The universal law of precession is:

$$\Delta\phi = \frac{2\pi}{c^2}\left(\langle V_N\rangle^2 + 3\omega r\right) \quad - (1)$$

Here $\langle V_N\rangle$ is the mean Newtonian orbital linear velocity, r is the distance between m orbiting M and ω is the angular velocity of frame rotation due to the underlying torsion. In the previous note, was worked out for the Hulse Taylor binary pulsar. In this note the universal law of precession (ULP) is applied to the planets of the solar system. In the literature the total observed precession of planets is given $\Delta\phi_T$, and the precession that remains after is given $\Delta\phi_R$. For outer planets $\Delta\phi_R \ll \Delta\phi_T$. In the obsolete standard model physics it is claimed that $\Delta\phi_R$ is the same as the precession, $\Delta\phi_E$, due to the force law of general relativity developed by Einstein, Einsteinian general relativity (EGR). However, it is now known in many ways that this cannot be true, so a new universal law of precession. Eq. (1), has been developed. Table 1 gives data for the planets. Precessions are in radians, and S.I. units are used.

planet	$\Delta\phi_T$	$\Delta\phi_R$	$\Delta\phi_E$	$\langle V_N\rangle$	$\langle r\rangle$ (metres)	E
Mercury	2.778×10^{-4}	2.090×10^{-6}	2.085×10^{-6}	4.74×10^4	5.79×10^{10}	0.2056
Venus	9.989×10^{-5}	4.072×10^{-7}	4.184×10^{-7}	3.50×10^4	1.08×10^{11}	0.0068
Earth	5.551×10^{-4}	2.424×10^{-7}	1.862×10^{-7}	2.98×10^4	1.50×10^{11}	0.0167
Mars	7.893×10^{-4}		6.553×10^{-8}	2.41×10^4	2.28×10^{11}	0.0934
Jupiter	3.176×10^{-4}		3.024×10^{-9}	1.31×10^4	7.79×10^{11}	0.0483
Saturn	9.454×10^{-4}		6.647×10^{-10}	9.30×10^3	1.43×10^{12}	0.056
Uranus	1.619×10^{-4}		1.156×10^{-10}	6.80×10^3	2.87×10^{12}	0.0461
Neptune	1.745×10^{-5}		3.758×10^{-11}	5.41×10^3	4.50×10^{12}	0.01
Pluto			2.020×10^{-11}	4.70×10^3	5.91×10^{12}	0.2484
Hulse Taylor binary Pulsar	0.0738		0.0414	1.25×10^6	$d = $ half right lat. tudo $= 5.37\times10^8$	0.8831

In comparison with the planets it can be seen that the precession of the

2) Hulse Taylor binary pulsar is orders of magnitude larger than the processions of the planets. In the HT pulsar the Einstein theory fails completely. In the planets, $\Delta\phi_E << \Delta\phi_T$ where $\Delta\phi_E$ is the result of the Einsteinian general relativity and $\Delta\phi_T$ is the experimentally observed total precession. For Neptune, $\Delta\phi_E$ is five orders of magnitude smaller than $\Delta\phi_T$.

So to a rational scientist, it is clear that the Einstein theory fails completely. Soft for the solar system and for the HT binary pulsar. For the planets Mars to Pluto, the gravity $\Delta\phi_R$ is very difficult to find in the literature, so close is nothing well worth to compare the claim of EGR, the precession $\Delta\phi_E$.

The dogmatists of the standard model claim that EGR is always very precise. However, there are almost a hundred refutations of this dogmatism in the UFT series alone, so the dogmatic claims have become wildly irrational, and have lost all touch with science and reality.

The universal law of precession, eq. (1), is based on the widely accepted ECE2 theory, and express all precession in terms of the angular velocity ω of frame rotation, due to spacetime torsion. The previous note showed that the observed precession of the Hulse Taylor binary pulsar, 0.0738 radians per earth year, is produced by an angular velocity of

$$\omega \, (HT \, pulsar) = 5.65 \times 10^{-3} \text{ radians per second}$$
$$- (2)$$

Eq. (2) is an exact description of the experimental data, achieved with the correct geometry.

) For the planet Mercury, the total observed precession of 2.778×10^{-4} radians per earth year is described exactly with an angular velocity of

$$\omega(\text{Mercury, total precession}) = 1.99 \times 10^{-5} \text{ radians per second} \quad -(3)$$

The total precession of Mercury is all that is observable.

The precession of

$$\Delta\phi_R = 2.090 \times 10^{-6} \text{ radians per earth year} \quad -(4)$$

for Mercury is derived from $\Delta\phi_T$ by "subtracting the influence of other planets". This is a dubious procedure which has been heavily criticized in the literature. Using:

$$1.0 \text{ radian} = 2.06265 \times 10^{5} \text{ arc seconds} \quad -(5)$$

It is found that

$$\Delta\phi_R(\text{Mercury}) = 0.4311'' \text{ per earth year} \quad -(6)$$
$$= 43.11'' \text{ per earth century}$$

However, the actually observed precession is $5730''$ per earth century, more than 100 times larger. Therefore in the standard model, about 99% of the observed precession is removed as "due to the influence of other planets". This is a nineteenth century procedure based on Newtonian methods, and not based on EGR. Therefore EGR applied to Mercury and all the planets is wildly self inconsistent. In Mercury for example $5686.89''$ per earth century is attributed to classical dynamics and $43.11''$ per earth century to EGR. The total precession is described by two entirely different theories and this is absurd. It is clear that the entire precession of $5730''$ per earth year should have been analyzed with EGR. This makes the mathematics intractable because an N body problem has to be analyzed with EGR.

†) The ULP reduces the total observed precession of 5730" / year to a net angular velocity of frame rotation of 1.99×10^{-5} radians per second. This is vastly simpler than EGR, which is really inimitable.

The results for the planets are given in Table 2 below.

Planet	Total Precession * (arcsecs/Earth century)	Einstein Field Equation (arcsecs/Earth century)
Mercury	5,730	43.11
Venus	2,040	8.65
Earth	11,450	2.07
Mars	16,280	1.36
Jupiter	6,550	0.063
Saturn	19,500	0.0157
Uranus	3,340	0.00239
Neptune	360	0.00078
Pluto		0.00042

* Taken from the Fitzgerald site (favorite) at the University of Texas. Note that there is a factor of ten error in the Fitzgerald site. It records the total precession as being ten times too small. This error is corrected in the above table, which is cross checked against other sources.

It becomes immediately clear from Table 2 that the Einstein field equation is wildly inaccurate, it gives only a tiny fraction of the observed precession. Furthermore, from Mars to Pluto, there are no experimental data with which to compare the Einstein field equation. The obsolete standard model claims that the EGR is always precise. If so, the experimental precessions would be the same as the EGR precession in Table 2. For Saturn for example, it would be necessary to isolate a precession of 0.014"

5) per earth century with precision from a total precession of 19,500 " a century. The ratio of the two precessions is

$$\frac{\Delta\phi_R}{\Delta\phi_T} = \frac{0.0137}{19,500} = 7.02 \times 10^{-7} \quad (7)$$

The obsolete standard model claims that 19,499.986 " per earth century are due to Newtonian effects. In order to isolate a precession of 0.014 " per earth century accurately, a precision of 0.014 " in 19,500 " would be required, an experimental precision of $(1 \pm 7.02 \times 10^{-7})$ " a century.

The precision in Table 7-2 of Marion and Thornton, 3rd edition, (repeated in the 4th edition) is nowhere near this. The table records only three values of $\Delta\phi_R$:

$$\left.\begin{array}{l} \Delta\phi_R (\text{Mercury}) = (43.11 \pm 0.45) \text{ " a century} \\ \Delta\phi_R (\text{Venus}) = (8.4 \pm 4.8) \text{ " a century} \\ \Delta\phi_R (\text{Earth}) = (5.0 \pm 1.2) \text{ " a century} \end{array}\right\} - (8)$$

The values from the Einstein field equation are different for the experimental values, and the total precessions according to Fitzgerald are:

$$\left.\begin{array}{l} \Delta\phi_T (\text{Mercury}) = 5,730 \text{ " a century} \\ \Delta\phi_T (\text{Venus}) = 2,040 \text{ " a century} \\ \Delta\phi_T (\text{Earth}) = 11,450 \text{ " a century} \end{array}\right\} - (9)$$

The ratios are

$$\frac{\Delta\phi_R}{\Delta\phi_T} = \frac{43.11}{5730} = 7.524 \times 10^{-3} \quad - (10)$$

for Mercury;

$$\frac{\Delta\phi_R}{\Delta\phi_T} = \frac{8.65}{2040} = 4.240 \times 10^{-3} \quad - (11)$$

for Venus;
and

$$\frac{\Delta\phi_R}{\Delta\phi_T} = \frac{2.07}{11,450} = 1.808 \times 10^{-4} \quad - (12)$$

for Earth

So to extract $\Delta\phi_R$ for $\Delta\phi_T$ for Mercury need an experimental precision of (1 ± 0.0075)" a century. However, the precision is $\sigma_i(\delta)$ is $0.45/43.11 = 0.010$ for Mercury; $4.8/8.4 = 0.571$ for Venus, and (± 0.24) for Earth. To extract ϕ_R for $\Delta\phi_T$ for Venus needs a precision of $(1 \pm 4.24 \times 10^{-3})$" century. To extract $\Delta\phi_R$ for $\Delta\phi_T$ for Earth needs a precision $(1 \pm 1.81 \times 10^{-4})$" a century. These results are summarized in Table 3.

Table 3: Comparison of Precisions

Planet	Required Precision	Precision in MT Table 7-2
Mercury	(1 ± 0.0075)" a century	(1 ± 0.01)" a century
Venus	(1 ± 0.00425)" "	(1 ± 0.57)" "
Earth	(1 ± 0.00181)" "	(1 ± 0.24)" "
Mars	$(1 \pm 8.35 \times 10^{-5})$" "	
Jupiter	$(1 \pm 9.618 \times 10^{-6})$" "	
Saturn	$(1 \pm 7.026 \times 10^{-7})$" "	
Uranus	$(1 \pm 7.16 \times 10^{-7})$" "	
Neptune	$(1 \pm 2.17 \times 10^{-6})$" "	
Pluto		

This table shows that the required experimental precision needed to extract $\Delta\phi_R$ is not available, so there is nothing with which to compare the Einstein field equation. The latter cannot therefore be a precise theory. The ULP or the latter and describes all precision in terms of a single factor ω, not complete precision.

Even if it were possible to measure $\Delta\phi_R$ experimentally MFT 40.9 gives the definitive refutation of EGR. It considers only the Einsteinian precession $\Delta\phi_E$ due to the Einsteinian force and omits consideration of the geodetic precession $\Delta\phi_g$ and the

7) Lense Thirring precession $\Delta\phi_{LT}$. These are always present when a mass m orbits a mass M. Table 4 gives the data of ΔFT4 in terms of arcseconds per Earth century:

Table 4: Einsteinian, Geodesic and Lense-Thirring Precessions

Planet	$\Delta\phi_E$	$\Delta\phi_g$	$\Delta\phi_{LT}$	Total	Observed $\Delta\phi$ (obs)
Mercury	43.11	20.65	0.00295	63.76	43.11 ± 0.45
Venus	8.65	4.325	1.986×10^{-4}	12.98	8.4 ± 4.8
Earth	2.07	1.035	4.05×10^{-5}	3.105	5.0 ± 1.2

The inclusion of $\Delta\phi_g + \Delta\phi_{LT}$ increase the theoretical precession of Mercury to 63.76" an earth century from 43.11" an earth century, showing that the agreement $\Delta\phi$ (obs) with $\Delta\phi_E$ is fortuitous and meaningless.

The universal law of precession, Eq. (1), is not based on the Einstein field equation and replaces $\Delta\phi_E$, $\Delta\phi_g$ and $\Delta\phi_{LT}$ by one law, Eq. (1).