

**Subject:** Fwd: Real Physics Talk: André Koch Assis - Mach's Principle  
**From:** Robert Bennett <bennettamdg@gmail.com>  
**Date:** 11/17/23, 10:43 PM  
**To:** alan <alanspaceaudits@gmail.com>

Hey, dude....Also had a hectic week.  
Thanks for the sign-up info....will try it tonight.  
You can call 212 673 6771 from 10AM to 9PM ...as long as the phone isn't tied up too long

Have included below an email I just sent to 2 dissidents re their video on Mach's Principle, including a storyboard/timeline of my responses at each marker. I doubt they will even reply, so I'd like to go public with a video myself. and post it on SA, for viewer comments. I need your advice on visual details....show the text and have voiceover?...etc...need to chew on this..

Looking to the future: there are 2 other videos I would like to critique:  
[E=mc\\*c](#)

**secrets of Einstein's unknown equation - with Sean Carroll**

Let's chat tomorrow...

Robert

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----- Forwarded message -----

From: **Robert Bennett** <[bennettamdg@gmail.com](mailto:bennettamdg@gmail.com)>  
Date: Fri, Nov 17, 2023 at 7:36 PM  
Subject: Real Physics Talk: André Koch Assis - Mach's Principle  
To: Alexander Unzicker <[aunzicker@web.de](mailto:aunzicker@web.de)>, Andre Assis <[assis@ifi.unicamp.br](mailto:assis@ifi.unicamp.br)>

To: Alexander Unzicker & Andre Assis

The recent video - [Real Physics Talk: André Koch Assis - Mach's Principle](#) - was interesting and relevant to my current research. I have read books by both speakers and applaud Alexander for his insider's revealing analysis of mainstream Particle Physics .... *The Higgs Fake*...in its defective logic and methods. The thoughts of Dr Assis I have encountered in "Relational Mechanics", the attempt to cast dynamics into kinematic form.

What follows is my own analysis of the empirical video content, using the scientific method and scholastic realism.

Your correction of any errors would be appreciated.

AMDG,

Dr Robert Bennett

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Video timeline:

5:52 Newton: absolute space means empty space?

RB: Wasn't the 'empty space' interpretation an indication that Newton didn't know where absolute space was or how tested? Wasn't the issue really reference frames? That is, where do I place an observer to detect absolute space? Where situated, so it can be tested via the scientific method.

14:00 NB cause 1 - the bucket: water surface forms a parabola even when bucket observer measures water at rest

RB: The bucketeer(bucket observer) measures the effect of a horizontal force(parabola) but Newton's law of centrifugal force,  $mr\omega^2$ , predicts no force if  $\omega = 0$ .

This implies a contradiction/distinction between the application of kinematics & dynamics.

### Newton's Spinning Bucket

...remains a perennial puzzle for cosmology, unsolved over four centuries. Newton's belief was in evidence of an absolute space (whose origin was not specified), while Mach and Bishop Berkeley held that the bucket test showed relative rotation, the influence of distant matter on local rotation. It represents the classic clash of absolute frame and relative motion perspectives, whose arguments pro and con are still being debated.

### Spinning Bucket Description



### Initial and final state of bucket

There is a delay between the rotation of the bucket and the water, the inertia of the water. The bucket's spin affects all of the water, but slowly. Eventually the water and bucket are co-rotating.

It is in this system state that we will analyze the motion in both lab and bucket frames.

Lab frame: top row left to right

Observations/Kinematics

Bucket at rest; water surface flat

Bucket and water co-rotating at  $\omega$ ; surface a parabolic vortex

Prediction: Dynamics

Centrifugal force =  $F_c = mr\omega^2 \Rightarrow$  Surface a parabolic vortex

Bucket frame: second row, left to right

Observations/Kinematics

Water at rest,  $\omega = 0$  ; Newton/lab rotating at  $-\omega$ , surface a parabolic vortex

Prediction: Dynamics

$\omega = 0$  means  $F_c = 0$  ; surface should be flat

### Summary

Lab frame application of a law of motion( $F_c$ ) correctly predicts reality

Bucket frame application of a law of motion( $F_c$ ) DOES NOT predict reality

Lab frame is quite general; anywhere on Earth the same results are obtained.

Bucket frame is also generic; any liquid may be used, the bucket can be a container of any size or shape and -most critically, the distance between Lab and Bucket frame is irrelevant.

Other similar test of laws of physics in the Lab vs moving frame, like Bennett's Hiker, lead to this statement:

**The laws of physics (obeying the Euler-Lagrange equations) are only valid in the Lab/Earth/ECEF reference frame.**

15:25 NB cause 2 - earth/ground: water moves horizontally; gravity is vertical. so Earth is not the cause

RB: True, gravity is not the cause of the anomaly...but now the lab observer (Newton) correctly predicts the parabola formation that's measured using the Earth ref frame...so now kin & dyn. agree.

20:55 AU: Mach's Principle (MP) implies distant mass could influence what is perceived as absolute space....

RB: MP is stated in other mainstream documents as:

"..physical law relating motion of distant stars to local inertial frame."

"...local laws determined by the large-scale structure of the universe."

In his 1883 book Science of Mechanics, Mach wrote that Newton's thought experiment "*simply informs us, that the relative rotation of the water with respect to the sides of the vessel produces no noticeable centrifugal forces, but that such forces are produced by its relative rotation with respect to the mass of the Earth and the other celestial bodies.*"

also cited at 21:55

Why is MP so often misquoted in mainstream contexts, by eliminating the option of the Earth's mass influencing MP? Is this accidental or deliberate?

Mach maintained the relativity of all motion, including rotational motion, claiming that one cannot distinguish between a bucket or Earth rotating in a fixed universe and the universe rotating around a fixed bucket or Earth.

- 1) Neither option can be tested; unfalsifiable theories are rejected by the scientific method
- 2) Relative motion described here is kinematic. The distinction of the absolute lab frame is made in dynamics, the prediction of future motion.

26:05 a Q is posed: A bucket is at rest on Earth and the universe is rotating 1 rev/sec west to east...what happens?

RB: Nothing....There's no rotation in the lab frame.

47:00 Does Earth spin on its axis....or does the universe?

RB: The question is moot in kinematics, because relativity is valid.

In dynamics the universe spins, because the earth must be used to correctly apply the laws of physics...covariance is violated.

50:45 Newton: centripetal force predicts the .4% equatorial bulge! so Earth spins..

RB: Aether model: The universal aether rotation of astral time = 1 stellar day causes a westerly wind of ~1600 km/h or 1000 mph at the equator.

Bernoulli's eqn ,  $P + \rho v^2/2 = \text{const}$ , predicts the aether pressure will be minimum at the equator , where the velocity is greatest.

Once the aether pressure and density are measured; the predicted bulge can be compared with measurement.

53:15 What if the universe rotates around a squishy earth ?

RB: If aether continues its current rotation, the same bulge will be present..

55:55 Foucault Pendulum proves the Earth is spinning...

RB: **Foucault Pendulum 1851**



The plane of oscillation of a pendulum, like a gyroscope, tends to stay constant regardless of the motion of the pivot. A pendulum free to swing in two dimensions from a long cord ( as in the dome of the Pantheon in Paris, ...67 meters (220 ft) ... will precess or rotate 360° clockwise. The period T depends on latitude: 24 hrs at the poles and no rotation at the equator.

This phenomenon is claimed - illogically - to demonstrate the Earth's rotation. For example, how does the Earth's rotation affect the FP plane, when the FP is only attached to the Earth by a string? In other words, how does the FP bob know the Earth is there, rotating beneath it, without any material cause, some action at a distance, to explain the effect?

The results of the Michelson-Gale exp. supports an aether wrapped around the Earth like the atmosphere - the aethersphere - if the aether is rotating westward at every latitude every 24 hours. The aether's speed can be modeled as dependent of the distance r from the surface to the polar axis (see figure above)

$$V(r) = kr/T$$

Consider applying this aether speed to the extreme ends of the FP swing:

At the equator the FP plane will not rotate if placed N-S..... both ends have the same speed.

At the poles the ends will have opposite sense of rotation and will display the actual 24 aether period.

At mid-latitudes the south endpoint will have slightly more speed than the north endpoint , so the FP will feel a CW torque, as observed to occur.

A prediction:

If the FP swings E-W on the equator the westward aether flow will boost the speed by  $v = kr/T$  and slow the eastward swing by  $-v$ . k is a small positive constant. Electronic timing of the swings should detect this effect of the aether's circulation.

The mainstream physics model of a rotating Earth would not have this effect.

The FP rotation is not rationally explained by a rotating Earth, but by a rotating aether around a static earth.

Conclusion: The Foucault Pendulum cannot show the Earth's rotation without a physical cause/medium connecting the ground to the pendulum.

The rotating aethersphere found by Michelson-Gale provides a logical cause, and matches all the details observed.

Aether wind supports FP planar motion..

56:55 FP simulation with pen in an Inertial Frame of Reference. ..

RB: Is the Earth frame orbiting the Sun an IRF? Not according to Special Relativity...

So the proposed FP pen model is invalid...

The FP measurement is kinematics, which only measures relative motion.

How then can the FP motion establish the Earth's absolute motion (in the stellar reference frame). The stars could be moving in the Earth reference frame

Consider [Uniqueness of the Inertial Frame](#)

104:10 AU: ...dynamics determines absolute space..

RB: Yes, Newton's Bucket and Bennett's Hiker et al show that Newton's absolute space is actually the Lab/ECEF frame

108:10 AKA: What if only 1 star in the sky?

RB; if aether still present, the phenomenon remains

110:20 AU: MP conflicts with GR.

112:15 AKA: Mach rejected GR.

RB: You are both correct. GR is a misnomer; It's General Dynamics (based on general covariance), not General Relativity/Kinematics. As such, it violates the ALFA model of Absolute Lab Frame and Fluid Aether. The laws of physics(Euler-Lagrange eqns) are only valid for an Earth observer(frame dependence).

117:30 AKA: think about these 4 exps... use Newton, Mach or a 3<sup>rd</sup> model.

AU: MP is a problem to solve

RB: I followed your advice, as outlined above.