

System Brief: Neubayern

PHYSICAL DATA

Neubayern was the name applied to the Groombridge 1618 star system by Bavarian settlers. The system was first visited by a Bavarian probe in 2142, and colonized in 2169. The star lies 14.599 light years from Sol, but due to the distance limitations of stutterwarp drive, travel is 18.763 light years and requires three jumps. There are three neighbors accessible by stutterwarp travel: Augereau, Bessieres, and DM+53 1320.

The primary is a K7V star, with a radius of 0.552 Sol and a mass of 0.534 Sol. Its average luminosity is 0.064 Sol, with a stellar effective temperature of 3860°K, and an absolute magnitude of 8.32. The life zone of the primary ranges from 0.182 au to 0.367 au; there is an extensive planetary system, including one planet within the life zone.

TRAVEL DATA

System contains eleven planets and seven satellites. Stellar 0.0001 g-gradient is located at 1.790 au; 0.1 g-gradient is located at 0.057 au. Planets I – IV are within the stellar 0.0001 g-gradient; planets V – XI are outside. Stutterwarp discharge is possible at the following system bodies: I, III IV, VI a, IX, IX b, IX c, and XI, in addition to primary; primary discharge body is XI for ships transiting the system, or at I for ships bound for the colony.

I - Nibelungen¹

Planet is a Garden body orbiting at 0.30 au with a ring system. Travel distance within threshold is 1.49 au. Stutterwarp discharge is possible from an altitude of 6,032 km. A German colony is present on the world.

II - Darmstadt¹

Planet is Rocky body orbiting at 0.48 au with no satellites. Travel distance within threshold is 1.31 au. Stutterwarp discharge is not possible due to sub-surface 0.1 g-gradient.

III - Munchen¹

Planet is Failed Core body orbiting at 1.01 au with no satellites. Travel distance within threshold is 0.78 au. Stutterwarp discharge is possible from an altitude of 7,147 km.

IV - Wiesbaden¹

Planet is Failed Core body orbiting at 1.41 au with no satellites. Travel distance within threshold is 0.38 au. Stutterwarp discharge is possible from an altitude of 5,956 km.

V - Neuscvhwanstein¹

Planet is Ice Ball body orbiting at 2.82 au with one satellite. Planet is located beyond threshold. Stutterwarp discharge at planet is not possible due to sub-surface 0.1 g-gradient. Satellites consist of one Ice Ball. Stutterwarp discharge is not possible at the satellite.

System Brief: Neubayern

VI - Essen¹

Planet is Ice Ball body orbiting at 5.36 au with two satellites. Planet is located beyond threshold. Stutterwarp discharge at planet is not possible due to sub-surface 0.1 g-gradient. Satellites consist of one Failed Core and one Chunk. Stutterwarp discharge is possible at the Failed Core satellite at an altitude of 2,880 km.

VII - Duisburg¹

Planet is Rock body orbiting at 10.73 au with no satellites. Planet is located beyond threshold. Stutterwarp discharge at planet is not possible due to sub-surface 0.1 g-gradient.

VIII - Dortmund¹

Planet is Ice Ball body orbiting at 20.38 au with no satellites. Planet is located beyond threshold. Stutterwarp discharge at planet is not possible due to sub-surface 0.1 g-gradient.

IX - Frankfurt¹

Planet is Ice Ball body orbiting at 44.83 au with three satellites. Planet is located beyond threshold. Stutterwarp discharge is possible from an altitude of 772 km. Satellites consist of one Ring, one Rock, and one Ice Ball. Stutterwarp discharge is possible at the Rock satellite at an altitude of 705 km, and the Ice Ball at an altitude of 143 km

X - Augsburg¹

Planet is Ice Ball body orbiting at 94.15 au with no satellites. Planet is located beyond threshold. Stutterwarp discharge at planet is not possible due to sub-surface 0.1 g-gradient.

XI - Wurzburg¹

Planet is Failed Core body orbiting at 20.38 au with no satellites. Planet is located beyond threshold. Stutterwarp discharge is possible from an altitude of 12,603 km.

SOURCES

1. Colonial Atlas, © 1987 GDW / © 2005 FFE, provides canon information on the Neubayern system and Nibelungen world.

System Name

Travel Data for Neubayern

Navigational Data

Colonial Region	French
Direct Distance From Sol	14.599 ly
Travel Distance from Sol	18.763 ly
Jumps from Sol	3

Stellar Coordinates			
	Primary	Companion	Companion
X	-8.4		
Y	4.4		
Z	11.1		

Neighbour System	Distance
Augereau	4.231 ly
Bessieres	7.113 ly
DM+53 1320	5.715 ly
	ly
	ly
	ly
	ly
	ly

System Bodies with Stutterwarp Discharge (0.1G Gradient) Information

	Primary	Companion	Companion	Companion	Companion
Stellar 0.1G Grad	0.057				au
Stellar 0.0001G Grad	1.790				au

Orbit	Orbit	Body Type	Position	T-Travel	Diameter, km	0.1G, km	0.1G Altitude
I	0.30 au	Garden	inside	1.49 au	8,000	10,032	6,032 km
a	0.016 10 ⁶ km	Ring		au	-	-	none km
II	0.48 au	Rock	inside	1.31 au	1,000	400	none km
III	1.01 au	Failed Core	inside	0.78 au	12,000	13,147	7,147 km
IV	1.41 au	Failed Core	inside	0.38 au	10,000	10,956	5,956 km
V	2.82 au	Ice Ball	outside	0.00 au	9,000	3,819	none km
a	0.054 10 ⁶ km	Ice Ball		au	6,000	2,940	none km
VI	5.36 au	Ice Ball	outside	0.00 au	11,000	5,160	none km
a	0.088 10 ⁶ km	Failed Core		au	6,000	5,880	2,880 km
b	0.320 10 ⁶ km	Chunk		au	600	147	none km
VII	10.73 au	Rock	outside	0.00 au	1,000	374	none km
VIII	20.38 au	Ice Ball	outside	0.00 au	2,000	800	none km
IX	44.83 au	Ice Ball	outside	0.00 au	4,000	2,772	772 km
a	0.020 10 ⁶ km	Ring		au	-	-	none km
b	0.180 10 ⁶ km	Rock		au	3,000	2,205	705 km
c	0.280 10 ⁶ km	Ice Ball		au	3,000	1,643	143 km
X	94.15 au	Ice Ball	outside	0.00 au	3,000	1,039	none km
XI	178.88 au	Failed Core	outside	0.00 au	18,000	21,603	12,603 km

Position: Inside indicates body orbits within the stellar 0.0001G gradient.
 T-Travel: The distance that must be traveled within the stellar 0.0001G gradient to reach the body.
 0.1G: The distance of the 0.1G gradient from the core of the body.
 0.1G Altitude: The distance of the 0.1G gradient above the surface of the body. A result of "none" indicates that a usable 0.1G gradient is not available and discharge cannot occur at the body.

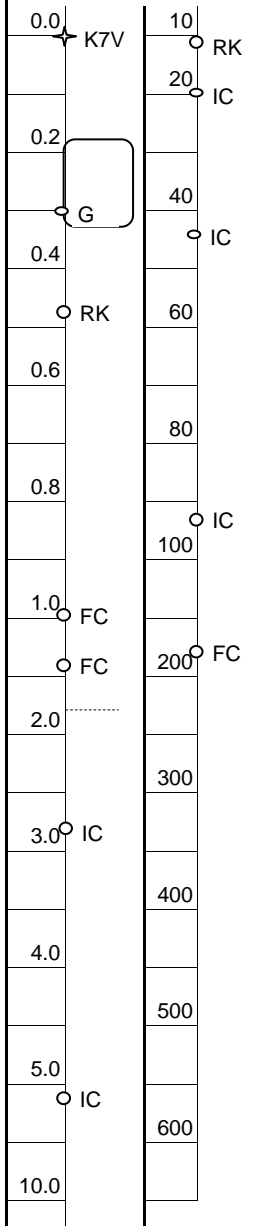
Notes

GDW's Colonial Atlas provides a chapter on the Neubayern System that describes Neubayern I in detail.

Values for all other planets and satellites are unofficial, except for name, type, and satellite quantity.

Germany has a colony on Neubayern I (Nibelungen).

System Schematic



- AS Asteroid
- CH Chunk
- DS Desert
- FC Failed Core
- G Garden
- GG Gas Giant
- GL Glacier
- HH Hot House
- IC Ice Ball
- PoG Post-Garden
- PrG Pre-Garden
- RK Rock
- 0.0001 G Grad
- Life Zone

System Name	Neubayern
-------------	-----------

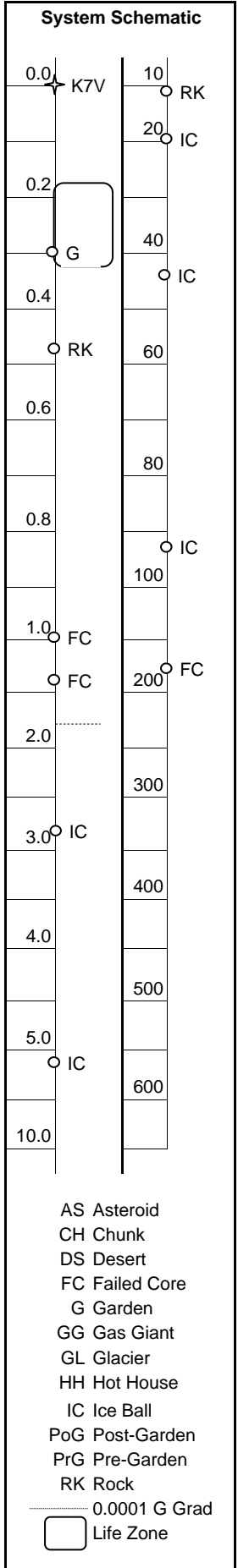
Navigational Data				
Colonial Region		French		
Direct Distance From Sol		14.599	ly	
Travel Distance from Sol		18.763	ly	
Jumps from Sol		3		
Stellar Coordinates				
	Primary	Companion	Companion	Companion
X	-8.4			
Y	4.4			
Z	11.1			

Neighbour System		Distance	
Augereau		4.231	ly
Bessieres		7.113	ly
DM+53 1320		5.715	ly
			ly
			ly
			ly
			ly

Stellar Data						
Name	Primary		Companion	Companion	Companion	Companion
Spectral Class	K	7				
Size	V					
Magnitude	8.32					
Identification No.	3800.0					
Type	Orange Main					
Radius	0.552					
Mass	0.534					
Luminosity	0.0640					
Effective Temp	3860	°K	°K	°K	°K	°K
Orbit Radius	-		au	au	au	au
0.1 G Grad	0.057	au	au	au	au	au
0.0001 G Grad	1.790	au	au	au	au	au
Inner Life Zone	0.182	au	au	au	au	au
Optimal Life Zone	0.253	au	au	au	au	au
Outer Life Zone	0.367	au	au	au	au	au

Planetary Data							
Orbit	Orbit	World Type	Diameter	Gravity	0.001 Grad	0.1 Grad	Sat
I	0.30 au	Garden	8,000 km	0.629 G	317,238 km	10,032 km	1
II	0.48 au	Rock	1,000 km	0.064 G	12,649 km	400 km	0
III	1.01 au	Failed Core	12,000 km	0.480 G	415,692 km	13,145 km	0
IV	1.41 au	Failed Core	10,000 km	0.480 G	346,410 km	10,954 km	0
V	2.82 au	Ice Ball	9,000 km	0.072 G	120,748 km	3,818 km	1
VI	5.36 au	Ice Ball	11,000 km	0.088 G	163,156 km	5,159 km	2
VII	10.73 au	Rock	1,000 km	0.056 G	11,832 km	374 km	0
VIII	20.38 au	Ice Ball	2,000 km	0.064 G	25,298 km	800 km	0
IX	44.83 au	Ice Ball	4,000 km	0.192 G	87,636 km	2,771 km	3
X	94.15 au	Ice Ball	3,000 km	0.048 G	32,863 km	1,039 km	0
XI	178.88 au	Failed Core	18,000 km	0.576 G	683,052 km	21,600 km	0
	au		km	G	- km	- km	
	au		km	G	- km	- km	
	au		km	G	- km	- km	
	au		km	G	- km	- km	
	au		km	G	- km	- km	
	au		km	G	- km	- km	

Notes



System
Name**Neubayern****Planetary Data**

World Name	Nibelungen (I)	Darmstadt (II)	Munchen (III)	Wiesbaden (IV)	schwanstein (V)	Essen (VI)
Orbit, au	0.30	0.30	1.01	1.41	2.82	5.36
Zone	life	outer	outer	outer	outer	outer
Core Type	rocky	rocky	icy	icy	icy	icy
Diameter, km	8,000	1,000	12,000	10,000	9,000	11,000
Density	1.0	0.8	0.5	0.6	0.1	0.1
Min MW Retained	17	vac	15	18	vac	94
Mass	0.252	0.000	0.426	0.296	0.036	0.066
Gravity, G	0.629	0.064	0.480	0.480	0.072	0.088
Atmos Pressure, atm	0.661	0.000	0.496	0.496	0.000	0.091
Escape Velocity, kps	7.170	0.717	5.378	5.378	0.807	0.986
Atmos Type	Dense	Vacuum	Dense	Dense	Vacuum	Very Thin
Actual World Type	Garden	Rock	Failed Core	Failed Core	Ice Ball	Ice Ball
Water Type	Oceans	Rare Ice	Ice Sheets	Ice Sheets	Plentiful	Plentiful
Water Coverage, %	30 %	<1 %	90 %	60 %	20 %	30 %
Atmospheric Oxygen, %	14	none	none	none	none	none
Oxygen Pressure, atm	0.092556124	none	none	none	none	none
Temperature Class	Temperate	Cold-VCold	Cold-VCold	Cold-VCold	Cold-VCold	Cold-VCold
Temperature Range, °C	0° to 30°	0° or less	0° or less	0° or less	0° or less	0° or less
Orbital Period, days	82.1	82.1	507.3	836.9	2367.0	6202.5
Rotation Period	tidal lock	60 days	29.52 hours	41.37 hours	25.18 hours	25.09 hours
Axial Tilt, °	8.0	35.0	33.0	22.0	34.0	34.0
Number of Satellites	0	0	0	0	1	2
0.0001G Gradient, km	317,238	12,651	415,751	346,459	120,765	163,179
0.1G Gradient, km	10,032	400	13,147	10,956	3,819	5,160
Inner Life Zone, km						
Optimal Life Zone, km						
Outer Life Zone, km						
Luminosity						

World Name	Duisburg (VII)	Dortmund (VIII)	Frankfurt (IX)	Augsburg (X)	Wurzburg (XI)
Orbit, au	10.73	20.38	44.83	94.15	178.88
Zone	outer	outer	outer	outer	outer
Core Type	rocky	icy	icy	icy	icy
Diameter, km	1,000	2,000	4,000	3,000	18,000
Density	0.7	0.4	0.6	0.2	0.4
Min MW Retained	vac	vac	118	vac	8
Mass	0.000	0.002	0.019	0.003	1.150
Gravity, G	0.056	0.064	0.192	0.048	0.576
Atmos Pressure, amt	0.000	0.000	0.198	0.000	0.595
Escape Velocity, kps	0.627	0.717	2.151	0.538	6.453
Atmos Type	Vacuum	Vacuum	Very Thin	Vacuum	Dense
Actual World Type	Rock	Ice Ball	Ice Ball	Ice Ball	Failed Core
Water Type	Rare Ice	Plentiful	Plentiful	Plentiful	Ice Sheets
Water Coverage, %	<1 %	40 %	10 %	30 %	20 %
Atmospheric Oxygen, %	none	none	none	none	none
Oxygen Pressure, atm	none	none	none	none	none
Temperature Class	Cold-VCold	Cold-VCold	Cold-VCold	Cold-VCold	Cold-VCold
Temperature Range, °C	0° or less	0° or less	0° or less	0° or less	0° or less
Orbital Period, days	17567.9	45986.0	150028.1	456614.9	1195810.3
Rotation Period	tidal lock	tidal lock	17.01 hours	41 hours	37 hours
Axial Tilt, °	37.0	4.0	16.0	11.0	15.0
Number of Satellites	0	0	3	0	0
0.0001G Gradient, km	11,834	25,302	87,648	32,868	683,149
0.1G Gradient, km	374	800	2,772	1,039	21,603
Inner Life Zone, km					
Optimal Life Zone, km					
Outer Life Zone, km					
Luminosity					

System Name	Neubayern
-------------	------------------

Satellite Data

Satellite Name	Nibelungen (I) a	Montez (V a)	Dusseldorf (VI) a	berhausen (VI) b
Zone	life	outer	outer	outer
Core Type	rocky	icy	rocky	icy
Diameter, km	Ring	6,000	6,000	600
Orbital Radius	2	6	8	120
Orbital Radius, km	16,000	54,000	88,000	1,320,000
Density	0.7	0.2	0.8	0.5
Min MW Retained	vac	vac	39	vac
Mass	0.000	0.021	0.085	0.000
Gravity, G	0.006	0.096	0.384	0.024
Atmos Pressure, atm	0.000	0.000	0.397	0.000
Escape Velocity, kps	0.063	1.076	4.302	0.269
Atmos Type	Vacuum	Vacuum	Standard	Vacuum
Actual World Type	Ring	Ice Ball	Failed Core	Chunk
Water Type	None	Plentiful	Ice Sheets	Rare Ice
Water Coverage, %	0 %	60 %	50 %	<1 %
Atmospheric Oxygen, %	none	none	none	none
Oxygen Pressure, atm	none	none	none	none
Temperature Class	Cold-Hot	Cold-VCold	Cold-VCold	Cold-VCold
Temperature Range, °C	-30° to 30°	0° or less	0° or less	0° or less
Orbital Period, days	None	7.4	11.3	657.4
Rotation Period	None	33.26 hours	17.3 hours	25.02 hours
Axial Tilt, °	None	29.0	21.0	25.0
0.0001G Gradient, km	0	92,965	185,930	4,648
0.1G Gradient, km	0	2,940	5,880	147
Notes				

Satellite Name	Nurnberg (IX) b	Koln (IX) c	Lubeck (IX) a		
Zone	outer	outer	outer		
Core Type	icy	rocky	icy		
Diameter, km	Ring	3,000	3,000		
Orbital Radius	5	45	70		
Orbital Radius, km	20,000	180,000	280,000		
Density	0.1	0.9	0.5		
Min MW Retained	vac	vac	vac		
Mass	0.000	0.012	0.007		
Gravity, G	0.001	0.216	0.120		
Atmos Pressure, amt	0.000	0.000	0.000		
Escape Velocity, kps	0.009	2.420	1.344		
Atmos Type	Vacuum	Vacuum	Vacuum		
Actual World Type	Ring	Rock	Ice Ball		
Water Type	None	Rare Ice	Plentiful		
Water Coverage, %	0 %	<1 %	60 %		
Atmospheric Oxygen, %	none	none	none		
Oxygen Pressure, atm	none	none	none		
Temperature Class	Cold-VCold	Cold-VCold	Cold-VCold		
Temperature Range, °C	0° or less	0° or less	0° or less		
Orbital Period, days	None	61.7	119.7		
Rotation Period	None	33.04 hours	49.02 hours		
Axial Tilt, °	None	23.0	28.0		
0.0001G Gradient, km	0	69,724	51,969		
0.1G Gradient, km	0	2,205	1,643		
Notes					