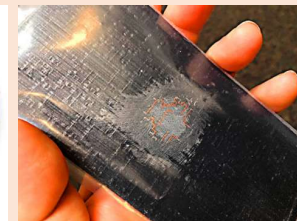
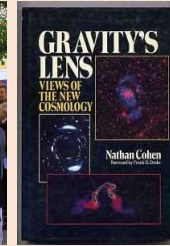


INVISIBILITY QUEST
**BATS, CLOAKS,
GRAVITY, &
MORALITY:
LESSONS FROM THE
INVISIBILITY QUEST**

Chip Cohen W1YW



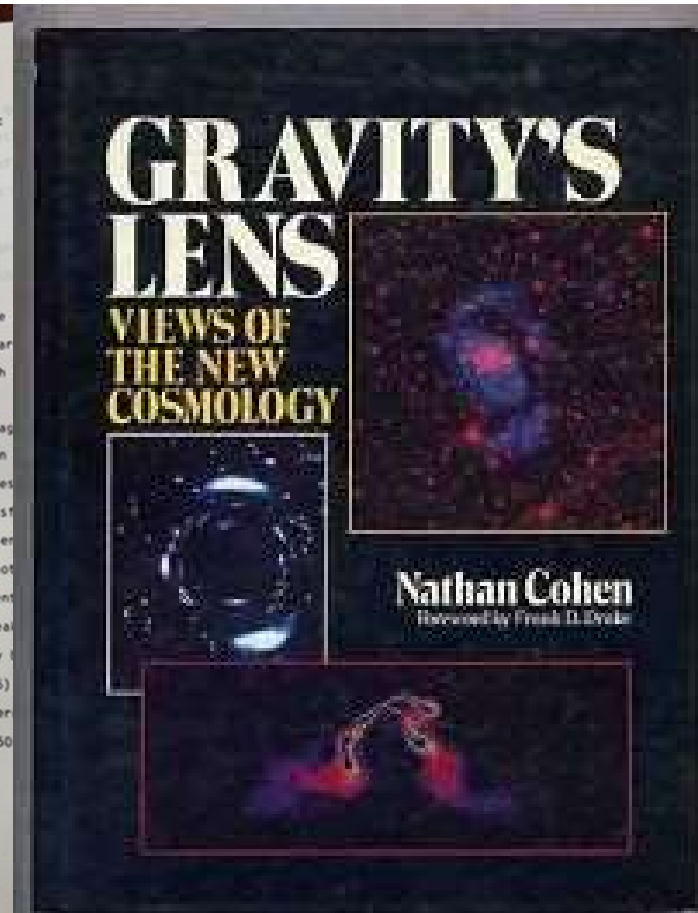


MILLIARCSECOND MORPHOLOGY OF THE TWIN QUASAR 0957+56A,B:
THE VIEW THROUGH A GRAVITATIONAL LENS

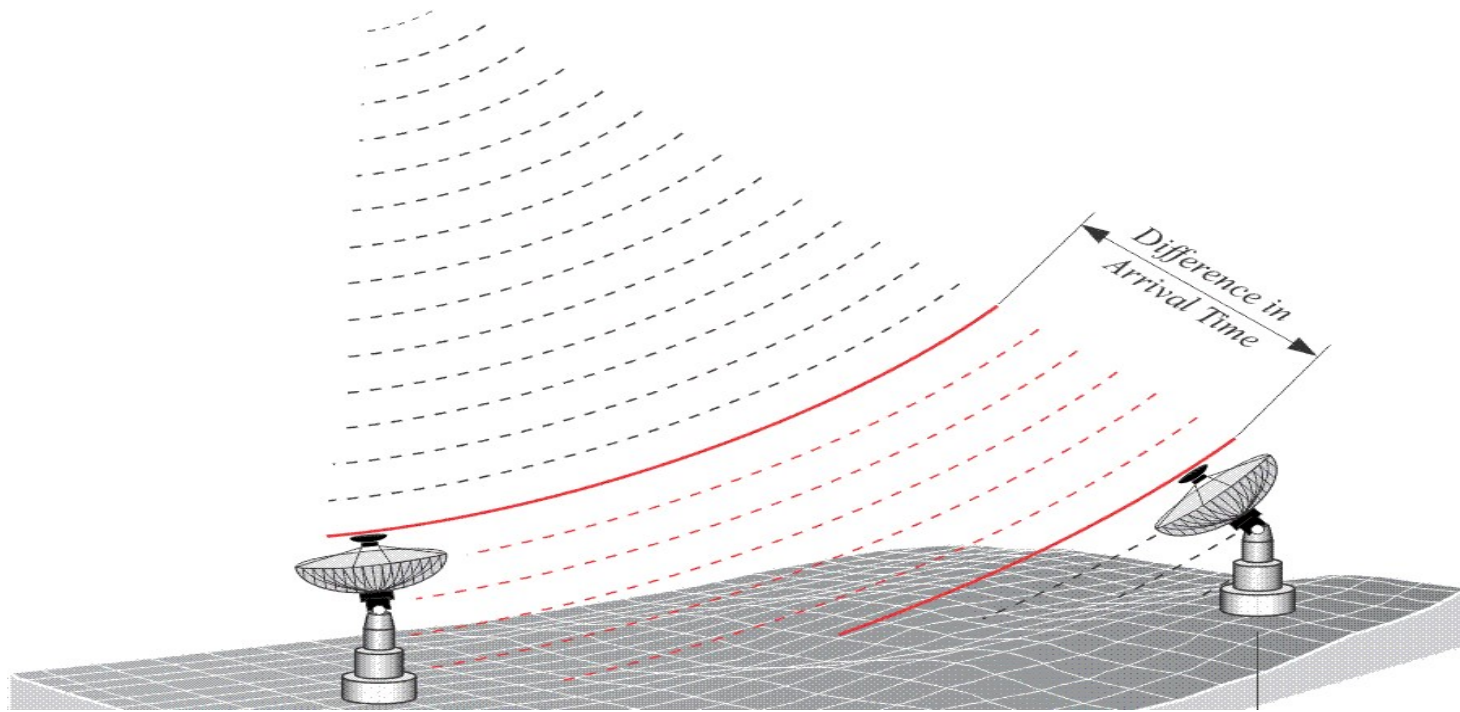
by
Nathaniel L. Cohen, Ph.D.
Cornell University, 1985

VLBI observations were made on 15 March 1981 at 13 cm of the
the Twin Quasar 0957+56A,B. These observations probed the milliar
(mas) structure of the Twin Quasar and its angular environs, with
Jansky sensitivities.

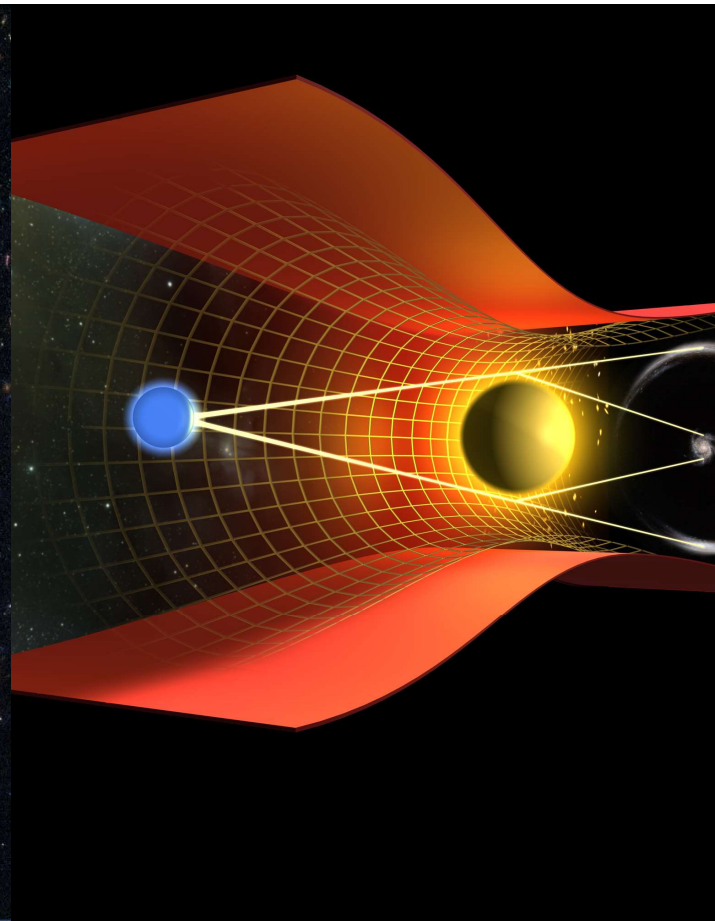
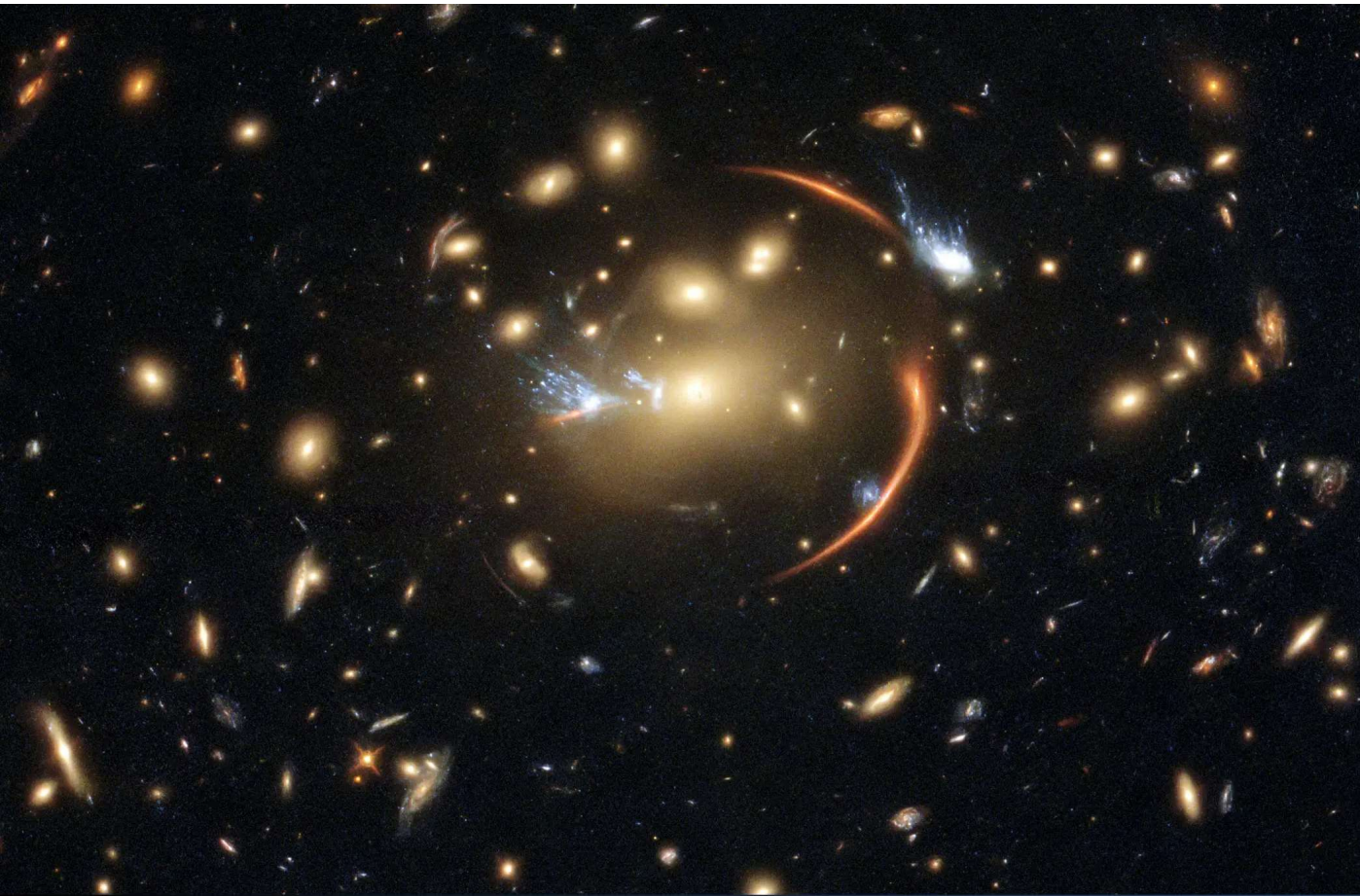
These observations yielded the first detailed studies of imag
gravitational lens, confirming the existence of the phenomenon on
scales. The main results include the following: 1) the brightnes
distribution of images A and B can be related with a linear transf
2) any other compact radio images must be less than 1/30 the inter
image B, 3) the extended (arcsecond) jet found in image A does not
in image B, 4) a time delay between the two images may be apparent
A and B cores are compared, with A following B, 5) a compact, weak
source, G, exists at the position of the center of the cD galaxy
to be part of the lens and is likely to be its radio core, and 6)
relative positions of G, B, A have been found with statistical er
less than a mas, with positions (G = (0, 0)) of A - G = (1071, 50
and B - G = (-181, -1029) mas.



Q: Who Am I?



A: Imaging (arrays) and Sensors...a Curious Cat!

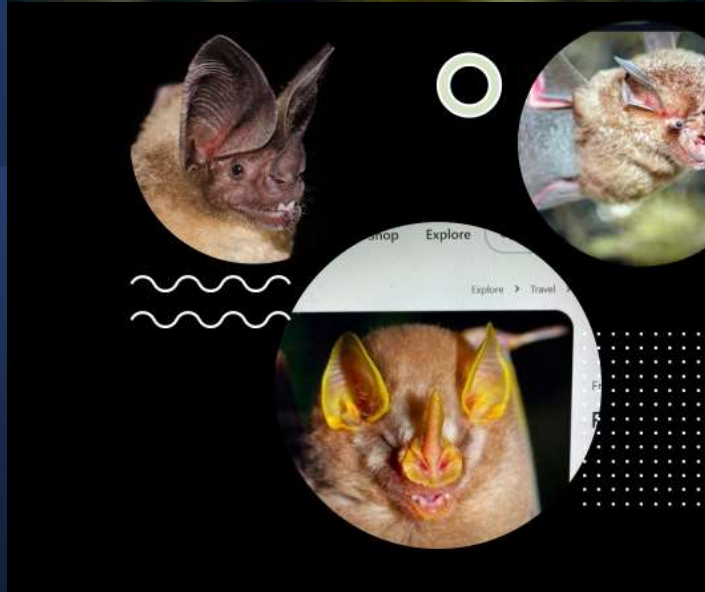
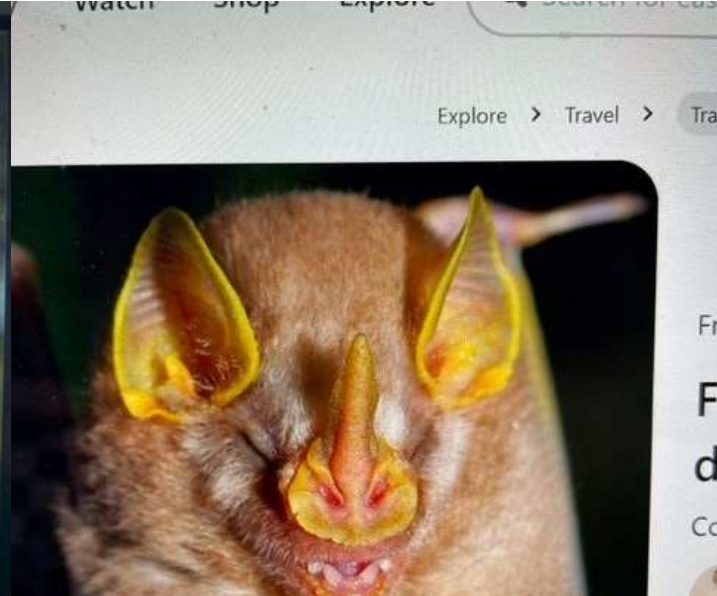


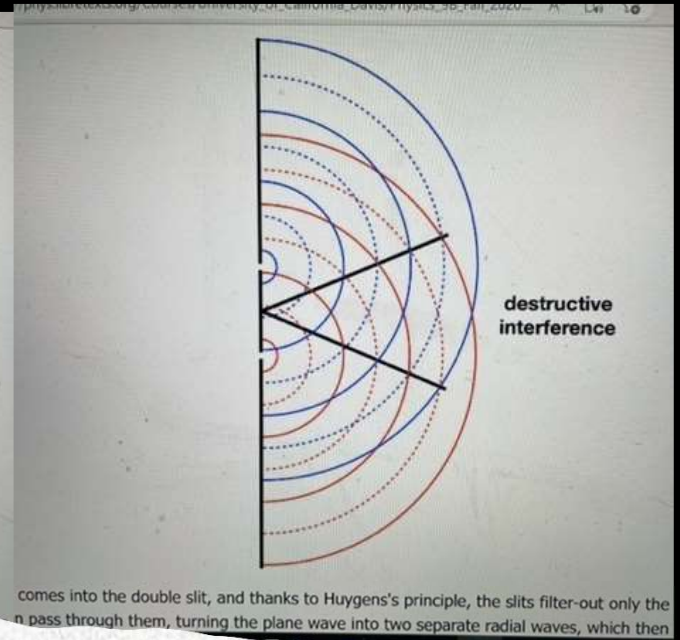
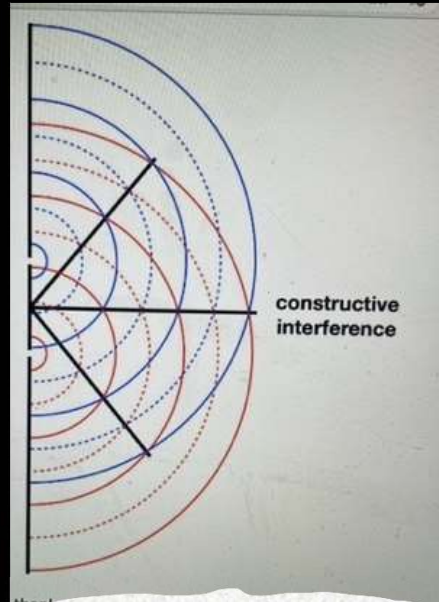
Cosmic 'Front scatter'

**Nature has
plentiful and
FASCINATING
Imaging/Sensor
Problems for
discovery and
use!**



BATS?

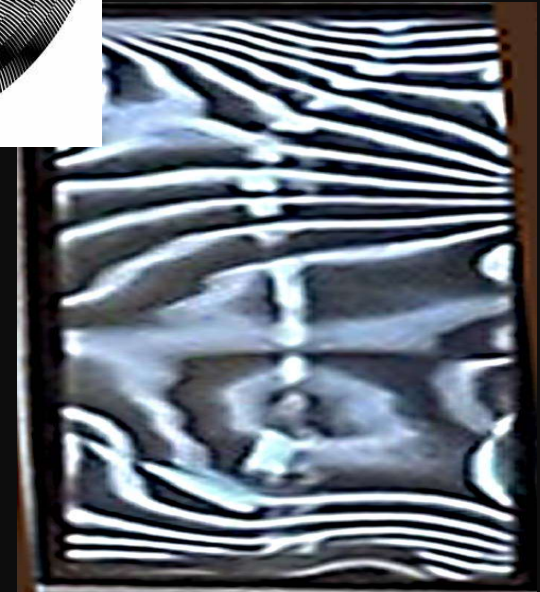
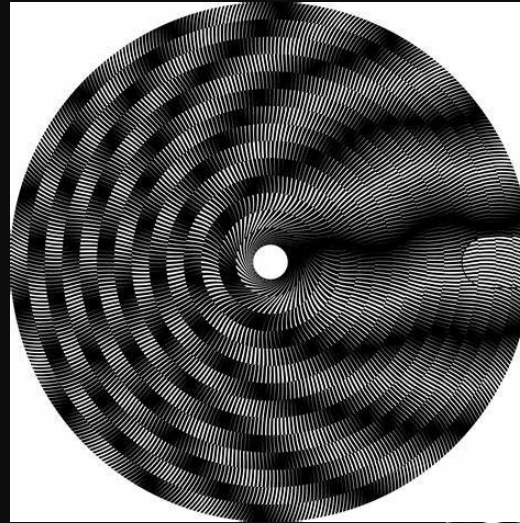




Double Slit:
Two element array via NOSTRILS!
1986 paper (MS) REJECTED by NATURE

MOIRE IMAGING:

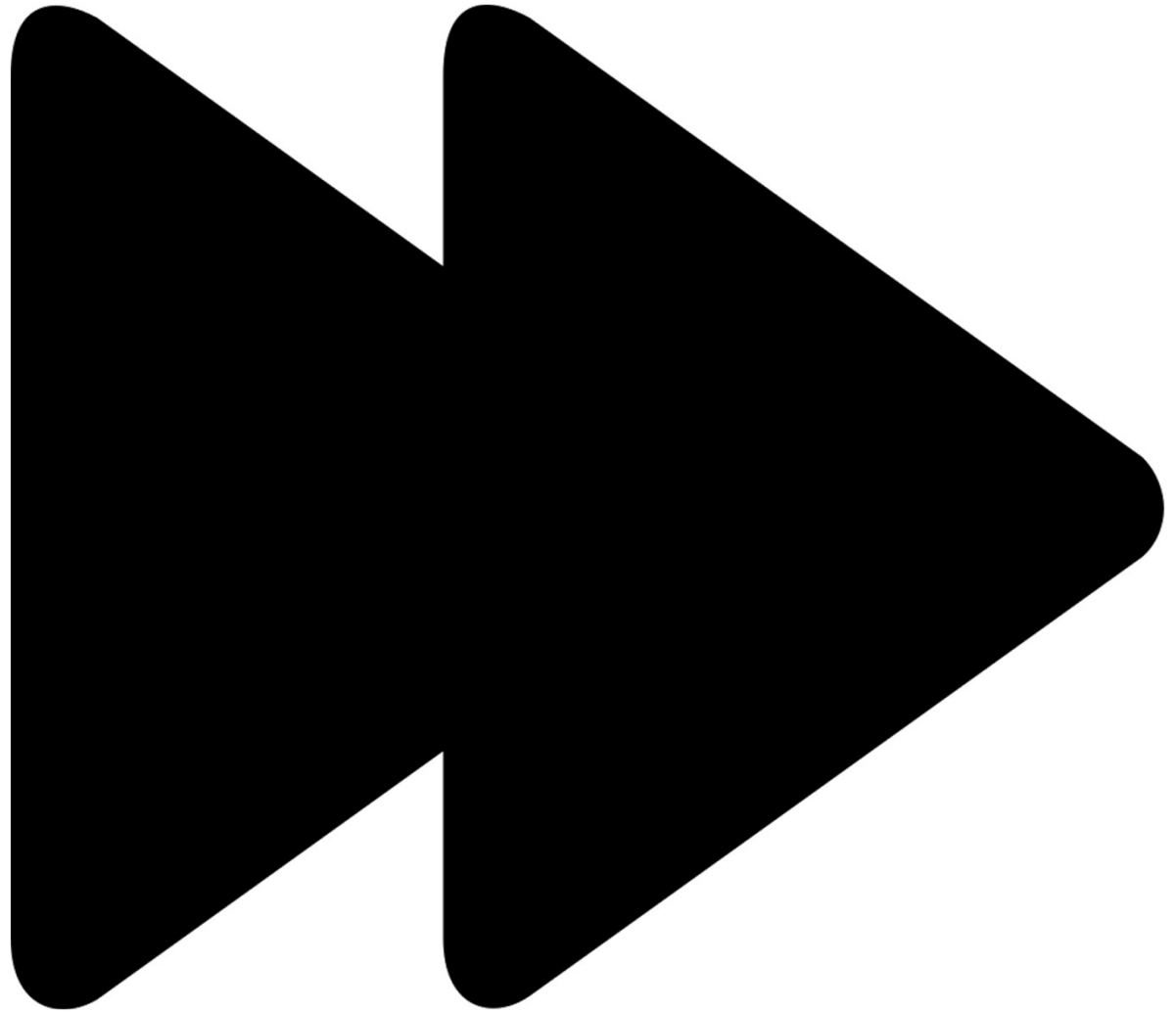
**Ultrasonic
light and
shadow to
catch MOTHS**



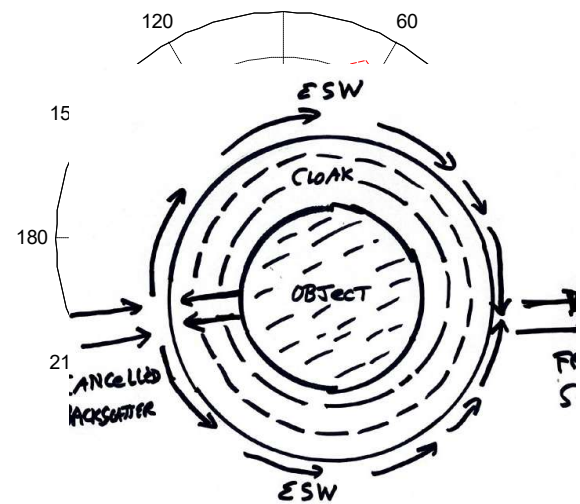
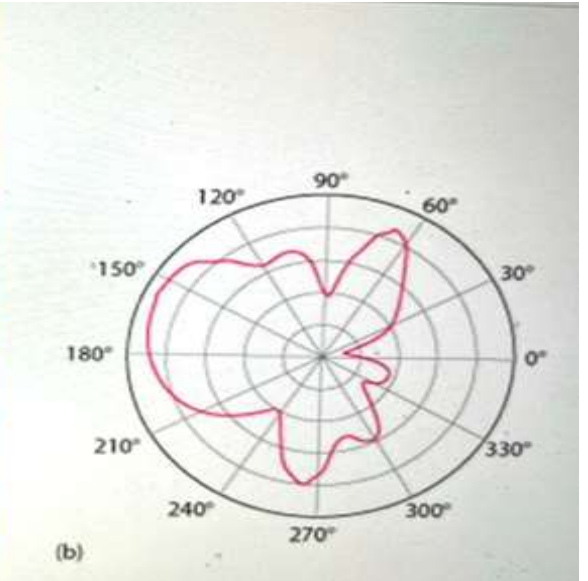
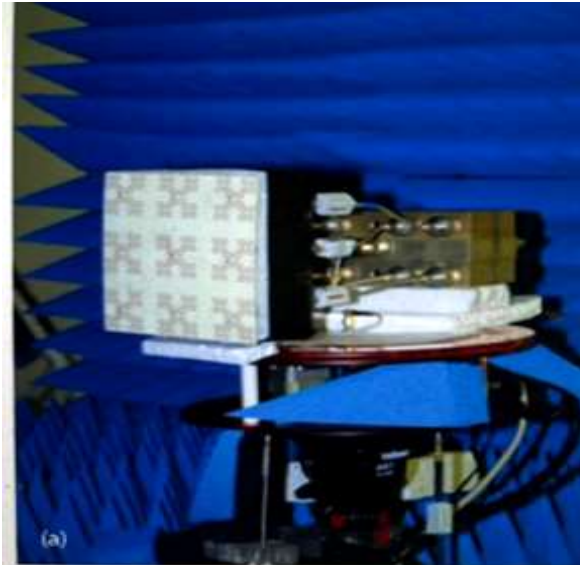
1986 MS
predicted
'invisibility'
ability by
moths



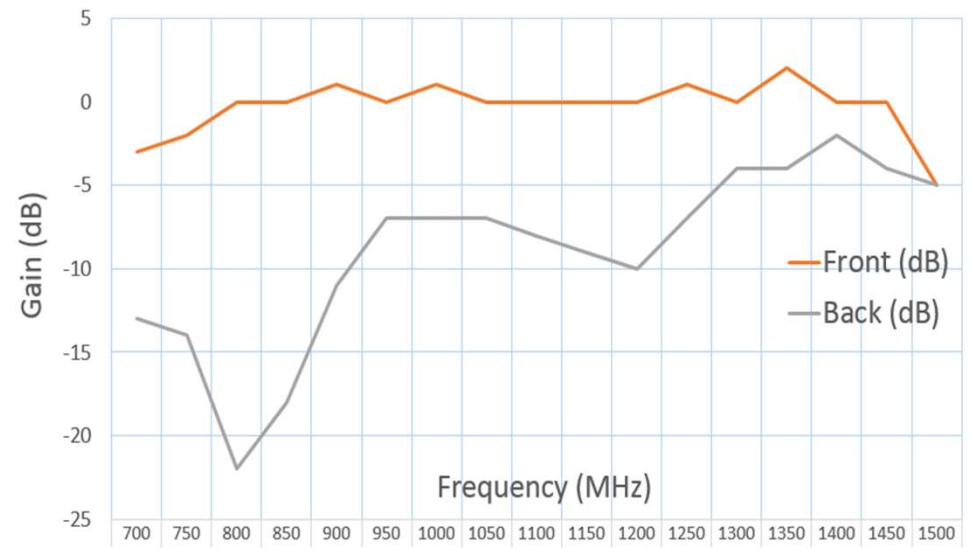
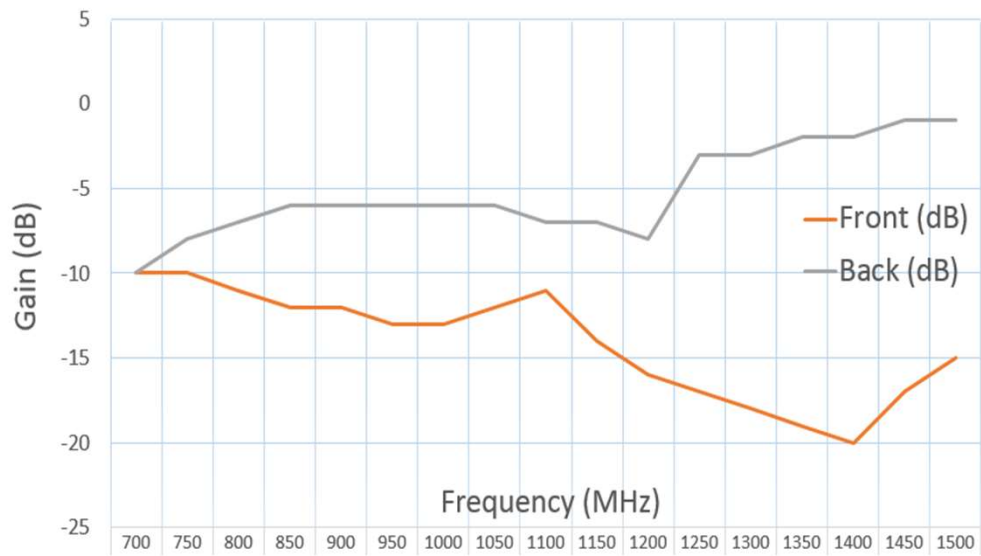
**FAST
FORWARD
to 2002..
FRACTAL
ERA**



CLOAK...In Hiding



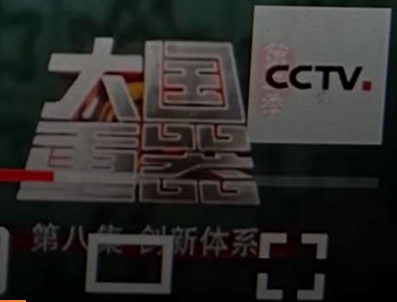
Triumph of Front Scatter





Getting out the Word

Unwanted User Scenario...2018



Point...Counterpoint

patentimages.storage.googleapis.com/09/69/01/66e935d036dcb8/US11408976-2...

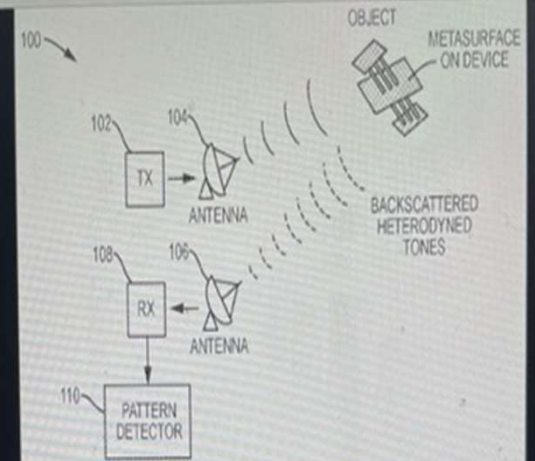


FIG. 1

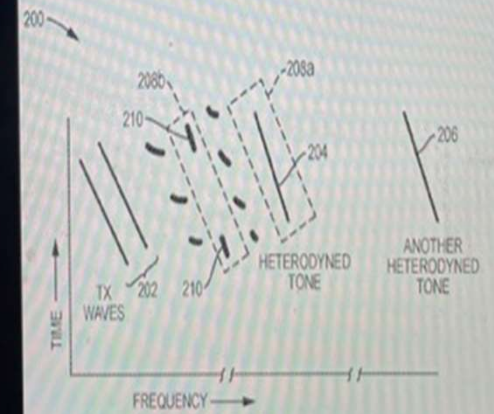


FIG. 2

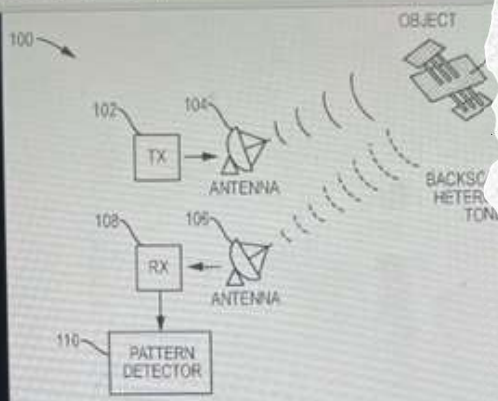


FIG. 1

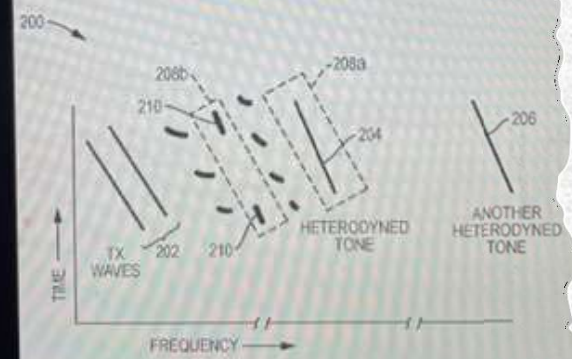


FIG. 2

INVENTOR'S OBLIGATION:

IMPROVE THE HUMAN CONDITION

A close-up photograph of a bat's face, showing its eyes, ears, and open mouth with visible teeth. The bat is looking towards the right of the frame. The background is dark and out of focus.

MORAL COMPASS:

“Plan for, and
mitigate
destructive uses of
the invention”



Thanks and 73!