = Prograde
XR5 = Prograde

## Flight #15

**Launch Date**: July 4, 2012
**Launch Time:** 03:09:43 UTC

**Pilot:** halcyon
**Departure:** KSC
**Launch Vehicle:** STS-Discovery
**Payload:** HabMod1 + URMS4

**Objectives:**

1.)Launch approaching in about 5 minutes. When time to intersection reaches 288 seconds on the Launch MFD, press 'ITEM' on the GPC MFD and type 777, then press ENTER to activate the launch auto-pilot.

2.) Rendezvous with OFSS and grapple STS-Discovery with URMS2.

3.) Move 'OFSS-Dock4' to 'OFSS-HabitatModule4' with the shuttle RMS.

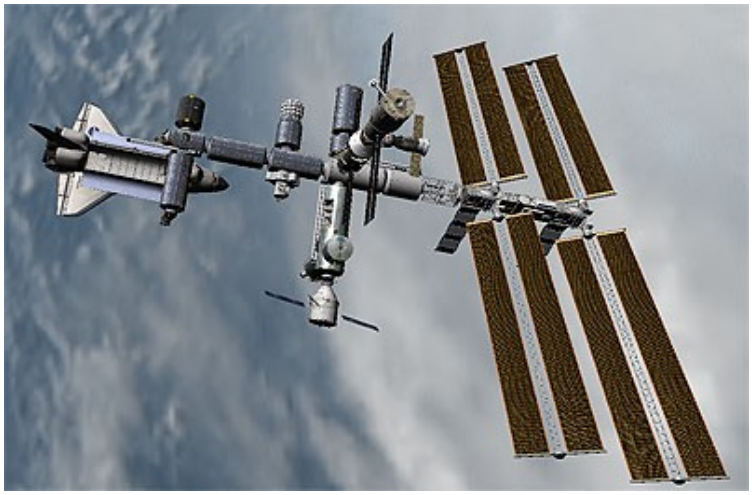
4.) Next grapple 'OFSS-HabitatModule1' with either the shuttle RMS or URMS3, docking it to 'OFSS-Artemis' port #3.

5.) Dock STS-Discovery to 'OFSS-Dock4'.

6.) Finally, grapple 'OFSS-Dock1' with URMS2, passing it over to URMS4 and dock it to 'OFSS-HabitatModule1'.

## Flight #16

**Launch Date**: September 2, 2012
**Launch Time:** 21:17:30 UTC



**Pilot:** Cras
**Departure:** KSC
**Launch Vehicle:** STS-Atlantis
**Payload:** Leonardo MPLM

**Objectives:**

1.) Launch approaching in about 5 minutes. When time to intersection reaches 288 seconds on the Launch MFD, press 'ITEM' on the GPC MFD and type 777, then press ENTER to activate the launch auto-pilot.

2.) Dock STS-Atlantis to 'OFSS-Dock1'

3.) Grapple and dock Leonardo MPLM to 'OFSS-Artemis' docking port #5.

4.) After off loading the supplies, grapple Leonardo MPLM and move it back into the shuttle cargo bay. *You will have to re-attach it to the shuttle manually by closing the sim and exiting the Orbiter launch pad. Un-grapple Leonardo MPLM before quitting the sim! Open (Current state).scn and replace the entry for the LeonardoMPLM vessel with:

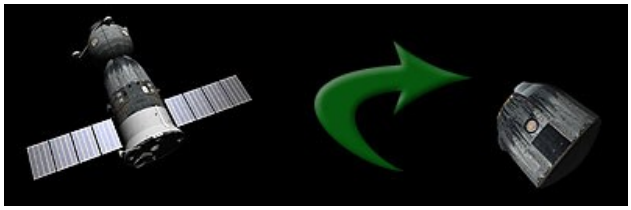
```
LeonardoMPLM:Spacecraft\Spacecraft3
  ATTACHED 0:0,STS-Atlantis
END
```

5.) After saving (Current state).scn, reload it and return STS-Atlantis with Leonardo MPLM to Cape Canaveral by September 15, 2012.

**Docking Tips:**
OFSS-Core = Prograde
STS-Atlantis = Prograde

## Flight #17

**Launch Date**: September 21, 2012
**Launch Time:** To be announced.



**Pilot:** usmc3891
**Departure:** Baikonur
**Launch Vehicle:** Soyuz
**Payload:** SoyuzTMA (Crew Rotation)

**Objectives:**

1.) To be announced.

## Flight #18

**Launch Date**: October 8, 2012
**Launch Time:** To be announced.

*Screenshot coming soon…*

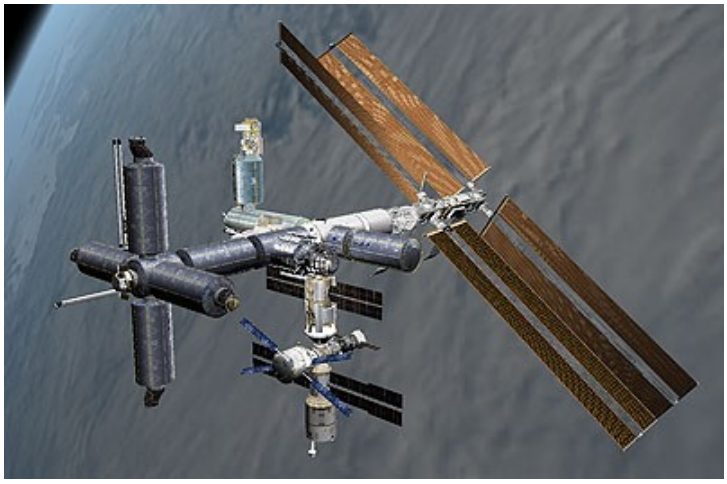
**Pilot:** Ky
**Departure:** KSC
**Launch Vehicle:** STS
**Payload:** MPLM

**Objectives:**

1.) To be announced.

## Flight #19

**Launch Date**: October 30, 2012
**Launch Time:** To be announced.



**Pilot:** guitarist473
**Departure:** Wideawake International
**Launch Vehicle:** XR5 Vanguard (European Space Agency)
**Payload:** HabMod2 + HabMod3 + PMA + PMA

**Objectives:**

1.) To be announced.

## Flight #20

**Launch Date**: November 26, 2012
**Launch Time:** To be announced.

**Pilot:** davewave
**Departure:** Jarvis
**Launch Vehicle:** Ariane 5
**Payload:** Crew Transfer Vehicle - Pegase

**Objectives:**

1.) To be announced.

## Flight #21

**Launch Date**: February 12, 2013
**Launch Time:** To be announced.

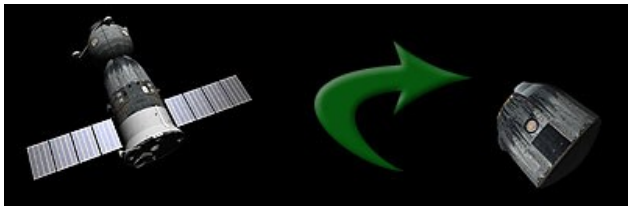
**Pilot:** Solar424
**Departure:** KSC
**Launch Vehicle:** STS- Endeavour
**Payload:** Centrifuge Accommodations Module (CAM)

**Objectives:**

1.) To be announced.

## Flight #22

**Launch Date**: March 16, 2013
**Launch Time:** To be announced.



**Pilot:** Scruce
**Departure:** Baikonur
**Launch Vehicle:** Soyuz
**Payload:** SoyuzTMA (Crew Rotation)

**Objectives:**

1.) To be announced.

## Flight #23

**Launch Date**: April 20, 2013
**Launch Time:** To be announced.

*Screenshot coming soon…*

**Pilot:** Chub777
**Departure:** KSC
**Launch Vehicle:** STS
**Payload:** SpaceLabDM

**Objectives:**

1.) To be announced.

## Flight #24

**Launch Date**: May 26, 2013
**Launch Time:** To be announced.

**Pilot:** Babelonia
**Departure:** Jarvis
**Launch Vehicle:** Ariane 5
**Payload:** Crew Transfer Vehicle - Pegase

**Objectives:**

1.) To be announced.

# VII. Credits

**Mission patches designed by:**

Eli13, with feedback from each mission commander.

I have to give a big thanks to all of the addon developers who've created the addons needed to build OFSS III:

- BrianJ
- Dan Steph
- David413
- Doug Beachy
- Enjo
- Kulch
- Loru
- Momo
- Mustard
- NoMatter
- PennyBlack
- Piper
- RussH
- Siriusfett
- Thorton
- WeHaveaProblem
- Well

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**Finally, thank you to all of the pilots participating in this project!**