

ORBITER SPACE FLIGHT SIMULATOR



ARIANE 5



Well & NoMatter

Orbiter Space Flight Simulator 2006

Ariane5

Well & no matter- May 2006



Thanks to:

- Martin Schweiger
 - Dansteph et la communauté francophone d'Orbiter
 - Vinka (Spacecraft & Multistage!!)
 - Mustard & Papyref
 - David Henderson (ATV)
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INSTALLATION

Unrar the archive into the Orbiter installation path. All the needed Spacecraft & multistage dlls are included.

This version is enhanced for Mustard and Papyref CSG Kourou ELA3

SCENARIOS

Ariane5 G Ar503 v112 : Launch Ariane flight112 with the atmospheric reentry demonstrator (or ARD) and Maqsat-3. Use «p» to start autopilot .

Ariane5 ECA : Launch Ariane5 ECA with maqsat-3 and Sylva. Use «p» to start autopilot.

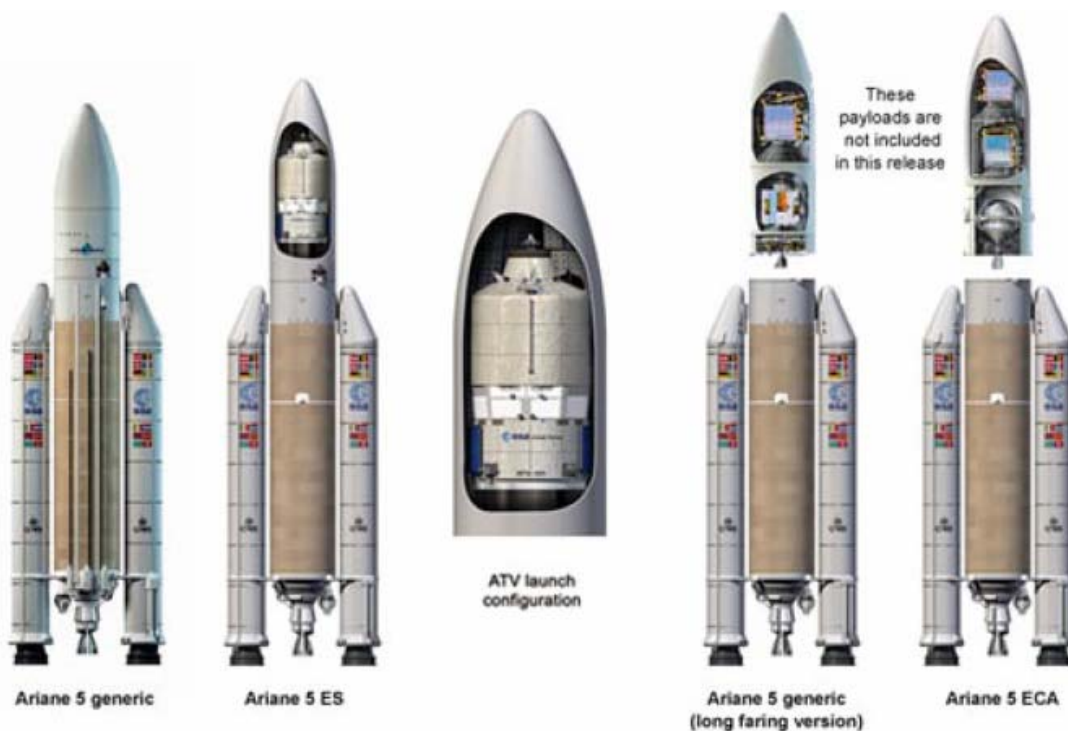
Ariane5 G long fairing : Launch Ariane5 long fairing version with Maqsat-3 & Sylva. «p» to start autopilot.

Ariane5 G medium fairing : Launch Ariane5 short fairing version with Maqsat-3. Use «p» to start autopilot.

Ariane5 G short fairing : Launch Ariane5 short fairing version with Maqsat-3. Use «p» to start autopilot.

Ariane5 ES : Launch Ariane5 ES with Maqsat-3. Use «p» to start autopilot.

Ariane 5 G (v158) Rosetta Launch : Launch the Ariane 5 Generic with Rosetta (v158) from Kourou 2nd March 2004; 07:17 UT. Type 'P' to start/stop the autopilot. Time is now T-60 secs. ****REQUIRES ROSETTA ADDON BY BRIAN JONES (avsim.com)****



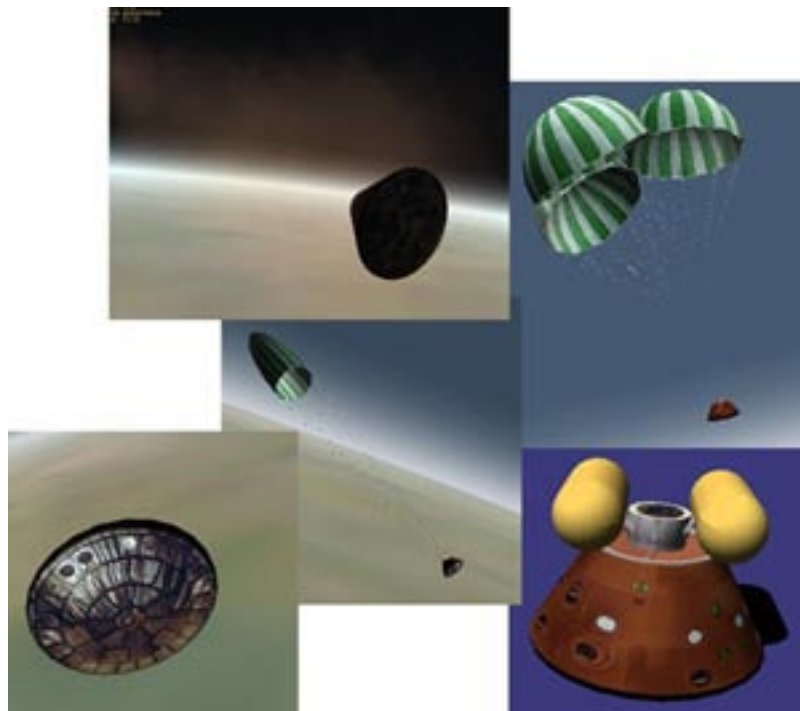
Warning : The Key of separation of the fairing "F" and the same of the FPS.

ARD- reentry procedures

The ARD should be jettisoned above 800 km alt.

- 1/ Engage retrograde and wait for the aerodynamic slowdown.
- 2/ When exiting reentry flames hit J to change tex from clean to burned.
- 3/ «J» will jettison reentry section fairing.
- 4/ Left shift+1 to deploy drogue chute (under 14Km altitude).
- 5/ Left shift+2 to deploy main chute and jettison drogue.
- 6/ Hit left shift+3 when the splashdown comes to jettison the chutes and deploy flotation bags.

Splashdown should normaly happen under 10 m.s-1.



About this addon

This version of Ariane has been mainly designed and done by Well but he was forced to stop development so we decided that I will keep on working alone to finish the addon.

This version is a light version as we had planned more payloads and a manned CTV to launch with but now I'm alone with the project, I have to slow the tempo!! Updates are planned.

All this material is free for use. Limited distribution.
Freeware, don't expect making money with.

ARIANE5 - Well & No Matter

How to add payloads?

You have to create a new ini file basing on pre-existing ones.

Here are the different versions and the corresponding inis.

ARIANE5 G :

Ariane5 Générique short fairing : arF3.ini

Ariane5 Générique medium fairing : arF2.ini

Ariane5 Générique long fairing : arF1.ini

ARIANE5 ECA :

Ariane5 ECA (10t) : arECA.ini

ARIANE5 ES :

Ariane ES (designed to launch ATV-20t) : arES.ini

1 / Copy the choosen file with notepad and modify [Payload_x] section where are the payloads definitions.

FORMAT

[PAYLOAD_X]	X stands for 1,2...up to 10.
off=(x,y,z)	Position de la charge utile
MeshName=«xxxx»	Chemin vers le fichier mesh
Name=«xxxx»	Nom de la charge utile
Module=«xxxx»	Chemin vers le fichier .cfg
Diameter=x	Diamètre en m
Height=x	Hauteur en m
Mass=xxx	Masse en kg
rot_speed=(x,y,z)*	Vitesse de rotation au largage en rad/s – * si nécessaire
speed=(x,y,z)*	Vitesse de largage en m/s –* si nécessaire, par défaut 1 m/s

You can add a maximum of 10 payloads.

When finished save the file with the extension .ini.

!! DON'T FORGET SYLDA & SPELTRA if needed.

2/ Create a .cfg file corresponding (choose the same name as the .ini!!!) with:

ClassName = xxx --> name of the file (without extension) / Ariane model
Module = multistage2

3/Make the scénario, use an existing one as model:

```
Ariane5: W-Ariane5\.cfg file
STATUS Landed Earth
POS -52.559628 5.060048
HEADING 130.00
PRPLEVEL 0:1.000 1:1.000 2:1.000
NAVFREQ 0 0
CONFIG_FILE W-Ariane5\.ini file
CONFIGURATION 0
STAGE_STATE 2
STAGE_IGNITION_TIME 0.000
CURRENT_BOOSTER 1
CURRENT_STAGE 1
CURRENT_INTERSTAGE 1
CURRENT_PAYLOAD 1
FAIRING 1
END
```

Be carefull with the path if your files are not in the «W-Ariane5» directory.

UPDATE

Update 1: 14th june 06

- Fix texture mapping on fairing, add the weight of fairing.
- Add scenario Flight V158 with the probe Rosetta (require Rosetta by Brian Jones).
- Add new configuration files of the ARD for best flight model during the atmospheric reentry.
- Included a playback scenario to learn the new control with angle of attack like the space shuttle (By BrianJ)

Update 2: 17th june 2006

- Fix weight of the second stage, power of boosters.
- Fix start position of scenario V158 (require Rosetta by Brian Jones).
- Fix a mix up between Ariane 5 ES and Ariane 5 ES Versatile.

Update 3: 23th august 2006

- add specific scenarios for users who don't use Kourou CSG addon.
- update original scenarios with CSG v3 definitions.

Update 4: 29th february 2007

- Correction of the movement during the separation of the EPC.
- Correction of the PARTICLESTREAM of the flight v112.
- Addition of the tug boat " Le Revi " and the frigate " Prairial " on the zone of recovery of the ARD.
- New documentation .pdf collecting the various modifications.
- Correction Autopilots Ariane 5 ECA.
- Correction Autopilots Ariane 5 G.
- Modification textures of fairing.