

Spoiler Warning: No free Samples!

Astronomy Themed Beverages

Co-Learnium

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CSIRO ASTRONOMY AND SPACE SCIENCE
www.csiro.au



Definitions

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What is a beverage (for the purposes of this talk):

Water + Malt + Hops + Yeast

What is Astronomy (for the purposes of this talk):

Astronomy, Physics, Electronics, Engineering, Science Fiction

Who we are?

CASS Fresh lager

- ‘Korea’s No 1 Beer’
- Pale Lager – pale/golden in colour, cold conditioned/matured with cold fermenting yeast
- CASS – CSIRO Astronomy and Space Science



The fundamentals

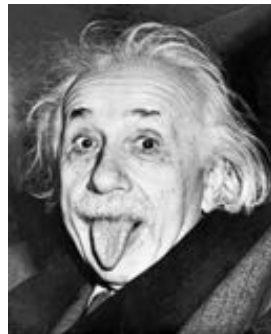
Brew Dog The **PHYSICS** amber ale



- Ellon, Scotland
- Amber Ale / Extra Special Bitter
- brewed with amber malt,
copper/brown colour, bit stronger
- Physics – underpins all we do in astronomy! The main goal of physics is to understand the universe that surrounds us

Lymestone Brewery 'ein stein' English bitter

- Stone, England
- English Bitter / strong pale ale with Maris Otter malts and Herbrucker hops
- Albert Einstein, 1879-1955, Relativity, $E=mc^2$, etc!



Celestial Bodies

Midnight **SUN** Porter

- Alloa, Scotland
- Spiced dark porter, chocolate malt, roast barley, bit of ginger with First Gold, Goldings and Cascade hops.

- Sun



(and 'Porter' is the name of a crater on the moon and one on Mars!)



Hideji THE MOON's Dark Lager (“Dunkel”)

- Miyazaki, Japan
- Dark Lager – dunkel, dark brown, roasted malt
- (Tsuki) The Moon



BLUE MOON Belgian White



- Canada-US-Australia
- ‘Belgian-Style’ Wheat beer
- ‘Blue Moon’ (not blood, super, super-blood, super-blue-blood, ...)



Sparkke What's **PLANET B** ? New England Pale Ale

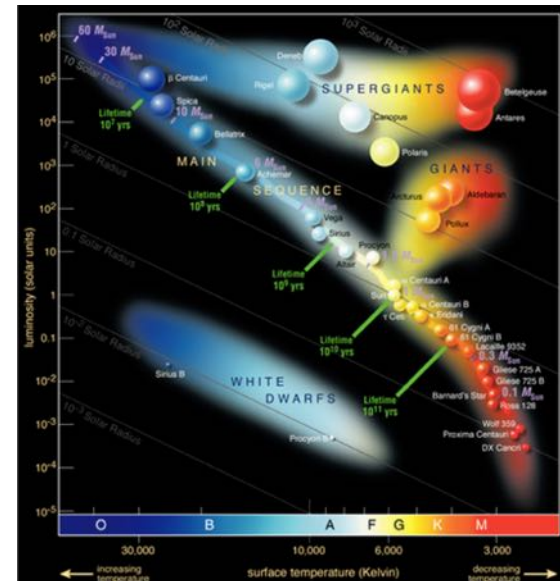
- Adelaide, Australia
- New England Pale Ale / Pilsner, with 6 (!) hops, mostly US
- Planet B ~~not allowed to comment because its climate change~~



J.W. Lees Manchester **STAR** strong ale



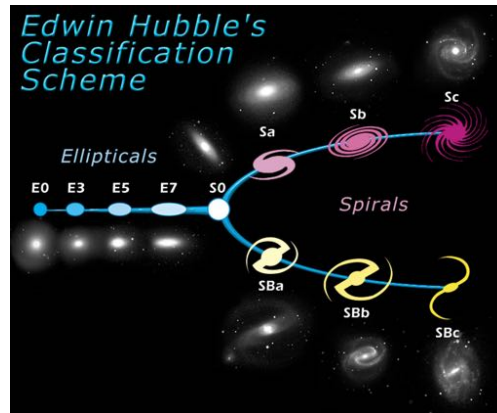
- Manchester, England
- Strong ale - 7.3% alcohol by volume, Golding Hops
- Star:



3 Raven **GALAXY** Juicy New England IPA

(although actually anything with **GALAXY** hops)

- Thornbury, Australia
- New England IPA – unfiltered and/or double IPA, with maximum hops
- ‘Galaxy’ is an Australian hop, tropical fruits, citrus fruits



- Galaxy classification:



Astronomy Life

Newcastle Nocturnal English bitter

- Newcastle, England
- 'Newkie Brown' derivative
- Nocturnal – stereotype of all astronomers!



Bollington **Nights** mild ale

- Bollington (very close to Jodrell Bank Observatory), England
- Dark Ale / 'MILD', lighter
- Nights – work a lot of these as astronomer



Red Willow **SLEEPLESS** American Amber Ale

- Macclesfield, England
- American Amber Ale – pale ale with amber malt
- Sleepless – the inevitable conclusion of the previous!



Engineering & Signal Processing

8 wired SEMI CONDUCTOR session IPA

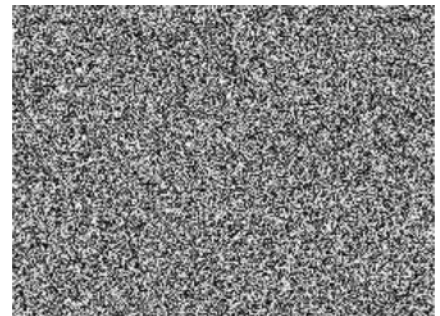
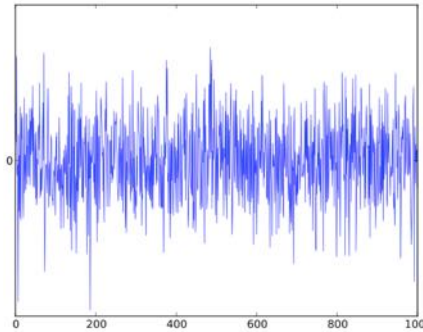
- Warkworth, New Zealand
- Session IPA – lower strength
- Semi-conductor – falls between a conductor of electricity and an insulator of electricity, varies with temperature



Yeastie Boys Australia **White Noise**



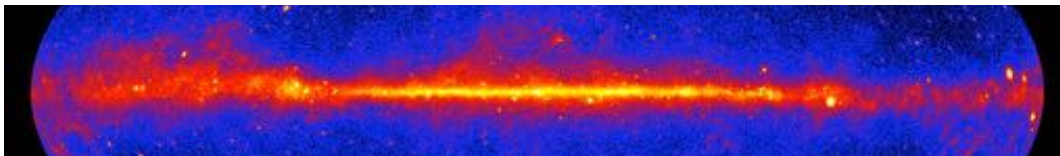
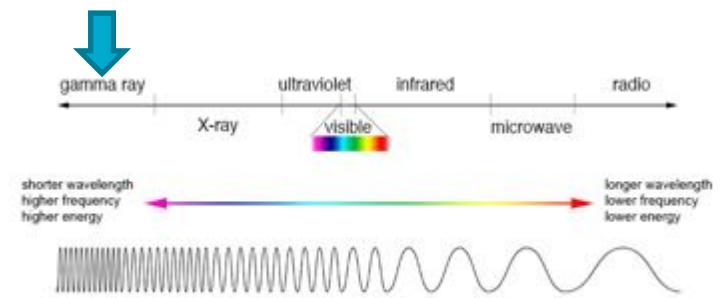
- Australia (Wellington, NZ originally)
- German white, or 'weisse' = wheat beer (top fermented, more wheat)
- White noise - random signal having equal intensity at different frequencies



The Spectrum

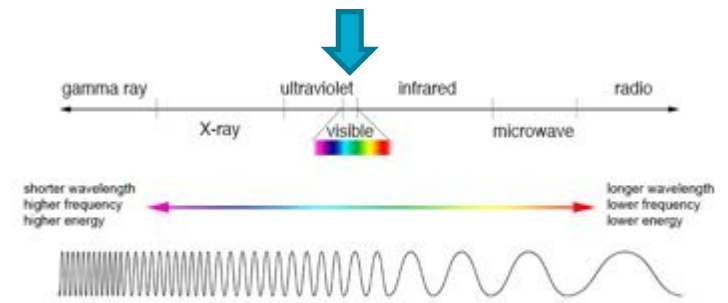
Beavertown **GAMMA RAY** American pale ale

- London, England
- American Pale Ale
- Gamma rays (photon energy > 100 keV), solar flares, pulsars, supernovae,



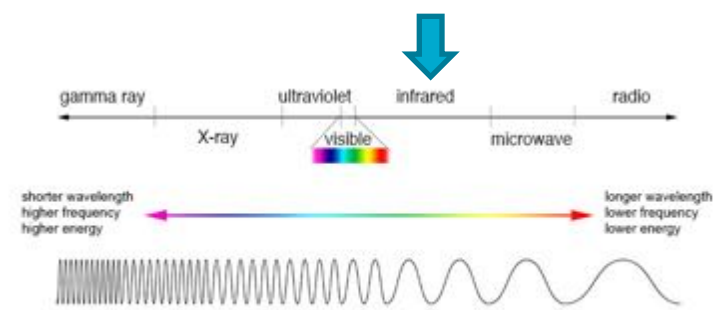
Hahn Premium LIGHT

- Originally Camperdown, Australia
- 'Light' beer – low strength
- Optical view dominated by stars, obscured by dust



Hardknott INFRARED IPA

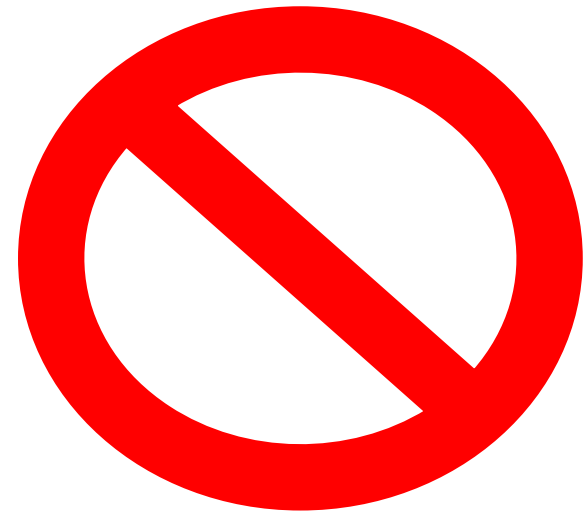
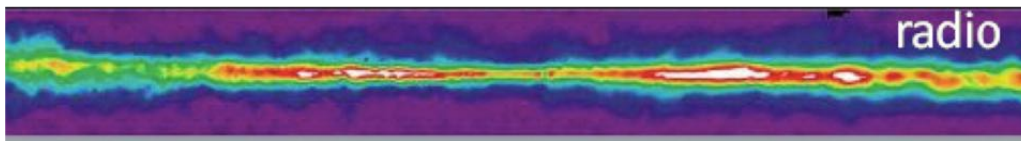
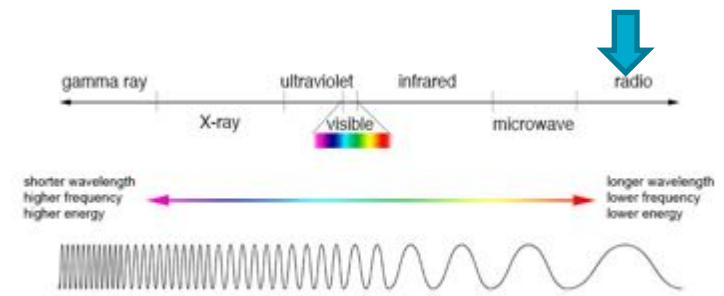
- Millom, England
- 'Oxymoronic IPA' lots of hops but also crystal malt
- Infrared emission – dust tracer



Collective Arts **RADIO** The Mothership

(only one not personally sampled!)

- Hamilton, Canada
- Imperial / double IPA
- Radio!



Special Mentions

Special Mentions – Science Fiction



Special Mention – Beer Mat App!

- Developing 3-d augmented reality app for outreach/education/etc
- Uses printed code ->
- Intend to develop for beer mats and Pint of Science

