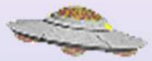
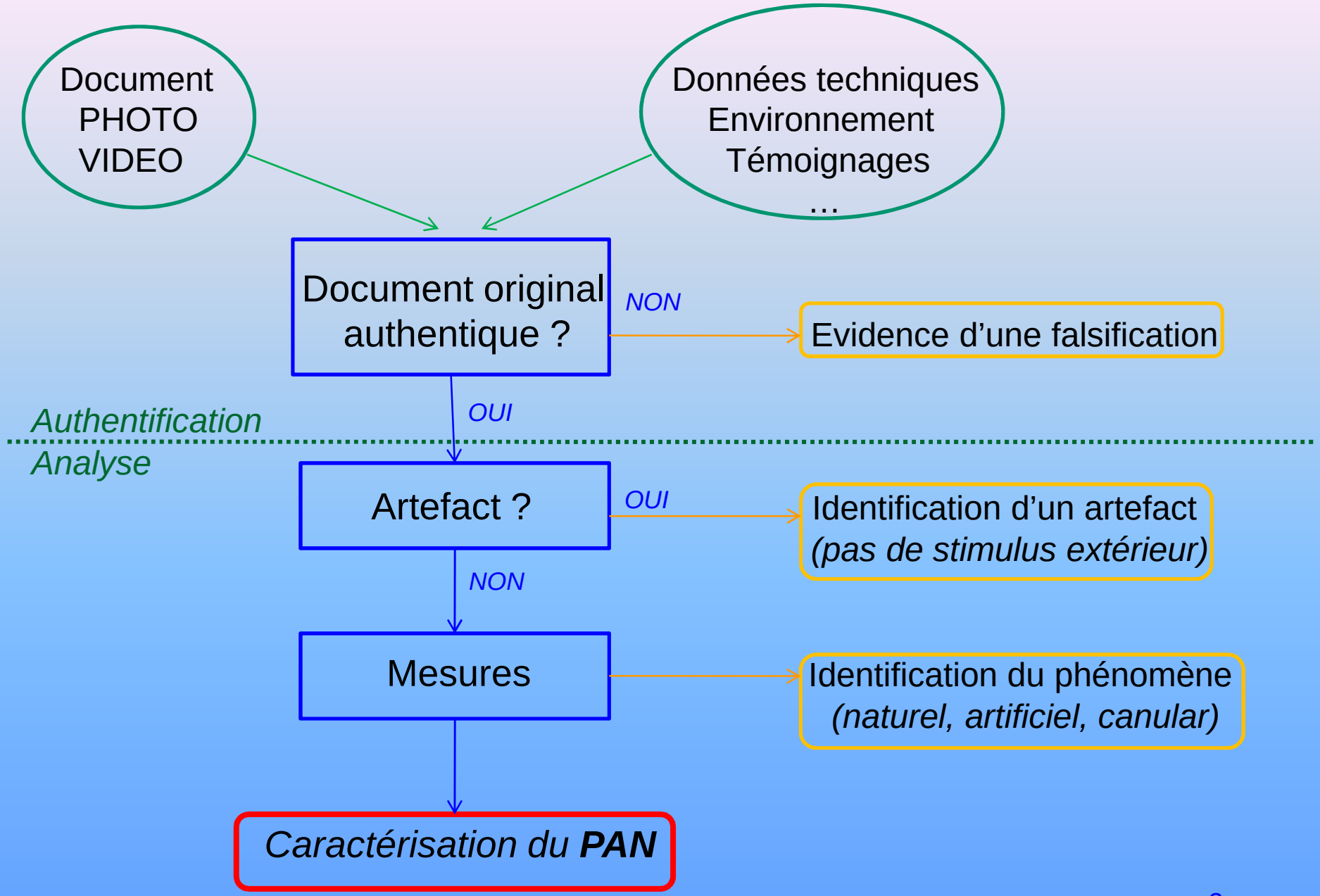


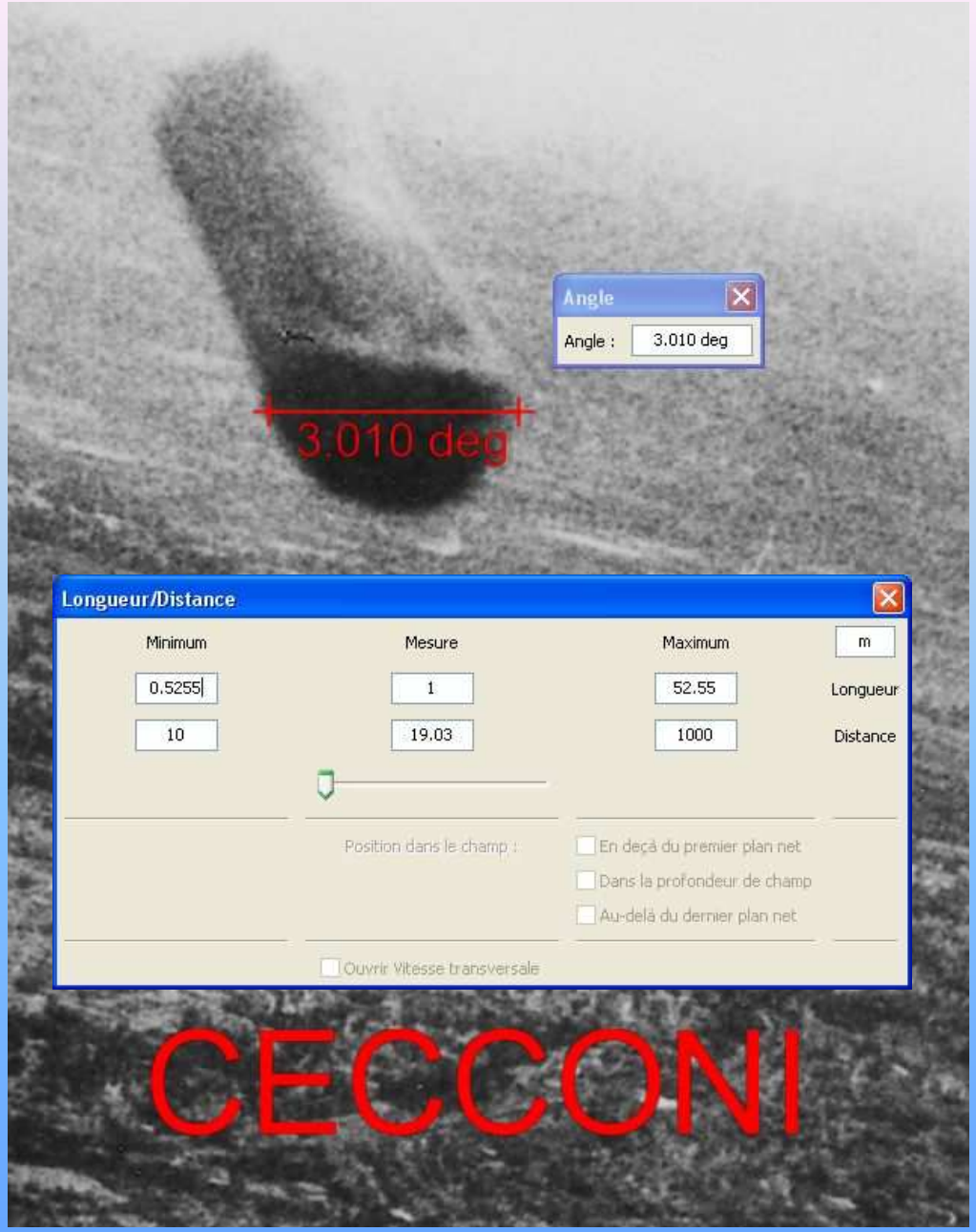
Authentification et analyse de photos/vidéos de PAN

CAIPAN 2014

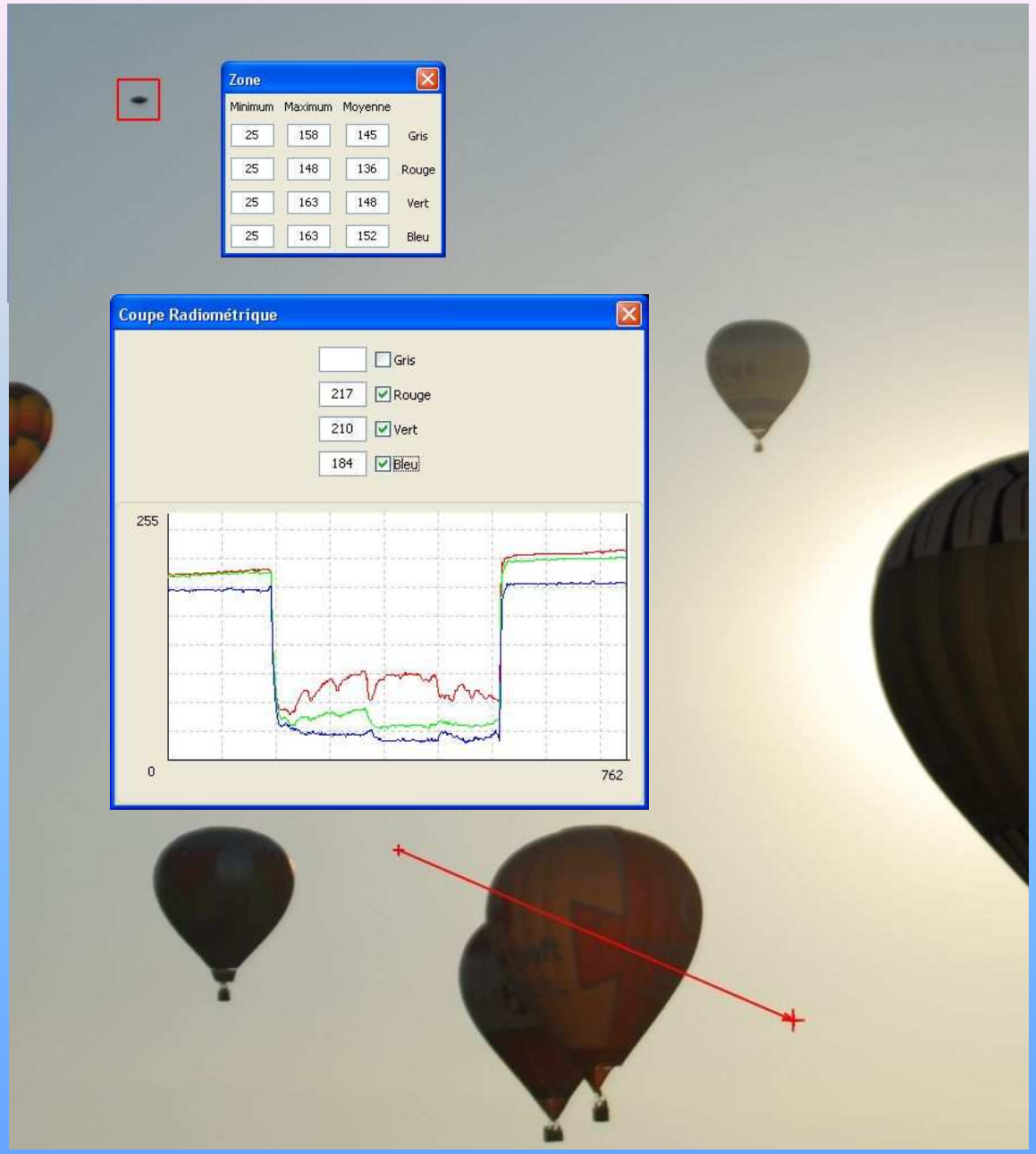
Paris, 8-9 juillet 2014

par François Louange et Antoine Cousyn

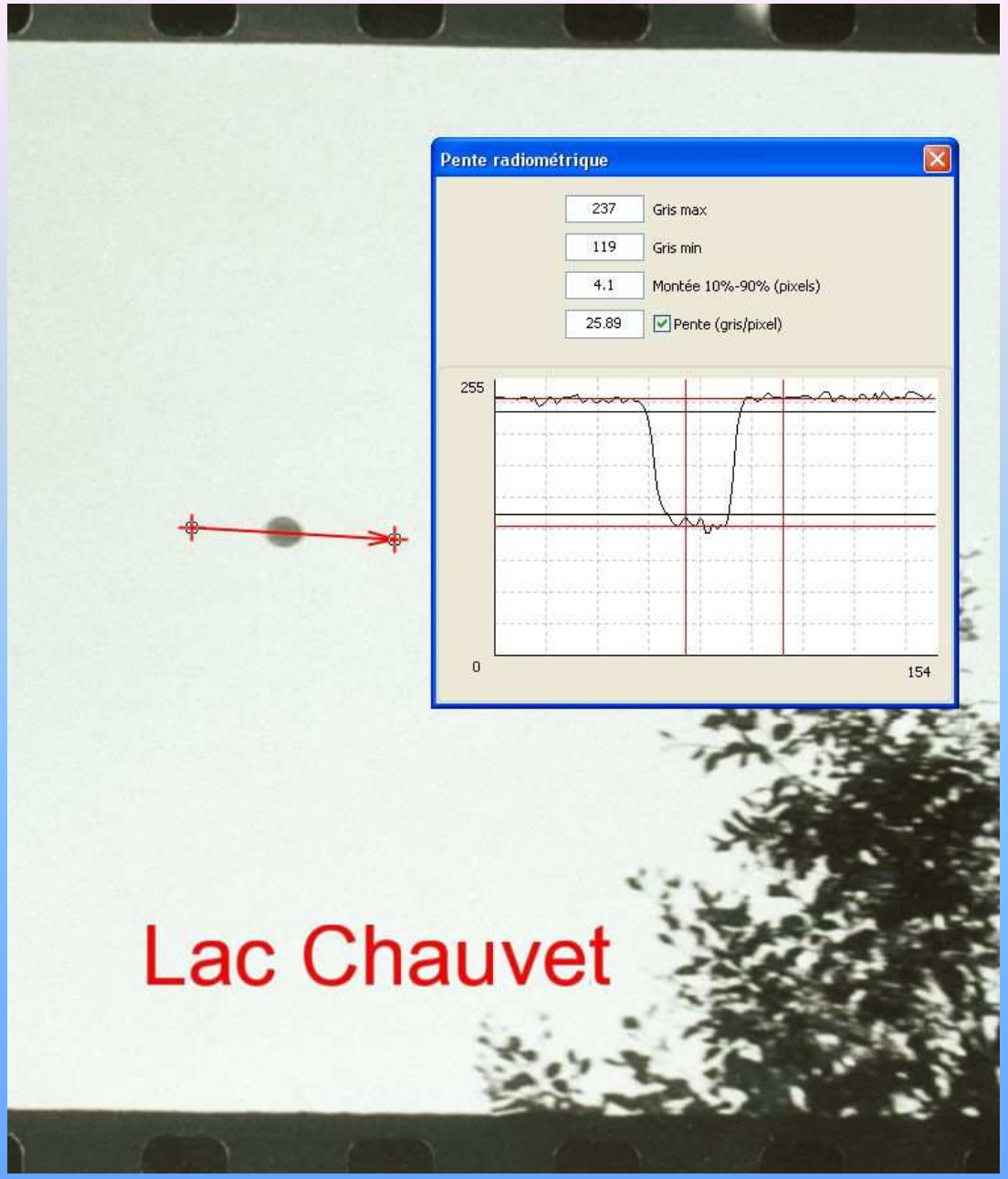

Document
PHOTO
VIDEO
Données techniques
Environnement
Témoignages
…
Document original
authentique ?
NON
Evidence d'une falsification
OUI
Authentification
Analyse
Artefact ?
OUI
Identification d'un artefact
(pas de stimulus extérieur)
NON
Mesures
Identification du phénomène
(naturel, artificiel, canular)
Caractérisation du PAN



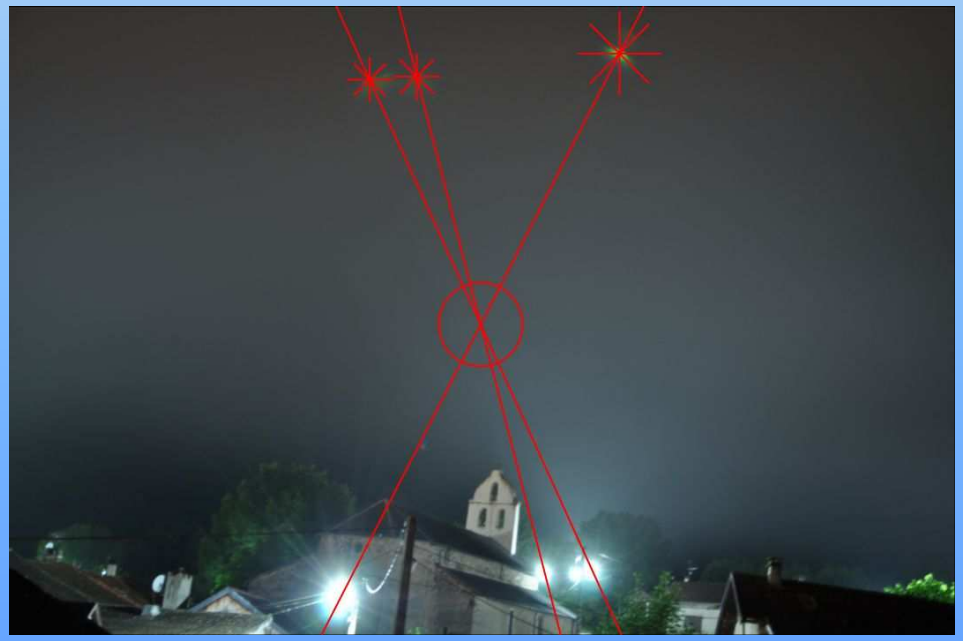
Mesures angulaires - Ratios taille/distance



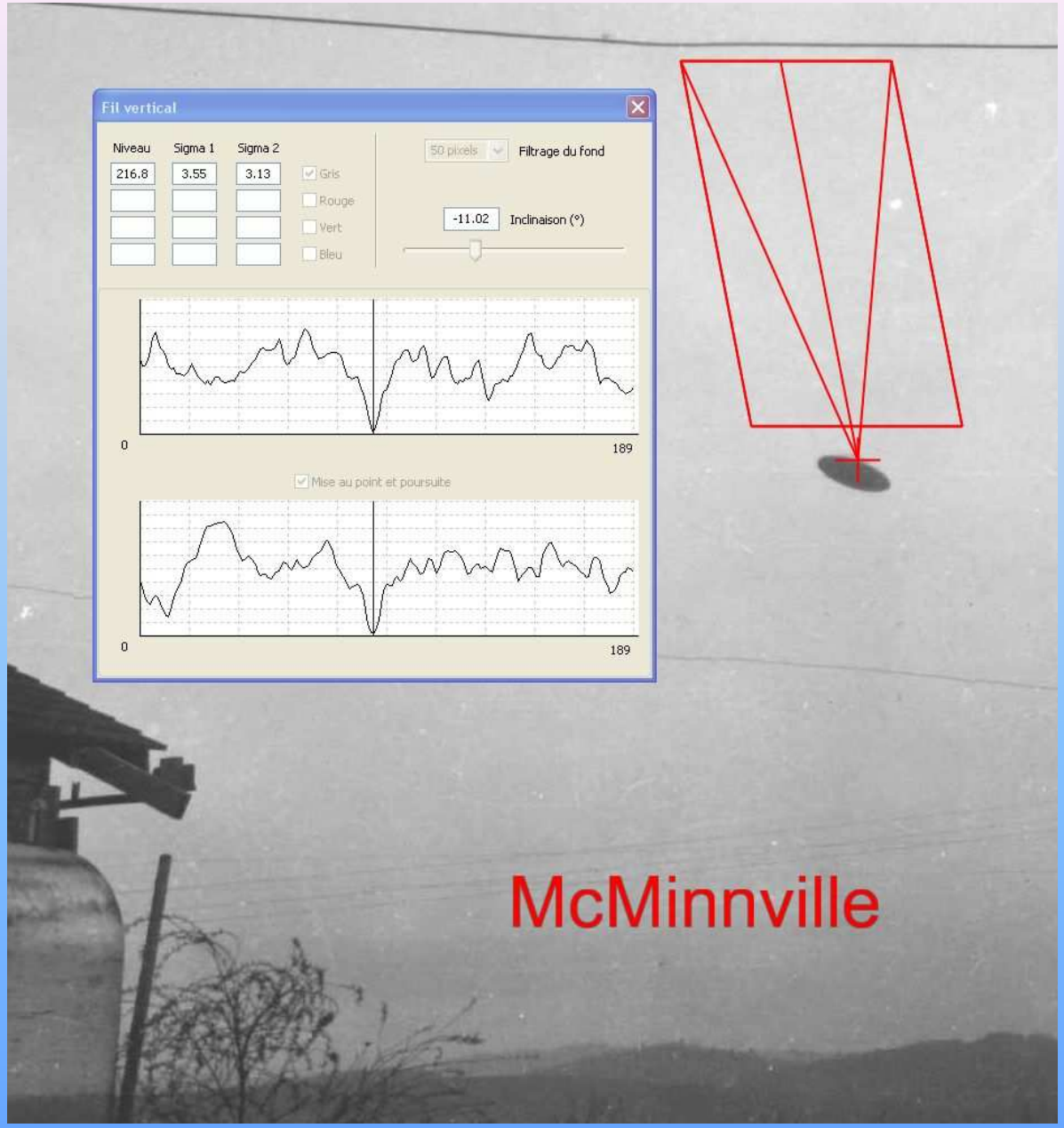
Mesures radiométriques



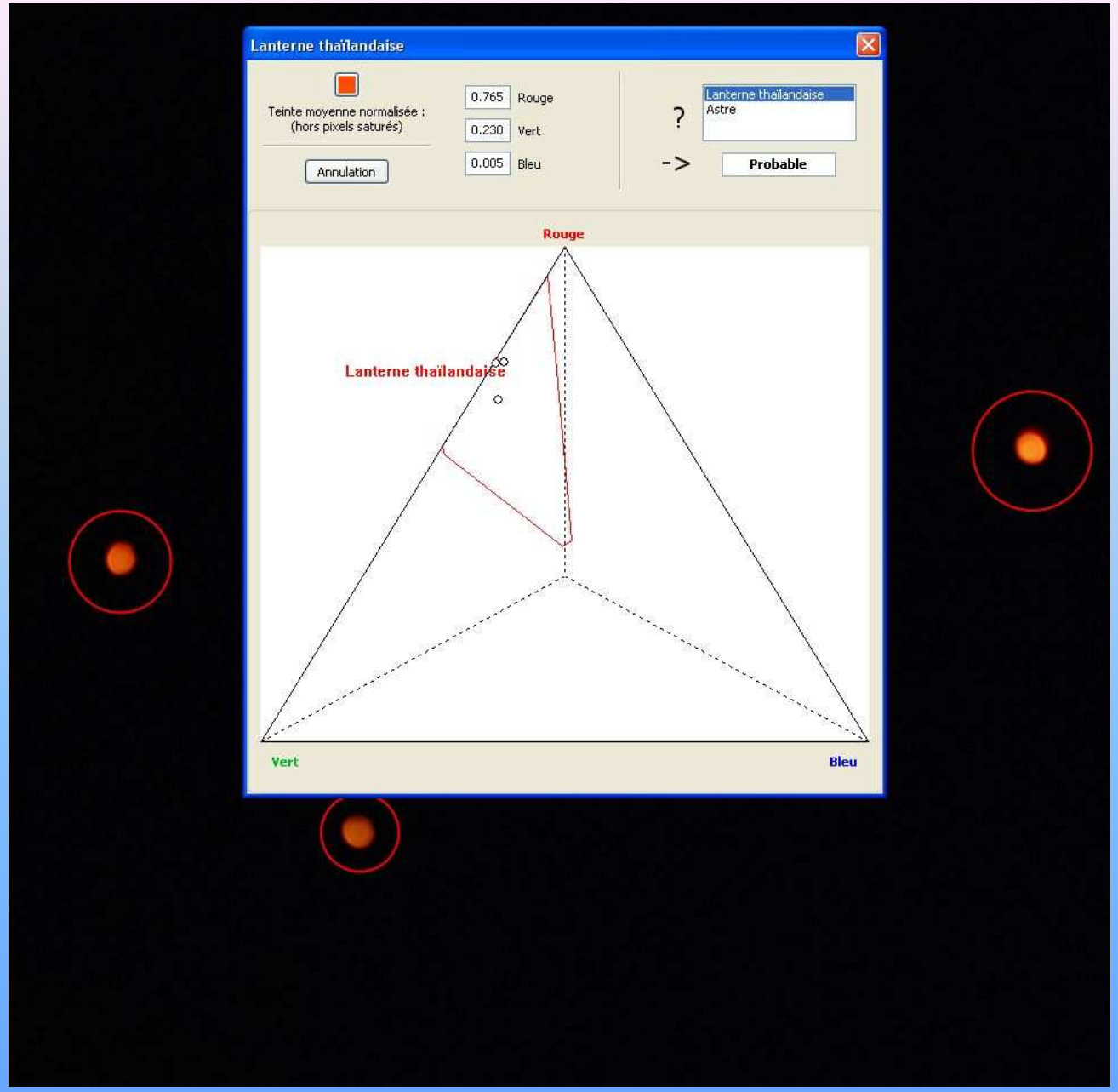
Mesures de netteté (FTM)



Réflexions dans l’optique



Détection d'un fil de suspension



Aide à la reconnaissance de lanternes thaïlandaises

Document photo/vidéo ORIGINAL

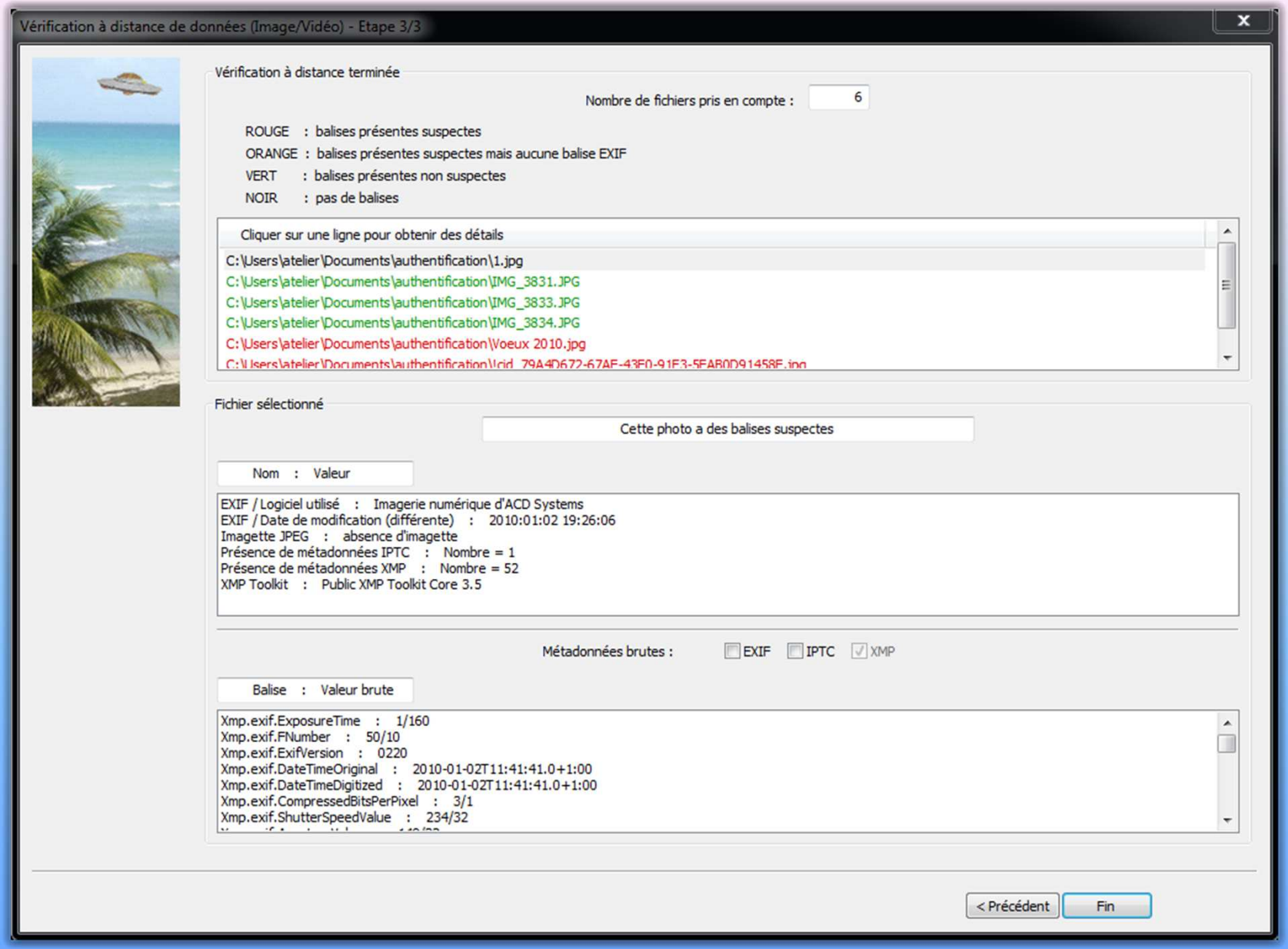
Argentique :

- Pellicule originale (négatif N&B ou couleur, diapositive)

Numérique :

- Recopie directe (sous *Windows*, *Linux*, *Mac OS*…) du fichier issu de la caméra (nom de fichier indifférent)

- La photo/vidéo doit avoir été prise sans option de « rendu spécial » ni d'incrustation en ligne



Authentification : Vérification de fichiers JPEG

Base

ID	Make	Type	Camera Model Name	Image Size
7	Canon	Camera	Canon EOS REBEL T3; Cano	1920x1280; 720x480; 4272x2848; 3088x2056; 2256x1504
8	Canon	Camera	Canon EOS REBEL T1i; Canc	3456x2304; 4752x3168; 2353x1568
9	Canon	Camera	Canon EOS DIGITAL REBEL	4272x2848; 3088x2056; 2256x1504
10	Canon	Camera	Canon EOS DIGITAL REBEL	3888x2592; 2816x1880; 1936x1288
11	Canon	Camera	Canon EOS DIGITAL REBEL	3888x2592; 2816x1880; 1936x1288
12	Canon	Camera	Canon EOS 50D	3456x2304; 4752x3168; 2353x1568
13	Canon	Camera	Canon EOS 40D	3888x2592; 2816x1880; 1936x1288
14	Canon	Camera	Canon EOS REBEL T4i; Canc	259 728; 3456x2304; 5184x3456; 1920x1280; 720x480; 4608
15	Canon	Camera	Canon EOS DIGITAL REBEL	345 x2304; 2496x1664; 1728x1152
16	Canon	Camera	Canon EOS 5D	3168x2112; 2496x1664
17	Canon	Camera	Canon EOS 6D	720x480; 5472x3648; 3648x2432; 2736x1824
18	Canon	Camera	Canon PowerShot G12	640x480; 1920x1080; 480x480; 2816x1880; 3648x2432; 3648x2
19	Canon	Camera	Canon EOS 20D	3504x2336; 2544x1696; 1728x1152
20	Canon	Camera	Canon PowerShot SX40 HS	640x480; 1920x1080; 480x480; 2816x1880; 2816x1584; 2816x2
21	Canon	Camera	Canon EOS-1D Mark IV	4896x3264; 4320x2880; 3552x2368; 2448x1632; 3672x2448
22	Canon	Camera	Canon EOS 30D	3504x2336; 2544x1696; 1728x1152

OK

Authentification avec CamCAT : image tronquée