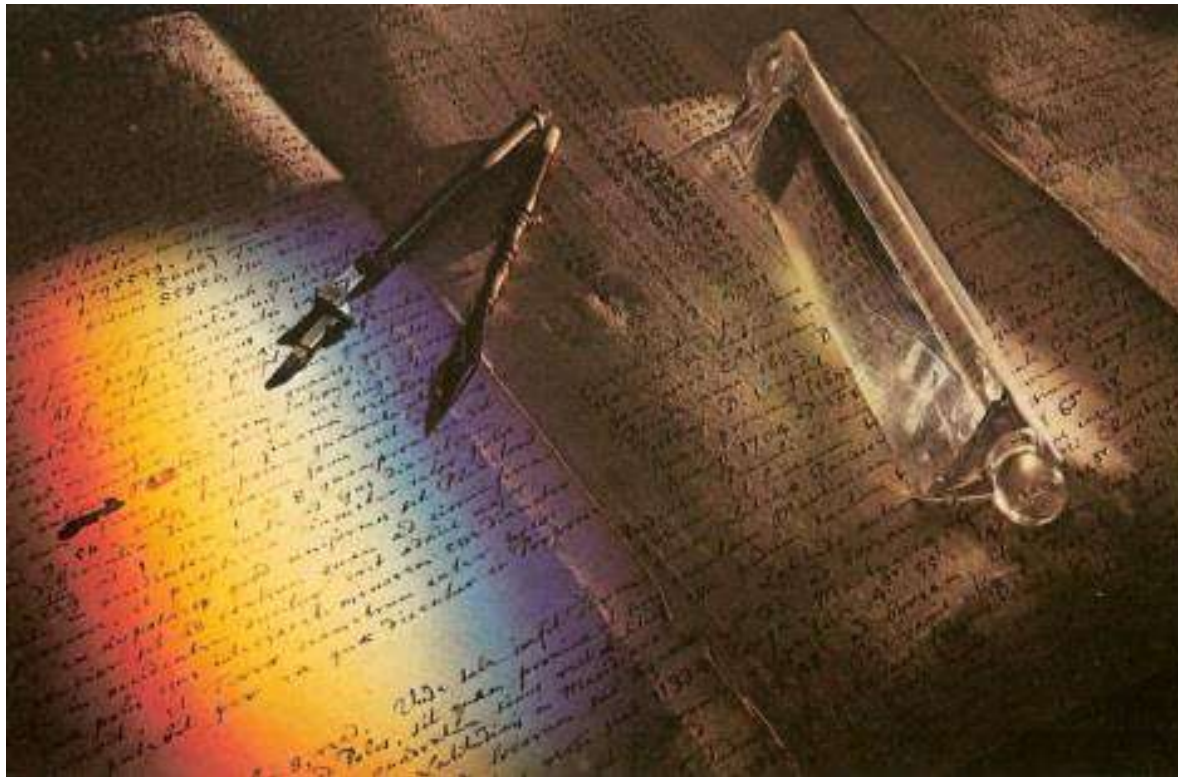


# LES GRANDES OREILLES

N° 1

**SPECTRES** *And Co*



# **ASTRO**

## **REGARDER LE CIEL**

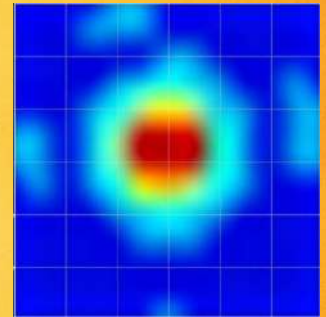
## **PLUTÔT LA NUIT !**



# **RADIOASTRO**

**FAIRE DES IMAGES  
RADIO DU CIEL !!!**

**ECOUTER LE CIEL !**



**PAS FORCEMENT LA NUIT !**

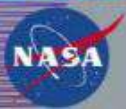
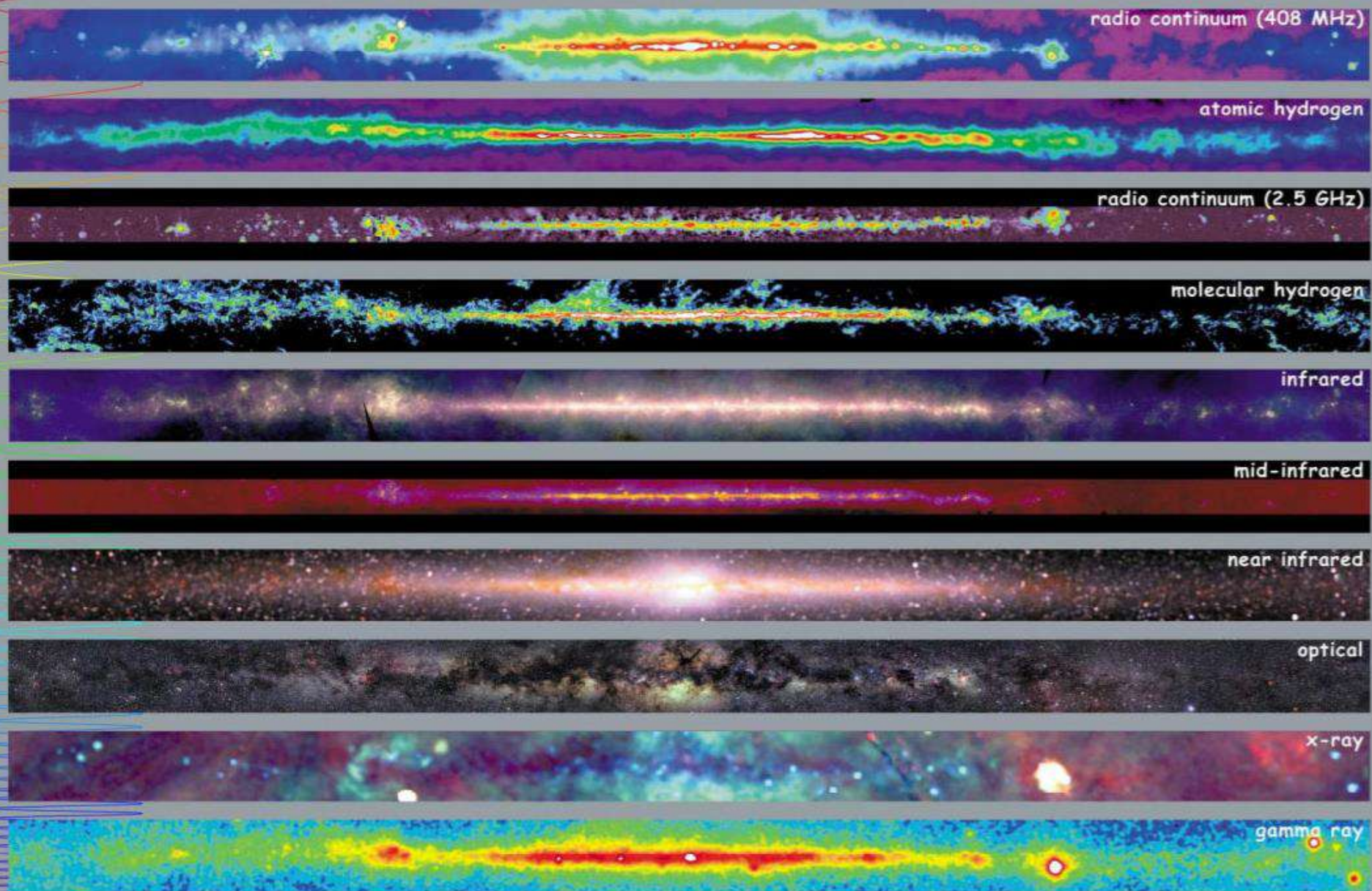


# LA VOIE LACTÉE





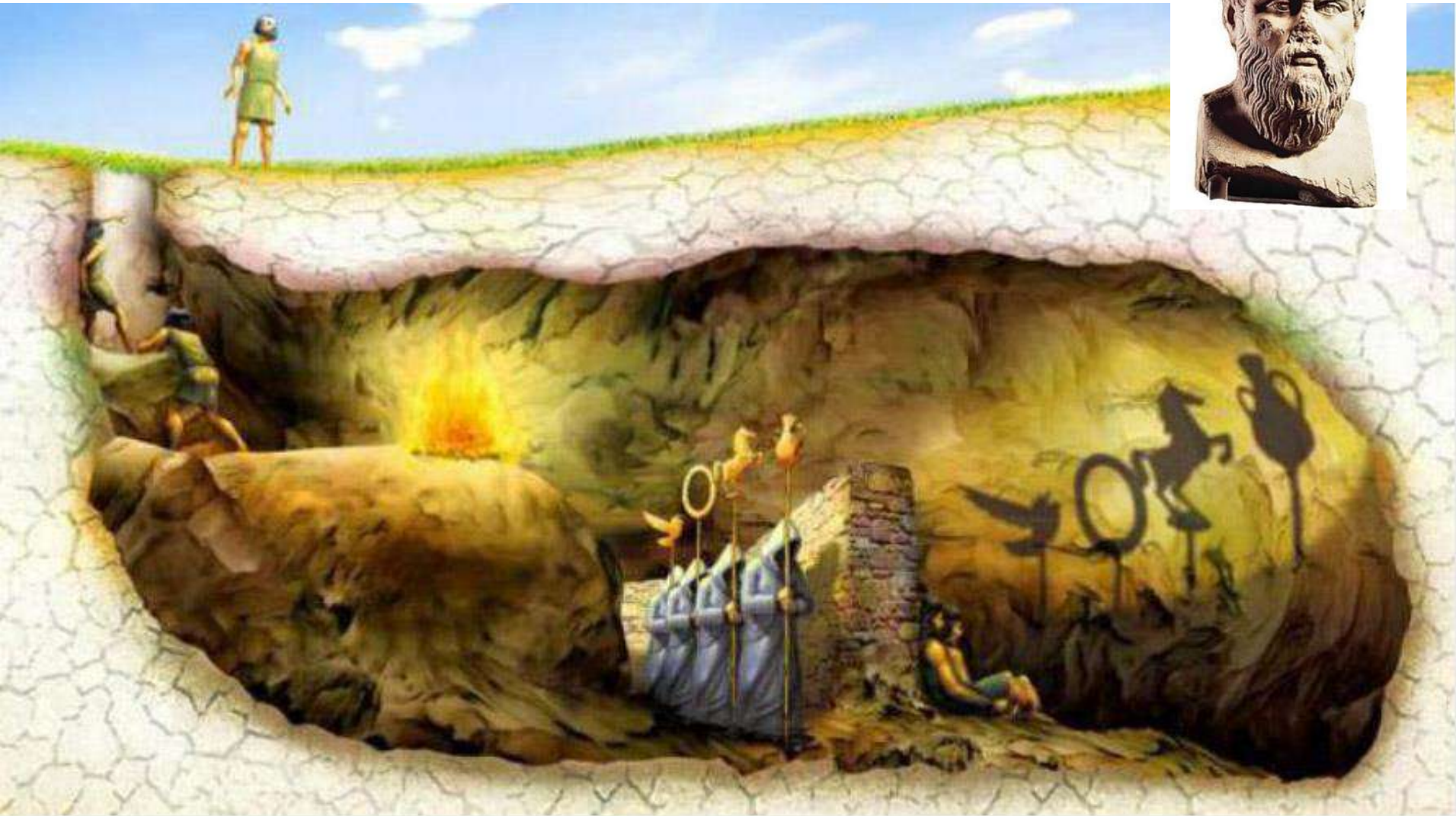
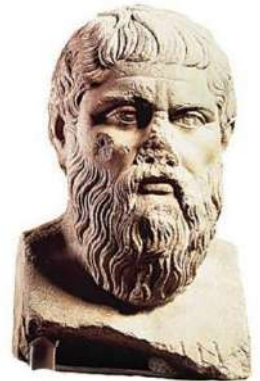
# IL EXISTE D'AUTRES VISIONS DE LA VOIE LACTÉE !



## Multiwavelength Milky Way

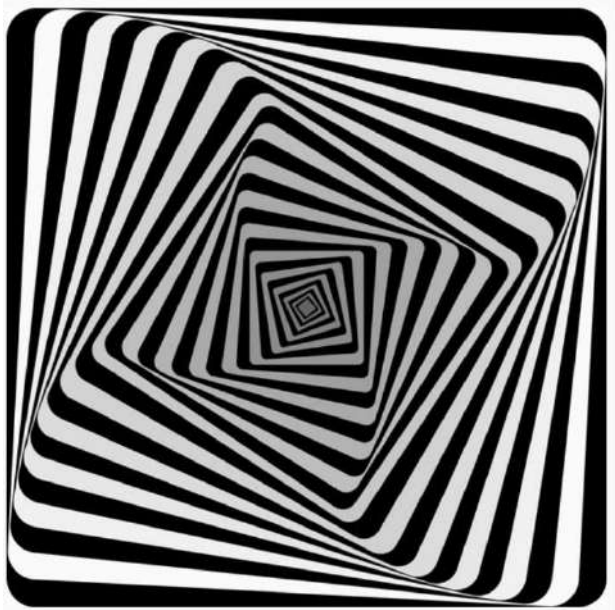


# VOS SENS VOUS TROMPENT !

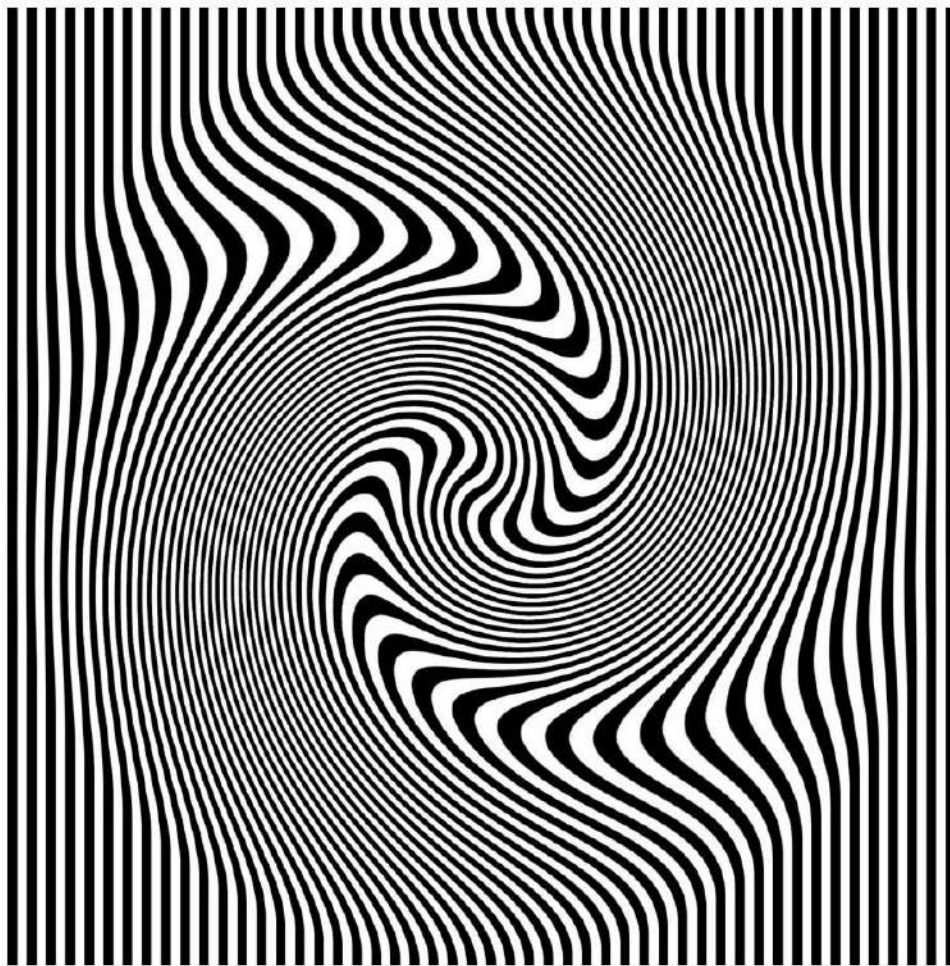


**Le Mythe de la caverne, *La République* de Platon**

# Les illusions d'optique



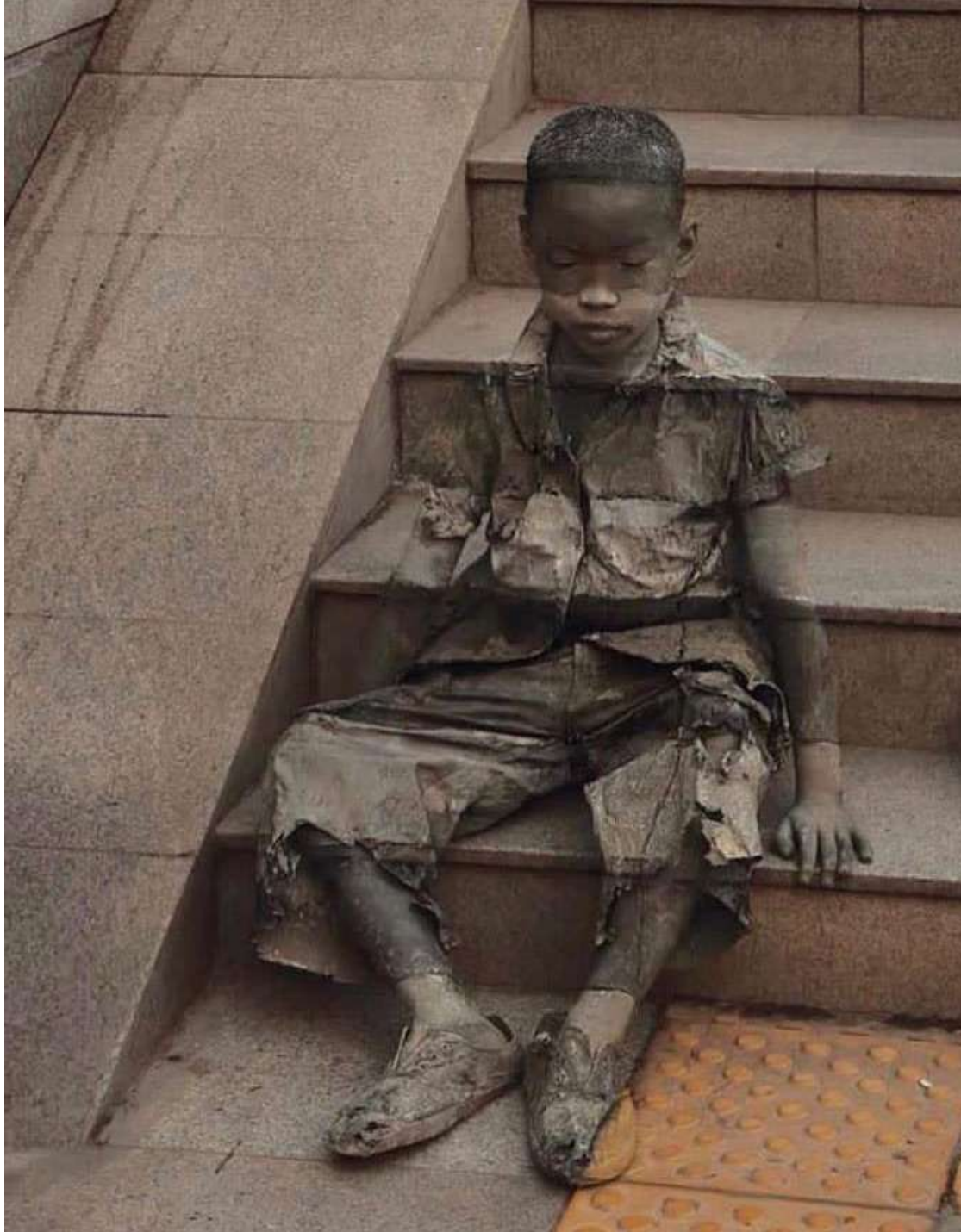




**VOTRE VUE  
VOUS TROMPE !**







**Kevin Lee, Haohui Zhou  
et Bin Liu**  
***"Ne m'ignorez pas !"***





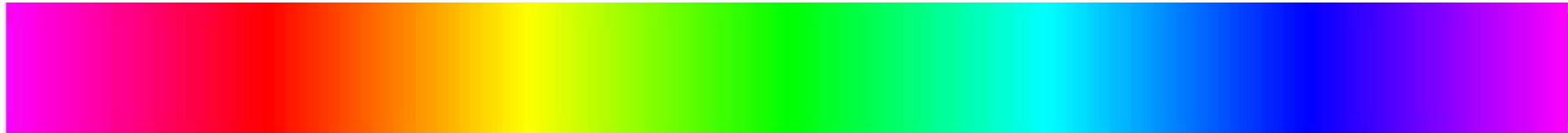
***Tim Noble  
et Sue Webster***



# A LA RECHERCHE DE NOS LIMITES VISUELLES



***Canis Lupus***



***Homo Sapiens***



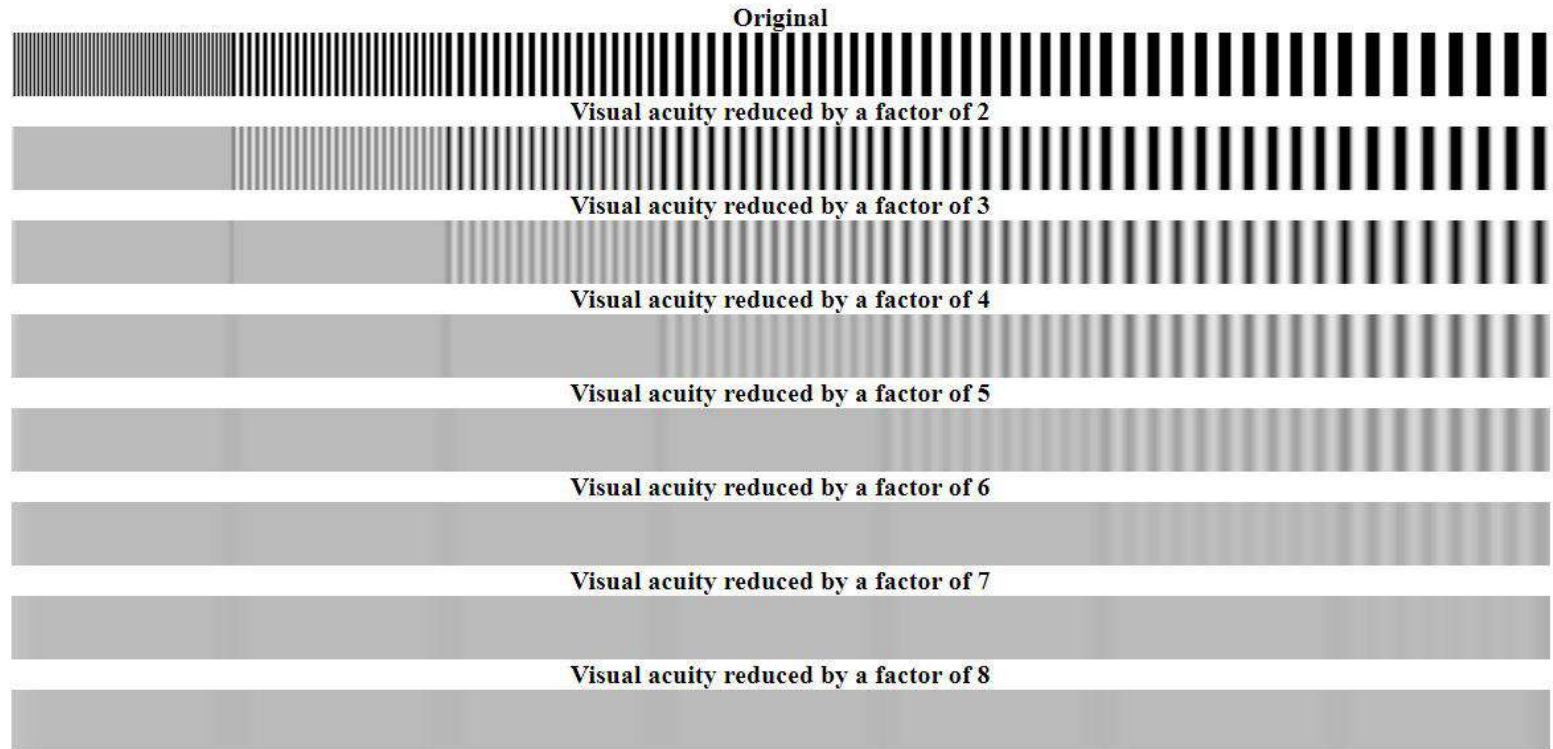


# LES CHIENS PEUVENT ILS LIRE LES JOURNAUX ?



***Acuité visuelle***

***Homo Sapiens***



***Canis Lupus***

***Miller PE, Murphy CJ (1995) Vision in dogs. J. Am. Vet. Med. Assoc. 207:1623-34.***

***Comment le Fdotus verrait Trump avec un drapeau Gay ?***





**Peu d'animaux peuvent percevoir les rayonnements UV. Les rènes en font partie.**

**Au nord, la neige réfléchit une bonne partie des UV. Par contre les lichens et l'urine absorbent les UV.**



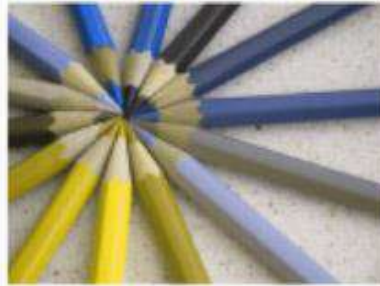


Normal



Nous ne faisons pas la différence entre un vert pur (590 nm) et un vert obtenu par mélange de jaune (580) et de bleu (480)

Protanopie



Notre cerveau n'y voit que du jaune !

Deutéranopie



Tritanopie

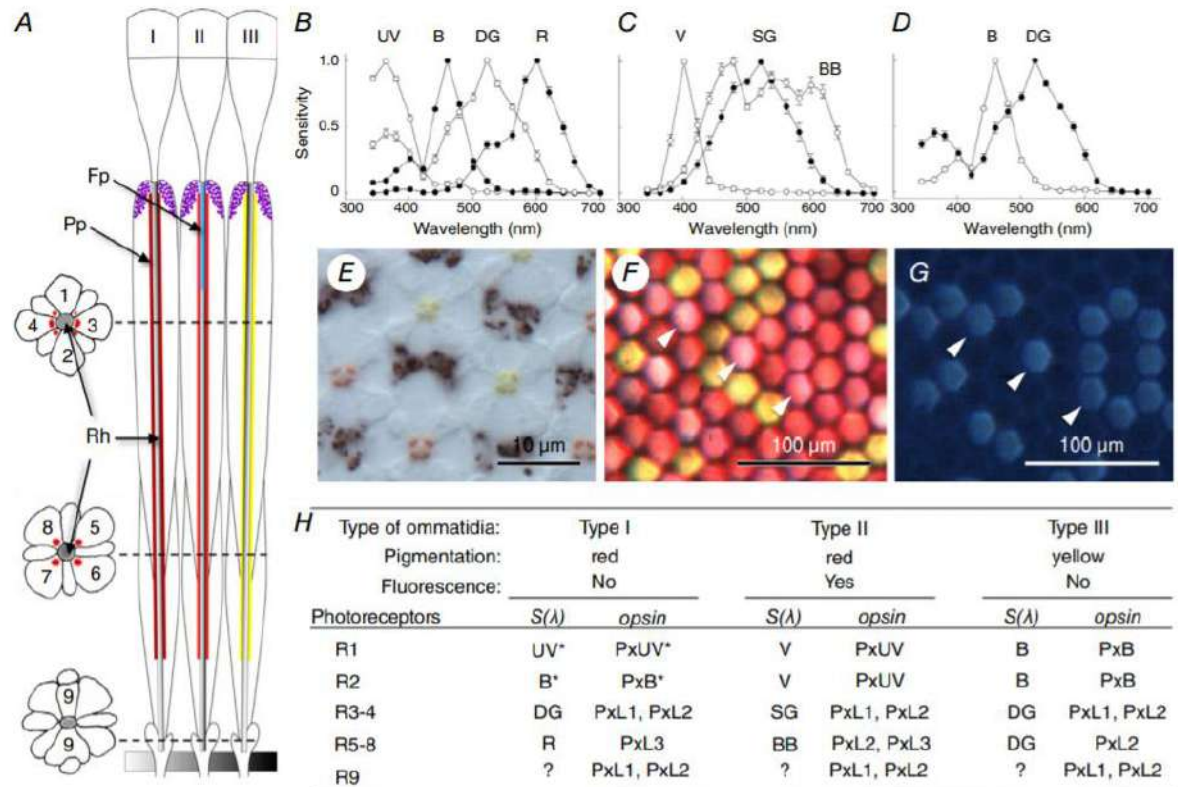
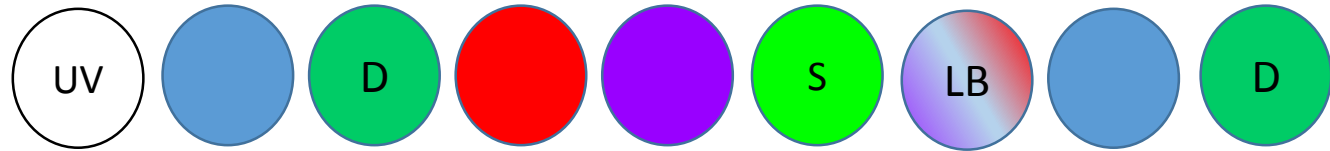




# ET LES PAPILLONS ?



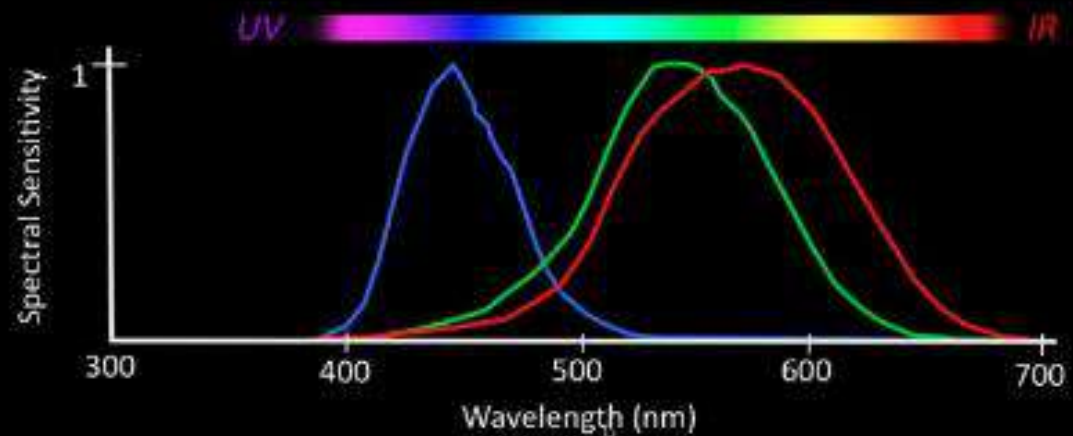
***Macaon (Swallowtail)***



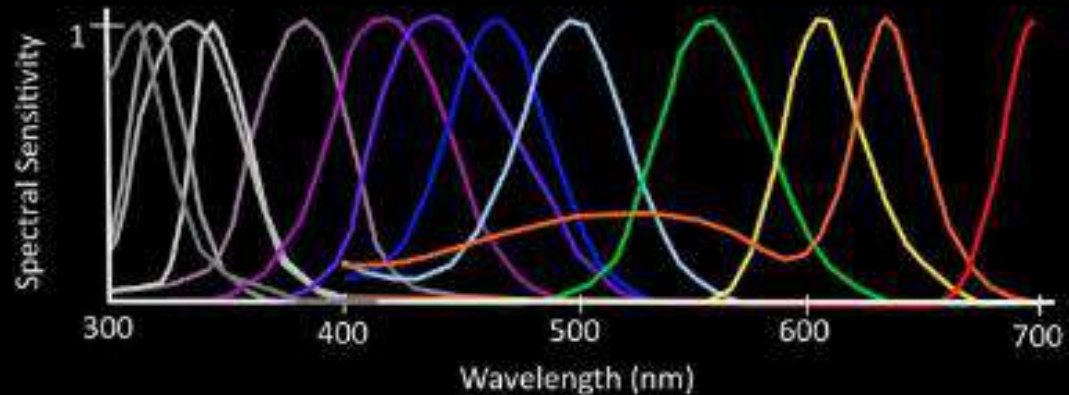
# LE BOUQUET C'EST LA CREVETTE MANTIS OU STOMATOPODE

**12 types de Cônes de l'UV au IR      6 paires d'yeux**

*Homo sapiens*



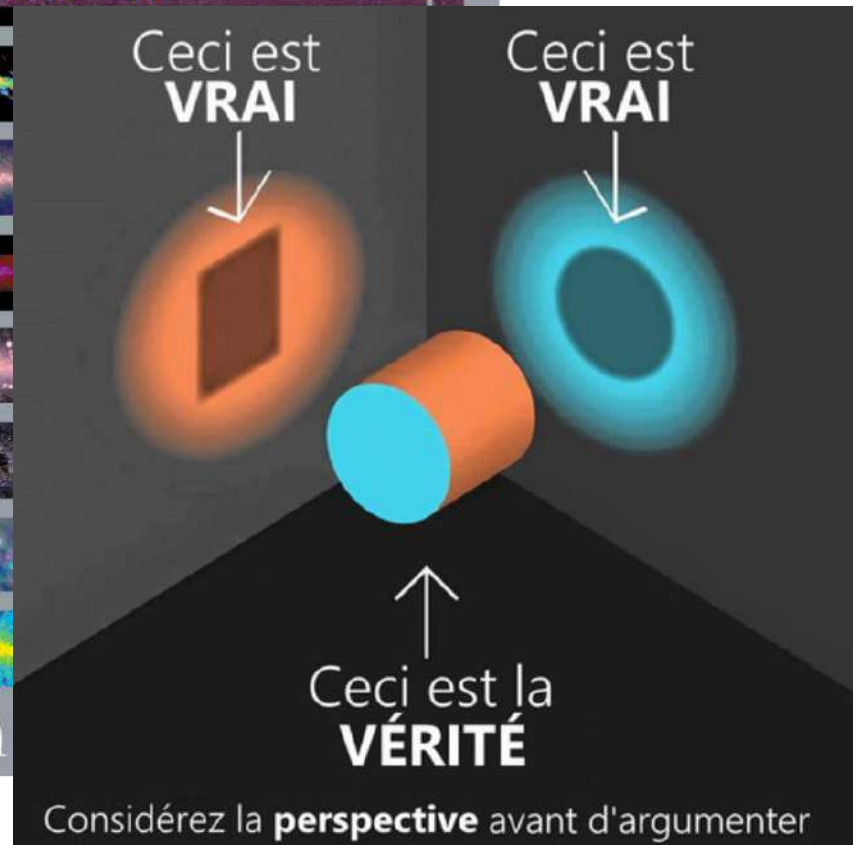
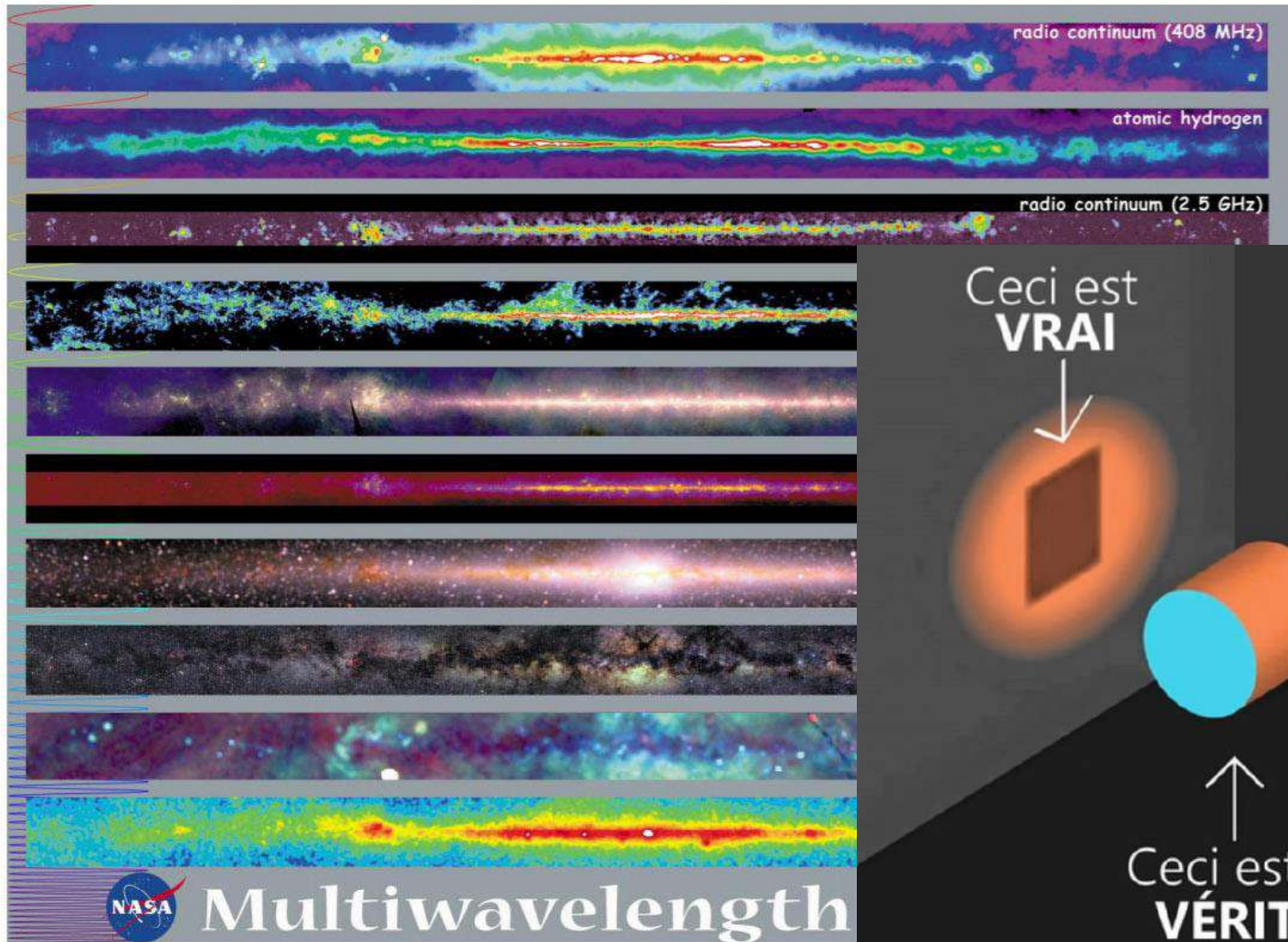
*Neogonodactylus oestedii*



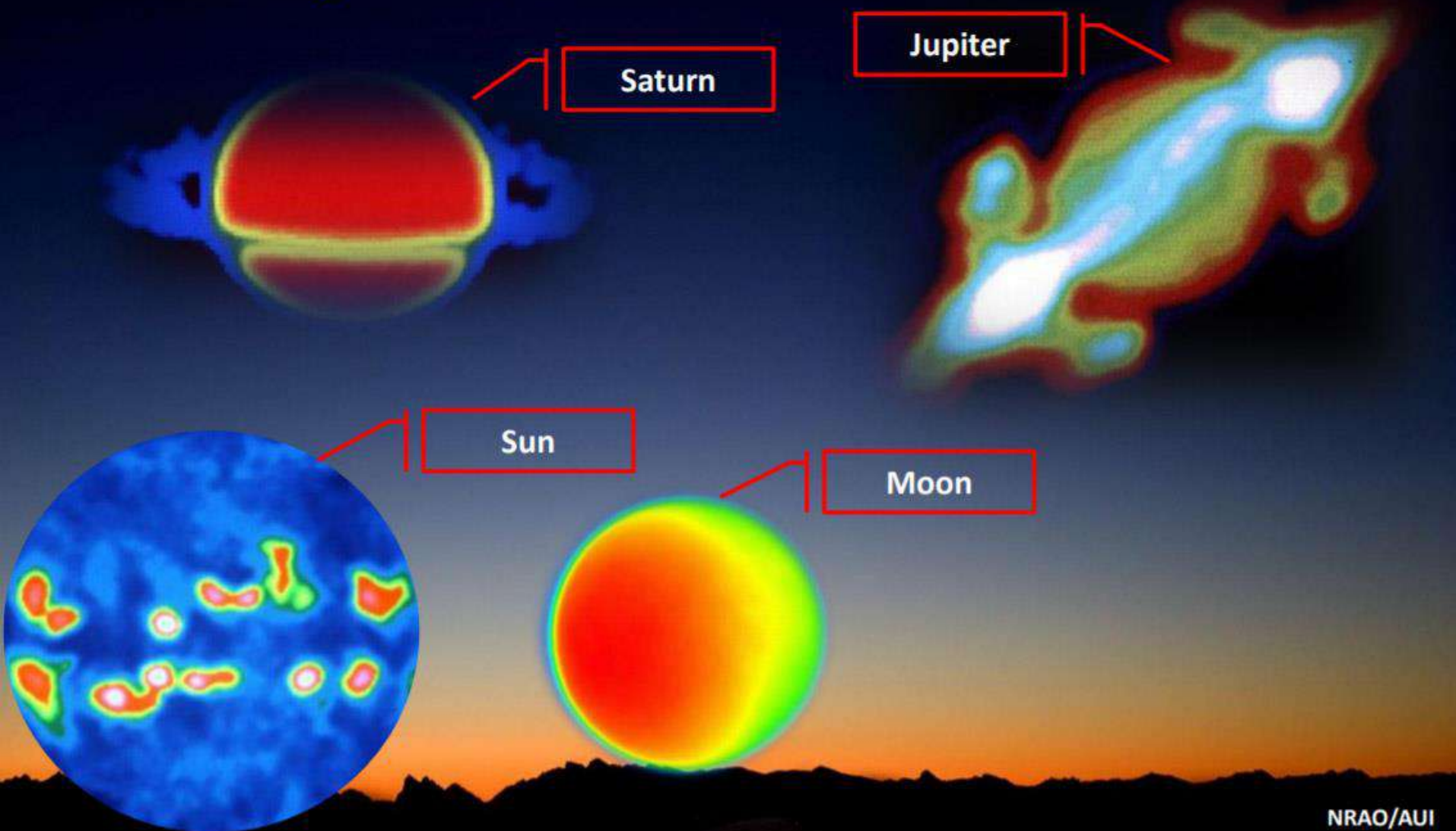


# LA RADIOASTRO : UN AUTRE POINT DE VUE

## PARMI BEAUCOUP D'AUTRES !



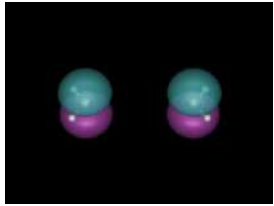
The universe changes when seen in band radio ...





# ***SPECTRE ÉLECTROMAGNÉTIQUE : LE TOUR DU PROPRIÉTAIRE***

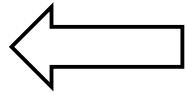




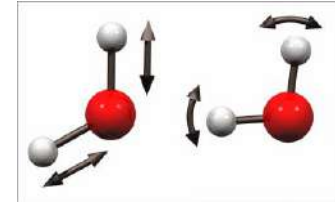
*Energie grande  
Longueur d'onde petite*



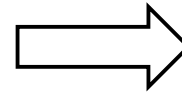
**Ionisants**



*Energie petite  
Longueur d'onde grande*



**Non Ionisants**



## SPECTRE ÉLECTROMAGNÉTIQUE

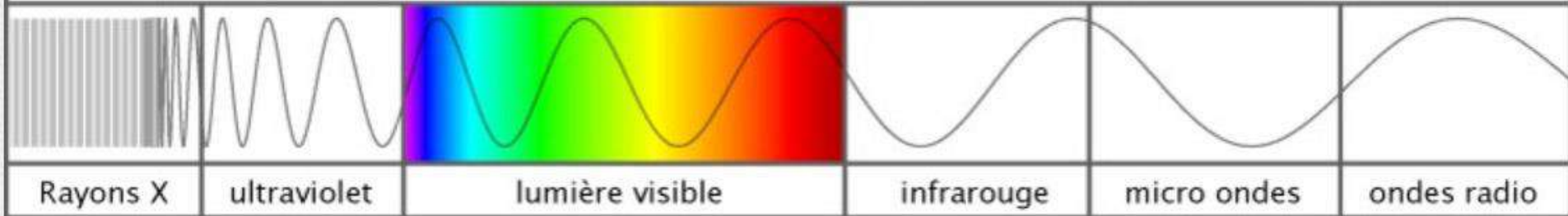
10 nm

400 nm

780 nm

1 mm

1 m



Rayons X

ultraviolet

lumière visible

infrarouge

micro ondes

ondes radio

2,45 GHz 12 cm



99,2 MHz 3 m



50 Hz 6 000 km

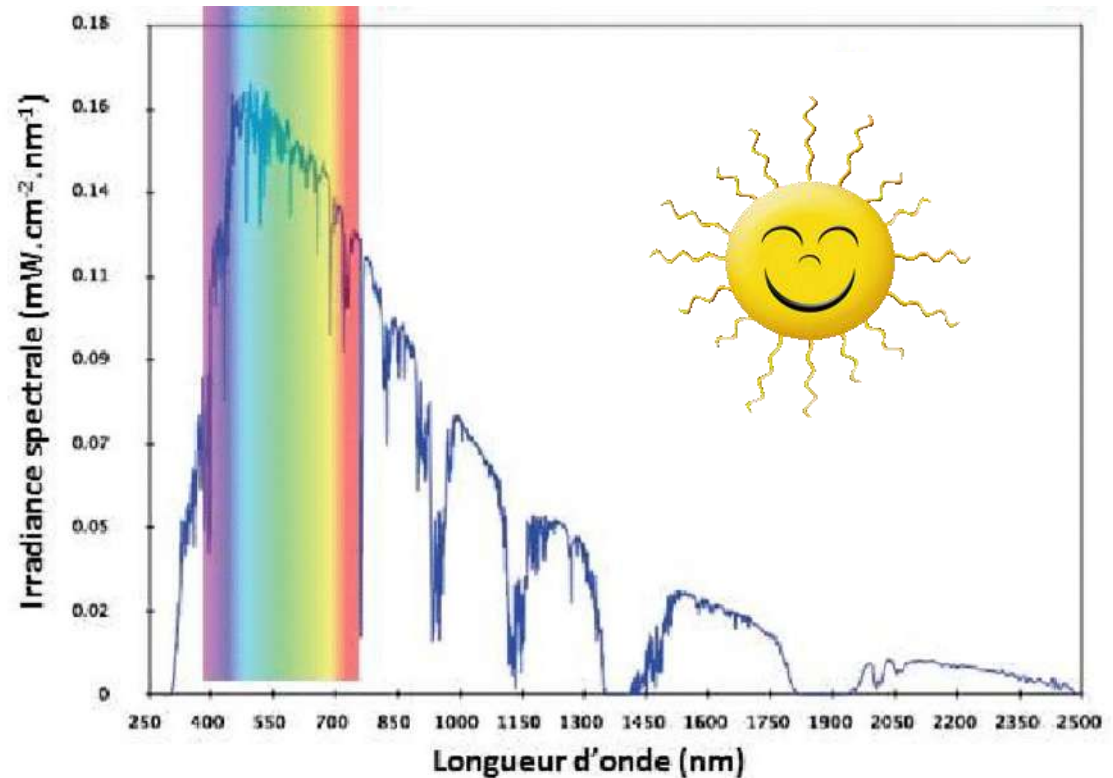
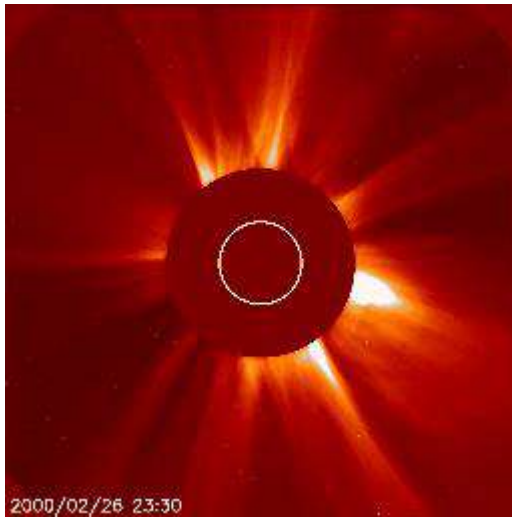




# Et surtout la **source électromagnétique primaire**

**3 % UV    44 % Vis    53 % IR**

**Un coléreux  
électromagnétique !  
et cyclique !**



**Rayons X !**

**Radio !**



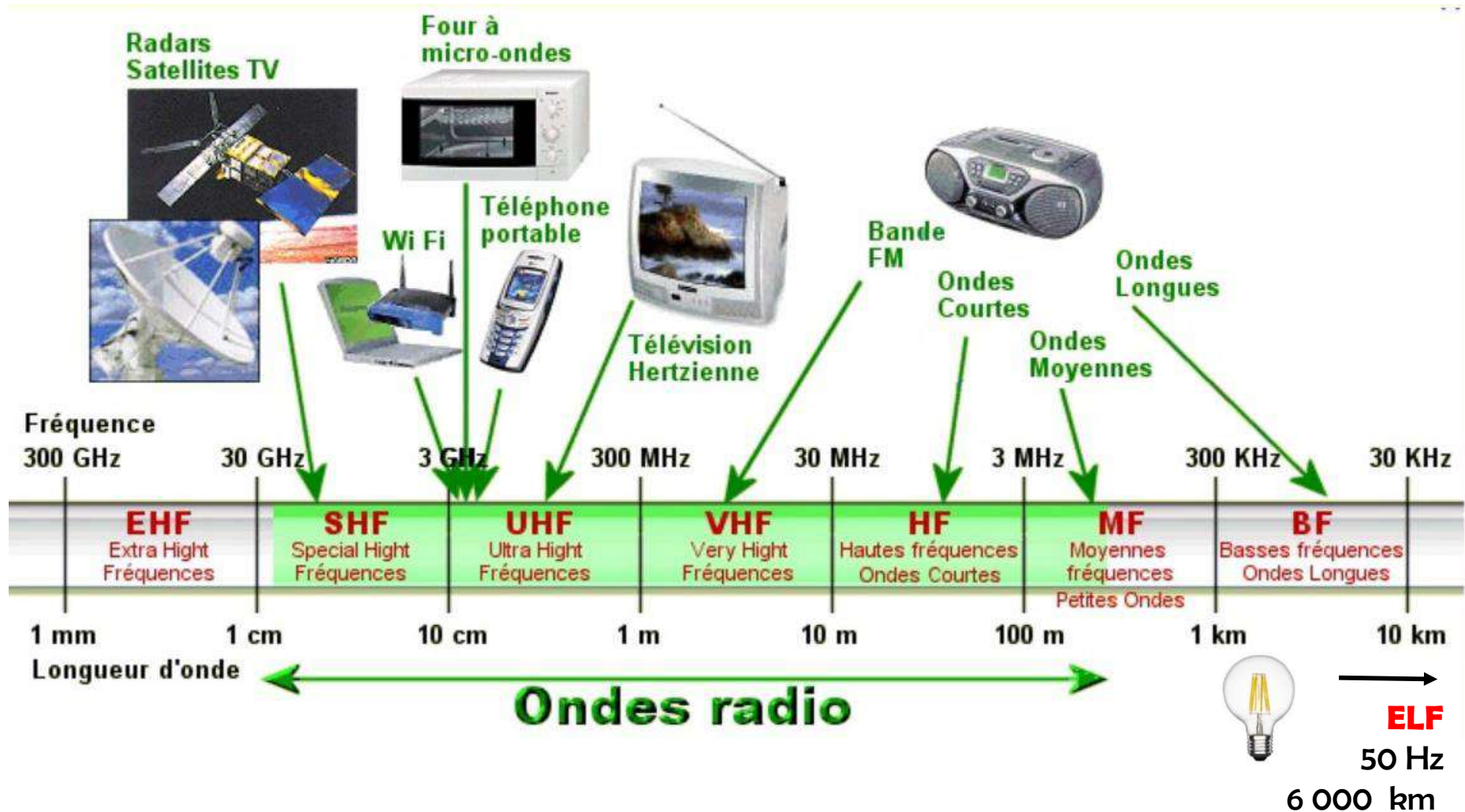
**13,36 à 13,41 MHz Soleil, Jupiter**

**25,55 à 25,67 MHz Soleil, Jupiter**

**73 à 74,6 MHz Soleil, Jupiter**

**pour le suivre :  
[www.spaceweatherlive.com](http://www.spaceweatherlive.com)**

# Et maintenant le coté faible énergie du spectre électromagnétique





# SPECTRE ÉLECTROMAGNÉTIQUE

**EN LIVE**



**SpectroLive**

Les solutions **SDR** **S**oftware **D**efined **R**adio receiver

**WebSDR** et **OpenWebRX**

On peut **écouter** mais aussi **ajuster** la fréquence (tuner)

Vous permettent d'écouter des conversations entre radioamateurs dans tous les modes de transmission qui leur sont permis sur ondes courtes

Démodulation directe : **AM, FM, BLU, CW**

mais aussi **RTTY, PSK31, PACTOR, AMTOR**

et aussi **JT9, JT65 et FT8**

et bien sur les Radios

# Attention aux navigateurs qui désactivent le son !

## Le site idéal est celui de l'Université de Twente

### PA3FWM (P.T. de Boer)

Wide-band WebSDR in Enschede x +

Non sécurisé | websdr.ewi.utwente.nl:8901

Amateur radio club ETGD

Faculty for Electrical Engineering,  
Mathematics and Computer Science

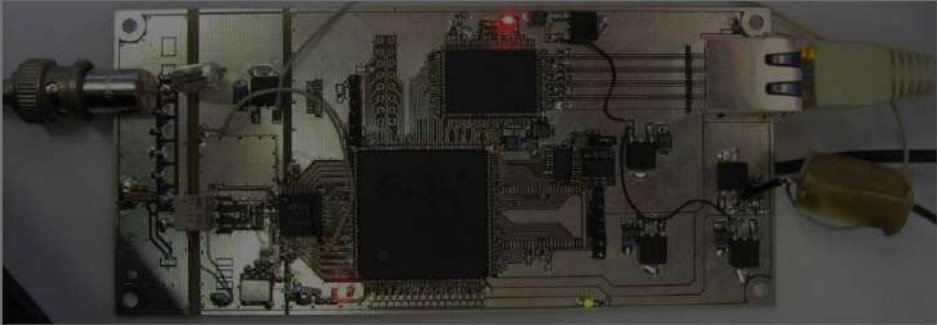
University of Twente  
Enschede - The Netherlands

Click here to start audio:

### Wide-band WebSDR


On this page you can listen to and control a short-wave receiver located at the amateur radio club [ETGD](#) at the [University of Twente](#). In contrast to other web-controlled receivers, this receiver can be tuned by multiple users simultaneously, thanks to the use of Software-Defined Radio.

This site, which in 2008 was the very first WebSDR site ever, was finally reactivated in July 2012 after [an interruption of more than 1.5 years](#); read also the [old news since then](#).




The system is currently composed of a "Mini-Whip" antenna, a homebuilt SDR board (as pictured; see [here for background](#)) which samples the entire shortwave spectrum and sends all of this via a gigabit ethernet link to a PC, where a special version of the WebSDR server software processes it. The Mini-Whip is based on a design from PA0RDT (google finds it); see [some pictures](#). The active receiving element is about 5 by 10 cm large. Such an antenna only works well with a [good grounding](#); ours is on top of a 20m high building, the upper part of which is all metal.


#### Other services available on this system:



WSPR reception



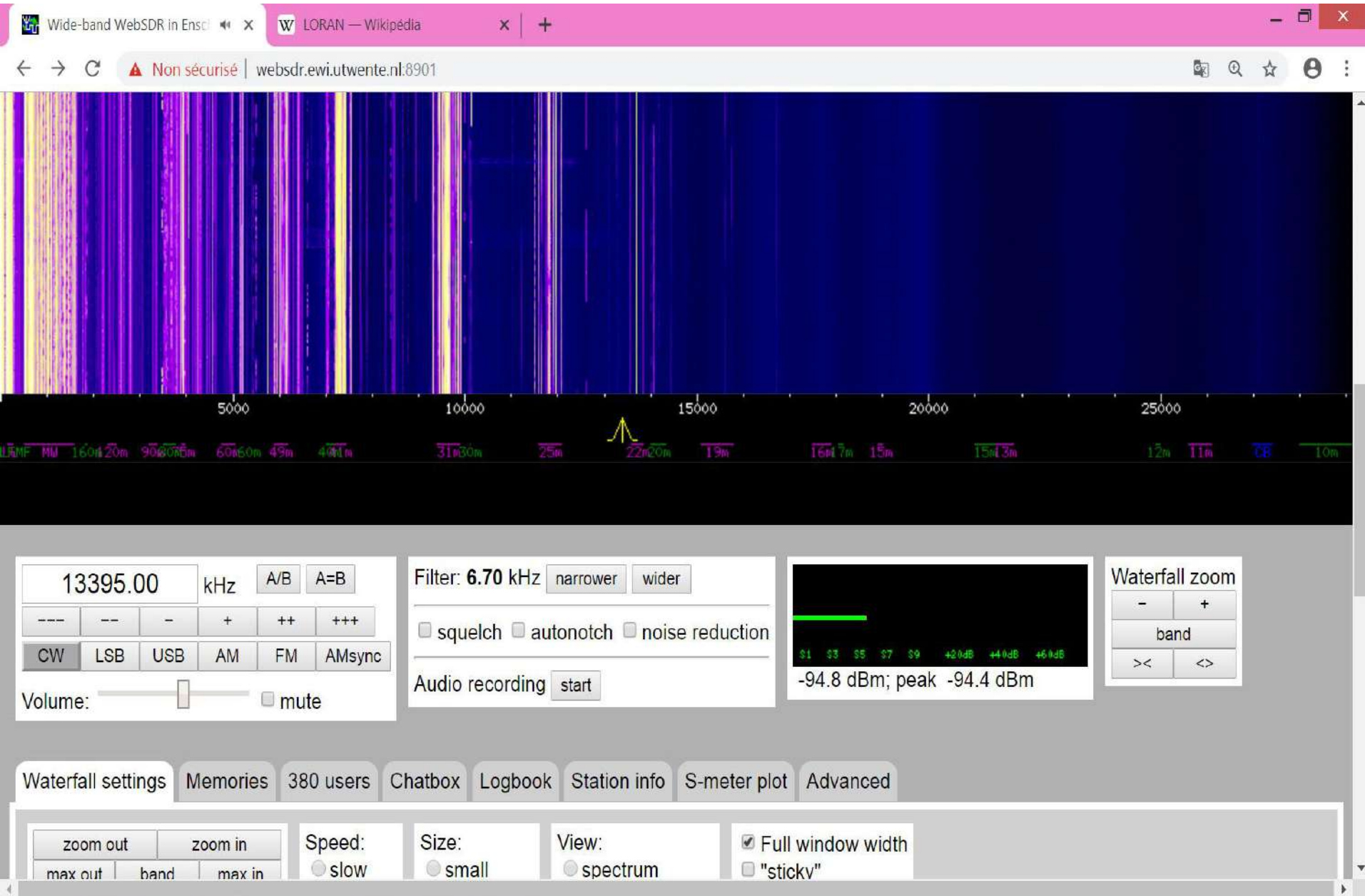
Chirp signal reception



Entire day waterfall display

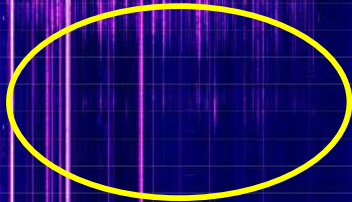


11770.61 9 kHz



# De la radioastro avec le webSDR ? Eclipse Solaire du 20 mars

**20/03/2015**



**21/03/2015**



