

# Technical Commission 3AF- SIGMA 2



**3AF**  
Association Aéronautique  
et Astronautique de France

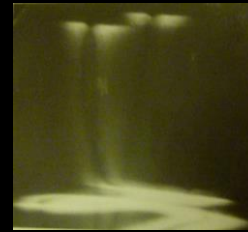
**3AF/ SIGMA2**

**Webinar 1: Approach to UAP optical observables**

**<https://www.3af.fr/groupe/sigma2-phenomenes-aerospaciaux-non-identifies-43>**



## 3AF/ SIGMA2 Webinar 1 on UAP optical observables



**UAP are real phenomena with remarkable observables :**

**Visible and Optical sightings are the most natural approach for UAP observation**, by naked eye or with sensors, or simply with a smartphone, by pilots, by astronomers but also simply by ordinary people facing strange unknown phenomena. More recently IR sensors have been used to collect thermal images of alleged UAP bringing more information but still insufficient in some cases to unveil mystery and identity on what they are.

### **UAP optical observables discussion between experts**

With contribution of top and credible international scientific and academic experts of physical approach of UAP (3AF SIGMA2, Galileo, NOVALEM ANALYTICS, LLC, SCU / Scientific Coalition for UAP Studies, Limina / Society for UAP studies, Vasco project team) and with support of Maybeplanet platform (thank you to Pascal Fechner and Maybeplanet for his reliable support), 3AF SIGMA2 proposed to hold Webinar 1 at 3AF headquarters in Paris to focus on the optical features or signature of UAP, from UV to IR spectrum in order to depict the data collected and the way to collect more physical data.

How strange they are. Are these optical observables due to the sunlight shining on objects or a natural phenomena like a floating atmospheric plasma, similar to ball lightning? Is it due to thermal or EM radiation from those objects due to hypervelocity or to an exotic propulsion device inducing plasma around? Why do we observe unusual shape or change of shape?

**Our common objective tonight is to discuss different UAP observation cases and try to grab the main optical observables and features**, which make them visible but not identified, extraordinary but fuzzy. Then we will also discuss the way to collect more physical data on the UAP optical observables.

**After reviewing papers, a discussion will take place with a round table**, starting by Q&A on the papers with the experts, then a debate on the What and How collecting more physical data on UAP optical observables, and how raising interest and resources from the scientific community.



# Opening of the webinar 1



## Opening of the 3AF/ SIGMA2 Webinar 1 : Approach to UAP optical observables

**Welcome speech & introduction by Luc Dini,**  
Chairman of 3AF/ SIGMA2 Technical Commission

**Opening address by Alain Juillet,**  
Senior executive advisor in security and intelligence. Previously, in charge of Economic  
and business intelligence in Prime minister Office



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# Program Speakers



Name	Affiliation	Subject
Dr. Beatriz Villarroel	Limina / Society for UAP studies ; astronomer ; Nordic fellow, Nordic Institute for Theoretical Physics, Sweden ; Director of Vasco Team	Searches for extraterrestrial probes near the Earth with the VASCO and EXOPROBE projects
Pr. Massimo Teodorani	Society for UAP studies , Galileo project ; Hessdalen project	A Second Life for Project Hessdalen
Peter A. Reali	SCU Project Development Director and member of the Board of Directors	A Forensic Analysis of “Rubber Duck,” a Publicly Available Video Showing a UAP Purportedly Filmed by Arizona National Guard on November 23, 2019
Dr. Jacques Vallée	President, NOVALEM ANALYTICS, LLC	An approach to UAP radiated energy observables: 5 study cases
Luc Dini <i>Presentation prepared with support from Joel Deschamps</i>	Chairman of 3AF SIGMA2 Technical Commission (3AF: Association Aéronautique et Astronautique de France) ; fellow member of 3AF; Expert optics and optronics measurements ; member of GEIPAN college of experts	Approach of UAP optical observables
Pr. Kevin Knuth	Physics Department, University at Albany (SUNY), Albany NY ; UAPx ; Scientific Coalition for UAP Studies ; Limina - Society for UAP Studies	UAP Optical Observables

# Round table Participants



Name	Affiliation
Luc Dini <i>With support of Pascal Fechner (manager of Maybeplanet WebTV)</i>	Chairman of 3AF Sigma2 Commission ; fellow member of 3AF; expert missiles - IR and radar detection and signatures - air-missile defense ; former auditor of IHEDN (French National Institute for Defence and Security) ; member of GEIPAN college of experts - Moderator of the round table
Brigadier General Armament (ret.) Pierre Bescond	Space expert and senior consultant in space, member of the IAA (International Academy for Astronautics), member of the Board of 3AF) and of 3AF SIGMA2, auditor of IHEDN (Institut des Hautes Etudes de Défense Nationale, French Institute for Defence and Security), member of COMETA, Former engineer at DGA (French Defense Procurement Executive) and at CNES (French National Space Agency) – General (armament) retired
Dr. Mike Cifone	Limina / Society for UAP Studies Director
Baptiste Friscourt (online)	Correspondent of “The Debrief”
Pr. Richard Griffiths (online)	Prof. of Astronomy Hawaii University ; SCU member ; Physics Dept., Carnegie Mellon University, Pittsburgh, PA ; Physics & Astronomy Dept., University of Hawaii at Hilo
Pr. Kevin Knuth (online)	Physics Department, University at Albany (SUNY), Albany NY ; UAPx ; SCU / Scientific Coalition for UAP Studies; Limina / Society for UAP Studies
Dr. Sarah Little (online)	SCU / Science advisor at the Scientific Coalition for UAP Studies , coauthor on five Galileo Project Phase 1
Dr. Filipe Nascimento	Limina / Society for UAP Studies Research, fellow at University College London, Brain Sciences
Robert Powell (online)	SCU / Founding Board member of the Scientific Coalition for UAP Studies
Peter A. Reali (online)	SCU Project Development Director and member of the Board of Directors
Pr. Massimo Teodorani (online)	Society for UAP studies ; Galileo project ; Hessdalen project
Michael Vaillant	uapcheck.com - Limina / Society for UAP Studies
Dr. Jacques Vallée	President, NOVALEM ANALYTICS, LLC
Dr. Beatriz Villarroel	Limina / Society for UAP studies – astronomer - Nordic fellow, Nordic Institute for Theoretical Physics, Sweden - Director of Vasco Team



# Round table Attendees



Name	Affiliation
Dominique Filhol (in room)	Film director and producer : “UFO : a state affair” (Documentary) & “Valensole” (Movie)
Michel Scheller (in room)	3AF - Honorary President of 3AF - former Chair of ONERA - Former Director of French Civil Aviation
Dr. Gerard Labaune (online)	3AF SIGMA2 - Expert in EM DEW
Dr. Joel Deschamps (online)	3AF Sigma 2 - Expert in Optics
Brigadier General (ret. - French Air and Space Force) Jean-Marc André (online)	3AF SIGMA2 - Expert in Air defense
Geoffrey Metchersky (in room)	3AF SIGMA2 - Expert in Bio environment
Dr. Andreas Muller (in room)	Writer journalist history of UFO in Germany - “Interdisciplinary Research Center for Extraterrestrial Studies” (IFEX) at the University of Würzburg - affiliate the Society of UAP Studies (SUAPS)
Dr. Nicolas Niasse (online)	3AF SIGMA2 - Expert in Plasma physics and Fusion energy
Dr. Stéphane Pfister (in room)	3AF SIGMA2 - Expert in European & International affairs
Raymond Piccoli (online)	3AF SIGMA2 - Dir of Ball lightning Lab
Dr. Mark Rodhieger (online)	BS in astrophysics University Illinois - Master & PhD in sociology President and Scientific Director of the CUFOs since 1986

# 3AF/ SIGMA2 Webinar 1 Registration



Video of the 3AF/ Sigma2 Webinar 1 will be available online from

**Friday 16<sup>th</sup> June 2023 - 20:00 Paris time**

## Webinar access fee

To access this SIGMA2 webinar, we have set a registration fee of **10 Euros** to cover our association (Loi 1901) costs to prepare such event and the particular effort of the SIGMA2 commission to gather expertise.

**To complete your registration, please visit the official website of 3AF at [www.3af.fr](http://www.3af.fr)**

There, you will find a straightforward payment process that ensures a seamless experience.

Once your payment is successfully processed, you will receive a unique link that grants you access to the webinar video for an unlimited amount of time.

Should you have any further inquiries or encounter any issues during the registration process, please do not hesitate to contact our dedicated support team at [admin@3af.fr](mailto:admin@3af.fr) : We are here to assist you and ensure a smooth journey leading up to the webinar.

We look forward to welcoming you to the SIGMA2 webinar and sharing an enlightening experience together.



France Aeronautical & Astronautical Association (3AF) was founded in 1947.

It has about 15,000 members as well as collective members including institutions such as CNES (French Space Agency), DGA (Ministry of Defense “Direction générale pour l’armement”) and DGAC (“Direction de l’aviation civile”) as well as Engineering academic/post grade schools.

3AF is a technical society that organizes scientific symposia such as space propulsion, green aviation, integrated air and missile defense. It also leads aerodynamics, commercial aviation, light air machines et machines, skills and training, drones, environment, flight tests, space observation and exploration, helicopters, history, economic intelligence and strategy, materials, missiles, IP, aero and space propulsion, Sigma2 (UAP), strategy and international affairs, structures, optronics systems, space transportation.

SIGMA2 Technical commission of the 3AF society is composed of expert members who bring their experience and know-how in diversified fields of expertise : engineers, academics, radiation specialists, former pilots and former career officers, astronauts, doctors, psychologists...

For many years, the work of the SIGMA2 Technical commission has focused on the study of the observation and physics of Unidentified Aerospace Phenomena (in French: “Phénomènes aériens non identifiés” = PAN).

Some of the work performed by SIGMA2 contributes to the expertise carried out by CNES/GEIPAN through the GEIPAN College of Experts.

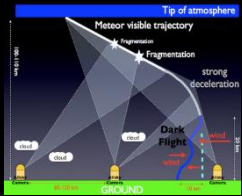
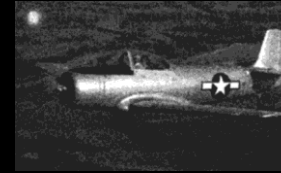
The research conducted by SIGMA2 experts is based on various sources of information, with a particular interest in cases observed and/or occurred abroad (beyond France) and which allow the study of data or materials contributing to a better understanding of the phenomena.



# 3AF

Association Aéronautique  
et Astronautique de France

## 3AF/ SIGMA2



**OBSERVABILITY**

Documentation  
research  
Data Base  
methodology

**CONTACT  
COMMUNICATION**



**$\Sigma 2$**

**PHYSICAL  
ELEMENTS  
STUDY**

**CASES  
SELECTION**



SIGMA2 is a group of multi disciplinary experts (pilots, astronaut, engineers in missiles, air defense, optronics, radar, EM, ball lightning, Directed energy) physicist gathered in a scientific society to study UAP cases

# 3AF/ SIGMA2 - Publications



Download the summary (English version) of the more recent SIGMA2 Progress Report :

<http://www.3af.fr/news/sigma2-work-progress-summary-2021-2178>

The Progress Report covers the analysis of the work carried out at international level, but also the case studies carried out by SIGMA2. You will also find the study of the hypotheses of physics associated with the interpretation of observations.

The work of the SIGMA2 Technical Commission focuses on cases identified at different times (from the 50's to the present day) and on different geographical areas.

Read also: Sigma2 comments on the Preliminary assessment report on UAP from US ODNI to US Congress (2021) :

[https://www.3af.fr/global/gene/link.php?doc\\_id=4558&fq=1](https://www.3af.fr/global/gene/link.php?doc_id=4558&fq=1)

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For more information on SIGMA2 News and Scientific publications :

<https://www.3af.fr/groupe/sigma2-phenomenes-aerospaciaux-non-identifies-43>

Email : [sigma@3af.fr](mailto:sigma@3af.fr)



# THE SCIENTIFIC COALITION FOR UAP STUDIES



## WHO ARE WE

A network of academics, scientists, engineers, experts from the security sector and professionals from diverse backgrounds who wish to understand the nature of Unidentified Aerospace Phenomena (UAP).

## OUR GOALS

- ◆ **TO ADVANCE** the current scientific research on UAPs.
- ◆ **TO ENCOURAGE** public discourse and engagement.
- ◆ **TO OFFER** credible and easily-digestible information on the issue, based on peer-reviewed scientific research.

## OUR WORK

We conduct and promote the rigorous scientific examination of UAPs by fully utilizing scientific tools, principles and practices in the study of reported UAP events in the US and worldwide.

## INTERESTED ?

We welcome any thoughts or questions at [Public.Info.SCU@gmail.com](mailto:Public.Info.SCU@gmail.com)



[www.explorescu.org](http://www.explorescu.org)



# Limina / Society for UAP Studies (SUAPS)



*Limina – The Journal of UAP Studies* is the first peer-reviewed academic journal in English to appear in some time that is devoted to academic study of unidentified aerospace-undersea phenomena. The journal entertains a variety of scholarly approaches to the subject, from the empirical to the cultural-historical. The journal is published and managed by the *Society for UAP Studies*.

The *Society for UAP Studies* (SUAPS) is the first learned society devoted to the subject of unidentified aerospace-undersea phenomena. The Society seeks to bring together scholars and professionals from a plurality of disciplines who are interested in participating in a dynamic cross-disciplinary exchange of ideas and research on the subject of UAP. SUAPS organizes workshops, symposia and standard academic conferences, in addition to hosting academic seminar series and other thematic lectures open to the public. It also plans to develop a rigorous curriculum in UAP Studies, and offer online courses devoted to it.

# Brigadier general (ret., air) Jean-Marc Andre

## Round table attendee



### Resume

Brigadier General (ret. - French Air and Space Force) Jean-Marc André

Expert in Air defense and member of the GEIPAN college of experts.

Jean-Marc André, Air Brigadier General (ret.), member of the 3AF SIGMA2 commission and expert at GEIPAN.

Graduated as an engineer from the French Air Force Academy (1970). Fighter pilot officer, commanded combat units and an air defense detection and control center. Participated in the development of military space programs (GRAVES, HELIOS) as head of the space division of the Air Force General Staff. Served also as Deputy Director of Protection and Safeguarding at the Space Centre in French Guiana (1995 – 1997). Has worked as upstream research officer in the Think Tank of a defense industrial group. Worked on directed energy projects.



# Brigadier general (ret, armement) Pierre Bescond

## Round table participant



### Resume

Brigadier General (ret- armement) Pierre Bescond



Space expert and senior consultant in space, export, quality, defence & security, member of the IAA (International Academy for Astronautics), member of the Board of 3AF (Association Aéronautique et Astronautique de France), auditor of IHEDN (Institut des Hautes Etudes de Défense Nationale, French institute for Defence and Security), member of COMETA which produced the 1999 UAP report. Former engineer at DGA (French Defense Procurement Executive) and at CNES (French National Space Agency) where he held various directorates positions, former member of the Council of ESA (the European Space Agency), and former advisor on space, defence and security issues for the French Minister in charge of Space.





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# Dr. Mike Cifone

## Round table participant



### Resume

Dr. Mike Cifone - Director of Society for UAP Studies

Dr. Cifone received a Ph.D. from the University of Maryland at College Park (UMD) in the philosophy of science. His research focused on the conceptual foundations of theoretical physics, and the metaphysical implications of relativity and quantum theories.

Dr. Cifone published in a number of physics and philosophy journals and after graduating from UMD in 2009, taught widely in philosophy, the philosophy of science, ethics, and logic at various universities and colleges across the United States, including in New York City and San Francisco. Since 2016 he has been a lecturer in philosophy for the City University of New York's Bronx campus. Now he works on UAP and the problem of what a science of the phenomena should be. Early in 2022, he founded both *Limina - The Journal of UAP Studies* and the Society for UAP Studies in an effort to provide the scholarly UAP community with serious academic infrastructure for peer-reviewed scholarly publication; regular academic meetings; interdisciplinary debate and dialogue; sustained international cooperation and exchange; and disciplinary definition through academic curriculum development, conferences and focused workshops.



SOCIETY FOR UAP STUDIES



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# Baptiste Friscourt Round table participant



## Resume

Baptiste Friscourt

Correspondent of "The Debrief"

Born in 1986, this certified visual arts teacher started looking for reliable information on UAP in 2017 at the request of his students. Since then, he's been covering UAP research in France for The Debrief. Trying to bridge scientific research with cultural effect, he is looking to connect all reliable sources on UAP research.



# Luc Dini

## Speaker – round table participant



### Abstract

#### Approach of UAP optical observables

With contribution from Dr. Joel Deschamps

The SIGMA 2 Commission is a technical Commission of the French 3AF (Association Aeronautics and Astronautics de France) dedicated to scientific investigation and technical analysis of reports of UAP cases using a multi-disciplinary methodology. Its team of experts includes professionals in aviation, engineering, physics, air defense, IR and radar detection, ball lightning, propulsion, and psychology. The paper reviews first the basics of an optical signature and its components, then gives some examples of different phenomena optical signature, including plasma, and will point out the specifics of optical observables from different UAP cases in France or foreign. The paper concludes on some technical approach for optical observables collection.



### Resume



Chairman of 3AF Technical Commission SIGMA2 on UAP study.


Fellow member of Association Aéronautique et Astronautique de France (3AF)

Graduated engineer in aeronautics (ISAE-ENSICA 1984), skilled in missiles, space, high atmosphere radiation, IR and visible phenomenology, air defense, IR and radar detection, hyperfrequency. Former military engineer, he had worked on the high atmosphere radiation physics. Former auditor of IHEDN (Institute of High Studies of National Defense- National Armament and Economy of Defense National Session N°44 2007-2008) and of Economic Intelligence Session of IHEDN (2017). Member of the GEIPAN college of experts.

# Dr. Joel Deschamps

## Contribution to paper – round table attendee



Abstract	Resume
<p><b>Approach of UAP optical observables</b></p> <p>With contribution from Dr. Joel Deschamps</p> <p>The SIGMA 2 Commission is a technical Commission of the French 3AF (Association Aeronautics and Astronautics de France) dedicated to scientific investigation and technical analysis of reports of UAP cases using a multi-disciplinary methodology. Its team of experts includes professionals in aviation, engineering, physics, air defense, IR and radar detection, ball lightning, propulsion, and psychology. The paper reviews first the basics of an optical signature and its components, then gives some examples of different phenomena optical signature, including plasma, and will point out the specifics of optical observables from different UAP cases in France or foreign. The paper concludes on some technical approach for optical observables collection.</p>	<p>3AF/Sigma 2 Expert in Optics</p>  <p>PhD in physics from the University of Besancon. Specialist in infrared detectors, infrared instrumentation, optical physical measurements. Expert for some DGA (French Armament Procurement Agency) programs like Helios2 (Military Optical Reconnaissance SAT), OSF (Rafale IRST), Scalp EG, Missile Defense.</p>



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# Dominique Filhol

## Round table attendee (filming)



### Resume

Film director and producer : “UFO : a state affair” (Documentary) & “Valensole” (Movie)



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# Pr. Richard Griffiths Round table participant

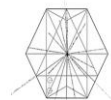


## Resume

Pr. Richard E. Griffiths

Prof. of Astronomy Hawaii University ; member of SCU/ Scientific Coalition for UAP studies ; Physics Dept., Carnegie Mellon University, Pittsburgh, PA ; Physics & Astronomy Dept., University of Hawaii at Hilo.

Richard Griffiths holds a B.Sc.(Special) in Physics from Imperial College, U. London and a Ph.D. from U. Leicester (1972) in the field of X-ray astronomy. He is Prof. Emeritus at Carnegie Mellon University. Prof. Griffiths' research interests have been primarily in X-ray astronomy, but he has also worked extensively on the results of deep surveys using the Hubble in visible light and these studies have concentrated on the evolution of galaxies with cosmic time. He continues to work on X-ray deep surveys, the ground-based identification and follow-up of X-ray sources, and gravitational lenses. Prof. R. Griffiths has over 300 publications in referred journals. He is MUFON State Director for Hawaii.



**SCU**

Scientific Coalition for UAP Studies  
Scientific Exploration of Anomalous Aerospace Phenomena



# Pr. Kevin Knuth

## Speaker – round table participant



### Abstract

#### UAP Observables



This talk will discuss the opportunities afforded by, and the challenges encountered in, the imaging of UAP in wavelengths ranging from the infrared, through the optical, to the ultraviolet. Infrared imaging is essential as there exists evidence that many UAP will not be visible in the optical range. Optical effects due to plasma sheaths and the phenomenon known as multi-imaging pose challenges as they tend to result in images being unresolved (blurry). While other effects, such as image field distortion and Faraday rings in polarized light, promise to reveal additional insights into the physics of UAP. Satellite imaging of UAP, while discussed for several years, is still virtually non-existent despite the powerful benefits.

### Resume

Prof. Kevin Knuth is a Full Professor in the Department of Physics at the University at Albany. He is the lead scientist of UAPx, and is a member of the Scientific Coalition for UAP Studies (SCU) and the Society for UAP Studies (SUAPS). He is the Editor-in-Chief of the journal Entropy (MDPI), and a former NASA research scientist having worked for four years at NASA Ames Research Center in the Intelligent Systems Division. He has over 25 years of experience in designing machine learning systems for data analysis applied to the physical sciences. Knuth has published over 100 peer-reviewed scientific publications and has been invited to give over 80 presentations in 17 countries.

# Dr. Sarah Little

## Round table participant



### Resume

Dr. Sarah Little

Science advisor at the Scientific Coalition for UAP Studies and is coauthor on five Galileo Project Phase 1

Dr. Little holds a Ph.D. from the Massachusetts Institute of Technology/Woods Hole Oceanographic Institution (MIT/WHOI) Joint Program in Oceanography/Applied Ocean Science and Engineering, specializing in marine geophysics. Her thesis involved theoretical, laboratory, and field studies of fluid flow and underwater acoustics. She also worked on laser communications and adaptive optics at the Mt. Haleakala observatory in Hawaii. She is currently the science advisor at the Scientific Coalition for UAP Studies and is coauthor on five Galileo Project Phase 1 instrumentation papers that are currently published ([Randall et al., 2023](#); [Szenher et al., 2023](#)); accepted ([Mead et al., 2023](#); [Watters et al., 2023](#)); or submitted ([Cloete et al., 2023](#)).



Scientific Coalition for UAP Studies  
Scientific Exploration of Anomalous Aerospace Phenomena



Association Aéronautique  
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# Dr. Filipe Nascimento

## Round table participant



### Resume

Dr. Filipe Nascimento

Limina / Society for UAP Studies

Research fellow at University College London. Brain Sciences

Filipe holds a PhD from the University of St Andrews (UK) and is currently a Sir Henry Wellcome Postdoctoral Fellow at the University College London (UCL) Queen Square Institute of Neurology (UK), one of the leading neuroscience research institutes in the world. His research focuses on understanding how diseases and conditions impacting the nervous system can affect neuronal circuits. He utilizes genetic, imaging, behavioral, and neurophysiological techniques in both preclinical models and human subjects. Filipe is interested in biological changes induced by UAP, especially in the nervous system. He contributes to the editorial board of the journal “Limina” and serves on the advisory board of the Society for UAP studies.



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# Robert Powell

## Round table participant



### Resume

Robert Powell

Robert has a BS in Chemistry and is a former collegiate debater. He has 28 years' experience in engineering management in the semiconductor industry. His experience includes managing a state-of-the-art chemistry laboratory and managing a Research and Development group that worked on nanotechnology using atomic force microscopes, near-field optical microscopy, and other techniques. Robert is also a co-holder of four patents related to nanotechnology.

Robert Powell is a founding Board member of the Scientific Coalition for UAP Studies (SCU). He was the Director of Research at MUFON from 2007-2017 and created MUFON's Science Review Board in 2012. Robert has completed detailed papers on: The "Stephenville Lights", "UAP: 2013 Aguadilla, Puerto Rico", "A Forensic Analysis of Navy Carrier Strike Group Eleven's Encounter with an Anomalous Aerial Vehicle", "Estimating Flight Characteristics of Anomalous Unidentified Aerial Vehicles", and "Isotope Ratios and Chemical Analysis of the 1957 Brazilian Ubatuba Fragment." Robert currently resides in Austin, Texas.



Scientific Coalition for UAP Studies  
Scientific Exploration of Anomalous Aerospace Phenomena

# Peter Reali

## Speaker- Round table participant



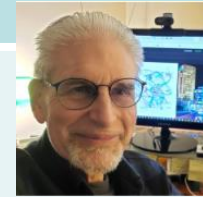
### Abstract

#### A Forensic Analysis of “Rubber Duck,” a Publicly Available Video Showing a UAP Purportedly Filmed by Arizona National Guard on November 23, 2019

A multi-faceted, forensic-type analysis was conducted of what has been termed the “Rubber Duck” videos. These are two publicly available .mp4 files that appear to show an unidentified aerospace phenomenon (UAP) moving with no means of propulsion or aerodynamic means of lift across a desert environment. These two, 30 min clips, “Rubber Duck 1 & 2”, are claimed to be from an anonymous source at the Department of Homeland Security. They were purportedly taken from a FLIR camera system onboard a RC-26B aircraft used by the Arizona Air National Guard on November 23, 2019. Data displayed on both videos are consistent with video being taken while in flight over the route described by the source. SCU was provided these videos by podcaster Andy Marcial. Kinematics, trajectory, rotation, flight characteristics (including parallax), lighting and temperature are investigated, as well as environmental weather conditions. The results of this analysis support the conclusion that the object cannot be explained as any known natural phenomenon or by any known technology used for aeronautical propulsion. As such, the object can be classified as a UAP. Such objects can be a hazard to aerial transportation, a dangerous distraction to pilots in certain situations, and are worthy of scientific investigation.



### Resume



Scientific Coalition for UAP Studies-Project Development Director and Member of the Board of Directors. Education: BSEE and MSEE from the University of California Berkeley in Statistical Communication Theory, Digital Design Engineering and Computer Science. Founding member of the AIAA [American Institute of Aeronautics and Astronautics] UAPIOC as well as on the Steering Group and Hardware Group Sub Committee. He had a long career in Silicon Valley as a director and manager of electrical design engineering projects. Career specialty was in telecommunications, network design and information Technologies and as Director and Engineering Manager for developing communication systems and technologies to implement networking equipment. Originated design concepts that led to two patents involving networking systems.

With an engineering partner started a small company and was president of “Open Solutions” where we received research grants from DARPA and NSF in super computing and distributed computer networks exploring innovative research using open source networking applications.

# Pr. Massimo Teodorani

## Speaker and round table participant

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### Abstract

Since 1984 Project Hessdalen (Norway), in collaboration with its several affiliate research groups in the world, can be considered one of the very few pioneering worldwide initiatives in the attempt of instrumented based investigation of anomalous aerial phenomena. Experience has shown what is missing for a full scientific study of this enigma. As a new operational phase is now demanded, an observational plan has been elaborated with the clear intent of drastically increasing our physical knowledge of a phenomenon that is going on in this Norwegian area since more than 40 years. Several incremental research steps are proposed and discussed, with their scientific rationale and procedural outline.

### Resume



Massimo Teodorani (PhD., Bologna University) is an astrophysicist from North Italy. His Ph.D. in Astronomy from Bologna University is with a specialization in stellar physics. He has been carrying out research on eruptive phenomena in astrophysics, extrasolar planets and SETI, by working as a researcher at the Istituto Nazionale di Astrofisica (INAF). He also is an expert in the physics investigation of anomalous aerial phenomena that occur recurrently in some locations of the world. On these topics, he has carried out considerable research using astronomy-like strategies and observational techniques. He is also a well-known science communicator in Italy and around the world.





# Dr. Jacques Vallee

## Speaker and round table participant



### Abstract

#### **Estimates of Optical Power Output in Unexplained Observations of Aerial Objects: An updated summary**

The question of the energy dissipated by unidentified flying objects (UFOs) in the visible and near-visible range in close-encounter cases and, more generally, in instances where distance to the object can be reliably measured, is a central one in the study of the nature and possible origin of the reported phenomena.

Earlier research in both government and academic settings has resulted in a number of studies, a few of which have been published in the scientific literature (1, 2) and in the popular press (3, 4, 5) but the topic is far from being exhausted by these pioneering works, as shown by the number of recent reports of unexplained objects and their effects around the world.

Much of the robust development since 1990 in terms of field studies and laboratory analyses accomplished under government funding has yet to be declassified for the benefit of the scientific community (6). However, earlier cases whose reliability has been established can be reviewed and updated to suggest new lines of investigation. In that spirit, this presentation summarizes and updates our earlier report in the Journal of Scientific Exploration that sought to place a number of such observations on record (7).

#### References:

1. Altschuler, M.D. (1968) Scientific Study of Unidentified Flying Objects. E. Gilmore, ed. Air Force Office of Aerospace Research, and New York: Bantam Books.
2. Condon, Ed. (1969) Scientific Study of Unidentified Flying Objects. NY: Bantam Note especially: Case 10: Haynesville, p.61 and pp.277-279.
3. Klass, Philip. (1968) UFOs: Identified. New York: Random House
4. Vallée, J.F. (1990) Confrontations. New York: Ballantine
5. Von Ludwiger, I. (1995) "Die Ungewoeblichen Lichterscheinungen ueber Greifswald" in UFOs – Zeugen und Zeichen, pp. 251-257. Berlin, publisher unknown.
6. Kelleher et al. (2021) Skinwalkers at the Pentagon (co-author with James T. Lacatski and George Knapp), Las Vegas: RTMA, Inc., October 2021.
7. Vallée, J.F. (1997-98) "Estimates of Optical Power Output in six cases of Unexplained Aerial Objects with Defined Luminosity Characteristics." Presented at the Rockefeller UFO Analysis Workshop, Tarrytown, N.Y., Sept.30-October 3, 1997, presided by Prof. Peter Sturrock. Published in Journal of Scientific Exploration Vol.12, no.3, Autumn 1998, ISSN 0892-3310

### Resume

Born in France in 1939, Jacques studied mathematics at the Sorbonne, earned a Master's degree in astrophysics at the University of Lille and was recruited to the first French team that tracked artificial satellites at Paris Observatory. Moving to the US in 1962, he worked on NASA projects at the University of Texas in Austin (notably, the first computer-based map of Mars) before joining Northwestern University where he completed his PhD in AI in 1967.

Jacques continued his computing career at SRI International and the Institute for the Future as one of the Principal Investigators on ARPANET (the early Internet) before co-founding a family of venture capital funds in Silicon Valley, specializing in IT and biotech investments. The funds, including a NASA venture project, financed 60 high-technology startups and led several "unicorns" to the public markets.

Dr. J. Vallée remains an active high-tech investor while serving on the scientific advisory board of the French Space Agency's group officially studying UFO reports. His books are widely translated. He was the model for the character played by François Truffaut in Close Encounters of the Third Kind. Jacques lives between San Francisco and Paris. He has two children.



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# Michael Vaillant

## Round table participant



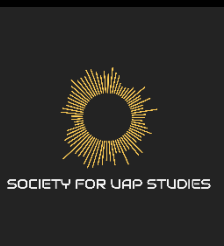
### Resume

Michael Vaillant

[uapcheck.com](http://uapcheck.com)

Limina/ Society for UAP Studies

M. Vaillant is a computer scientist with dual Masters degrees in Information Systems and Innovation Management. With 16 years of experience as a consultant and expert for GEIPAN, he played a pivotal role in creating the state-of-the-art governmental UAP database, developing automated investigation software. He also contributed to various projects, including an automated detection camera system for GEIPAN, laying the foundation for the French Fireball Observation Network. He co-authored a notable study on spatial correlations between UAP and French nuclear activity (T. Laurent et al., 2023) and meteorite interactions with stratospheric aerosols (M.-A. Courty et al., 2023).





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# Dr. Beatriz Villarroel

## Speaker and round table participant



Abstract	Resume
<p>Dr. Beatriz Villarroel</p> <p>Searches for extraterrestrial probes near the Earth with the VASCO and EXOPROBE projects</p> <p>Dr. Villarroel presents two ongoing astronomy projects to search for extraterrestrial probes near the Earth: the Vanishing &amp; Appearing Sources during a Century of Observations (VASCO) project as well as the newly started EXOPROBE project. In the first, the VASCO team searches old photographic plate images from pre-Sputnik times for signs of artificial objects outside our atmosphere. In the second project, we search explicitly for extraterrestrial probes near the Earth, with the goal of fast validation of the results. I present preliminary results of both projects.</p>	<p>Dr. Beatriz Villarroel, an astronomer, is a postdoctoral researcher at the Nordic Institute for Theoretical Physics (Nordita) in Stockholm. She finished her PhD. in 2017, writing a thesis on the environments on supermassive black holes (active galactic nuclei). She is very interested in transient astronomy and its connection to Searches for Extraterrestrial Intelligence (SETI). She leads the VASCO and EXOPROBE project, where EXOPROBE takes off answering the questions that are beyond the methodology of VASCO.</p>





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# Dr. Gerard Labaune Round table attendee



## Resume

Dr. Gerard Labaune

3AF SIGMA2  
Expert in EM DEW



Member of 3AF Technical Commission SIGMA2 on UAP study.  
Graduated engineer-doctor (Ecole Polytechnique 1978), skilled in electromagnetism, electromagnetic compatibility, hyperfrequency, plasma, laser.  
Former head of a department (and several subsidiaries) in defense industry group,





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# Dr. Andreas Müller

## Round table attendee



### Resume

Dr. Andreas Müller

IFEX  
SUAPs

Born in 1976 graduated in communication and graphic design at the University of Fine Arts at Saarbrücken (Germany) and started working as an independent researcher, writer and journalist with a focus on anomalistic topics early on.

For many years he investigated the Crop Circle phenomenon from a scientific point of view, wrote two books on the topic and co-curated the very first museum exhibition on the research and history of the Crop Circle phenomenon for a proper scientific cultural-historical museum, the Wiltshire Museum at Devizes.

Since 2007 he is the editor of the German daily news portal [www.grenzwissenschaft-aktuell.de](http://www.grenzwissenschaft-aktuell.de) (GreWi) a news-website focusing on anomalistic phenomena, research and frontiers in science.

In the wake of the latest developments about UAP interest and research in the USA, Andreas went on a search for all known and unknown official German UFO-files – a work that has led to the publication of his extensive 450pages book “Deutschlands UFO-Akten” (Germany's UFO-files) in late 2021. In this context he discovered many so far unknown of such documents, for example as a whole UFO-file created by the German intelligence service BND.

His new book “Deutschlands historische UFO-Akten” (Germany's historical UFO-files) due in July 2023 takes a new look into truly historical reports (starting in the 8<sup>th</sup> century), records, handwritings and printed pamphlets from Germany, Austria and Switzerland describing phenomena we would likely call “UFOs” today.

Andreas is also an associate member of Professor Hakan Kayla's “Interdisciplinary Research Center for Extraterrestrial Studies” (IFEX) at the University of Würzburg and affiliate member of the Society of UAP Studies (SUAPS).



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# Dr. Nicolas Niasse

## Round table attendee



### Resume

Dr. Nicolas Niasse

3AF SIGMA2

Expert in Plasma physics and Fusion energy

Member of the 3AF Technical Commission SIGMA2, Dr. Nicolas Niasse contributes significantly to plasma physics and UAP studies.

His research interests are primarily in the fields of inertial confinement fusion, magneto-inertial confinement fusion, and the radiative properties of high-energy-density (HED) plasmas. With a prolific academic career, Dr. Niasse continues to explore and extend the frontiers of plasma physics and fusion energy research.



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# Pr. Florian de Huyst Round table attendee



## Resume

Pr. Florian De Vuyst

3AF SIGMA2  
Expert in Applied Mathematics

Florian De Vuyst is Professor of Applied Mathematics, expert in computational fluid dynamics and numerical methods in Engineering. He is also interested in high-performance computing, reduced-order modelling and more recently in scientific Machine Learning.



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# Dr. Stéphane Pfister Round table attendee



## Resume

Dr. Stéphane Pfister

3AF SIGMA2  
Expert in European & International affairs



Stéphane Pfister is a Civilian expert with 12 years previous operational experience as Commissioned Officer in the French Army. He served in various international positions and conflict-prone areas. Stéphane holds a PhD in Political Science (University of Geneva, 2008) and a postgraduate Diploma in European Studies (European Institute of the University of Geneva, 2004). He is also graduated from the Saint-Cyr military Academy (Diploma in Human & Social Sciences, Strategy, International Relations, 1994). Within 3AF/SIGMA2, his main fields of expertise are international aspects of UAP studies.





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# Raymond Piccoli Round table attendee



## Resume

Raymond Piccoli

3AF SIGMA2  
Dir of Ball lightning Lab



Raymond Piccoli is director of the Lightning Research Laboratory. A specialist in storm phenomena for three decades, he is an expert in the very specific field of the effects of lightning at the point of impact. Field scientist very experienced in conducting research in the heart of thunderstorms, his main research topics relate to ball lightning, phenomena resulting from natural photo nuclear reactions produced by lightning, and unconventional phenomena related to lightning. Astronomer by training (participation in projects in the fields of the detection of small bodies in the Solar System, optical interferometry and submillimeter radio astronomy), president of the Scientific Committee of the International Symposium on Lightning, Thunderstorm and Atmospheric Phenomena (ISL-TAP), curator of the Museum of Storms and Lightning, he is also a senior international consultant-expert, a reserve Gendarmerie officer (RCDS), and a scientific advisor for several public and private organizations. Raymond Piccoli is member of the GEIPAN college of experts.



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# Geoffrey Metchersky Round table attendee



## Resume

Geoffrey Metchersky

3AF SIGMA2  
Expert in Bio environment

Member of 3AF technical commission SIGMA2 on UAP study. Geoffrey Mestchersky holds a Master Degree in geochemistry from Paris VI University (Pierre et Marie Curie). Specializing in field instrumentation, he has started his career at CNRS (Centre National de la Recherche Scientifique - French National Centre for Scientific Research) in Oceanography/applied Ocean Science. He is currently working in a French national research center.



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# Dr. Mark Rodhieger Round table attendee



## Resume

### Dr. Mark Rodhieger

Mark Rodeghier has been President and Scientific Director of the J. Allen Hynek Center for UFO Studies since 1986. He earned a BS in astrophysics from Indiana University in 1975 and then completed master's and PhD degrees from the University of Illinois at Chicago in sociology.

He works professionally as a consultant in statistical analysis and data analytics. He has taught numerous workshops on a variety of statistical techniques, authored or coauthored two books on statistics and survey research, and has been principal statistician for more than 80 papers in clinical research, with a recent focus on sickle cell disease.

His work in the UFO field began with CUFOS in 1974, and he has done research and investigation in a variety of areas, including vehicle interference cases, physical trace events, abduction cases, especially the psychology and the sociology of abduction experiencers, and led the CUFOS investigation of the Roswell crash.

His UFO-related publications include numerous articles for *International UFO Reporter*, the *Journal of UFO Studies*, and the *Journal of Scientific Exploration*, as well as the monograph *UFO Reports Involving Vehicle Interference: A Catalog and Data Analysis*.



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