

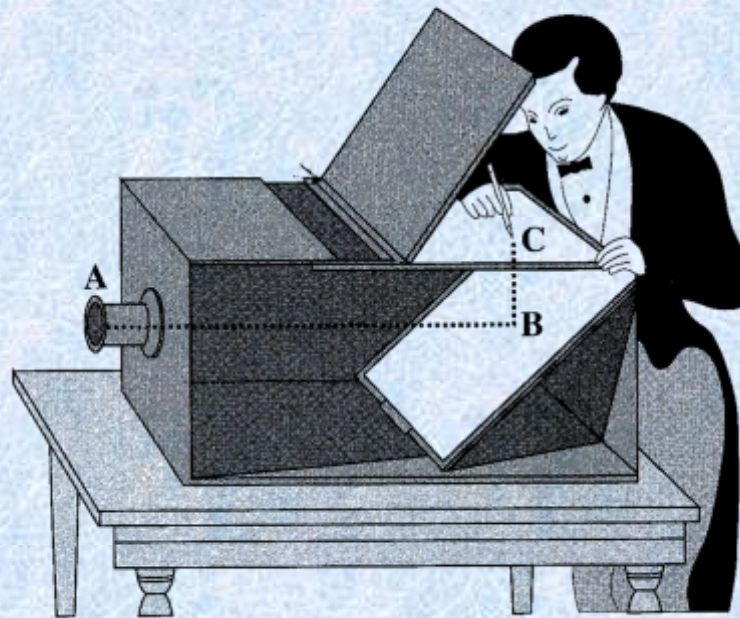
# Sensoriamento Remoto Aplicado à Geografia

## Sensor Fotográfico

Prof. Dr. Ailton Luchiari

Prof. Dr. Reinaldo Paul Pérez Machado

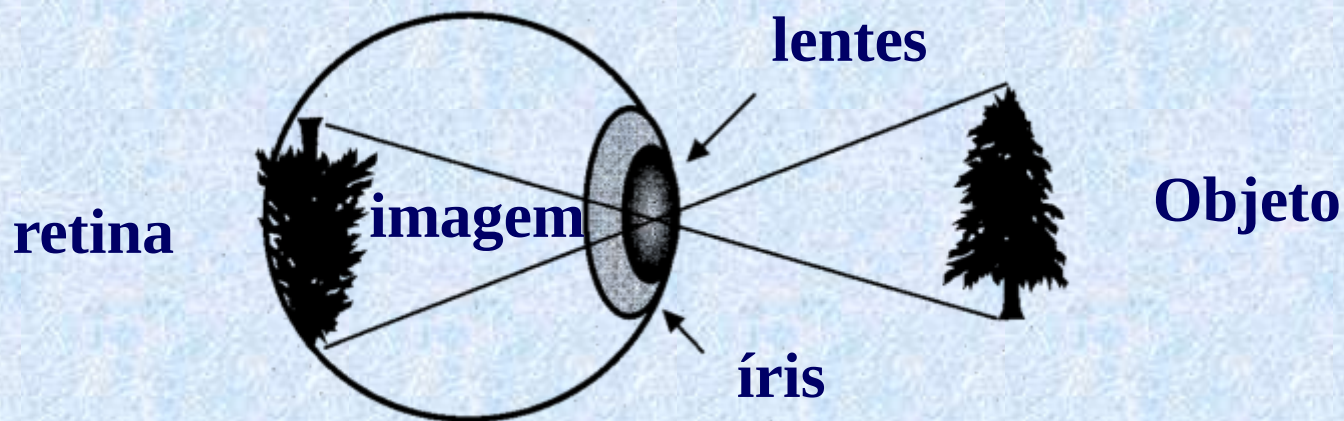
# Sensor Fotográfico



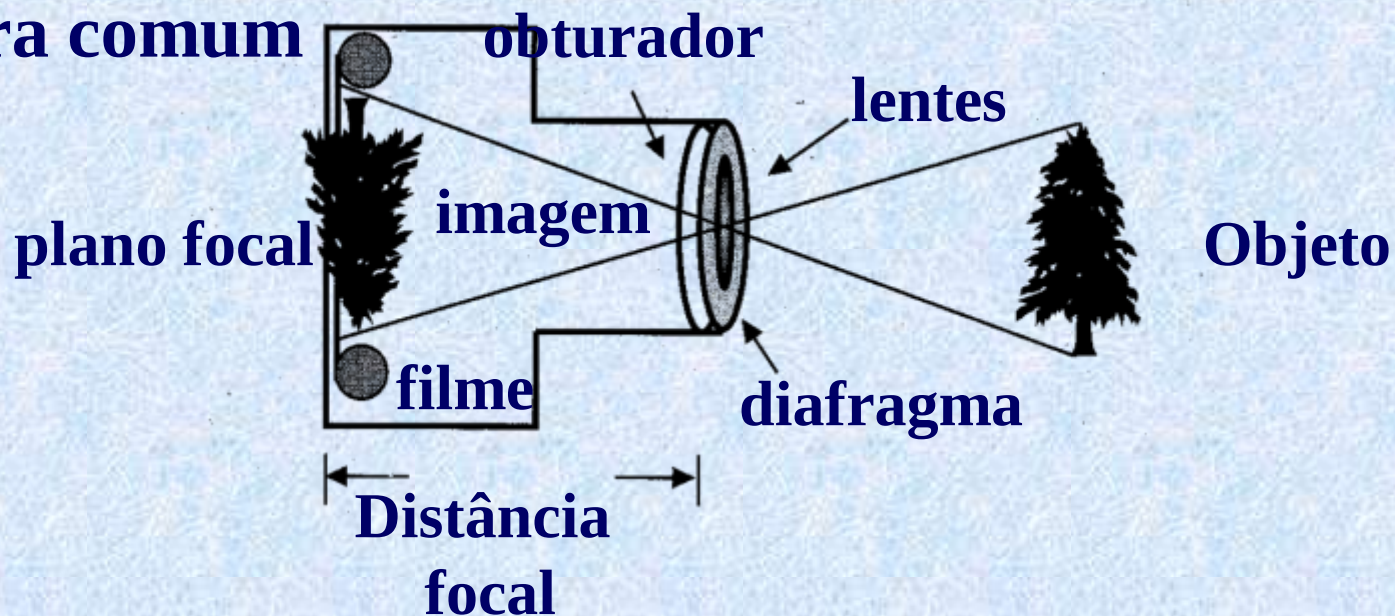
**Câmara escura**

# Sensor Fotográfico

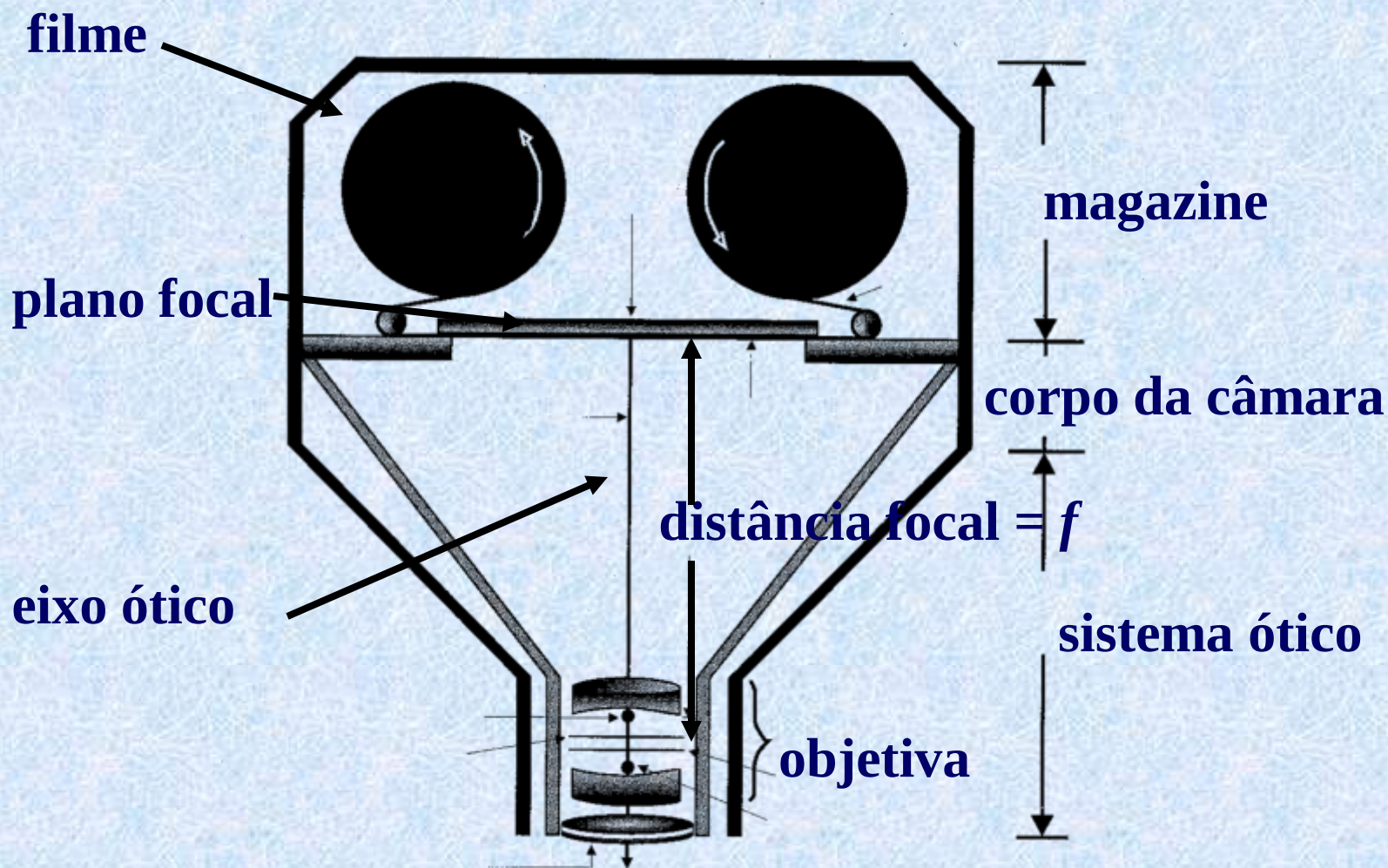
## Olho Humano



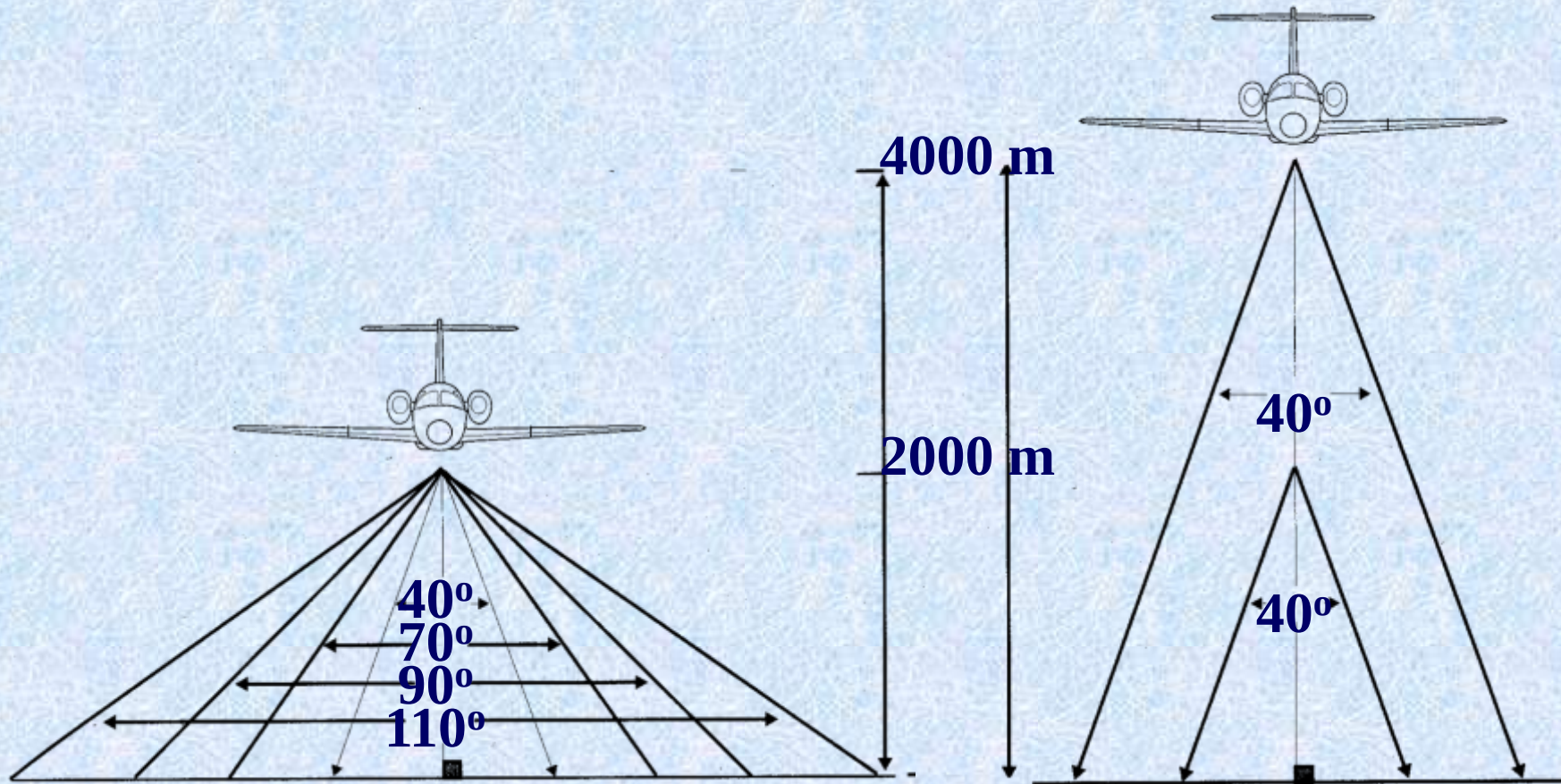
## Câmera comum



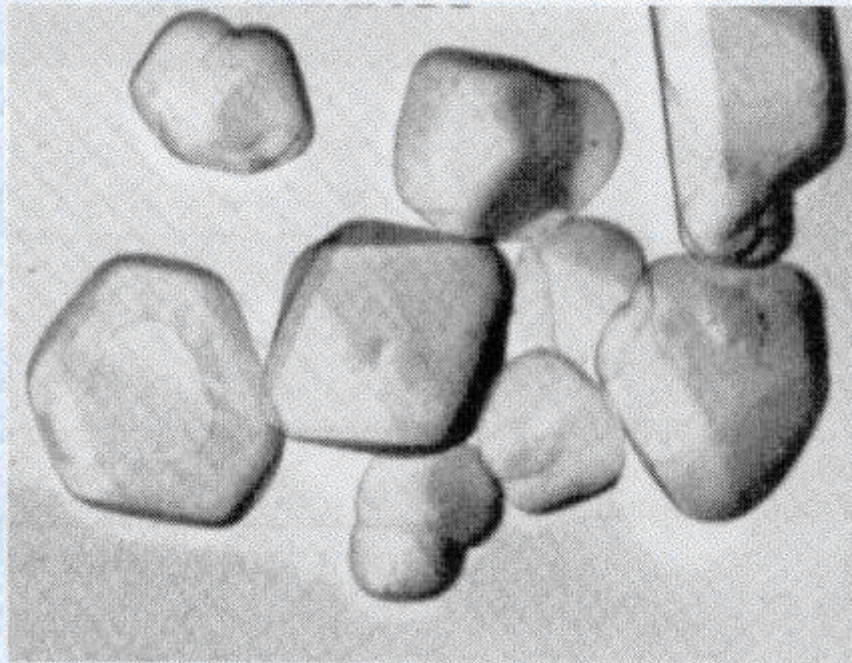
# Sensor Fotográfico



# Objetiva



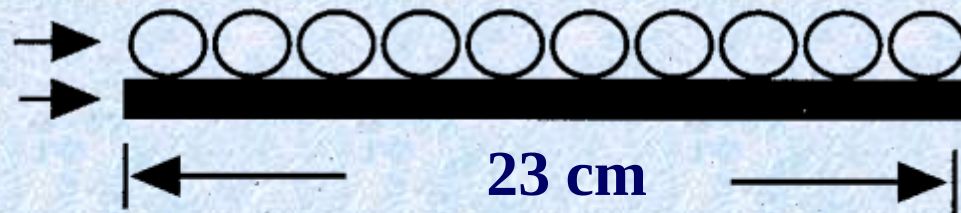
filmes



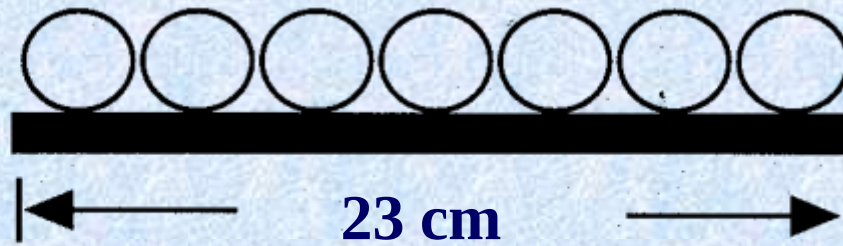
**Cristais de haletos de prata**

# Filmes - velocidade

**haletos de prata**  
**base de acetato**

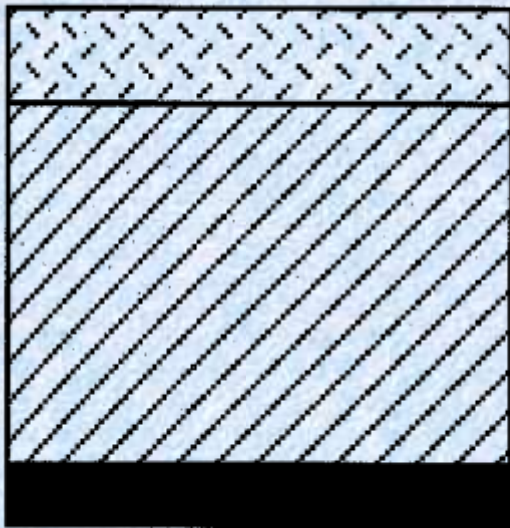


**haletos de prata**  
**base de acetato**

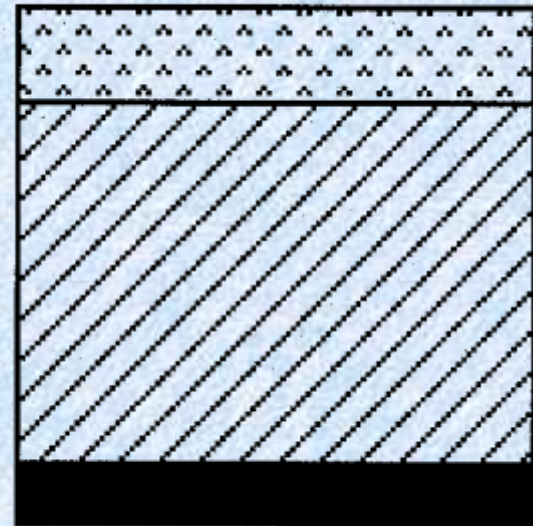


# Filmes – branco e preto

**filme BP visível**



**filme BP infravermelho**

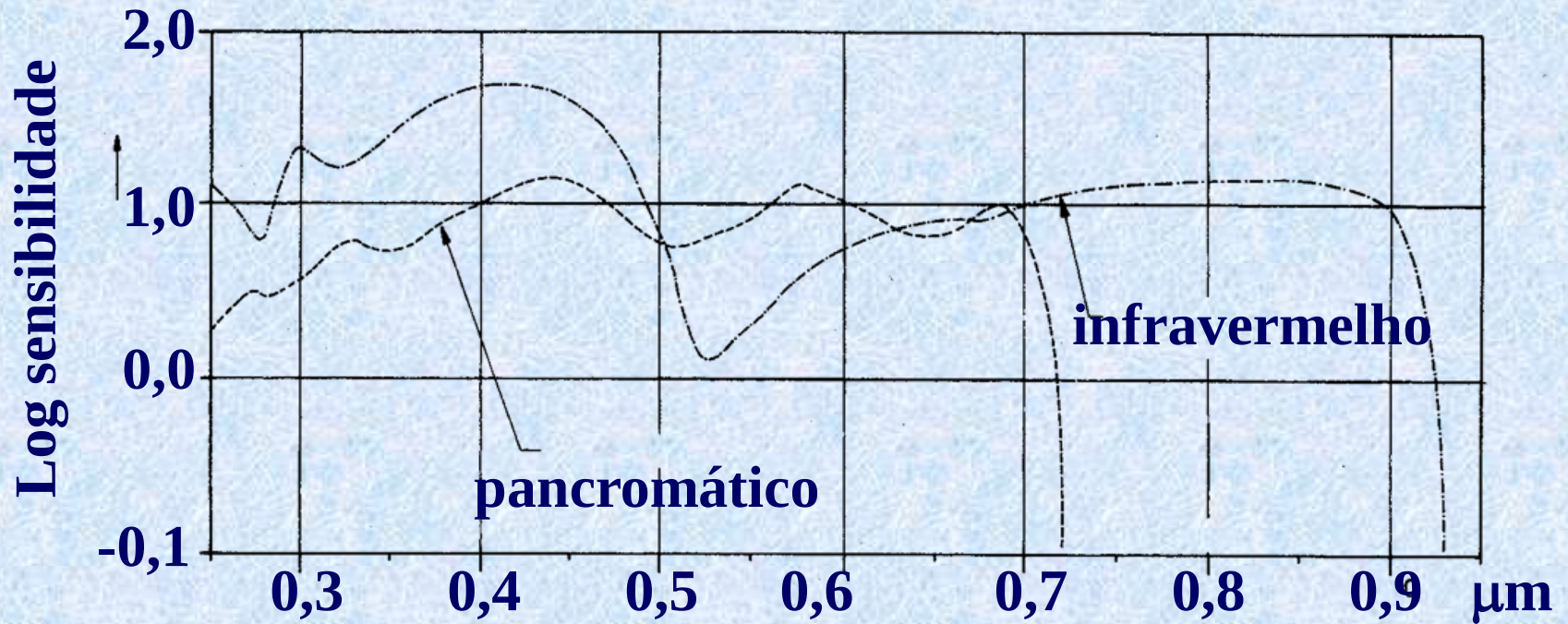


**emulsão com  
haletos de prata**

**base de  
polyester**

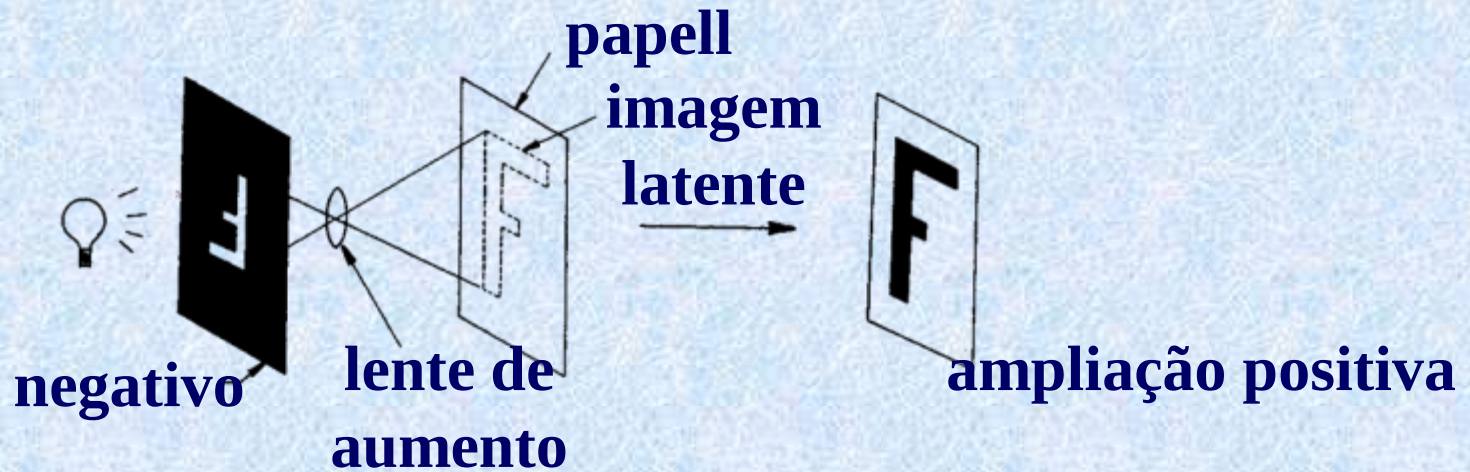
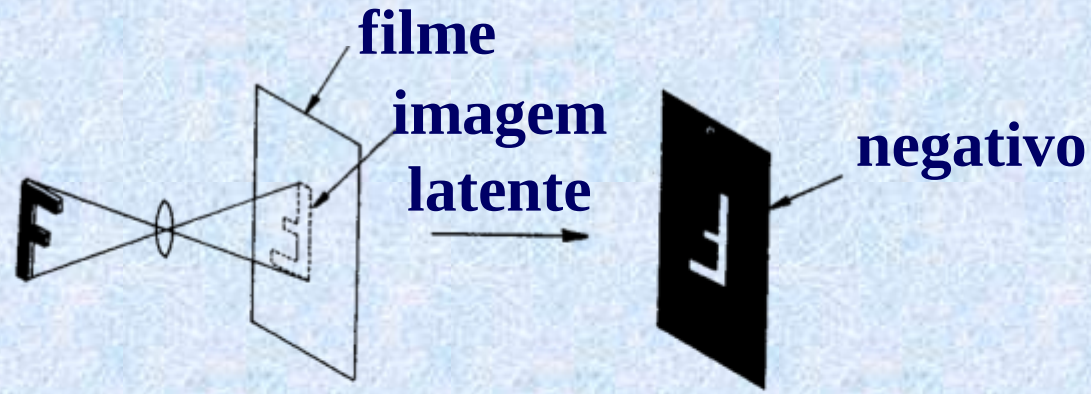
**camada anti-halo**

# Filmes – BP sensibilidade

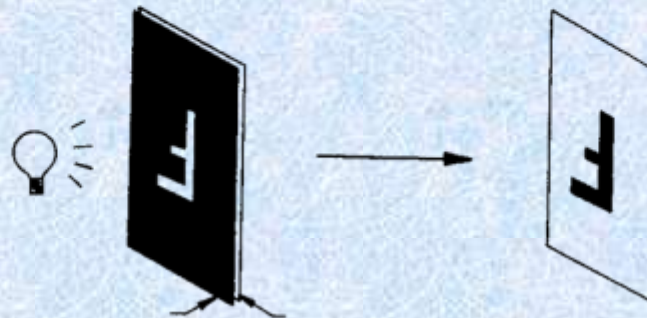


# Filmes – BP revelação

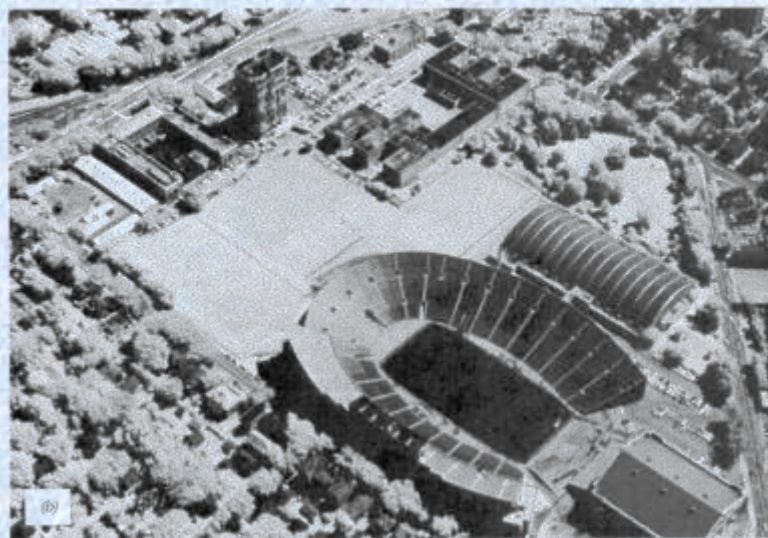
cena original



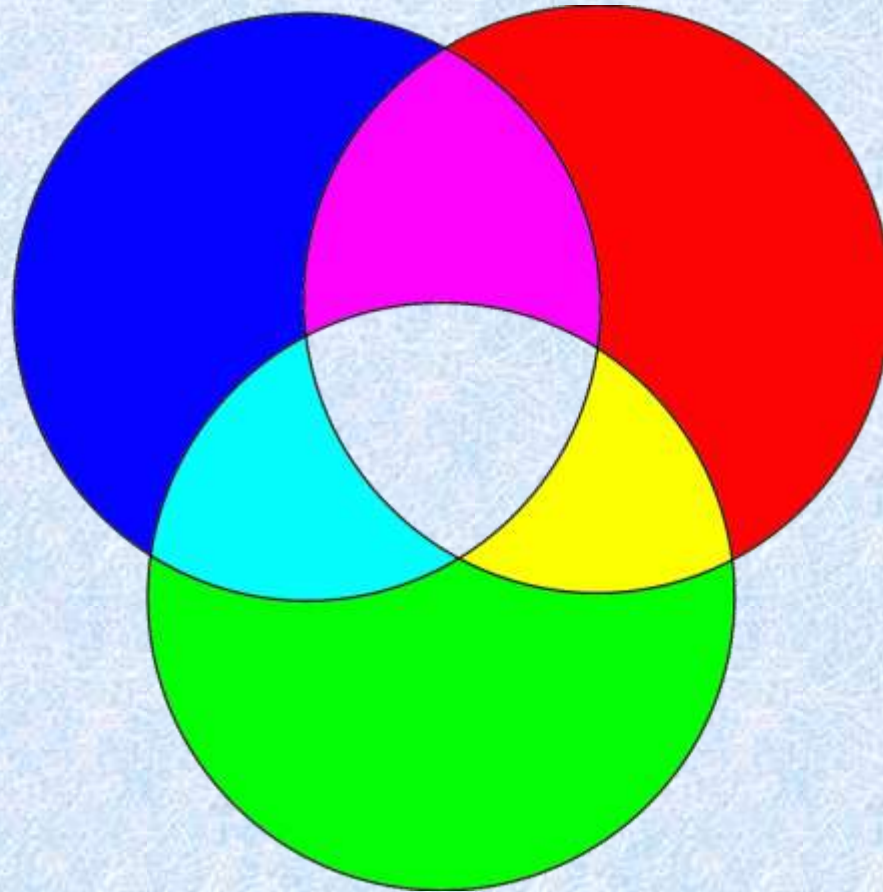
Cópia de contato



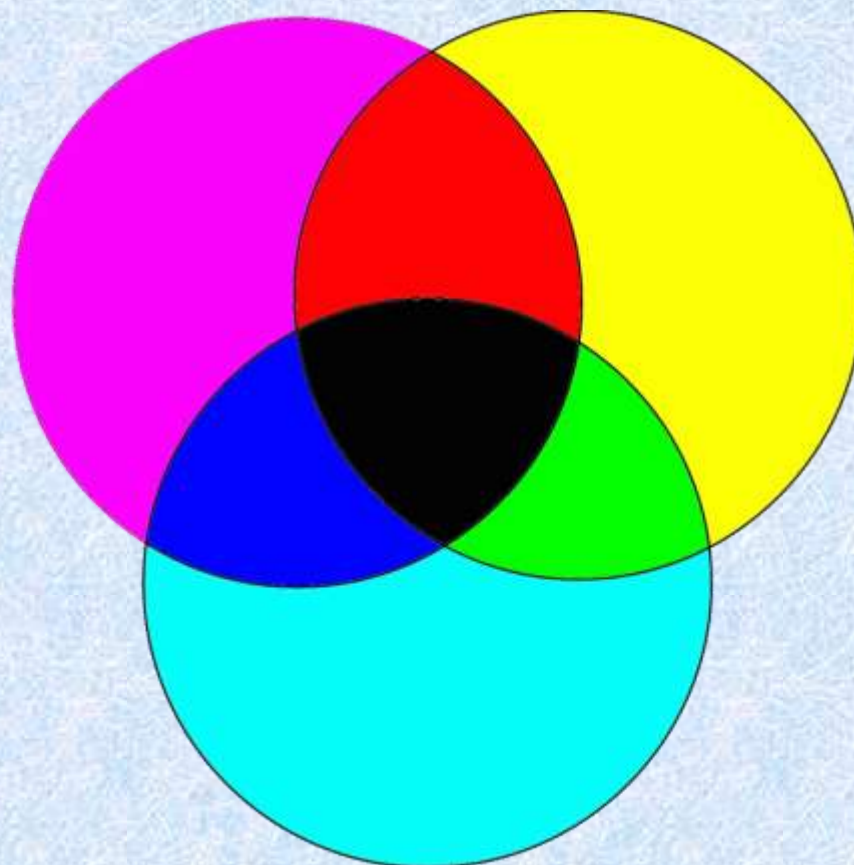
# Filmes – BP resultado



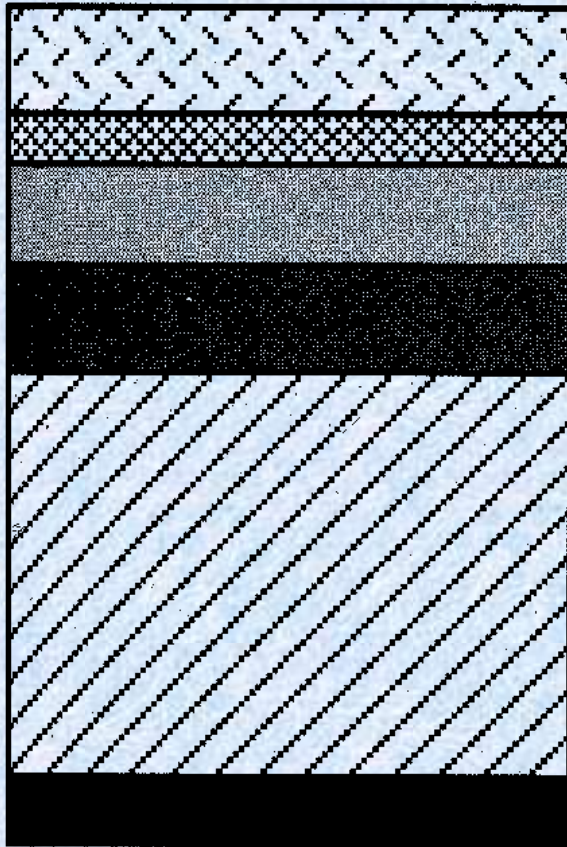
# Filmes coloridos – cores aditivas



# Filmes coloridos – cores subtrativas



# Filme colorido normal



**camada sensível ao azul**

**filtro amarelo**

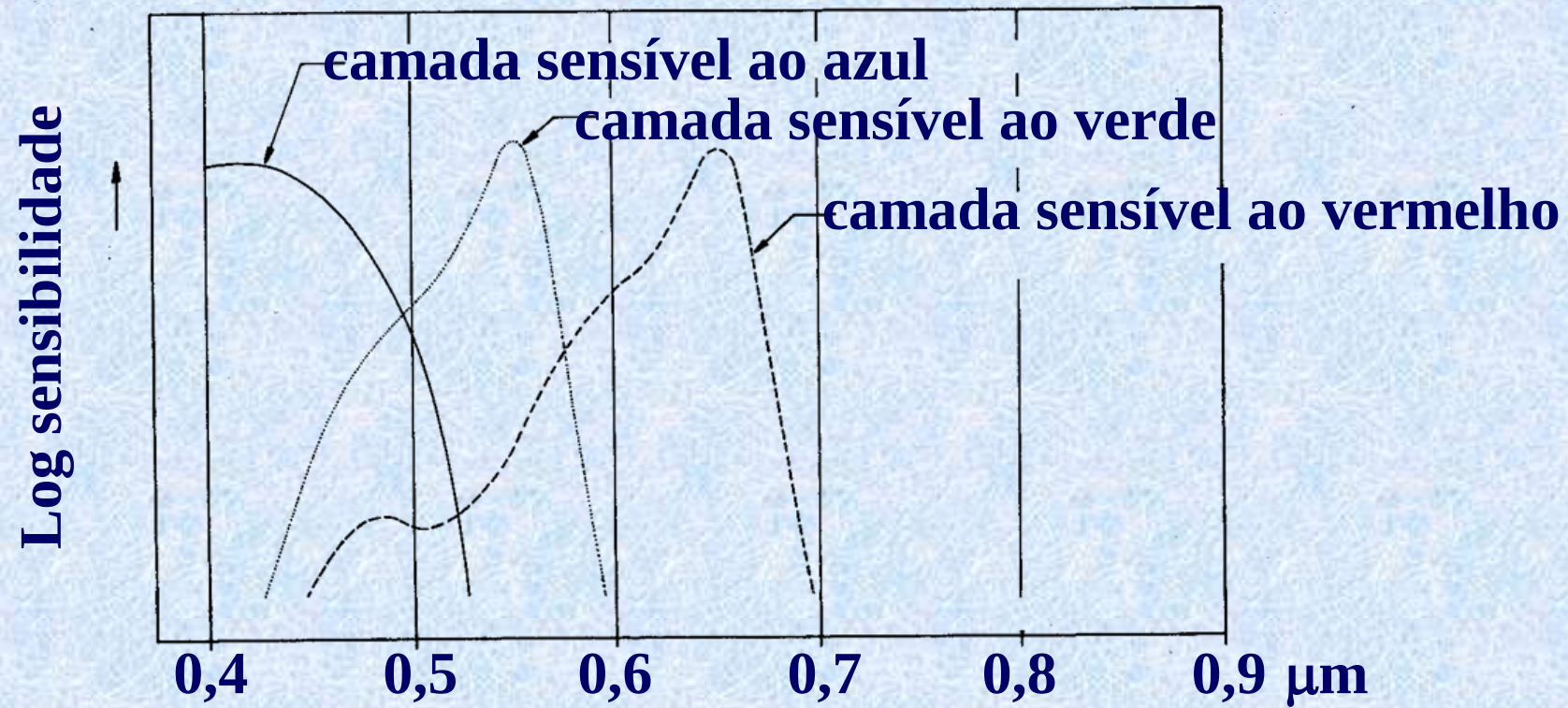
**camada sensível ao verde**

**camada sensível ao vermelho**

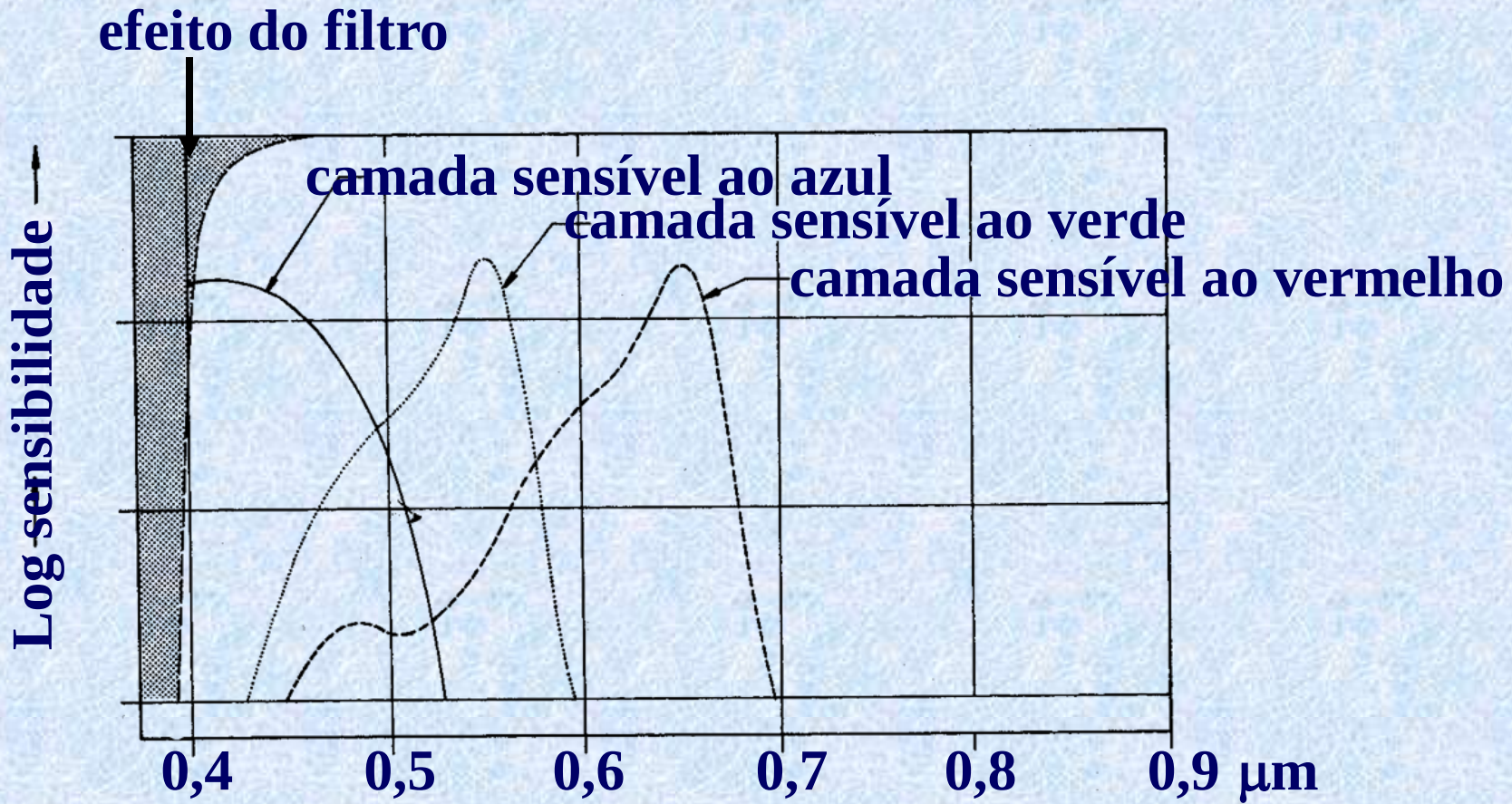
**base de acetato - polyester**

**camada anti-halo**

# Filme colorido normal - sensibilidade



# Filme colorido normal - filtro

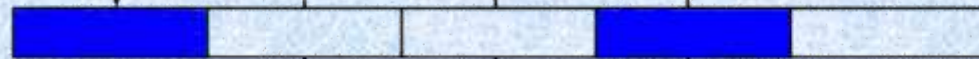


# Filme colorido normal - revelação

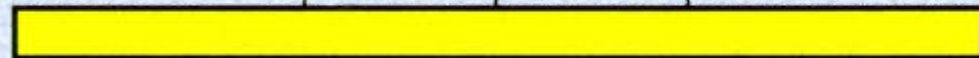


cores dos objetos

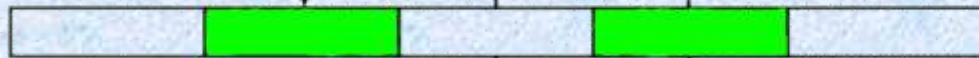
exposição



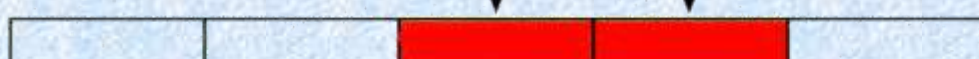
camada sensível ao azul



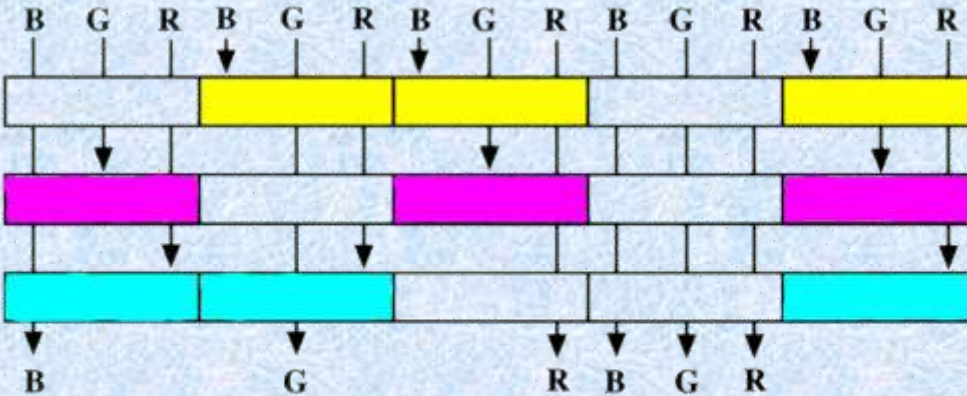
filtro amarelo



camada sensível ao verde



camada sensível ao vermelho

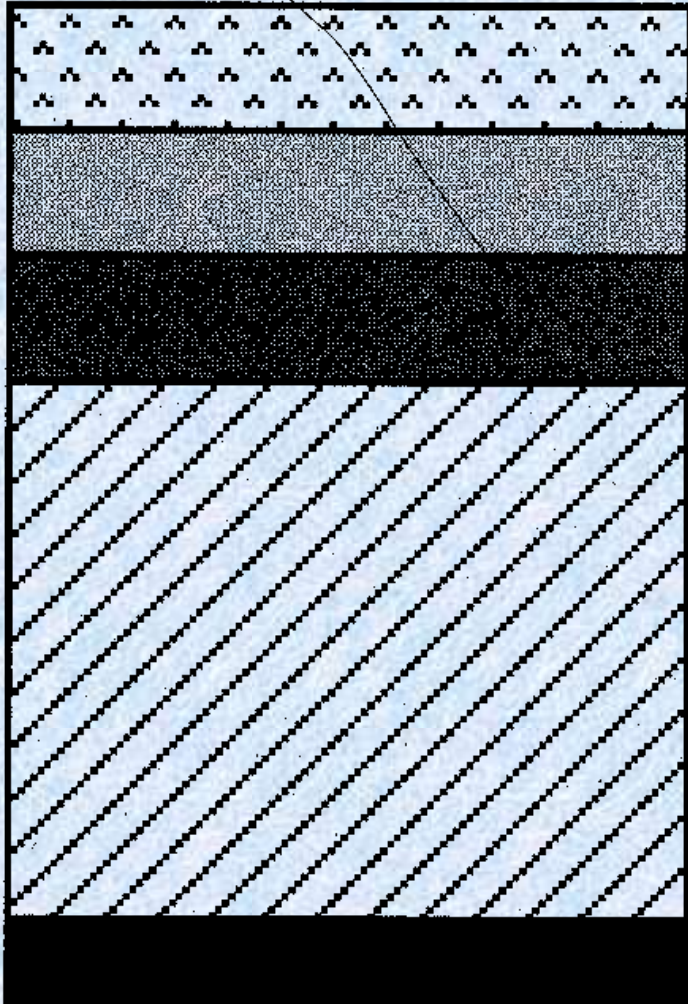


revelação



diapositivo

# Filme colorido infravermelho



**camada sensível ao infravermelho**

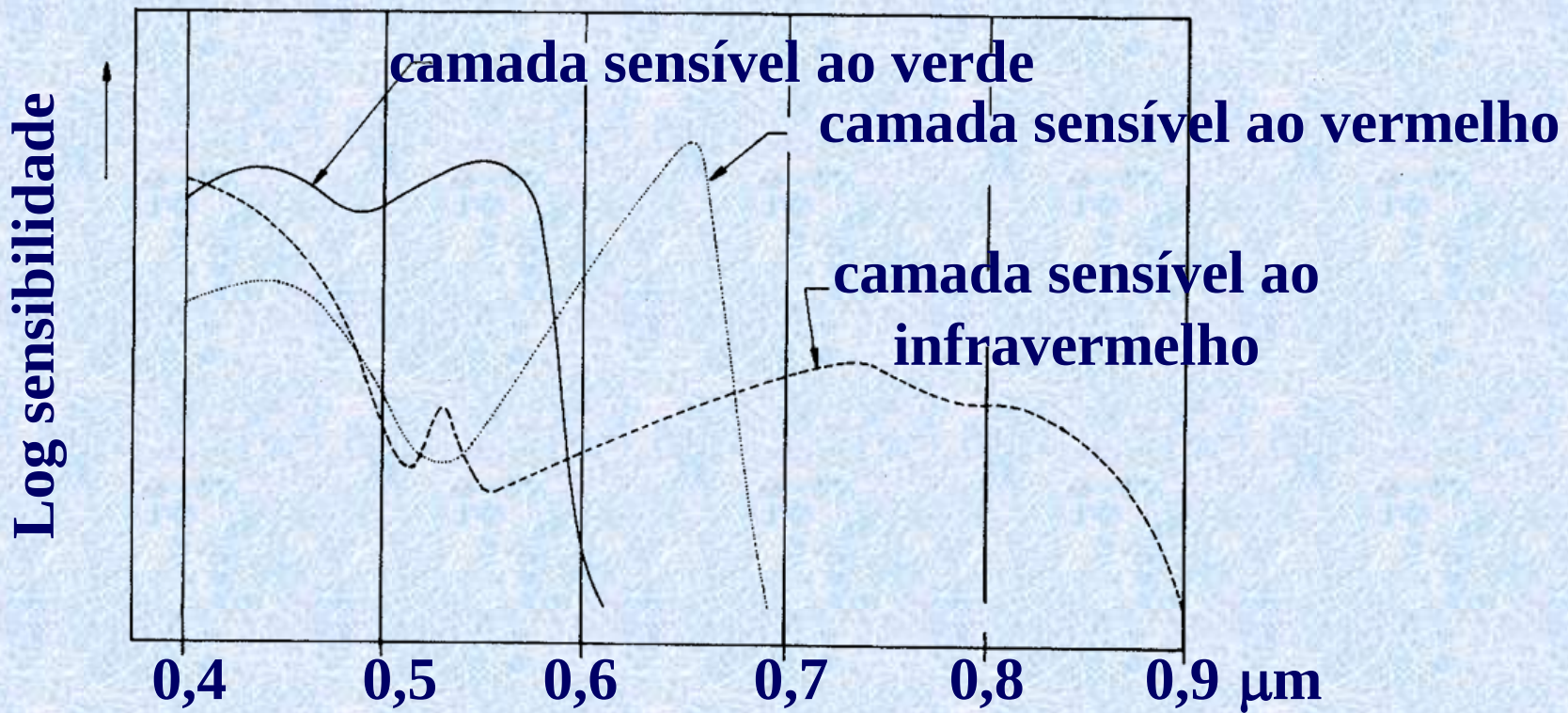
**camada sensível ao verde**

**camada sensível ao vermelho**

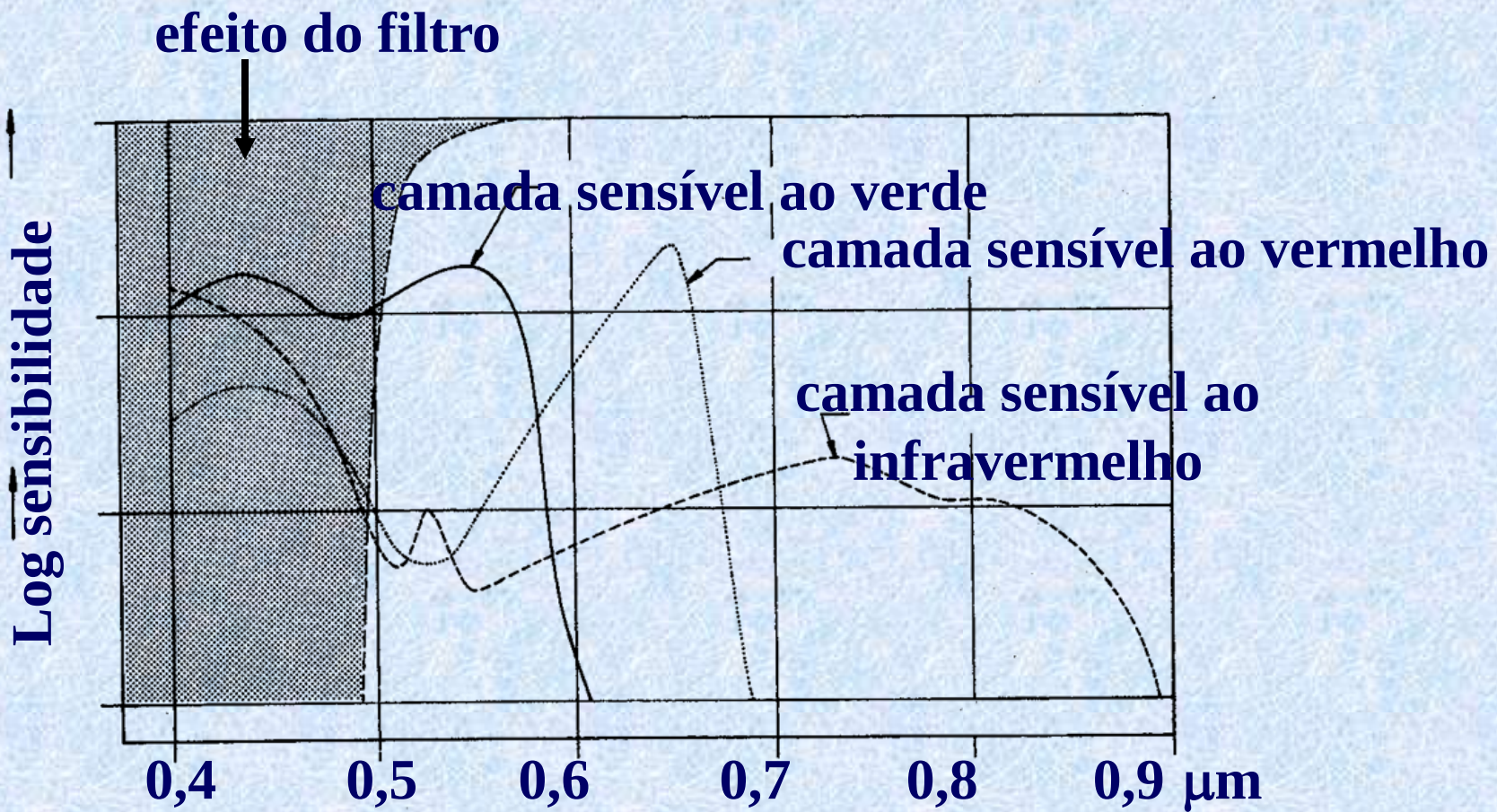
**base de acetato - polyester**

**camada anti-halo**

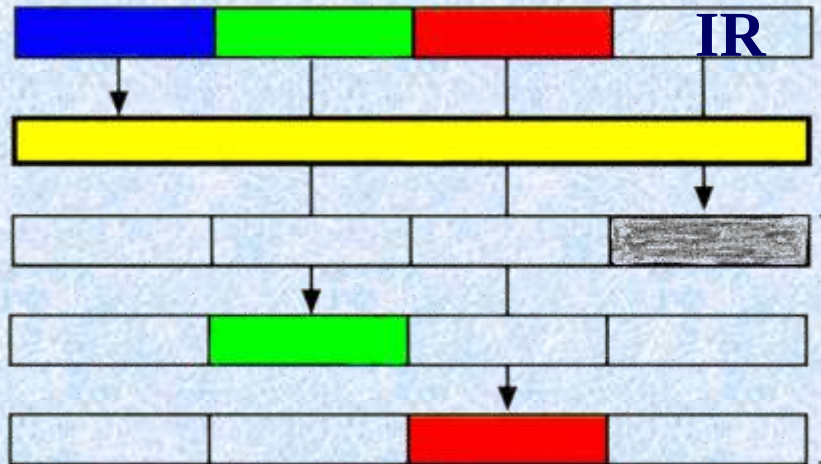
# Filme colorido infravermelho - sensibilidade



# Filme colorido infravermelho - filtro



# Filme colorido infravermelho - revelação



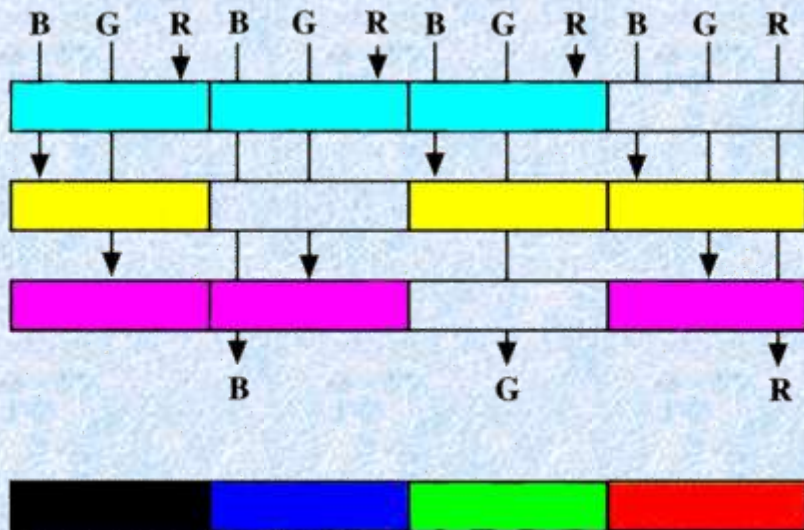
reflectância dos objetos

filtro colocado na câmara

camada sensível ao infravermelho

camada sensível ao verde

camada sensível ao vermelho



revelação

cores no filme

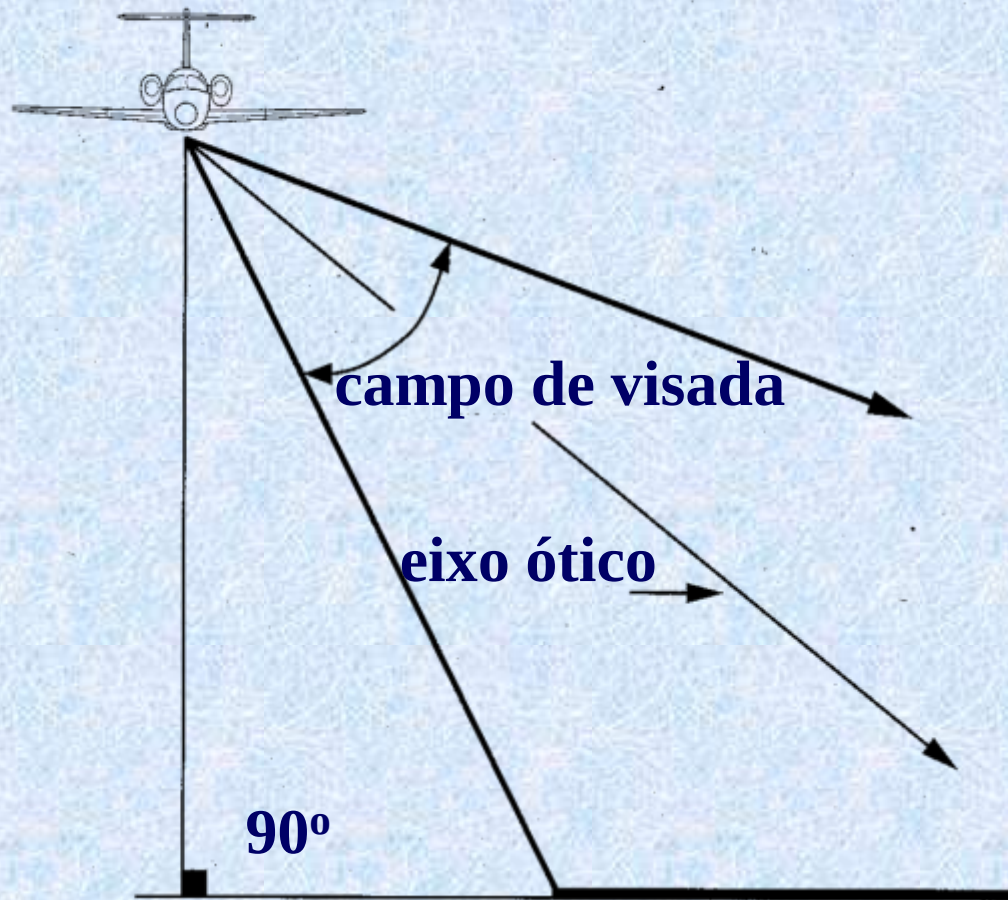
# Filmes coloridos- resultados



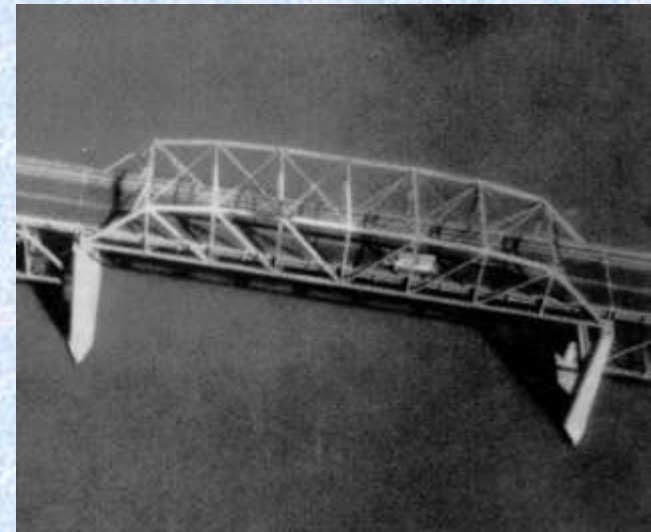
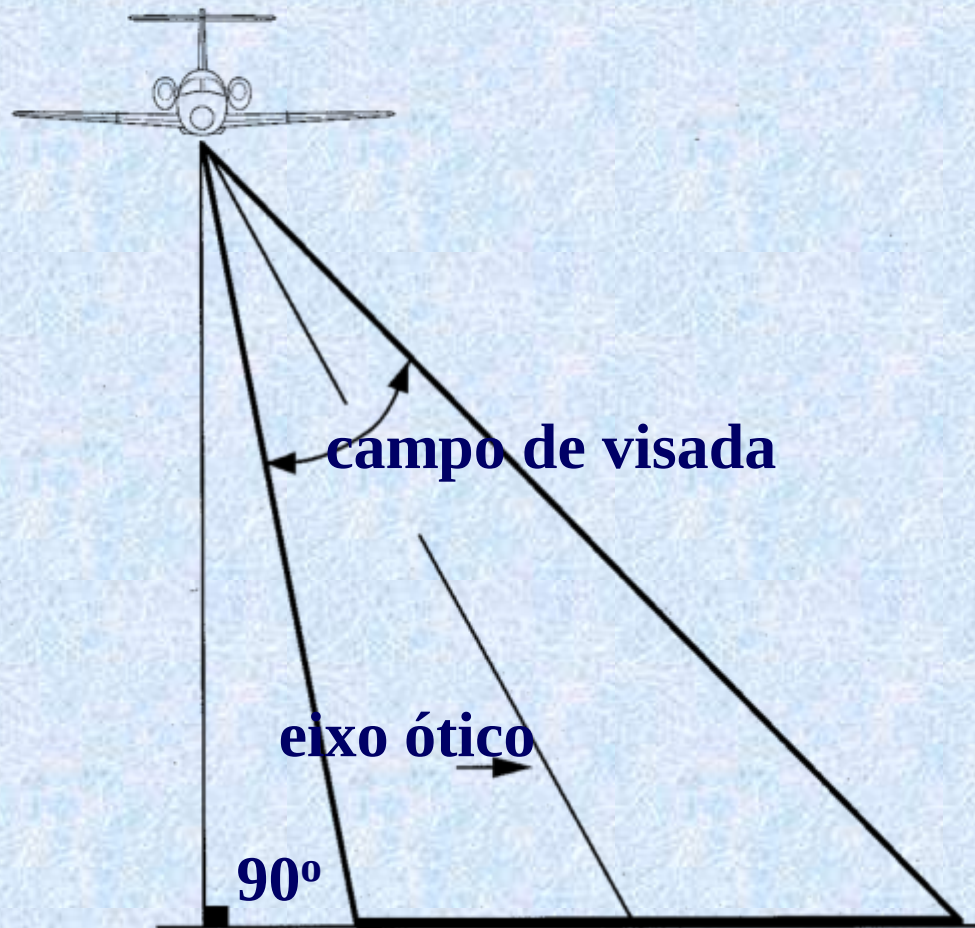
# Filmes coloridos- aplicação



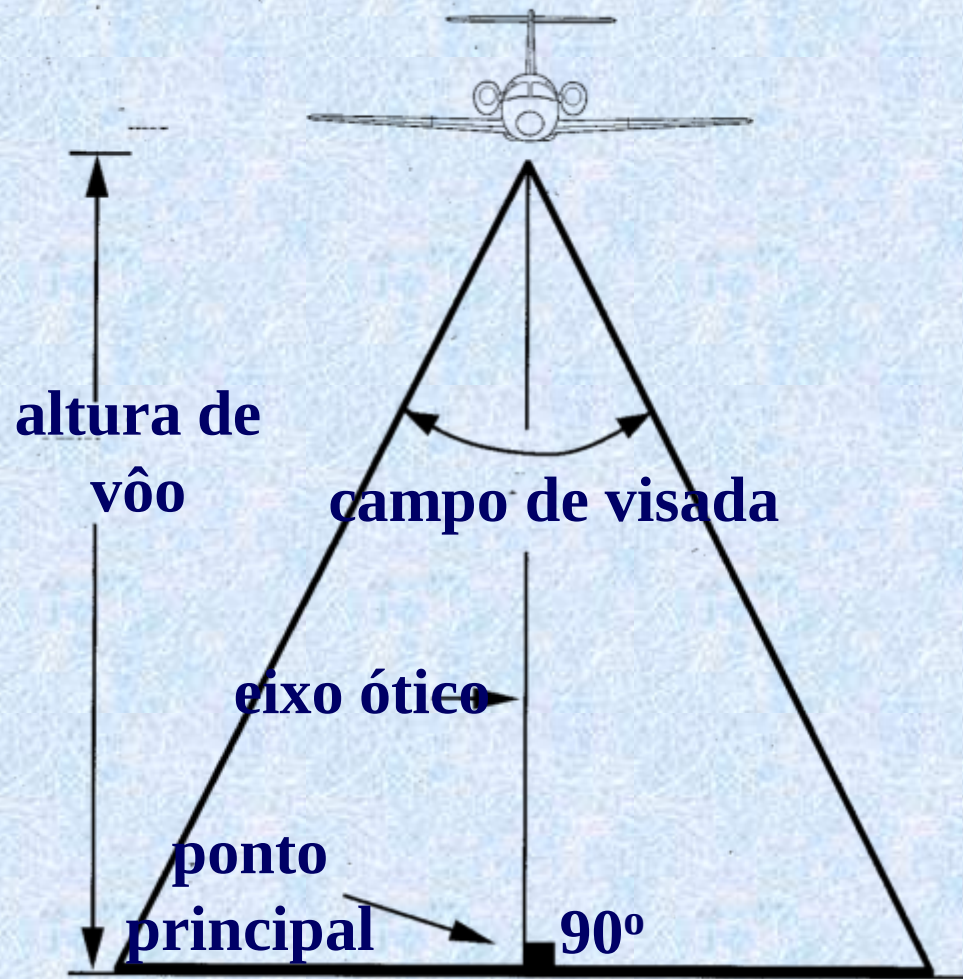
# Fotografias aéreas – oblíqua alta



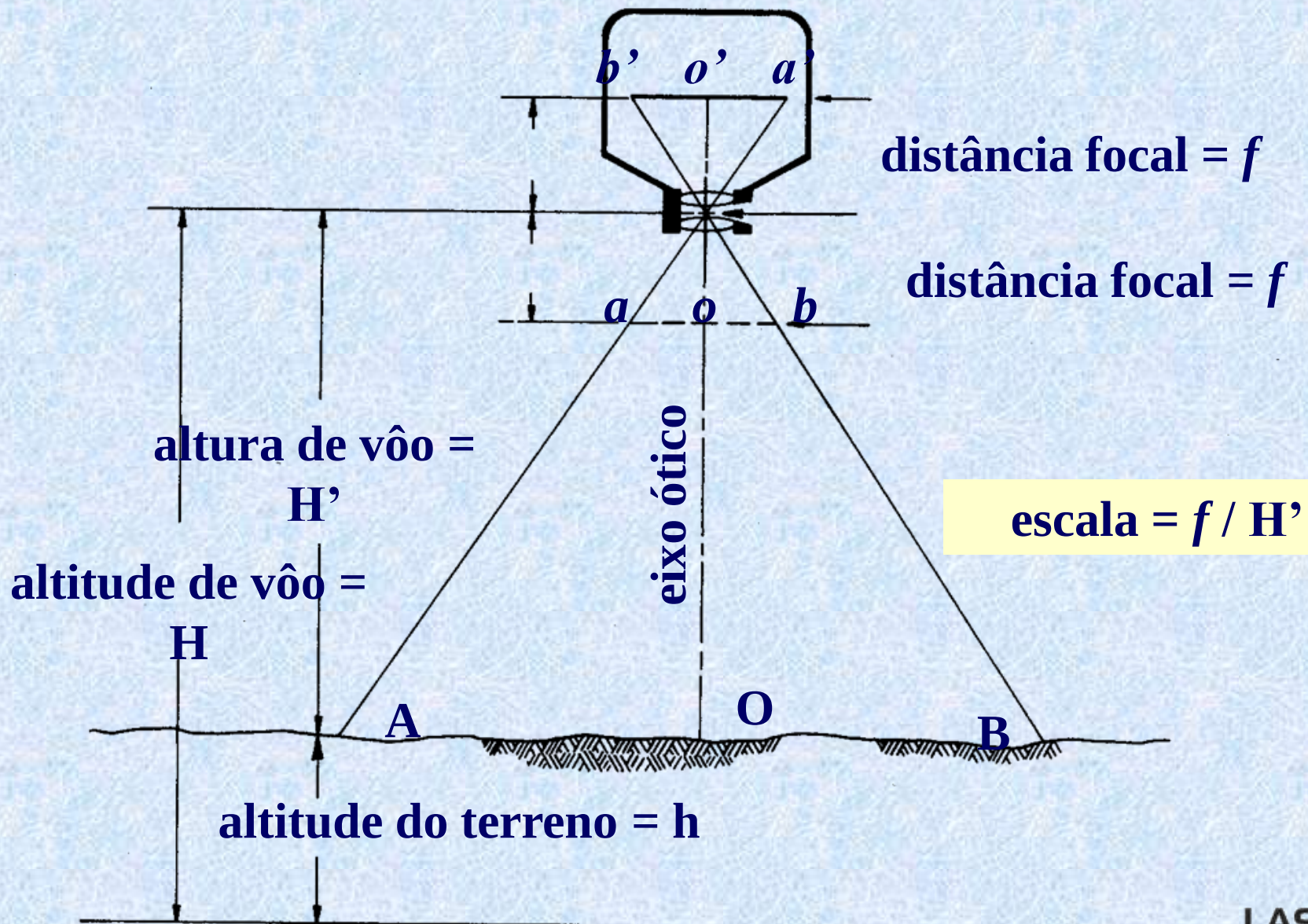
# Fotografias aéreas – oblíqua baixa



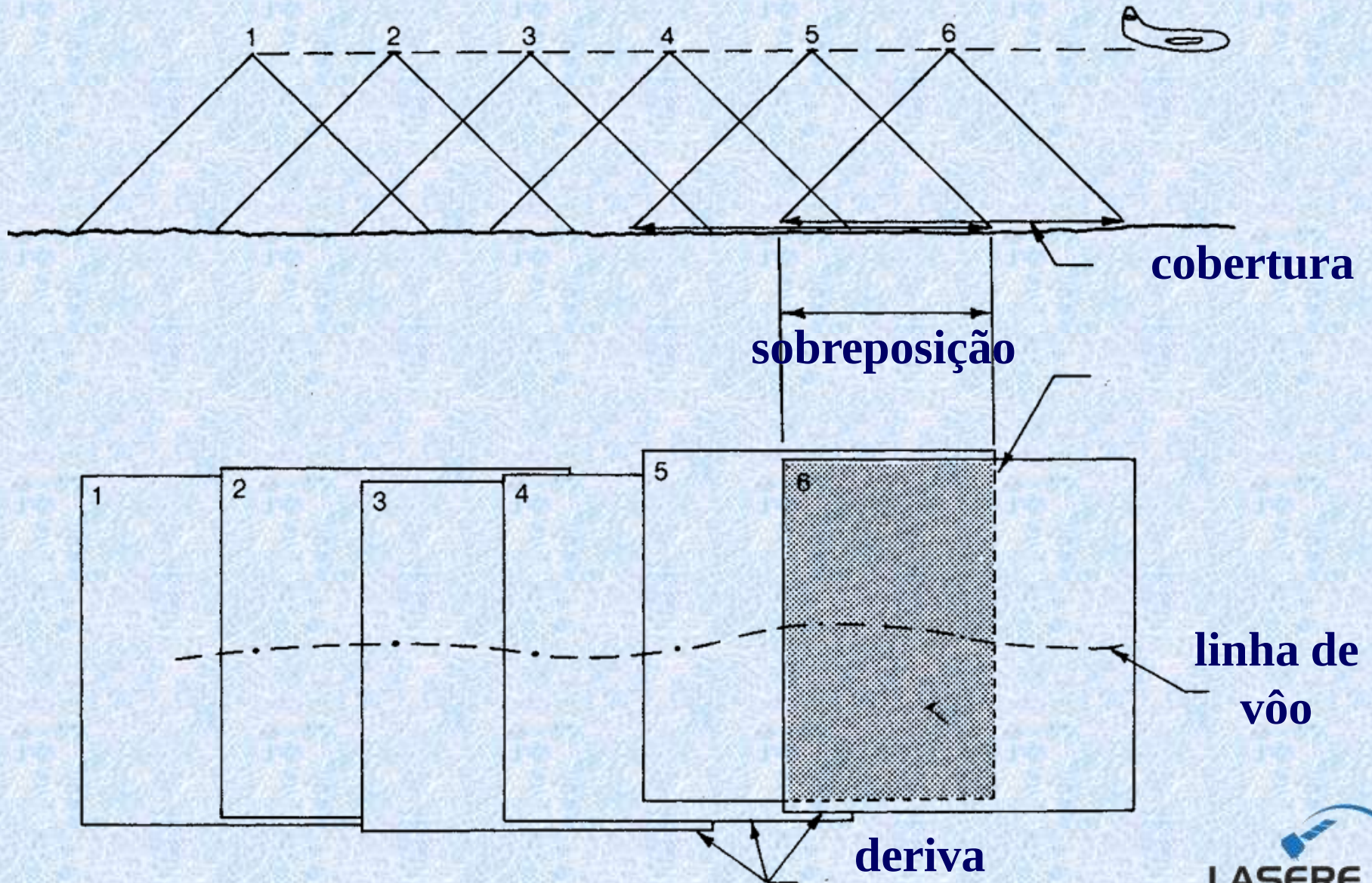
# Fotografias aéreas – vertical



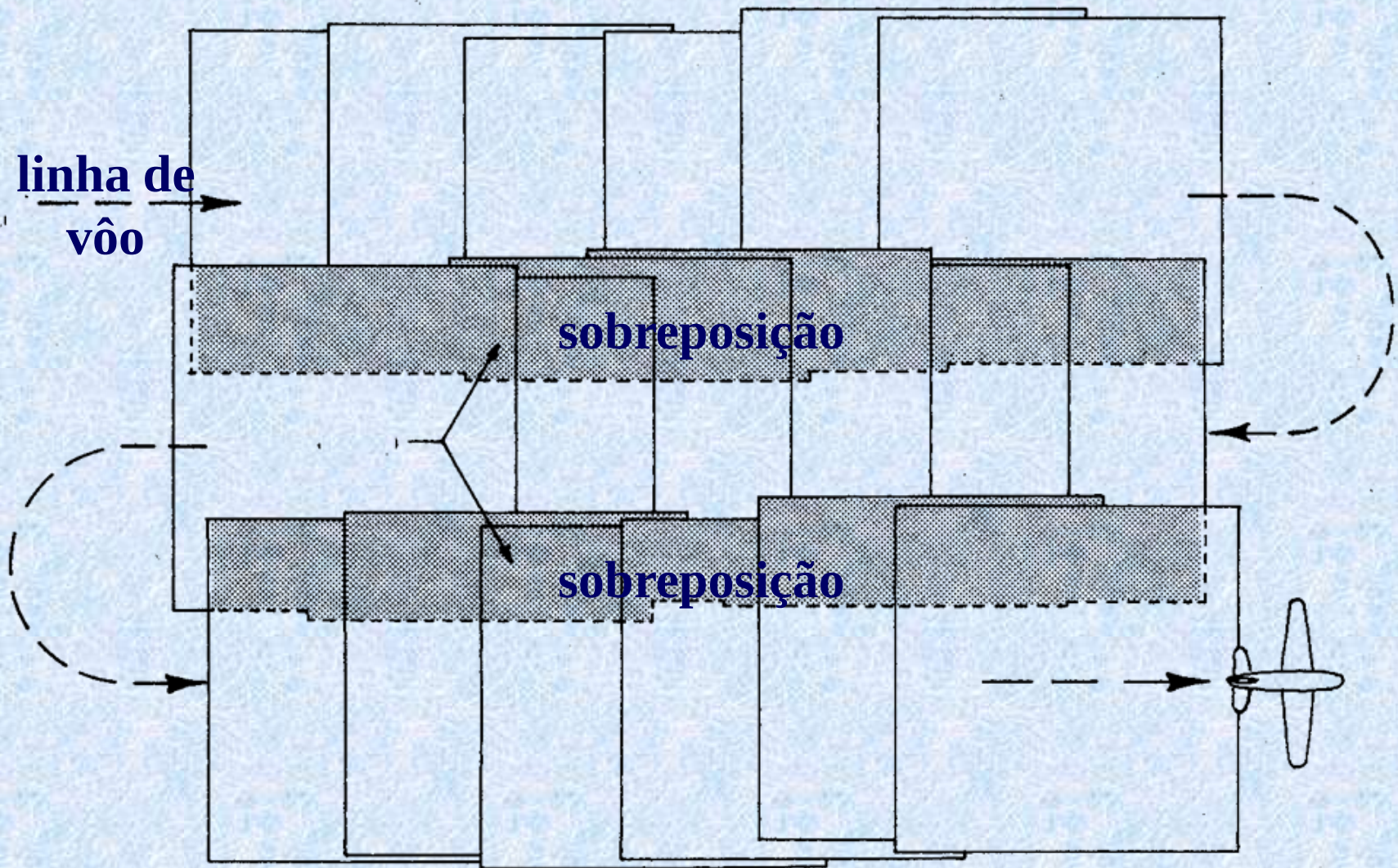
# Fotografias aéreas – elementos



# Fotografias aéreas – linha de vôo



# Fotografias aéreas – faixas de vôo



# Modelo estereoscópico

