

# THE FIRST SUMMER SCHOOL IN ASTRONOMY AND GEOPHYSICS

Belgrade, Serbia

august 2007



# INFLUENCE OF BEER ON MOVEMENT OF MOON AND EARTH GRAVITY



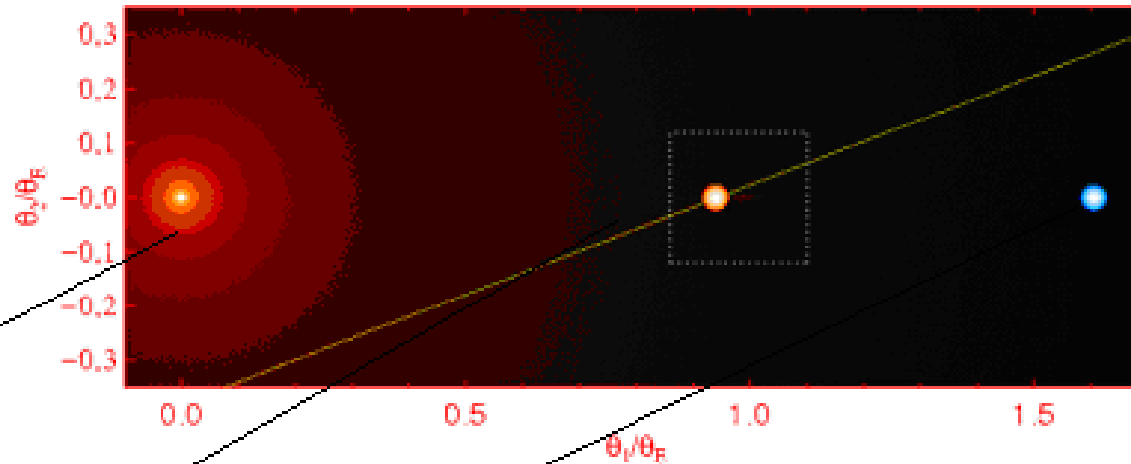
**Marko Vanic**

**Damir Ribic**

*Institute of beerphysics*



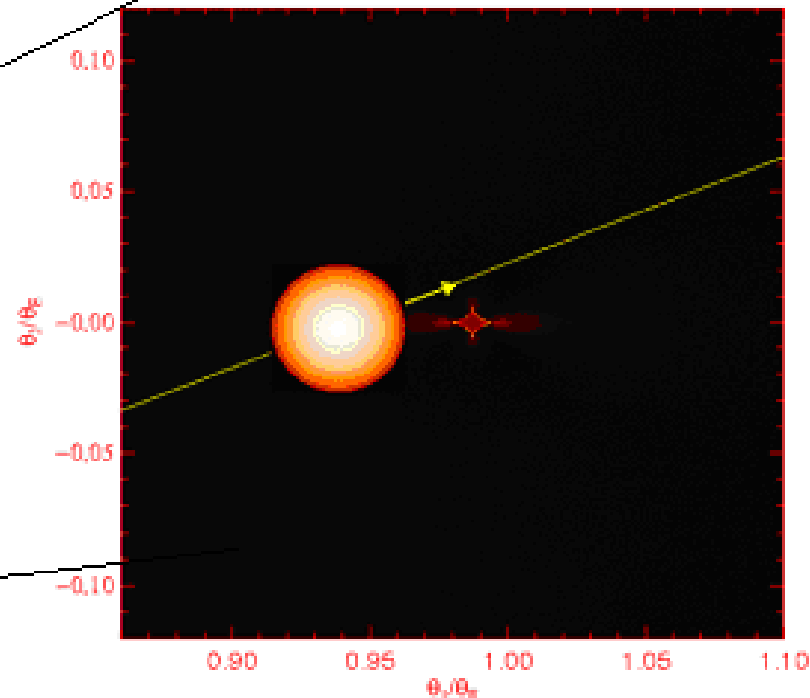
# SOBER STATE PHYSICS



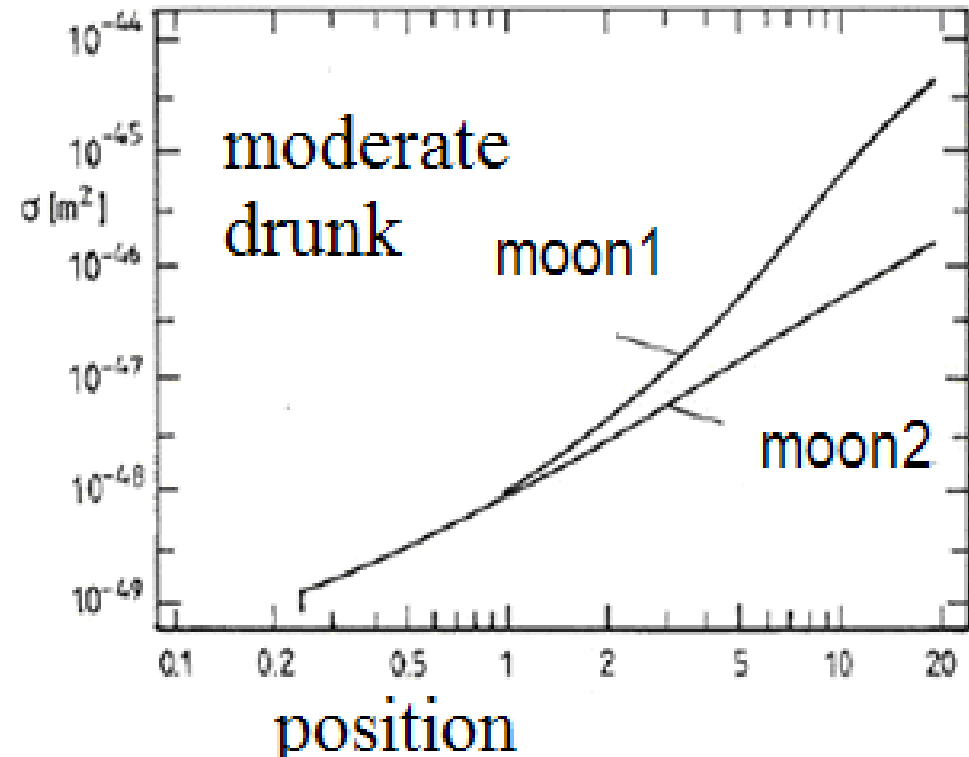
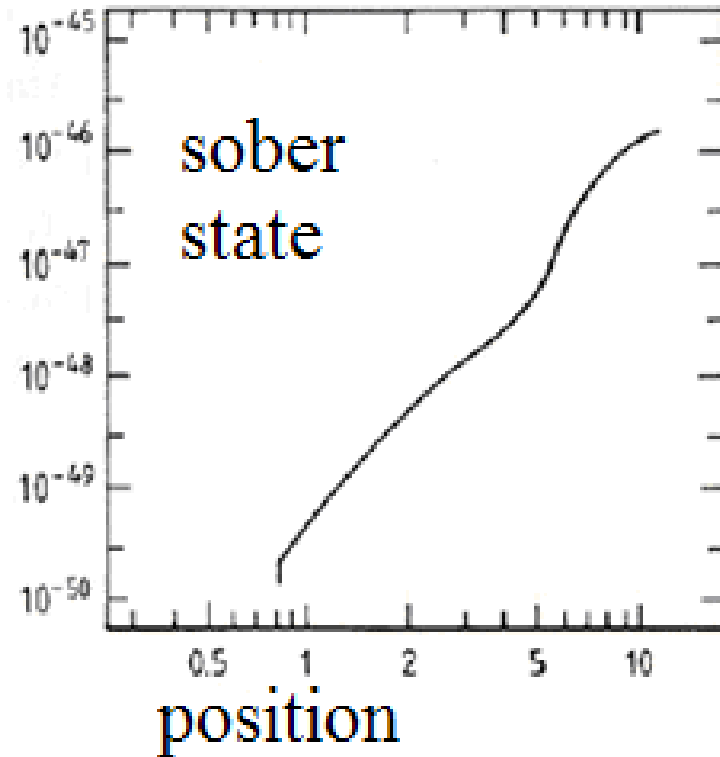
beer=0  
velocity of  
observer=0

observer  
=sober  
walking  
to moon

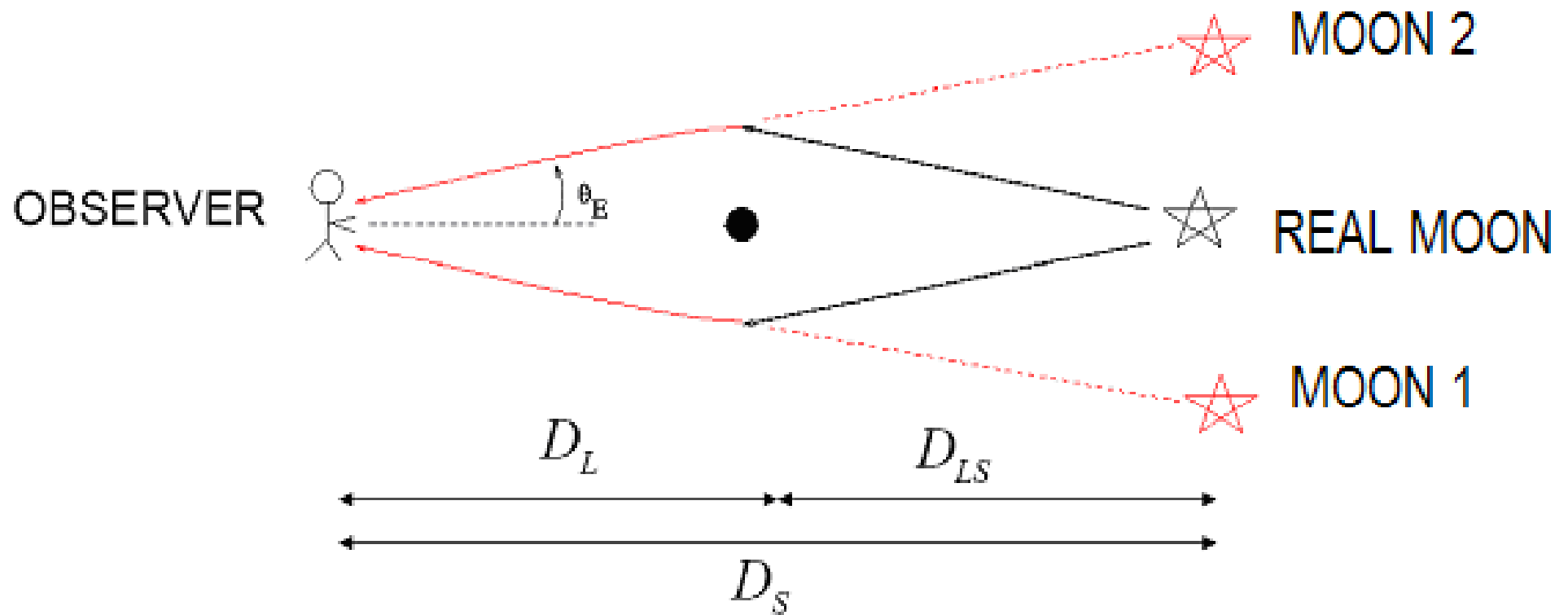
beer = 0  
time = 19:30  
(after lectures)



# Beer lensing



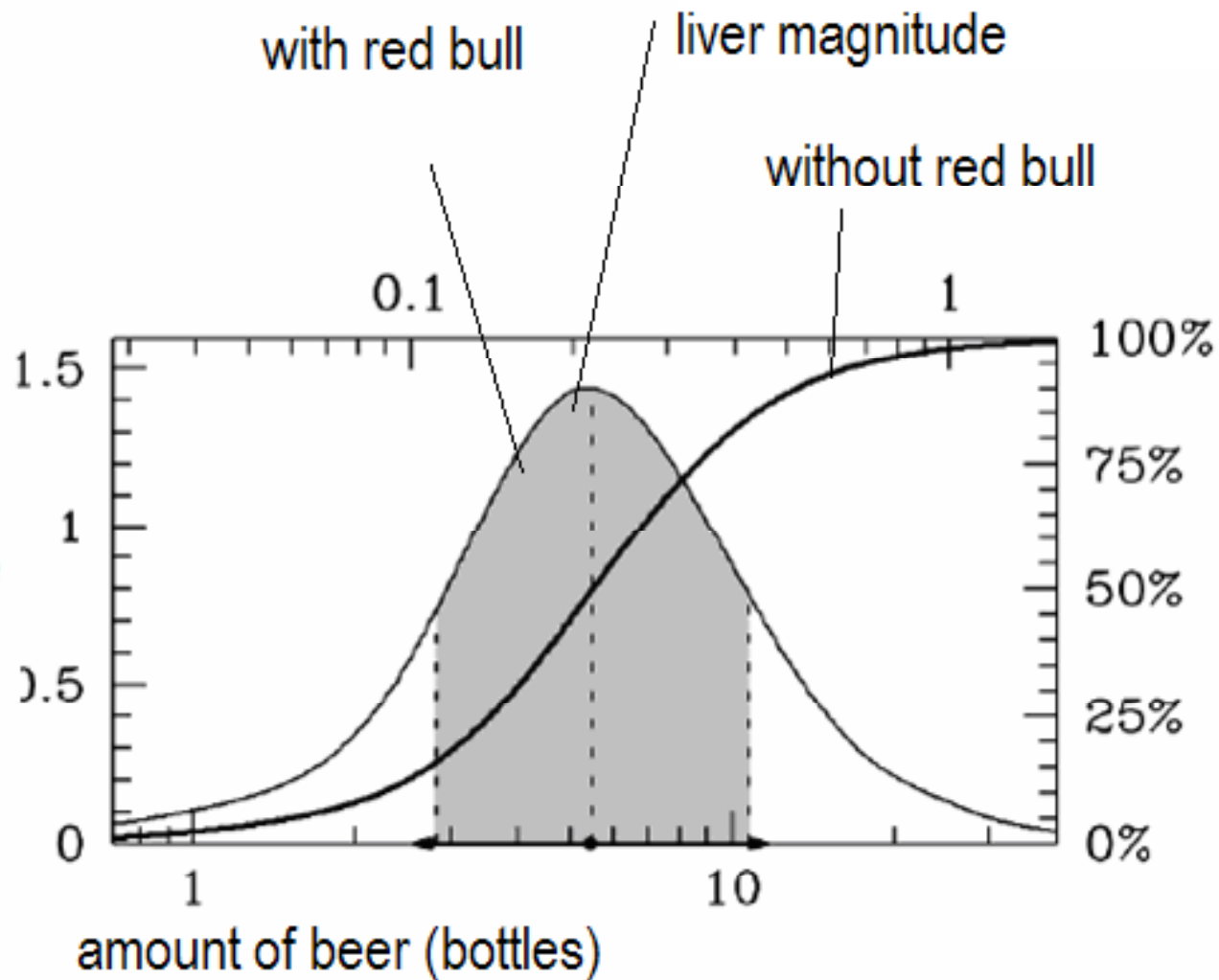
# BEERITATIONAL LENS



**BEERSTEINS RADIUS**

$$R_0 = \sqrt{\frac{4GM_{tot}D_{LS}}{c^2D_LD_S}}$$

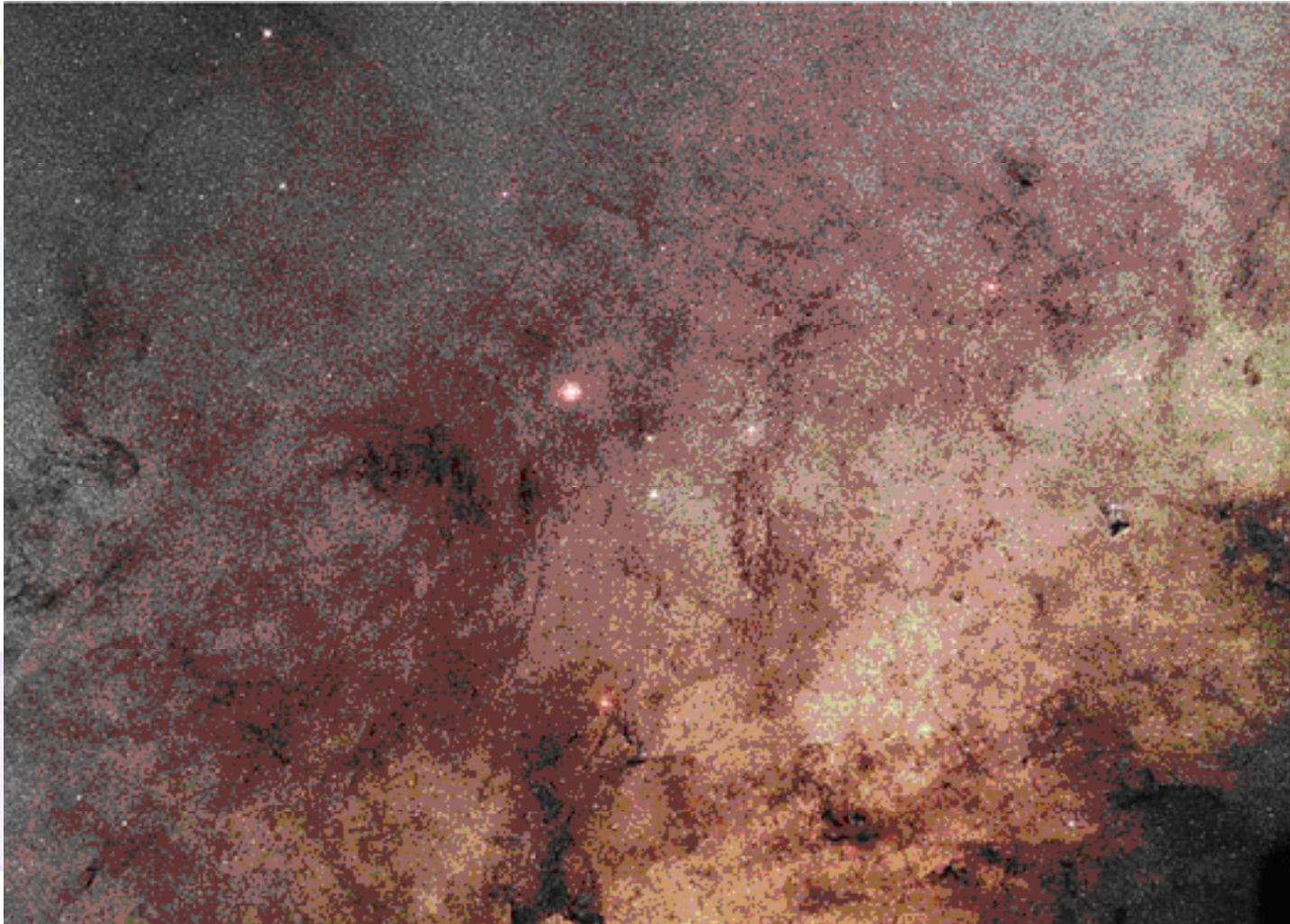
# Influence of poisonous beverages on blood content



blood dosage

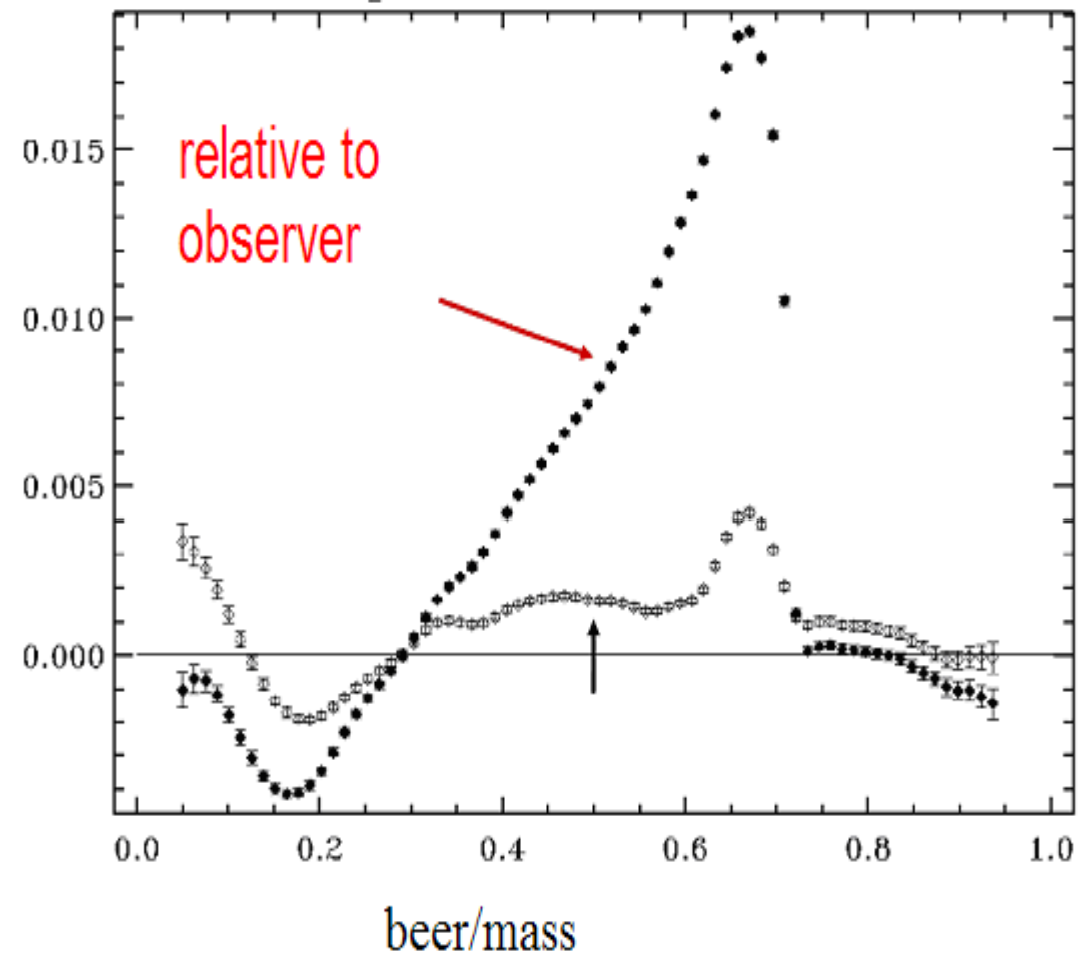
amount of beer (bottles)

# Liver at magnitude peak



# Experimental data

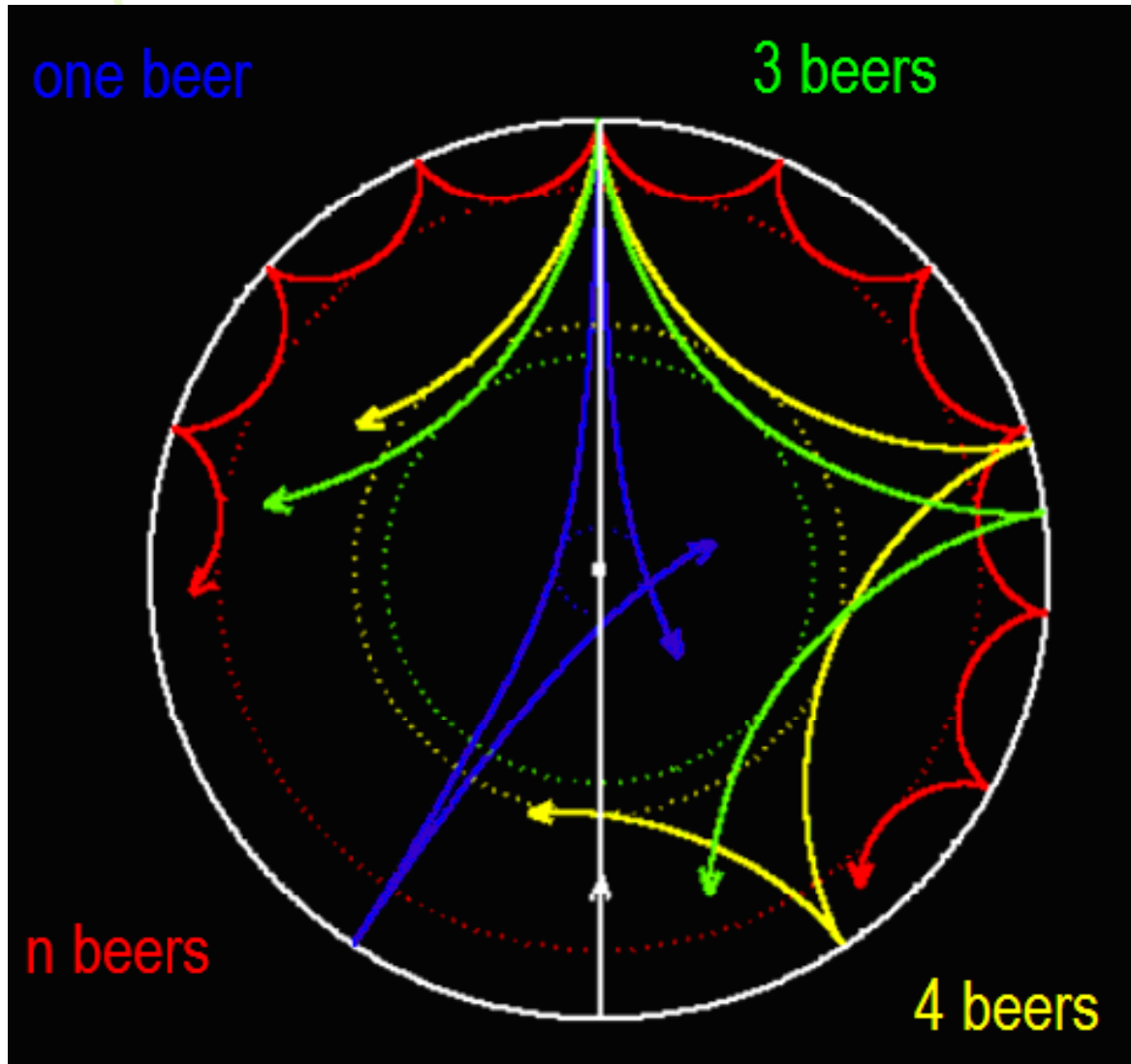
beer	moon position
12.00	-
$10.93 \pm 0.004$	-
$1.10 \pm 0.10$	$3.31 \pm 0.04$
$1.40 \pm 0.09$	$1.42 \pm 0.04$
$2.55 \pm 0.30$	$2.79 \pm 0.05$
$8.52 \pm 0.06$	-
$7.92 \pm 0.06$	-
$8.83 \pm 0.06$	-
$4.56 \pm 0.3$	$4.48 \pm 0.06$
$8.08 \pm 0.06$	-
$6.33 \pm 0.03$	$6.32 \pm 0.02$
$7.58 \pm 0.05$	$7.58 \pm 0.01$
$6.47 \pm 0.07$	$6.49 \pm 0.01$
$7.55 \pm 0.05$	$7.56 \pm 0.01$
$5.45 \pm 0.04$	$5.56 \pm 0.06$
$7.33 \pm 0.11$	$7.20 \pm 0.06$
$5.5 \pm 0.3$	$5.28 \pm 0.06$
$6.40 \pm 0.06$	-



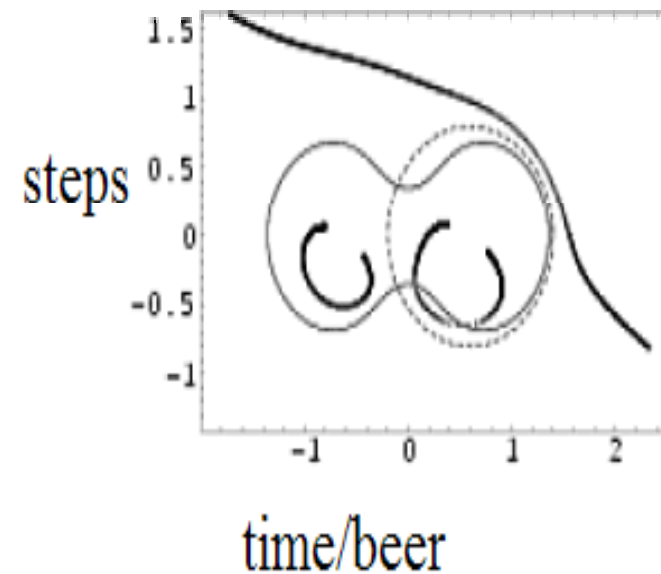


# Movement of observer – the influence

In space



In time – nonlinear  
as you see



# GEOMAGNETIC FIELD INFLUENCE



**300**  
**Joules**  
**1900 V**  
**110 uF**  
**empty**



**1000**  
**Joules**  
**2400 V**  
**110 uF**  
**empty**



**1500**  
**Joules**  
**5200 V**  
**110 uF**  
**empty**



**1500**  
**Joules**  
**5200 V**  
**110 uF**  
**Full**

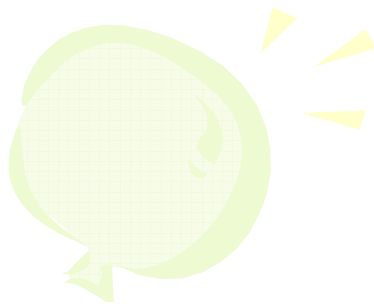
## GEOMAGNETIC FIELD - INTENSITY

(Statistics)

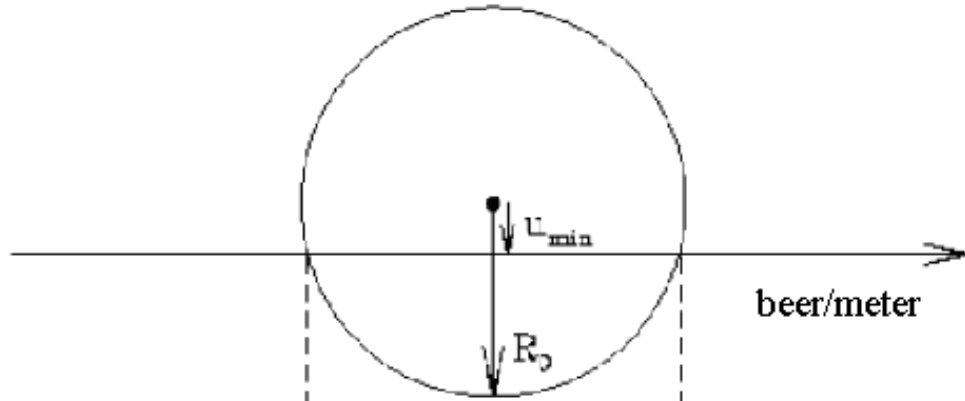
$$\chi^2 / d.o.f. = \frac{\sum (x(t)_{obs} - x(t)_{theor})^2}{n_{data} - n_{parameters} + 1}$$

**=> OBVIOUSLY  
IRRELEVANT**

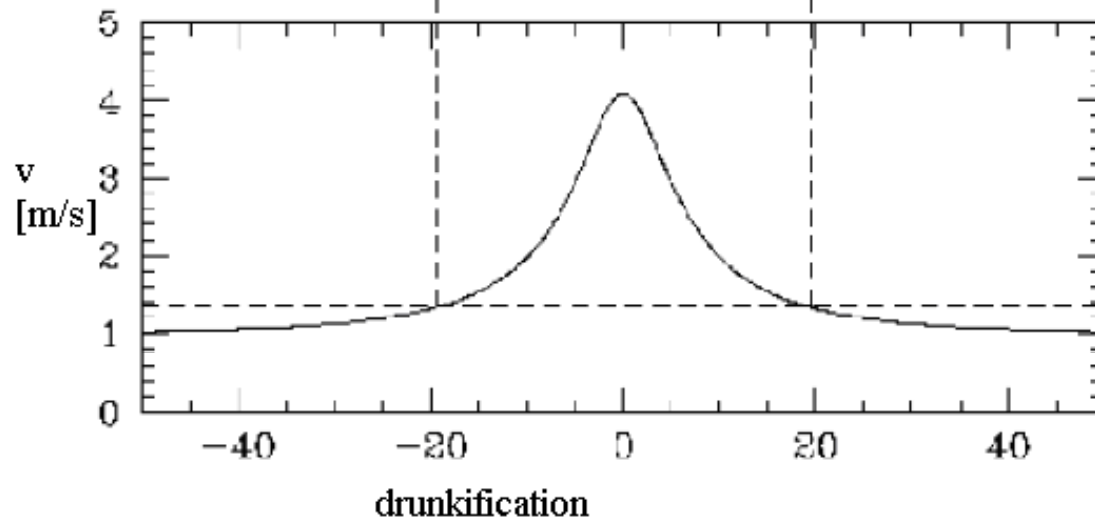
THUS,  $div \mathbf{v} = \mathbf{0}$



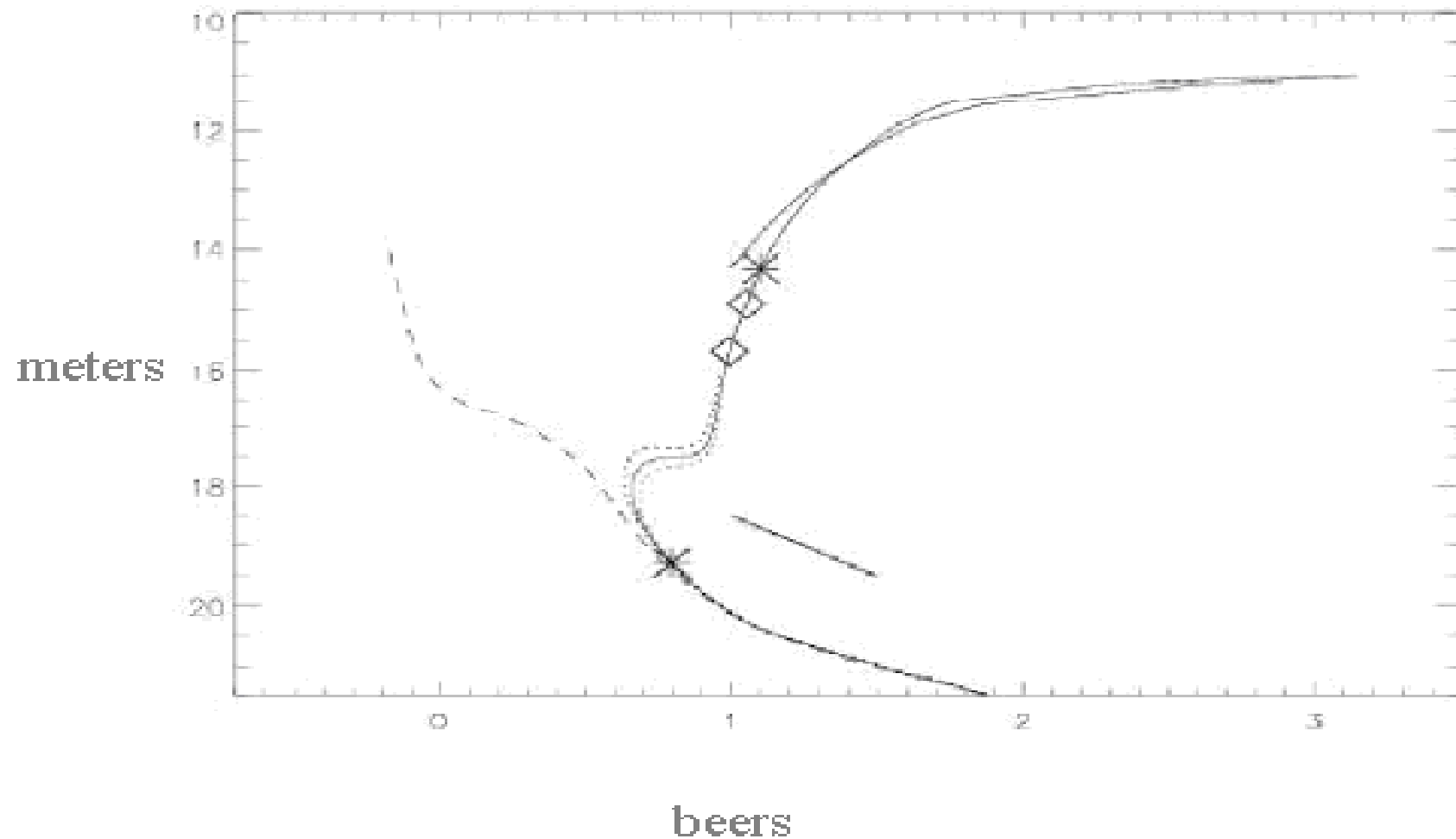
# Movement of drunk astronomer



**ROTATIONAL  
COMPONENT**

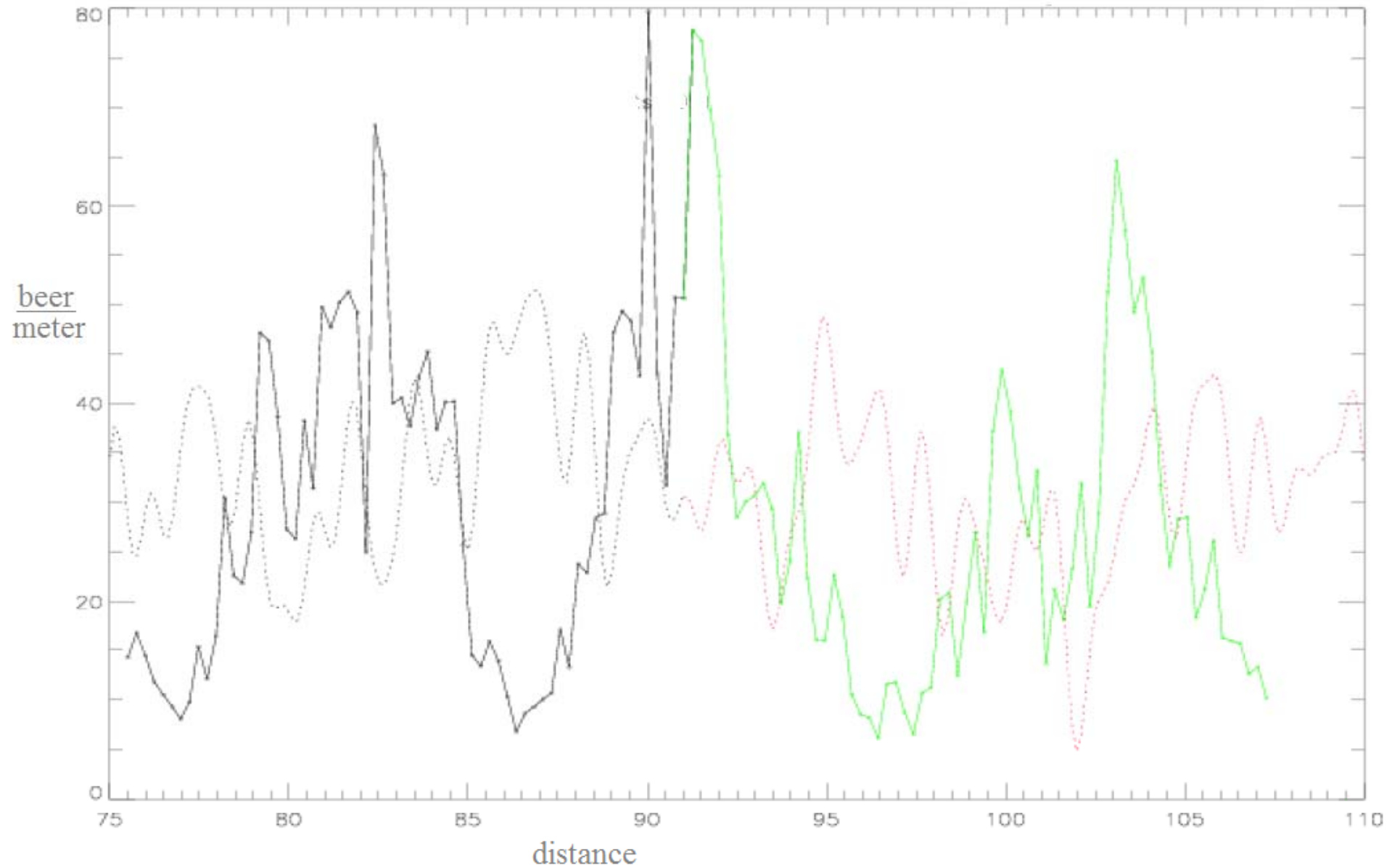


# LINEAR COMPONENT



Non-redbullian case

# Actual movement of drunk scientist





Determining actual position of the moon according to evidence of fueled scientist

COORDINATE TRANSFORM TO SOBER SYSTEM OF REFERENCE

$$\vec{\alpha}(\vec{x}) = \frac{4G}{c^2} \sum_i^n m_i \frac{\vec{x} - \vec{x}_i}{|\vec{x} - \vec{x}_i|^2}$$

$$\vec{x} = \frac{\vec{\theta}}{\theta_E},$$

$$\vec{y} = \frac{\vec{\beta}}{\theta_E}$$

$$\vec{y} = \vec{x} - \sum_i^n m_i \frac{\vec{x} - \vec{x}_i}{|\vec{x} - \vec{x}_i|^2}$$

ACCORDING TO THESE EQUATIONS, WHEN YOUR FRIEND DESCRIBES YOU POSITION OF THE MOON, YOU CAN CALCULATE WHERE AND WHAT IT ACTUALLY WAS

# Moon in optical spectrum of observer





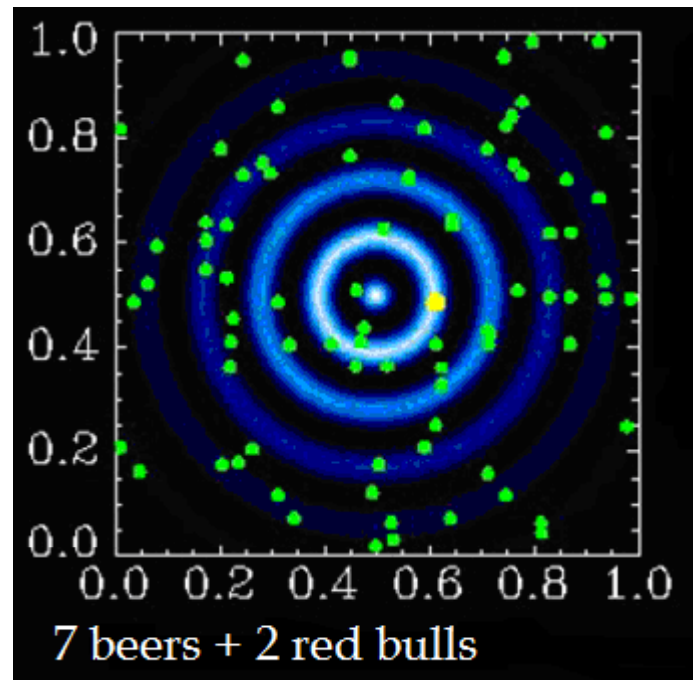
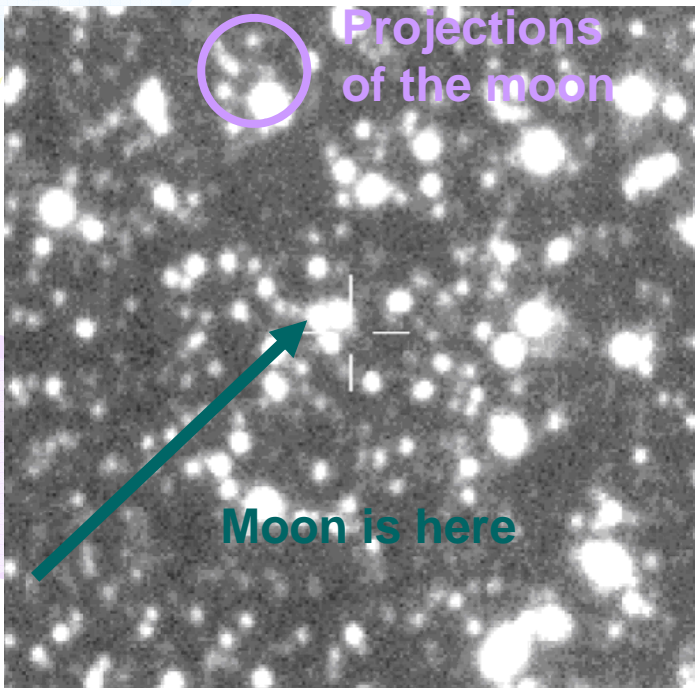
2 beers



3 beers + red bull



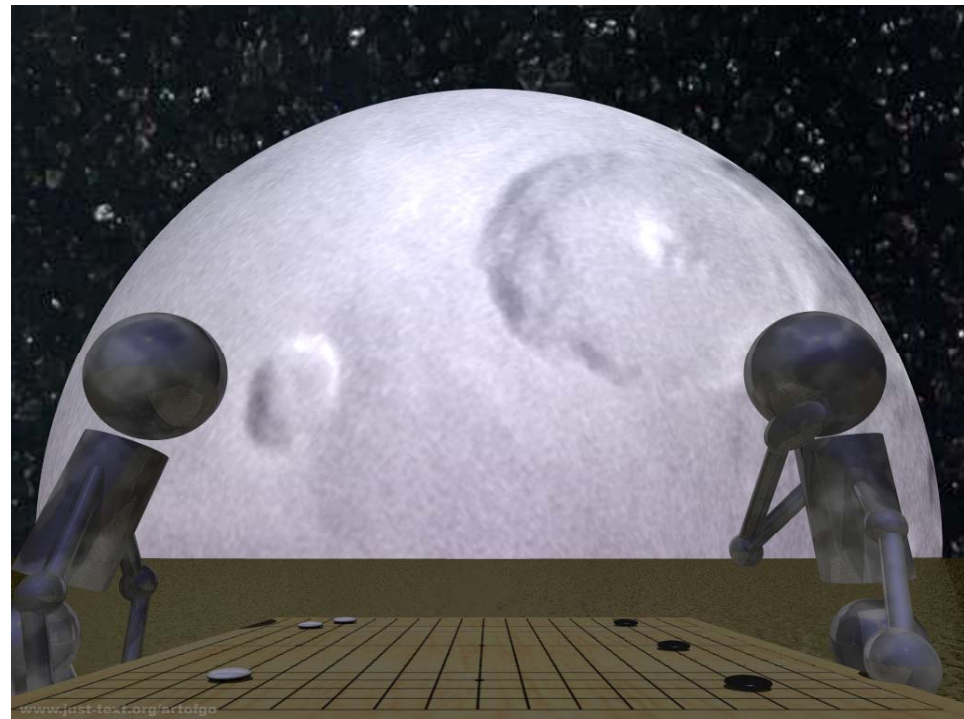
7 beers, no red bull



# Paranoia effect



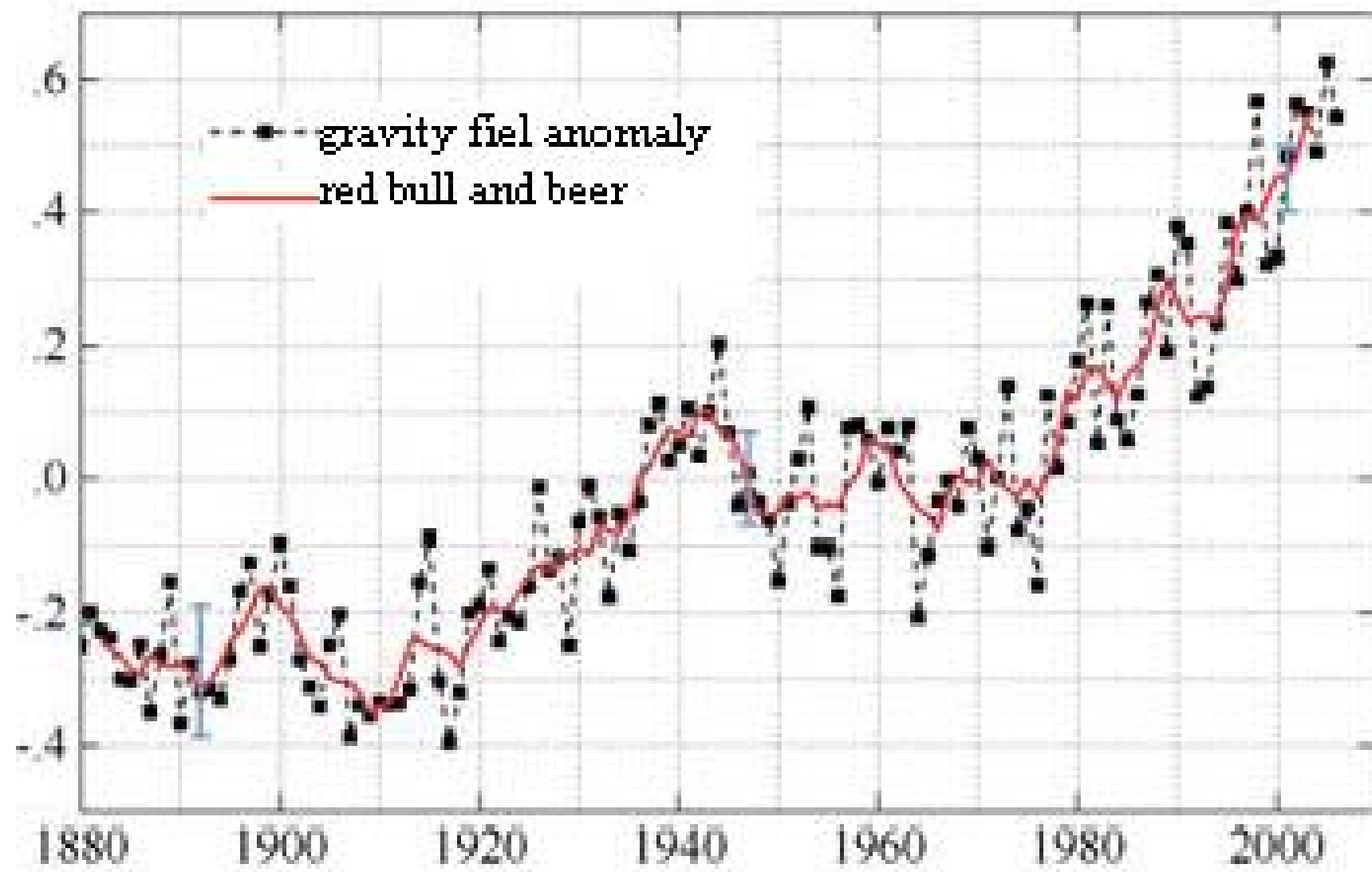
**Beers= 10 to infinity**



**8 hours a day in summer school,  
5 or more red bulls, 10 or more beers**

# Infulence of beer and red bull on the Earth gravitiy field

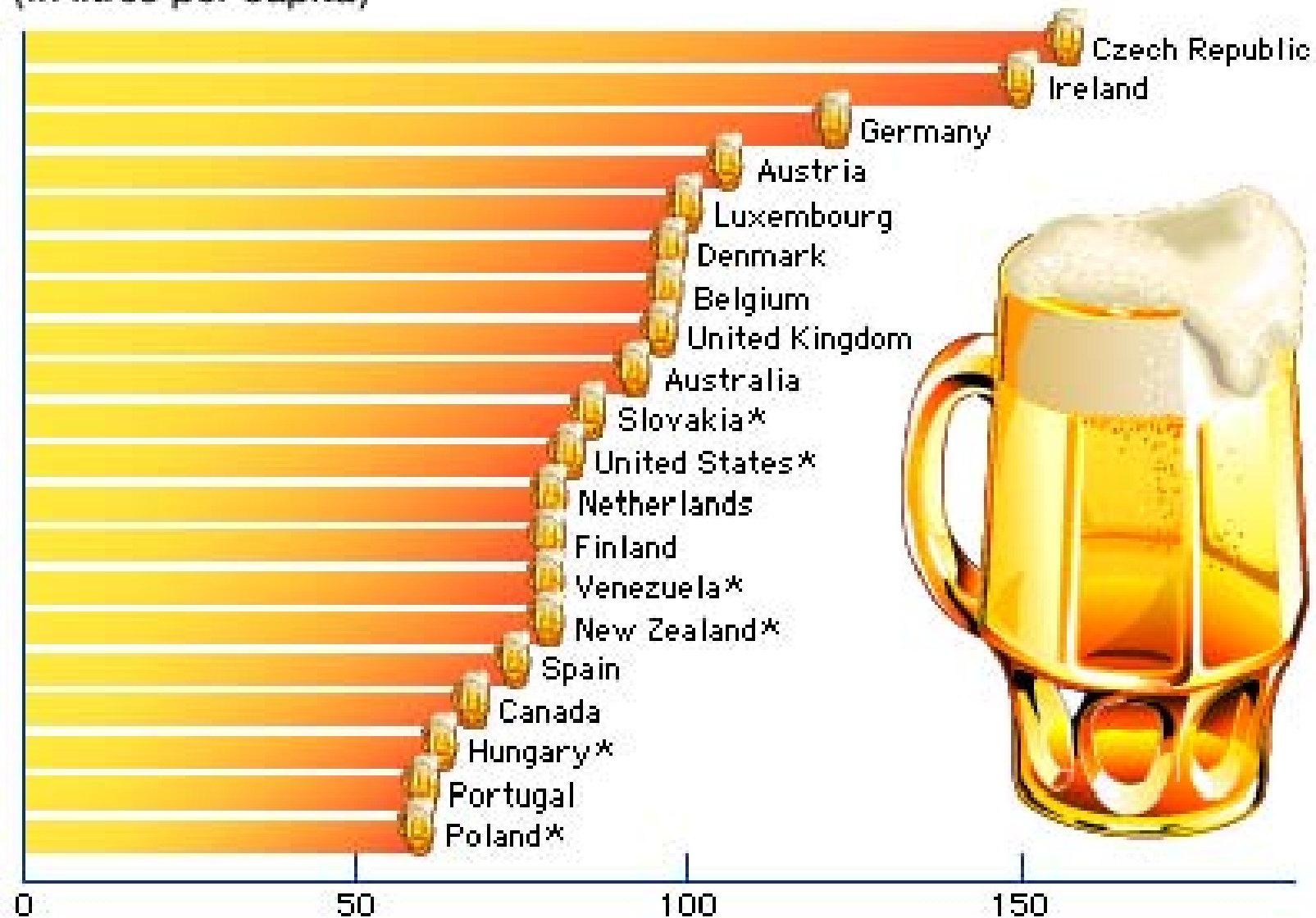




**NOTICE: RESERCH IS NOT  
DONE ON CHILDRENS AND  
ANIMALS!!!!!!**



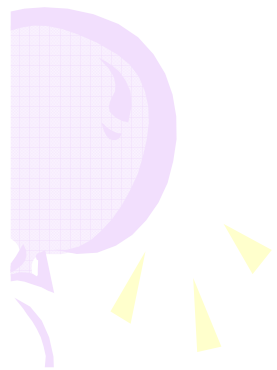
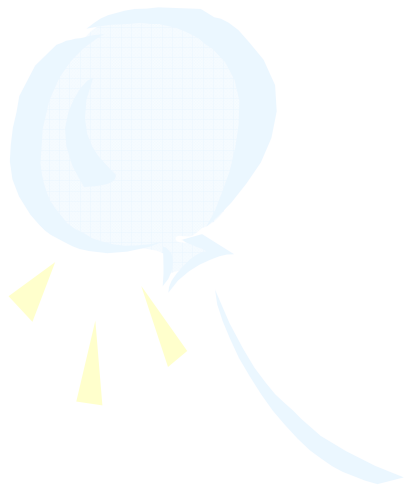
## Beer consumption by country, 2001 (in litres per capita)



\*Some consumption figures have been estimated from beer production data.

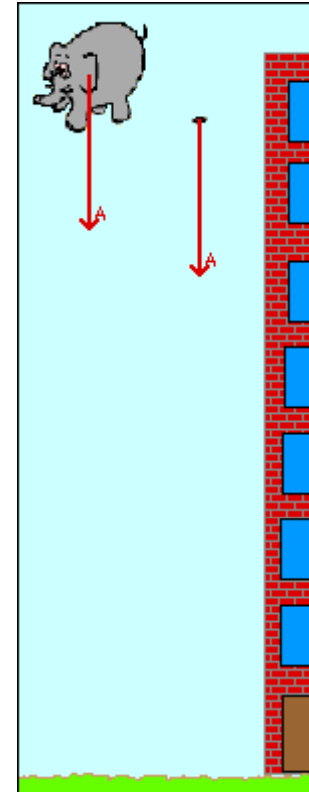
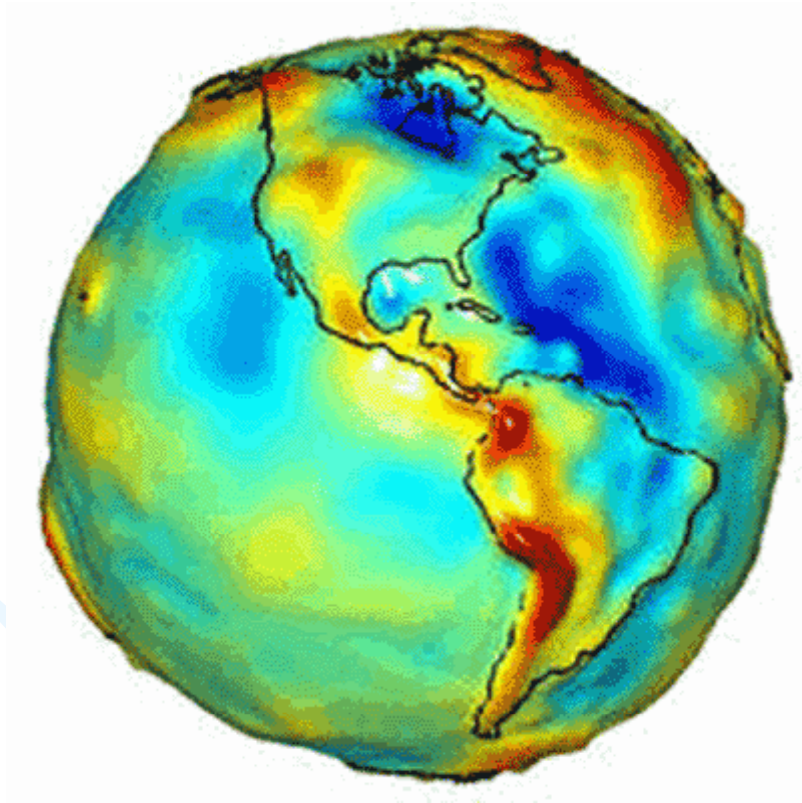
Source: *World Drink Trends* published by the World Advertising Research Center, in association with the Commission of Distilled Spirits, Schiedam, Neth.



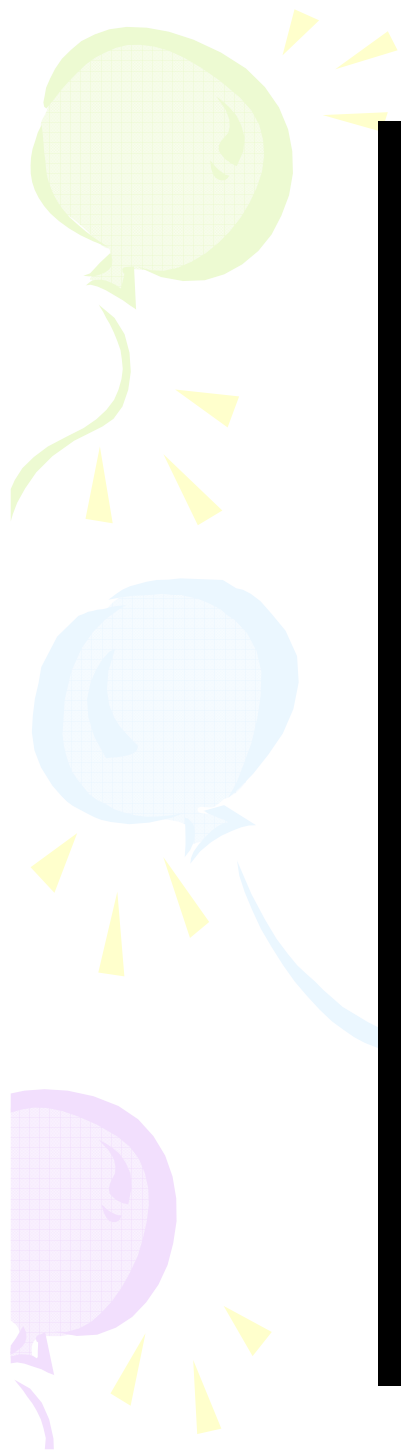
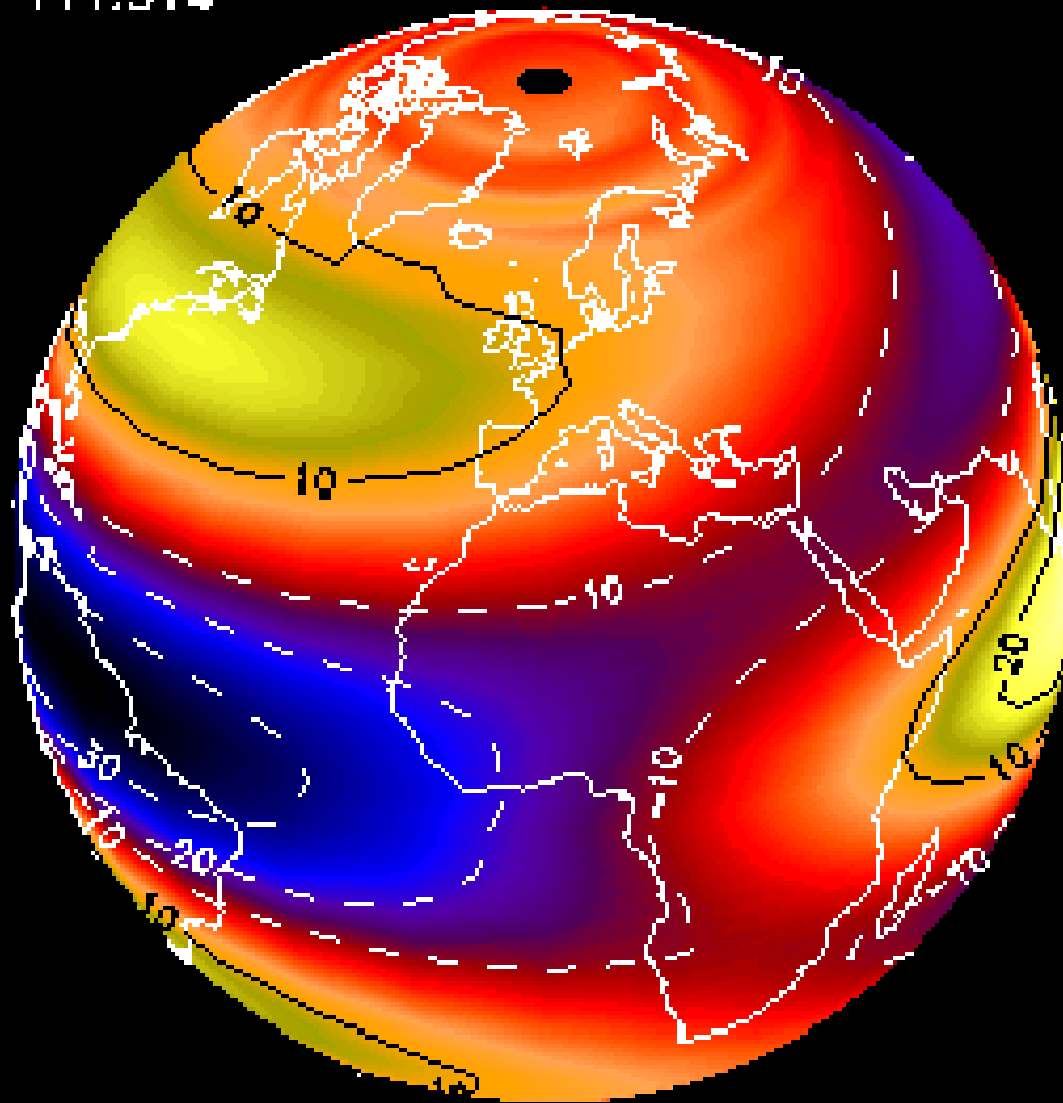




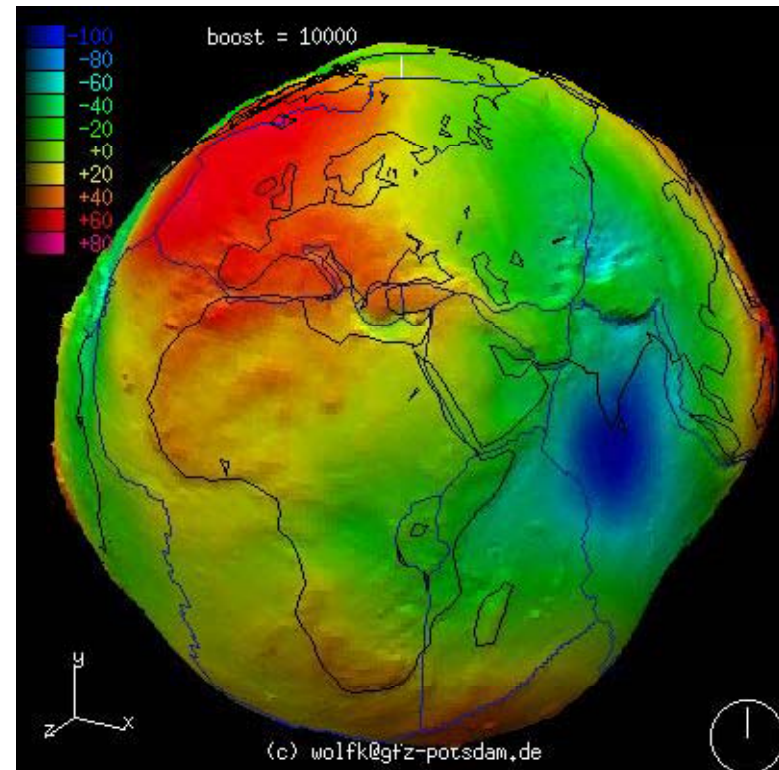
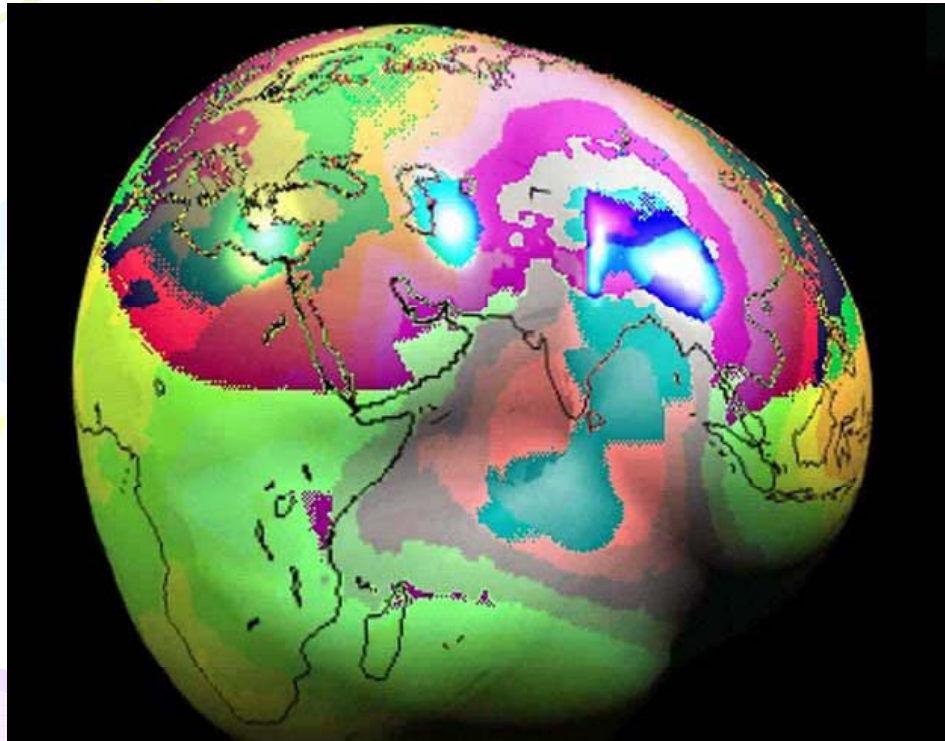
# Before beer consumption



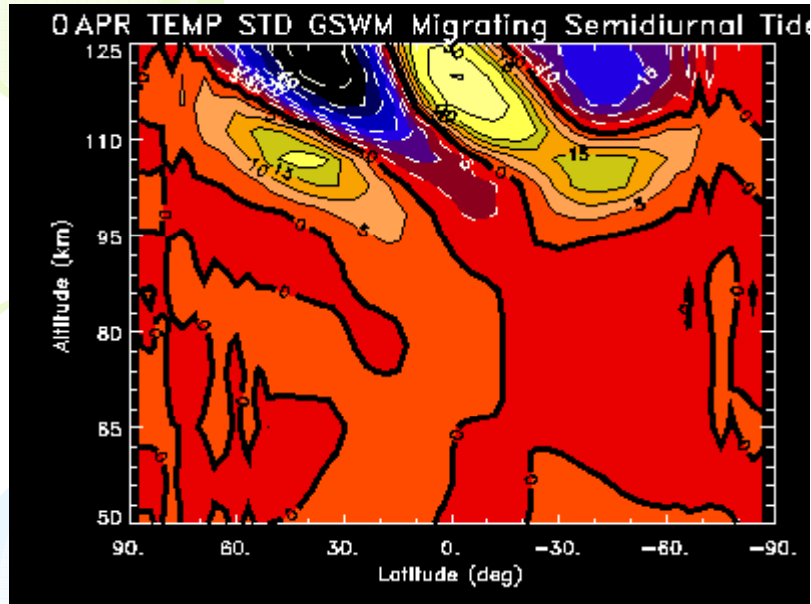
0 APRIL TEMP GSWM Migrating DIUR Tide  
111.514



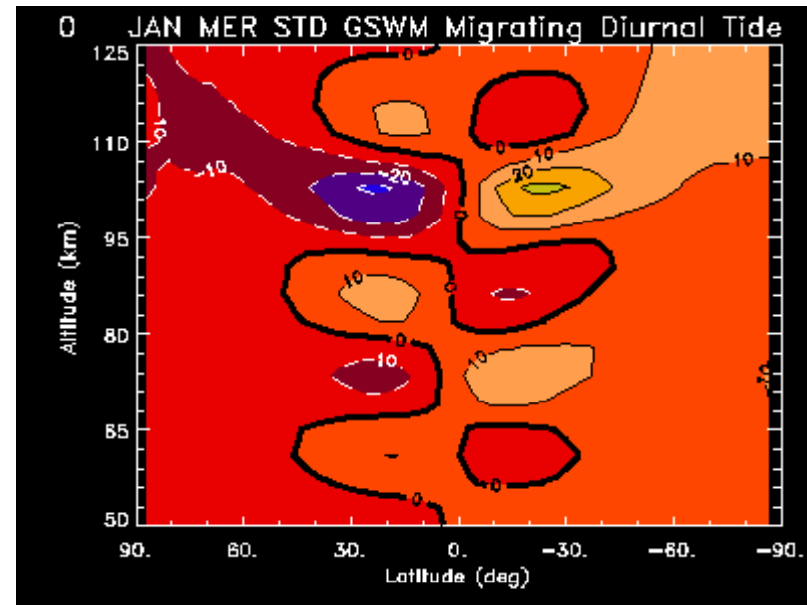
...and after



## Beer consumers



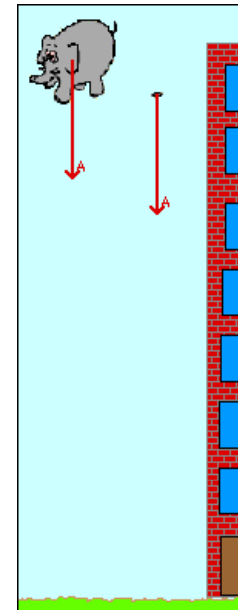
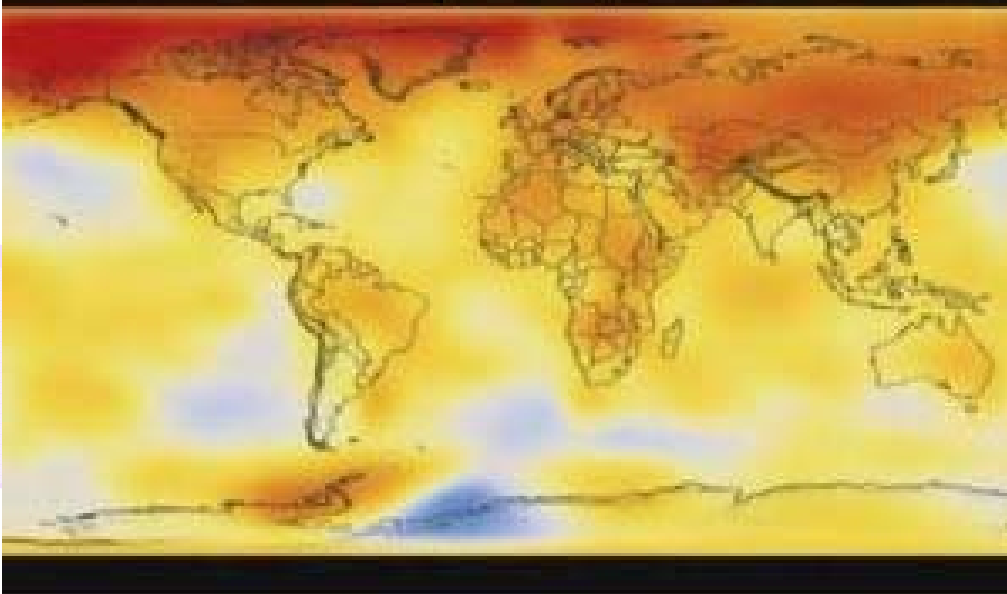
## Beer and Red Bull consumers



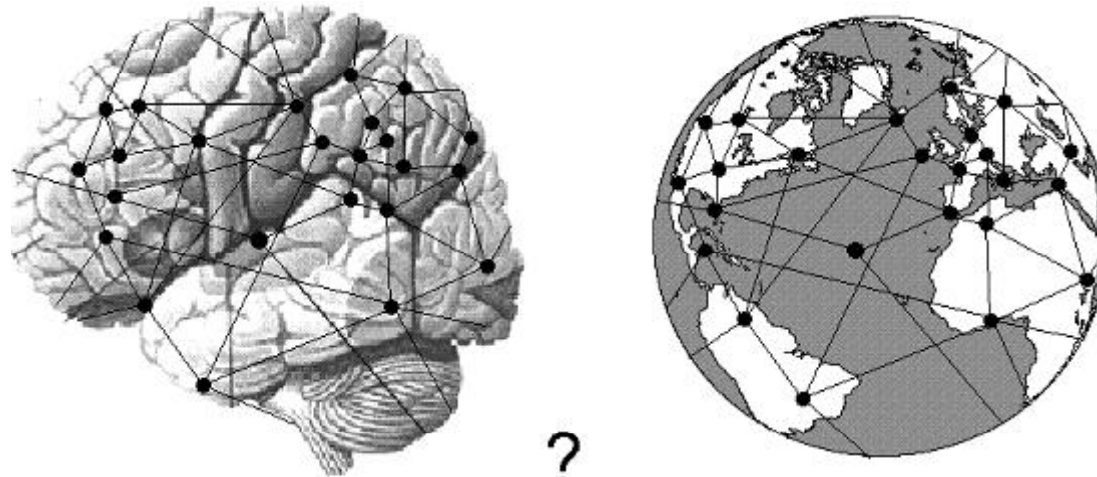
red bull



berr

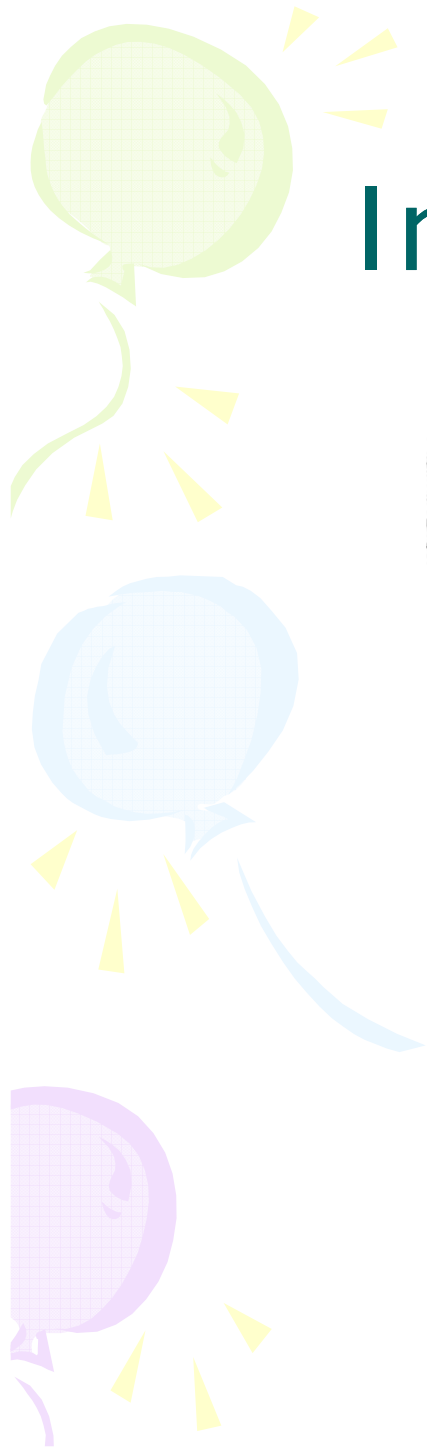


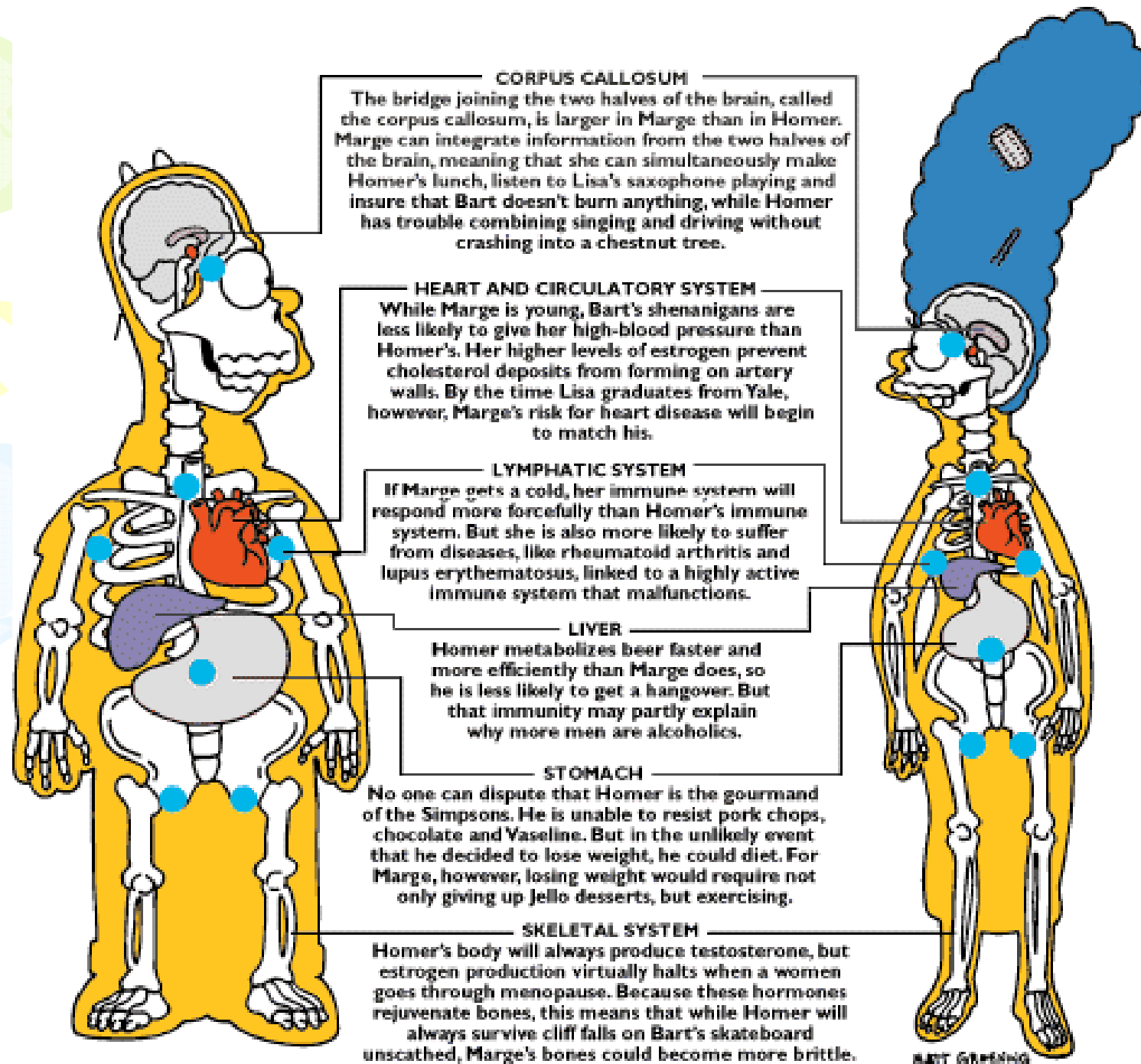
# Influence on humans



Human Brain

Gravity Field





#### CORPUS CALLOSUM

The bridge joining the two halves of the brain, called the corpus callosum, is larger in Marge than in Homer. Marge can integrate information from the two halves of the brain, meaning that she can simultaneously make Homer's lunch, listen to Lisa's saxophone playing and insure that Bart doesn't burn anything, while Homer has trouble combining singing and driving without crashing into a chestnut tree.

#### HEART AND CIRCULATORY SYSTEM

While Marge is young, Bart's shenanigans are less likely to give her high-blood pressure than Homer's. Her higher levels of estrogen prevent cholesterol deposits from forming on artery walls. By the time Lisa graduates from Yale, however, Marge's risk for heart disease will begin to match his.

#### LYMPHATIC SYSTEM

If Marge gets a cold, her immune system will respond more forcefully than Homer's immune system. But she is also more likely to suffer from diseases, like rheumatoid arthritis and lupus erythematosus, linked to a highly active immune system that malfunctions.

#### LIVER

Homer metabolizes beer faster and more efficiently than Marge does, so he is less likely to get a hangover. But that immunity may partly explain why more men are alcoholics.

#### STOMACH

No one can dispute that Homer is the gourmand of the Simpsons. He is unable to resist pork chops, chocolate and Vaseline. But in the unlikely event that he decided to lose weight, he could diet. For Marge, however, losing weight would require not only giving up Jello desserts, but exercising.

#### SKELETAL SYSTEM

Homer's body will always produce testosterone, but estrogen production virtually halts when a woman goes through menopause. Because these hormones rejuvenate bones, this means that while Homer will always survive cliff falls on Bart's skateboard unscathed, Marge's bones could become more brittle.

BART GRENING



BEER



BEER + RED BULL





CONTRAINDICATION



BEER AND BEER + RED BULL



WITHOUT

## AFTHER RESEARCH





**THE FIRST SUMMER SCHOOL  
IN ASTRONOMY AND GEOPHYSICS**



**BEER**

**IT'S WHAT'S FOR DINNER**

**THANKS FOR YOUR NERVES!!!**