NEWS PRESENCE OF ASTEROID NAMES RELATES TO ANGLES TO SUN -- COLLECTION STARTED ON Feb 15, 2022, EVALUATED DAILY

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        17980 Vanschaik (1999 JN56)
                                      766 Moguntia (1913 SW)
                                                                  21560 Analyons (1998 QC91)
                  90377 Sedna (2003 VB12) , 225088 (2007 OR10) , 136199 Eris (2003 UB313)
       1 Ceres .
                                     90482 Orcus (2004 DW),
                                                               136472 Makemake (2005 FY9)
                                                                                                Pluto
        50000 Quaoar (2002 LM60)
        10199 Chariklo (1997 CU26)
                                      23238 Ocasio-Cortez (2000 WU111),
                                                                           13123 Tyson (1994 KA)
<code>m[∗]:= Tally[Flatten[Table[asteroididentitylist[i]]["Classes"], {i, 1211}]]]</code>
        iii asteroid belt , 1159 }, { iii main belt asteroids , 1105 }, { iii outer main belt asteroids ,
         \parallel \parallel \text{ inner main belt asteroids}, 10 \}, \{ \parallel \parallel \text{ Apollo asteroids}, 7 \}, \{ \parallel \parallel \text{ near-Earth asteroids}, 9 \},
        Kuiper Belt objects , 6 , { it trans-Neptunian objects , 9 } , { it Jupiter Trojan asteroids , 15 } ,
        | Plutoids |, 4 |, { | | scattered disk objects |, 3 |, { | | centaur asteroids |, 1 | }
In[@]:= Length[asteroididentitylist]
Out[•]= 1211
In[*]:= asteroidnames = Import["asteroidnames1211.m"];
```

```
In[•]:= Length[asteroidnames]
Out[ \circ ] = 1211
In[*]:= check = Import["MinorPlanetSunData.csv"][[-1, 1]
Out[ \circ ] = 2022-12-01
In[o]:= dates = Import["META RESULTS.csv"][1, 2;; All]
out_{-} = \{2022-02-15, 2022-02-16, 2022-02-17, 2022-02-18, 2022-02-19, 2022-02-20, 2022-02-21, 2022-02-18, 2022-02-19, 2022-02-20, 2022-02-21, 2022-02-19, 2022-02-20, 2022-02-21, 2022-02-19, 2022-02-20, 2022-02-21, 2022-02-20, 2022-02-21, 2022-02-20, 2022-02-21, 2022-02-20, 2022-02-21, 2022-02-20, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-02-21, 2022-
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In[*]:= Position[dates, "2022-10-18"]
Out[\bullet] = \{ \{246\} \}
In[n]:= do = Table[DateObject[dates[i]]], {i, Length[dates]}]
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        Mon 28 Nov 2022
In[•]:= Length[do]
Out[•]= 291
     extantSun = Import["MinorPlanetSunData.csv"][[1;; -1]];
In[*]:= metaresults = Import["META RESULTS.csv"];
```

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log[\cdot]:= For now i = 291, now i \le 291(*Length[do]*), now i++,
                          now = do[[nowi]];
                          results = metaresults[2;; All, nowi+1];
                         (*degrees=Table[UnitConvert[MinorPlanetData[
                                               asteroididentitylist[[j]],Dated["GeocentricEclipticLongitude",now]],
                                           "AngularDegrees"],{j,1,Length[asteroididentitylist]}];*)
                         degrees = Table
                                 \label{lem:convert} \textbf{UnitConvert} \Big[ \textbf{EntityValue} \Big[ \textbf{asteroididentitylist} \big[ \textbf{j} \big] \big], \ \textbf{EntityProperty} \Big[ \textbf{"MinorPlanet"}, \\ \textbf{matter a start of the property} \Big] \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of the property} \Big] \\ \textbf{MinorPlanet} \Big[ \textbf{matter a start of th
                                              "GeocentricEclipticLongitude", \{\text{"Location"} \rightarrow \text{London city}, \text{"Date"} \rightarrow \text{now}\}\]
                                      "AngularDegrees", {j, 1, Length[asteroididentitylist]};
                         Sun = UnitConvert[
                                  StarData["Sun", Dated["GeocentricEclipticLongitude", now]], "AngularDegrees"];
                         diffSun = Mod[QuantityMagnitude[degrees - Sun], 360];
                          nowSun = Join[{dates[[nowi]]}, Riffle[results, diffSun]];
                          resultsSun = AppendTo[extantSun, nowSun];
                         Export["Sun results T2.csv", resultsSun];
                         Export["Sun results T2" <> DateString[now,
                                     {"Year", "/", "Month", "/", "Day", " ", "Hour", "Minute"}]<> ".csv", resultsSun];
                         extantSun = resultsSun;
 In[*]:= If[Position[resultsSun[All]], _Mod] == {}, Export["MinorPlanetSunData.csv", resultsSun]]
Out[] = MinorPlanetSunData.csv
```