



Planetary Debris: A timeline of the events of "Planetes"

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"I long to accomplish a great and noble task, but it is my chief duty to accomplish humble tasks as though they were great and noble. The world is moved along not only by the mighty shoves of its heroes but also by the aggregate of the tiny pushes of each honest worker."

Helen Keller, writer and social activist

"We've developed space suits that keep us alive even while surrounded by Death. The point, though, is to survive. I didn't get it at first, but now I do. I'm no longer alone... and that's why I'll survive."

Hachirota "Hachimaki" Hoshino, EVA Specialist

2070's. With 11 billion people living on planet Earth, Mankind needs the space resources to keep its mother world inhabitable, and because of it, space development is on rise: there are permanent colonies on Moon and Mars - Humanity is about to become a space-faring species... But there are problems on the way: there is a search for new sources of heavy Hydrogen and Helium-3 - the fuels for 70% of the demands of electricity and for the nuclear rocket engines that propel the interplanetary spaceships (1). The demand is growing up and there is a chance that Lunar and Martian Helium-3 isn't enough to keep energy production on Earth and space exploration... so Mankind is about to launch a mission in direction of Jupiter, to build a permanent base to mine its resources (2). Another problem is the increasing of the space debris around the planet that began to menace the space routes, and had claimed several lives in 2068, when a small piece of space debris (apparently a single screw) crashed a suborbital spaceplane, killing most of the passengers... To counter such threat, space development companies, such as Technora, were forced to put "Debris Sections" to collect it. One of such crews, of the spaceship DS-12, is composed by Hachirota "Hachimaki" Hoshino, Ai Tanabe, Fee Carmichael and Yuri Mihairokoh (3). "Planetes" is their story.

[Several spoilers for the manga "Planetes"]

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## The Timeline

2024 - Astronaut Ibun Fadran dies and he had a space funeral.

2025 - Goro Hoshino, Hachimaki's father, is born.

2030 - Space funerals are prohibited on Earth's orbit. Technora International Corporation is founded. Moon colonization for the mining of Helium-3 began [speculation]

2040 - Mars Development begins. Earth Development Community (EDC) is created to regulate space development (4). [Speculation]

July 27, 2038 - Yuri Mihairokoh is born in Russia.

May 8, 2039 - Fee Carmichael is born in Florida, USA

2044 - The first DS-12 spacecraft is build

Beginning of 2050 - Goro Hoshino marries Haruko (?)

March, 2050 - Goro Hoshino leaves Earth in a mission for Mars Development Project

July, 2050 - Goro Hoshino arrives on Mars

October 20, 2050 - Hachirota "Hachimaki" Hoshino, son of Goro and Haruko Hoshino, is born. Goro Hoshino was in Mars, on EDC Olympus Research Base. The first Martian baseball game is played. Note: there are more than 100 people living in Mars at that time.

2050-2060 - Exploration of the Asteroid Belt. One of the leaders was Astronaut Harry Rolland.

Spring of 2056 - a little baby (less than a year-old) is abandoned in front of the house of Koji Tanabe, former rock singer and actual windmill technician for Eastern Japan Electric Power Corp., and Yukari Tanabe, elementary school teacher. They adopt the kid and give her the name Ai.

2062 - Kyutaro Hoshino (Hachimaki's brother) is born. Nono is born in the Moon. The sea level in Earth began to rise.

2062 - Fee marries (husband's name is not given) [speculation]

2063 - Zephram Cochrane develops the Warp Drive

2065 - Al Carmichael, Fee's son, is born [speculation]

2066 - Yuri marries a Japanese woman.

June 13, 2068 - The Accident of Spaceplane Alnail 8, caused by space debris, and Yuri Mikairokoh's wife dies. Due public clamor, Technora Corporation began to collect space debris (5).

2072 - Hachirota Hoshino becomes part of the crew of DS-12, meeting Fee and Yuri.

2074 - Hachirota "Hachimaki" Hoshino, Fee Carmichael and Yuri Mihairokoh collect space debris for Technora in DS-12 "Toy-Box" ("Planetes" narration begins)

January of 2074 - Hachimaki saves Yuri's life in a work-related accident.

July of 2074 - Hachimaki breaks his leg in a work accident and he is treated in the hospital of Crater City Archimedes. He meets Nono, a "young woman" and Astronaut Harry Rolland.

October of 2074 - Harry Rolland commits suicide. Nono reveals that she is a 12-years-old Lunarian. Hachimaki is send to Earth for more detailed exams.

November of 2074 - Hachimaki returns to the "Tox-Box" crew. [Speculation]

December of 2074/January of 2075 - A series of terrorist acts by the "Space Defense League" happens in the lunar cities, culminating with a tentative to create the Kessler Syndrome, destroying the International Orbital Control Center of Orbital Trajectories. This is stopped by DS-12 captain Fee Carmichael, but the "Tox-Box" is destroyed on it.

January of 2075 - Yuri and Hachi visits Hachi's family in Chiba, Japan, meeting Hachi's mother Haruko and his brother Kyutaro, who manage to launch his rocket - the "Hoshino-1" - to the space with the help of Yuri. Fee, Hachi and Yuri receives a new ship from the Ministry of Space, for Debris Clearing.

In the middle of 2075 - Hachimaki is temporally lost in the orbit of the moon in the middle of a solar radiation storm. Due the incident, he develops "Deep-Space Disorder," a psychological condition that includes hallucinations. He began to improve after he visits the place of the Tandem Miller Nuclear Fusion Engine, created for interplanetary travel, for the spaceship Von Braun.

November of 2075 - The EDC decides to build a permanent resource site - a mine - on Jupiter, before for the end of the century, for extraction of heavy hydrogen and helium 3 - the first manned mission to Jupiter will take place on Spaceship Von Braun that is being built by Dr. Werner Locksmith.

December of 2075 - Hachi meets Dr. Werner Locksmith, and Fee and Yuri meets Goro, Hachi's father. Explosion of the second Tandem Miller engine on its lunar underground site, causing two trillion dollar damage. Hachi's father becomes the chief engineer of the Jupiter mission.

January of 2076 - Rookie astronaut Ai Tanabe joins the crew of DS-12. They find the body of astronaut Ibun Fadran.

February of 2076 - Hachi leaves DS-12 for the first round of crew training for the Jupiter Mission.

March of 2076 - Soon after pass to the second round, Hachi survives a terrorist attempt by Space Defense League. Hachi's hallucinations return. On a visit to the Von Braun, Hachi witness a terrorist attempt against the mission.

September of 2075 - Hachi, Goro and Tanabe escape an attempt against Goro's life by the Space Defense League, capturing one of their leaders. SDL attacks stops. One week later, Hachi is accepted to the Jupiter Crew.

October of 2075 - Hachi and his crew colleague Leonov crash a training ship in the dark side of the moon, due damage caused by debris and a solar flare. Leonov is incapacitated. They are rescued by the DS-12. Hachi's feelings for Tanabe grow.

November of 2075 - Leonov is sent to a hospital on Earth - after visit him, Hachi visits his family on Earth. He almost drowns in the sea. At the end of the month, Hachi returns to Orientale Basin City on Moon.

February, 2077 - Hachi is partnered with EVA specialist Sally Silverstone. While camping in the surface of Moon, Hachi have a hallucination. His loneliness grows.

April 2077 - Sally Silverstone helps Hachi to recover from his condition. Hachi returns to Earth and visit Tanabe and her family.

June 2077 - Hachi and Ai decide to marry before he leaves to Jupiter.

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The Genealogies:

Although at first look, the crew of DS-12 didn't look a probable place to look for members of Wold Newton family, surprises always came for the places that one could less expected...

Born in 2038, DS-12 co-pilot Yuri Mihairokoh was a space material engineer for Technora Corporation before become a debris collector, after the accident of Alnail 8 that claimed the life of his wife. He was the late son of Tania Simonova and Dmitri Mihairokoh, both space engineers, first for Russian Space Program, and later for Technora Corporation. Tania was the result of a lightening affair between space engineer Natalya Fyodorovna Simonova and James Bond during the "GoldenEye" crisis (6).

Fee Carmichael, the tomboy captain of DS-12, is the daughter of Robert Carmichael, an electronic engineer, and Sidney Hawkins, a social worker - and both would contribute for Fee's strong and caring personality. Fee's mother is the daughter of Virgil "Static" Hawkins and Daisy Watkins (7), and sister of Chicago P.D. Homicide Detective Daniel

Hawkins (8). But the most surprising contribution came from Fee's father line: he was son of Terry Carmichael, a Defense Intelligence agent, responsible by the recovering of two atomic missiles, stolen by a rogue Air Force pilot (9). Terry Carmichael in turn was the unexpected daughter of Roger "Race" Bannon and "Jezebel Jade" (10). Certainly such ancestry could explain Fee's actions at Kessler Syndrome terrorist attempt that prevented that mankind could be cut from space forever (11). Fee would also be the ancestor of Starfleet Officer Lt. Nyota Uhura.

EVA specialist Hachirota "Hachimaki" Hoshino is the older son of Haruko and Goro Hoshino, a space engineer/astronaut of Mars Development Project, and he has a younger brother, Kyutaro, who yearns to become also a space engineer. His mother Haruko is daughter of Mitsune "Kitsune" Konno (12) and Yahiko Suzuki, brother of Sakura Komogawa, mother of pioneer astronaut Asumi Komogawa (13). Goro Hoshino is, although his mother Kaoru, grandson of car racing legend Go Mifune and his wife, Michi Shimura (apparently the need for speed runs in the family, the only difference is that for Go and Michi's grandson, it become a need for the Second Cosmic Velocity - Earth's Escape Velocity). His father Hiroshi was brother of FBI bomb expert Lisa Hoshino (14).

The genealogy of Hachimaki's wife Ai Tanabe is a mystery... she is the adopted daughter of Koji Tanabe and Yukari Tanabe, but her biological parents are unknown... her red hair and caring but strong temper, together with the results of genetic screening, indicate that she could be related to legendary swordmaster Kenshin Himura (15). Hachimaki Hoshino and Ai Tanabe are ancestors of Starfleet Officer Lt. Hikaru Sulu.

Apparently, British EVA specialist Sally Silverstone is a direct descendent of Long John Silver - apparently, her branch of her family, aware of their ancestor's bad name, changed their name to "Silverstone" (16).

Dr. Werner Locksmith, the designer of the Spaceship Von Braun and of the Tandem Miller Nuclear Fusion Engine, is son of Henry Locksmith, a Technora executive, and Heather Wiseman, daughter of Michael Wiseman. One interesting note is that before she married Henry Locksmith, Heather was married to John Powell, an electronic engineer - from her first marriage came Gregory Powell, U.S. Robots / Cybertronics field technician and astronaut (17).

At first look, one cynical person could say that they waste their genetic gifts - nothing could be more false. These are the people who help to guarantee Mankind's dream to reach the stars, and that also guarantee that our loved ones will be able to return save and sound from the Infinite Beyond... Fee, Ai, Hachimaki and Yuri, welcome to the Wold Newton Universe... and thank you for being there.

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"Where do you think the limit is between the Earth and space? There from the Thermosphere at about 100 kilometers altitude, the density decreases abruptly, and at 200... hum... I you ask me... the limit doesn't exist. This world... has no limits. Now, I find that wonderful."

Yuri Mihairokoh, co-pilot of DS-12 "Toy-Box"

"We're astronauts. No matter where we go... we always have to come back alive. And we will."

Hachirota "Hachimaki" Hoshino, EVA specialist

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Notes:

(1) Another reason for the Von Braun Mission is to obtain a fuel station for the newly developed FTL drives - The Warp Drive, by Dr. Zephram Cochrane (in 2063) and at same time, the Hyperatomic Drive, by "Brain", the spintronic supercomputer of U.S. Robots / Cybertronics. Beyond the great power intake, specific characteristics of such drives prevent its use until 22<sup>nd</sup> Century. More on the problems of the FTL drives on the upcoming article "The Ultimate Beanstalk: The Construction of the Space Elevator"

(2) Although there are earlier missions to the Jovian moons, the Von Braun mission was the first to go to the planet itself, to mine its helium-3 and heavy hydrogen. The civilian Jupiter Station depicted in later "Star Trek" stories would be the mining (and later research) station build by the crew of Von Braun spaceship.

(3) One interesting point is that while the Starfleet mentions that the origin for their tradition of put a international (and later extraterrestrial) crew on their starships came from the first formation of Von Braun's Jupiter Mission crew, *this* formation was inspired by the workings of the crews of Debris collector ships, that proved that nationality of its members isn't a great problem, as most military space forces retroactively defended then.

(4) It is possible that the Earth Development Community (EDC) was the test tube for the creation of Earth's Federation, as narrated by Star Trek and Isaac Asimov's stories.

(5) One could ask why Technora and other space development companies didn't used the robots developed by U.S. Robots / Cybertronics for such dangerous and needed job - well, the reason is that such corporations didn't see debris collection as something lucrative or important, that deserve the great investment that the development of robots for that function would require: it was just to calm public clamor, therefore the Debris Sections are in the lower end of the corporative structure (specially in Technora). Ironically, the best astronauts would come from the Debris Sections, due their practical training by their jobs.

(6) For more info about this check Win Eckert's "Bond Chronology"

(7) More of Virgil Hawkins's career could be verified in the cartoon "Static Shock."

(8) Daniel Hawkins is the detective who investigated the death of U.S. Robots / Cybertronics founder Dr. Lawrence Robertson - when these events were related in the movie "I, Robot," the names were changed to Detective Del Spooner and Dr. Alfred Lanning.

(9) As narrated in the movie "Broken Arrow" - The U.S. Department of Defense "convinced" the scriptwriter to write the story as if the man responsible to retrieve the stolen nukes was U.S. Air Force Captain Riley Hale, and Agent Carmichael as if she was a park ranger caught in the middle of the events. The truth is that was Agent Terry Carmichael who recovered the stolen weapons, with Capt. Hale as her "sidekick" - probably it was done to keep Agent Carmichael's real identity secret.

(10) From "Jonny Quest." Researcher Patrick Reumann identified Jezebel Jade as being in truth Modesty Blaise. Probably, after the affair with Race Bannon (probably after the events of "Terror Island"), Modesty delivered the child and gave it to a family that she could trust (maybe a former member of The Network?) to raise the child, that in other way could to be a target for Modesty's enemies.

(11) Although in the anime version Fee had blue eyes, in the manga she has *golden/bronze* eyes. It could be possible that she is one of the ancestors of the "Bronze" family of "Lensmen."

(12) From the manga "Love Hina"

(13) From the anime "Futatsu no Spica". As Yuri, also Asumi have a space-related tragedy in her family - her mother died when, early in the century XXI, a rocket project by Asumi's father Tomoro crashed in the middle of a small town, near of the launching center. But, justice be done, the real cause of the accident was that Tomoro's superiors didn't hear his warnings and forced him to resign, don't allowing him to increase the safety of the rocket.

(14) From "Kochikame the movie"

(15) From "Rurouni Kenshin." Another factor is Ai Tanabe's subjective feelings to be part of the space - if she really is related to Kenshin Himura, it could be related to the fact that he is a descendent of Maushu Yousho, as theorized by Dr. Cheryl Huttner.

(16) Considering that Long John Silver is a member of the Star Inn Family, an earlier meteor crash, whose one of the effects was "a yearning for the nautical life." It would be ironically appropriate that one of his descendents become an astronaut.

(17) Michael Wiseman is a member of Holmes Family tree, as demonstrated by Dr. Brad Mengel - that could explain why both Heather's sons, Gregory Powell and Werner Locksmith, are good engineers in their fields (Powell in field robotics, and Locksmith in spacecraft engineering). Also it is interesting to mention that Gregory Powell had two detectives in his descendants: Lincoln Powell, who would be New York's Prefect and an Esper, and whose most difficult case was narrated by Alfred Bester in "The Demolished Man," and Elijah Baley, whose cases investigated together with R. Daneel Olivaw, were narrated by Isaac Asimov.

Sources:

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Rurouni Kenshin (anime/manga)

Static Shock (cartoon)

Love Hina (manga)

Futatsu no Spica (anime)

Kochikame the movie