

MUSICAL SCALES with

CERES as the FUNDAMENTAL

ALL WITHIN .5 PERCENT UNLES MARKED

1. Self ODR – farthest distance from sun over closest

1.1733464928541080927

2. SOLAR DAY

Venus PLANET → 1.2058273481430349048 **WITHIN 0.58 PERCENT**



3. Mass

Uranus PLANET → 1.3989104802334194313,

Venus PLANET → **1.2549629112716535923,**

4. YEAR LENGTH

Neptune PLANET → 1.1194588943886178447` 7.979695490466106,

Saturn PLANET → 1.6003398020522457228` 7.979695490466106,

5. Ang Mom

Earth PLANET → **1.2030965035838398702,**

Eris → **1.2030965035838398702**

6. Radius

Mars PLANET → 1.8025561937176486897

SOLAR DAY by CERES

Venus PLANET → 1.2058273481430349048

```
In[ ]:= 2^FractionalPart[Log[2, EntityValue["Planet", "SolarDay", "EntityAssociation"] /
Entity["MinorPlanet", "Ceres"] ["SolarDay"]]]
```

```
Out[ ]:= { | Mercury → 1.817, Venus → 1.206, Earth → 1.322, Mars → 1.358,
Jupiter → 1.094, Saturn → 1.174, Uranus → 1.899, Neptune → 1.775 | }
```

```
In[ ]:= 2^FractionalPart[Log[2, Entity["MinorPlanet", "Pluto"] ["SolarDay"] /
Entity["MinorPlanet", "Ceres"] ["SolarDay"]]]
```

```
Out[ ]:= 1.056
```

```
In[ ]:= 2^FractionalPart[Log[2, Entity["MinorPlanet", "Eris"] ["SolarDay"] /
Entity["MinorPlanet", "Ceres"] ["SolarDay"]]]
```

```
Out[ ]:= 1.43
```

MASS by CERES

Uranus PLANET → 1.3989104802334194313,

Venus PLANET → 1.2549629112716535923,

near

Neptune PLANET → 1.6506373412836585041`2.9610235401334117

```
In[ ]:= 2^FractionalPart[Log[2, EntityValue["Planet", "Mass", "EntityAssociation"] /
Entity["MinorPlanet", "Ceres"] ["Mass"]]]
```

```
Out[ ]:= { | Mercury → 1.36, Venus → 1.25, Earth → 1.54, Mars → 1.32,
Jupiter → 1.91, Saturn → 1.14, Uranus → 1.40, Neptune → 1.65 | }
```

```
In[*]:= 2^FractionalPart[
  Log[2, Entity["MinorPlanet", "Pluto"]["Mass"] / Entity["MinorPlanet", "Ceres"]["Mass"]]]
```

```
Out[*]= 1.73
```

```
In[*]:= 2^FractionalPart[
  Log[2, Entity["MinorPlanet", "Eris"]["Mass"] / Entity["MinorPlanet", "Ceres"]["Mass"]]]
```

```
Out[*]= 1.10
```

```
In[*]:= -----
```



BODIES IN HARMONY with Ceres

YEAR LENGTH

Neptune → 1.1194589,

Saturn → 1.6003398,

Near musical harmony

Mercury → 1.193756,

```
In[*]:= 2^FractionalPart[Log[2, EntityValue["Planet", "OrbitPeriod", "EntityAssociation"] /
  Entity["MinorPlanet", "Ceres"]["OrbitPeriod"]]]
```

```
Out[*]= { | Mercury → 0.8376922, Venus → 0.53493151, Earth → 0.86954356, Mars → 0.81772523,
  Jupiter → 1.2893601, Saturn → 1.6003398, Uranus → 1.1414849, Neptune → 1.1194589 | }
```

```
In[*]:= 2^FractionalPart[Log[2, Entity["MinorPlanet", "Ceres"]["OrbitPeriod"] /
  EntityValue["Planet", "OrbitPeriod", "EntityAssociation"]]]
```

```
Out[*]= { | Mercury → 1.193756, Venus → 1.8693982,
  Earth → 1.1500286, Mars → 1.2229047, Jupiter → 0.77557850,
  Saturn → 0.62486729, Uranus → 0.87605185, Neptune → 0.89328872 | }
```

```
In[*]:= 2^FractionalPart[Log[2, Entity["MinorPlanet", "Eris"]["OrbitPeriod"] /
  Entity["MinorPlanet", "Ceres"]["OrbitPeriod"]]]
```

```
Out[*]= 1.8916
```

```
In[*]:= 2^FractionalPart[Log[2, Entity["MinorPlanet", "Pluto"]["OrbitPeriod"] /
  Entity["MinorPlanet", "Ceres"]["OrbitPeriod"]]]
```

```
Out[*]= 1.6841723
```

In[]:= -----



Moment Of Inertia

In[]:=

```
2^FractionalPart[Log[2, EntityValue["Planet", "MomentOfInertia", "EntityAssociation"] /
  Entity["MinorPlanet", "Ceres"] ["MomentOfInertia"]]]
```

Out[]:= Inertia Moment Of

```
<| Mercury → 1.8, Venus → 1.3, Earth → 1.78, Mars → 1.92,
  Jupiter → 1.60, Saturn → 1.10, Uranus → 1.09, Neptune → 1.6 |>
```

MAKE ANG MOMENTUM LIST

```
angV = 2 / 5 * Entity["Planet", "Venus"] ["Mass"] *
  Entity["Planet", "Venus"] ["Radius"] ^ 2 * Entity["Planet", "Venus"] ["SolarDay"] * 2 * π
```

Out[]:= -----¹²

Out[]:= 2.02 × 10³⁴ kg mi²days

```
angM = 2 / 5 * Entity["Planet", "Mercury"] ["Mass"] *
  Entity["Planet", "Mercury"] ["Radius"] ^ 2 * Entity["Planet", "Mercury"] ["SolarDay"] * 2 * π
```

Out[]:= 3.35 × 10³² kg mi²days

```
angE = 2 / 5 * Entity["Planet", "Earth"] ["Mass"] *
  Entity["Planet", "Earth"] ["Radius"] ^ 2 * Entity["Planet", "Earth"] ["SolarDay"] * 2 * π
```

Out[]:= 5.65 × 10³³ kg mi²h

```
angMa = 2 / 5 * Entity["Planet", "Mars"] ["Mass"] *
  Entity["Planet", "Mars"] ["Radius"] ^ 2 * Entity["Planet", "Mars"] ["SolarDay"] * 2 * π
```

Out[]:= 1.764 × 10³² kg mi²h

```
angC = 2 / 5 * Entity["MinorPlanet", "Ceres"] ["Mass"] *
  Entity["MinorPlanet", "Ceres"] ["Radius"] ^ 2 *
  Entity["MinorPlanet", "Ceres"] ["SolarDay"] * 2 * π
```

Out[]:= 1.84 × 10²⁷ kg mi²h

```
In[ ]:= angJ = 2 / 5 * Entity["Planet", "Jupiter"] ["Mass"] *
          Entity["Planet", "Jupiter"] ["Radius"] ^2 * Entity["Planet", "Jupiter"] ["SolarDay"] * 2 * π
```

```
Out[ ]:= 8.94 × 1037 kg mi2h
```

```
In[ ]:= angS = 2 / 5 * Entity["Planet", "Saturn"] ["Mass"] *
          Entity["Planet", "Saturn"] ["Radius"] ^2 * Entity["Planet", "Saturn"] ["SolarDay"] * 2 * π
```

```
Out[ ]:= 1.998 × 1037 kg mi2h
```

```
In[ ]:= angU = 2 / 5 * Entity["Planet", "Uranus"] ["Mass"] *
          Entity["Planet", "Uranus"] ["Radius"] ^2 * Entity["Planet", "Uranus"] ["SolarDay"] * 2 * π
```

```
Out[ ]:= 9.34 × 1035 kg mi2h
```

```
In[ ]:= angN = 2 / 5 * Entity["Planet", "Neptune"] ["Mass"] *
          Entity["Planet", "Neptune"] ["Radius"] ^2 * Entity["Planet", "Neptune"] ["SolarDay"] * 2 * π
```

```
Out[ ]:= 9.7 × 1035 kg mi2h
```

```
In[ ]:= angP = 2 / 5 * Entity["MinorPlanet", "Pluto"] ["Mass"] *
          Entity["MinorPlanet", "Pluto"] ["Radius"] ^2 *
          Entity["MinorPlanet", "Pluto"] ["SolarDay"] * 2 * π
```

```
Out[ ]:= 1.149 × 1029 kg mi2days
```

```
In[ ]:= angE = 2 / 5 * Entity["MinorPlanet", "Eris"] ["Mass"] *
          Entity["MinorPlanet", "Eris"] ["Radius"] ^2 *
          Entity["MinorPlanet", "Eris"] ["SolarDay"] * 2 * π
```

```
Out[ ]:= 5.7 × 1029 kg mi2h
```

```
-----
```

```
In[ ]:= angMom = List[angM, angV, angE, angMa, angC, angJ, angS, angU, angN, angP, angE]
```

```
Out[ ]:= { 3.35 × 1032 kg mi2days , 2.02 × 1034 kg mi2days , 5.7 × 1029 kg mi2h ,
          1.764 × 1032 kg mi2h , 1.84 × 1027 kg mi2h , 8.94 × 1037 kg mi2h , 1.998 × 1037 kg mi2h ,
          9.34 × 1035 kg mi2h , 9.7 × 1035 kg mi2h , 1.149 × 1029 kg mi2days , 5.7 × 1029 kg mi2h }
```

Ceres Ang Mom

Earth n Eris 1.2, Jupiter 1.41, Saturn 1.26, Uranus 1.89, Mercury 1.04

1.2030965035838398702`2.3817519886273533,

1.2030965035838398702`2.3817519886273533

In[]:= 2^FractionalPart[Log[2, angMom / angC]]

Out[]:= {1.04, 1.96, 1.20, 1.46, 1.00, 1.41, 1.26, 1.89, 1.96, 1.46, 1.20}

Radius by Ceres

within .5 percent

Mars PLANET → 1.8025561937176486897`3.323660855758724

In[]:= 2^FractionalPart[Log[2, EntityValue["Planet", "Radius", "EntityAssociation"] / Entity["MinorPlanet", "Ceres"]["Radius"]]]

Out[]:= { Mercury → 1.30, Venus → 1.61, Earth → 1.694, Mars → 1.803, Jupiter → 1.162, Saturn → 1.94, Uranus → 1.69, Neptune → 1.64 }

In[]:= 2^FractionalPart[Log[2, Entity["MinorPlanet", "Eris"]["Radius"] / Entity["MinorPlanet", "Ceres"]["Radius"]]]

Out[]:= 1.237

In[]:= 2^FractionalPart[Log[2, Entity["MinorPlanet", "Pluto"]["Radius"] / Entity["MinorPlanet", "Ceres"]["Radius"]]]

Out[]:= 1.266

change in orbital distance by Ceres

```
In[ ]:= Entity["MinorPlanet", "Ceres"]["Aphelion"] / Entity["MinorPlanet", "Ceres"]["Perihelion"]
```

```
Out[ ]:= 1.1733465
```