

Earth/matriX  
SCIENCE TODAY

Different Planets as Unit 1.0:  
Mass, Radii, Density and Other Categories

Charles William Johnson

Earth/matriX  
P.O. Box 231126, New Orleans, LA 70183-1126  
ISSN 1526-3312

[www.earthmatrix.com](http://www.earthmatrix.com)      [johnson@earthmatrix.com](mailto:johnson@earthmatrix.com)

©1997-2013 Copyrighted by Charles William Johnson. All rights reserved.

## **Different Planets as Unit 1.0: Mass, Radii, Density and Selected Categories**

In this presentation of slides, we examine the relationships of the planets as of specific characteristics with different planets being assigned unit 1.0 for different data.

Comparisons based on different planets being set at unit 1.0 allows us to identify different relational aspects among the planets, and progressions in the numerical values otherwise overlooked.

The traditional analysis of maintaining Earth the 3rd planet in the solar system as unit 1.0 denies patterns from appearing when other planets are assigned unit 1.0 for comparison. Without this perspective, it is difficult to teach young astronomers the rich analytical possibility of this system. The scientific literature conventionally presents the Earth as unit 1.0 to its own detriment.

The planet Earth as the unit 1.0 for measurement for the astronomical unit (AU)

Mercury	.39	[.3870320856]
Venus	.72	[.7232620321]
<b>Earth</b>	<b>1.0</b>	<b>[1.0]</b>
Mars	1.52	[1.523395722]
		[Planetoids; asteroids]
Jupiter	5.2	[5.202540107]
Saturn	9.54	[9.552139037]
		[Recognized Break]
Uranus	19.18	[19.21791444]
Neptune		
	30.06	[30.10695187]
Pluto	39.52	[39.43850267]

Conventional Chart

2

It is confusing to create a distance scale based on the third element on the scale.

Source: [http://earthmatrix.com/orbital/astronomical\\_unit.html](http://earthmatrix.com/orbital/astronomical_unit.html)

In this first example,  
note how Earth is  
given as unit 1.0

By changing  
unit 1.0

to Saturn,  
notice the  
change in  
numerical  
pattern  
among the  
values.

Mercury  
Venus  
Earth  
Mars  
  
Jupiter  
Saturn  
Uranus  
Neptune  
  
Pluto

**Mass**

Earth  
Unit  
1.0

Saturn  
Unit  
1.0

0.055  
0.815  
1.0  
0.107  
  
318  
95  
14.5  
17.2  
  
0.002

0.0005789  
0.0085789  
0.0105263  
0.001126315  
  
3.347368  
1.0  
0.152631  
0.181052  
  
0.000021052

Today,  
astronomers  
have dropped  
Pluto as a  
planet, which  
makes no sense,  
as the data reveal  
in this essay.

Earth Unit	Saturn Unit
1.0	1.0

### Radii

Mercury	0.38	0.42222
Venus	0.95	0.105555
<u>Earth</u>	<u>1.0</u>	0.11111
Mars	0.53	0.05888
Jupiter	10.8	1.2
<u>Saturn</u>	9.0	<u>1.0</u>
Uranus	3.93	0.43666
Neptune	3.87	0.43
Pluto	0.178	0.0197777

Another significant question for young astronomers is to reconsider the definition of a “planet”.

In order to understand the entire solar system and its relationships of gravity, it is necessary to retain Pluto as a planet. This becomes obvious from the data in this study

Highest &  
Lowest  
Values  
Paired

Earth  
Unit  
1.0

Saturn  
Unit  
1.0

Earth  
Unit  
1.0

Saturn  
Unit  
1.0

5

**Mass**

**Radii**

Mercury

0.055

0.0005789

0.38

0.42222

Venus

0.015

0.0005789

0.05

0.105555

In this group of slides, the highest and lowest values are highlighted in pairs, successively, until Earth appears without a pair. I have followed the procedure as used in Olympic scoring, where the highest and lowest scores are taken away in order to analyze the remaining. Here, I take away each successive pair of the highest & lowest values until all pairs are considered. In this case, Earth ends the exercise.

Pluto

0.002

0.000021052

0.178

0.0197777

Highest &  
Lowest  
Values  
Paired

Earth  
Unit  
1.0

Saturn  
Unit  
1.0

Earth  
Unit  
1.0

Saturn  
Unit  
1.0

6

**Mass**

**Radii**

Mercury

0.055

0.0005789

0.38

0.42222

Venus

0.815

0.0085789

0.95

0.105555

**Earth**

**1.0**

0.0105263

**1.0**

0.11111

Mars

0.107

0.001126315

0.53

0.05888

Jupiter

**318**

**3.347368**

**10.8**

**1.2**

**Saturn**

95

**1.0**

9.0

**1.0**

Uranus

14.5

0.152631

3.93

0.43666

Neptune

17.2

0.181052

3.87

0.43

Pluto

**0.002**

**0.000021052**

**0.178**

**0.0197777**

Highest &  
Lowest  
Values  
Paired

Earth  
Unit  
1.0

Mass

Saturn  
Unit  
1.0

Earth  
Unit  
1.0

Radii

Saturn  
Unit  
1.0

Mercury

0.055

0.0005789

0.38

0.42222

Venus

0.815

0.0085789

0.95

0.105555

Earth

1.0

0.0105263

1.0

0.11111

Mars

0.107

0.001126315

0.53

0.05888

Jupiter

318

3.347368

10.8

1.2

Saturn

95

1.0

9.0

1.0

Uranus

14.5

0.152631

3.93

0.43666

Neptune

17.2

0.181052

3.87

0.43

Pluto

0.002

**0.000021052**

0.178

**0.0197777**



Highest &  
Lowest  
Values  
Paired

Earth  
Unit  
1.0

Saturn  
Unit  
1.0

Earth  
Unit  
1.0

Saturn  
Unit  
1.0

8

**Mass**

**Radii**

Mercury

0.055

0.0005789

0.38

0.42222

Venus

0.815

0.0085789

0.95

0.105555

Earth

1.0

0.0105263

1.0

0.11111

Mars

0.107

0.001126315

0.53

0.05888

Jupiter

318

3.347368

10.8

1.2

Saturn

95

1.0

9.0

1.0

Uranus

14.5

0.152631

3.93

0.43666

Neptune

17.2

0.181052

3.87

0.43

Pluto

0.002

0.000021052

0.178

0.0197777

Highest &  
Lowest  
Values  
Paired

Earth  
Unit  
1.0

Mass

Saturn  
Unit  
1.0

Earth  
Unit  
1.0

Radii

Saturn  
Unit  
1.0

9

Mercury

0.055

0.0005789

0.38

0.42222

Venus

0.815

0.0085789

0.95

0.105555

Earth

1.0

0.0105263

1.0

0.111111

Mars

0.107

0.001126315

0.53

0.05888

Jupiter

318

3.347368

10.8

1.2

Saturn

95

1.0

9.0

1.0

Uranus

14.5

0.152631

3.93

0.43666

Neptune

17.2

0.181052

3.87

0.43

Pluto

0.002

0.000021052

0.178

0.0197777

**Unpaired****Earth  
Unit****1.0****Mass****Saturn  
Unit****1.0****Earth  
Unit****1.0****Radii****Saturn  
Unit****1.0**

10

Mercury

0.055

0.0005789

0.38

0.42222

Venus

0.815

0.0085789

0.95

0.105555

Earth

1.00.01052631.00.11111

Mars

0.107

0.001126315

0.53

0.05888

Jupiter

318

3.347368

10.8

1.2

Saturn

95

1.0

9.0

1.0

Uranus

14.5

0.152631

3.93

0.43666

Neptune

17.2

0.181052

3.87

0.43

Pluto

0.002

0.000021052

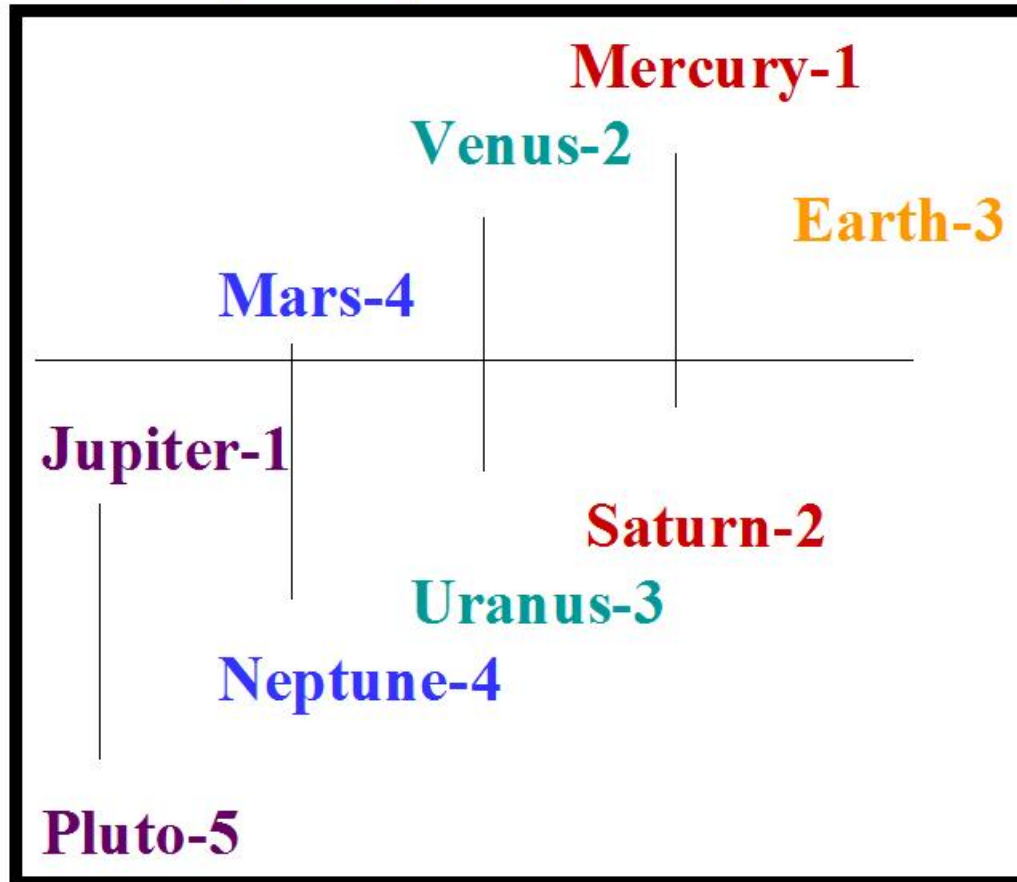
0.178

0.0197777

Pairs by  
Highest & Lowest Values  
Earth is without a pair

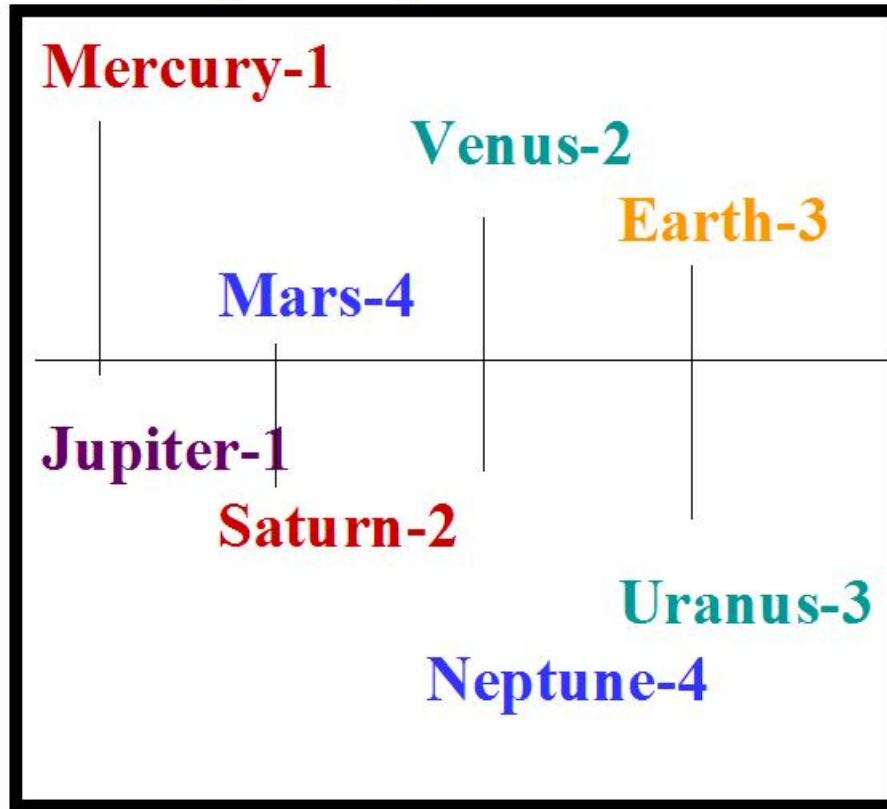
1|5, 4|4, 2|3, 1|2, 3

**Mass**



Pairs by  
Highest & Lowest Values  
without Pluto in Pairs

**Mass**



1|1, 4|2, 2|4, 3|3

In this slide, it is obvious that the planet Saturn must be assigned unit 1.0.

**Saturn**  
**Unit**  
**1.0**

**Density**

Mercury	5.5	7.85714
Venus	5.2	7.4285714
Earth	5.5	7.857142
Mars	3.9	5.571428
Jupiter	1.4	2.0
<b><u>Saturn</u></b>	0.7	<b><u>1.0</u></b>
Uranus	1.3	1.857142
Neptune	1.6	2.285214
Pluto	2.1	3.0




## Mercury as Unit 1.0 for Orbital Period (Days)

**Unit System:**  
**1.0 | 1035.0**

14

<u>Planet</u>	<u>Orbital Periodicity</u>	<u>Mercury @ 1.0</u>
<b>Mercury</b>	<b>87.66144 days</b>	<b>1.0</b>
Venus	224.701	2.56
Earth	365.25636	4.166
Mars	686.6812	7.833
Jupiter	4332.71	49.425
Saturn	10759.721	122.74
Uranus	30685.1868	350.04
Neptune	60190.5955	686.625
<b>Pluto</b>	<b>90780.8157</b>	<b>1035.584</b>



Source: [http://earthmatrix.com/sciencetoday/astronomical\\_unit.html](http://earthmatrix.com/sciencetoday/astronomical_unit.html)

## Mercury as Unit 1.0 for Mean Orbital Velocity (km/sec)

<b>Mercury</b>	<b>47.88 km/sec</b>	<b>10.101</b>	<b>1.0</b>
Venus	35.02	7.38818	.7314
Earth	29.79	6.284810	.6221
Mars	24.13	5.09071	.5039
Jupiter	13.07	2.75738	.2729
Saturn	9.67	2.04008	.2019
Uranus	6.81	1.43670	.1422
Neptune	5.45	1.149789	.1138
<b>Pluto</b>	<b>4.74</b>	<b>1.0</b>	<b>.0989</b>

Pluto as Unit 1.0

Source: [http://earthmatrix.com/sciencetoday/astronomical\\_unit.html](http://earthmatrix.com/sciencetoday/astronomical_unit.html)



## Mercury as Unit 1.0 for Mean Orbital Velocity (km/sec)

<b>Mercury</b>	<p>Notice how Neptune has a value near the diameter: <u>114.591559</u></p> <p>And, Earth has a near multiple of <math>2\pi</math>: <u>6.283185307</u></p>	<b>10.101</b>	<b>1.0</b>
Venus		7.38818	.7314
Earth		<u>6.284810</u>	.6221
Mars		5.09071	.5039
Jupiter		2.75738	.2729
Saturn		2.04008	.2019
Uranus		1.43670	.1422
Neptune		<u>1.149789</u>	.1138
<b>Pluto</b>		<b>1.0</b>	<b>.0989</b>

Pluto as Unit 1.0

## The Planet Mercury as Astronomical Unit (1.0) -AU

<b>Mercury</b>	<b>1.0</b>
Venus	1.846153846
Earth	2.564102564
Mars	3.8974358
Jupiter	13.333
Saturn	24.46153846
Uranus	49.17948718
Neptune	77.076923
<b>Pluto</b>	<b>101.333</b>

**Unit System:**  
**1.0 | 101.0**

Astronomers have dropped the planet Pluto from its status as a planet, classifying it as a “dwarf” planet.

This has been done without considering the progressive data presented in this study.

Source: [http://earthmatrix.com/sciencetoday/astronomical\\_unit.html](http://earthmatrix.com/sciencetoday/astronomical_unit.html)