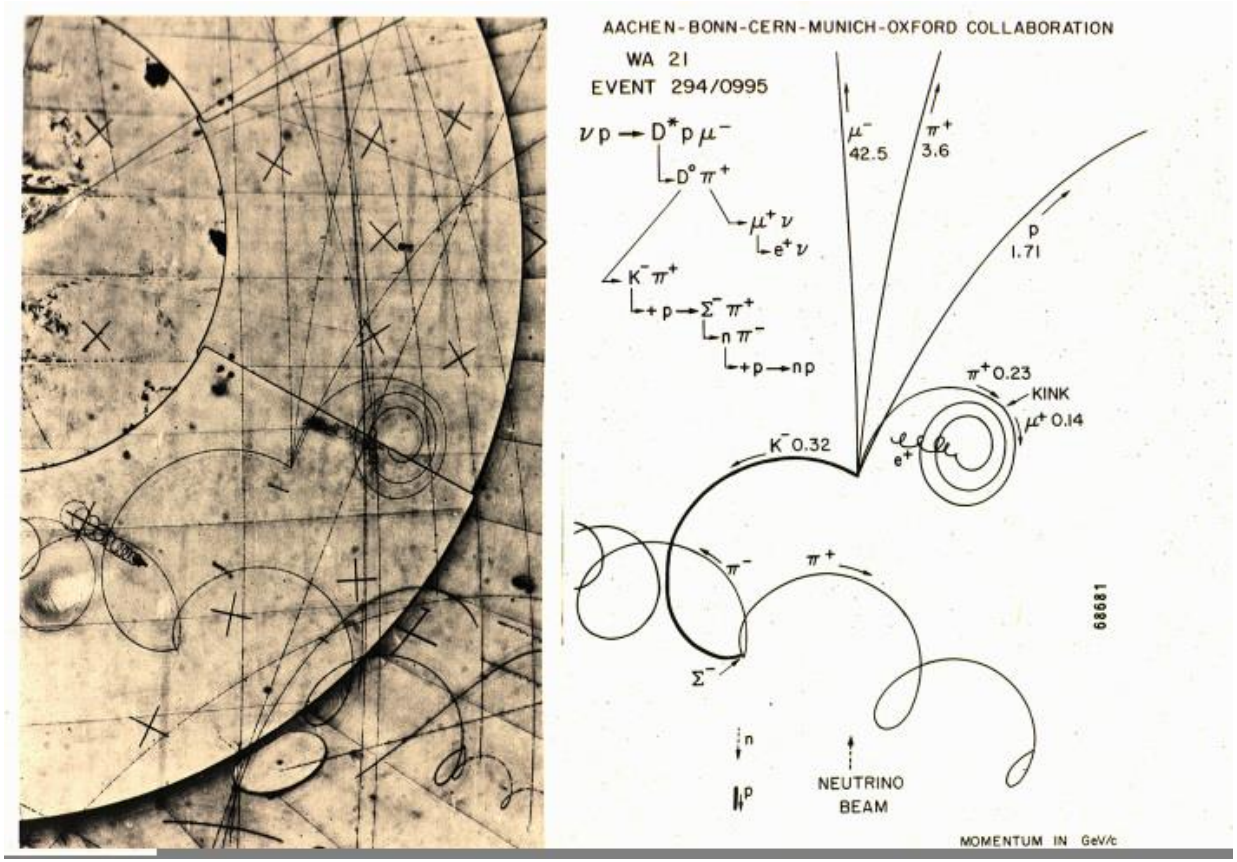
Applied Physics 186

Imaging

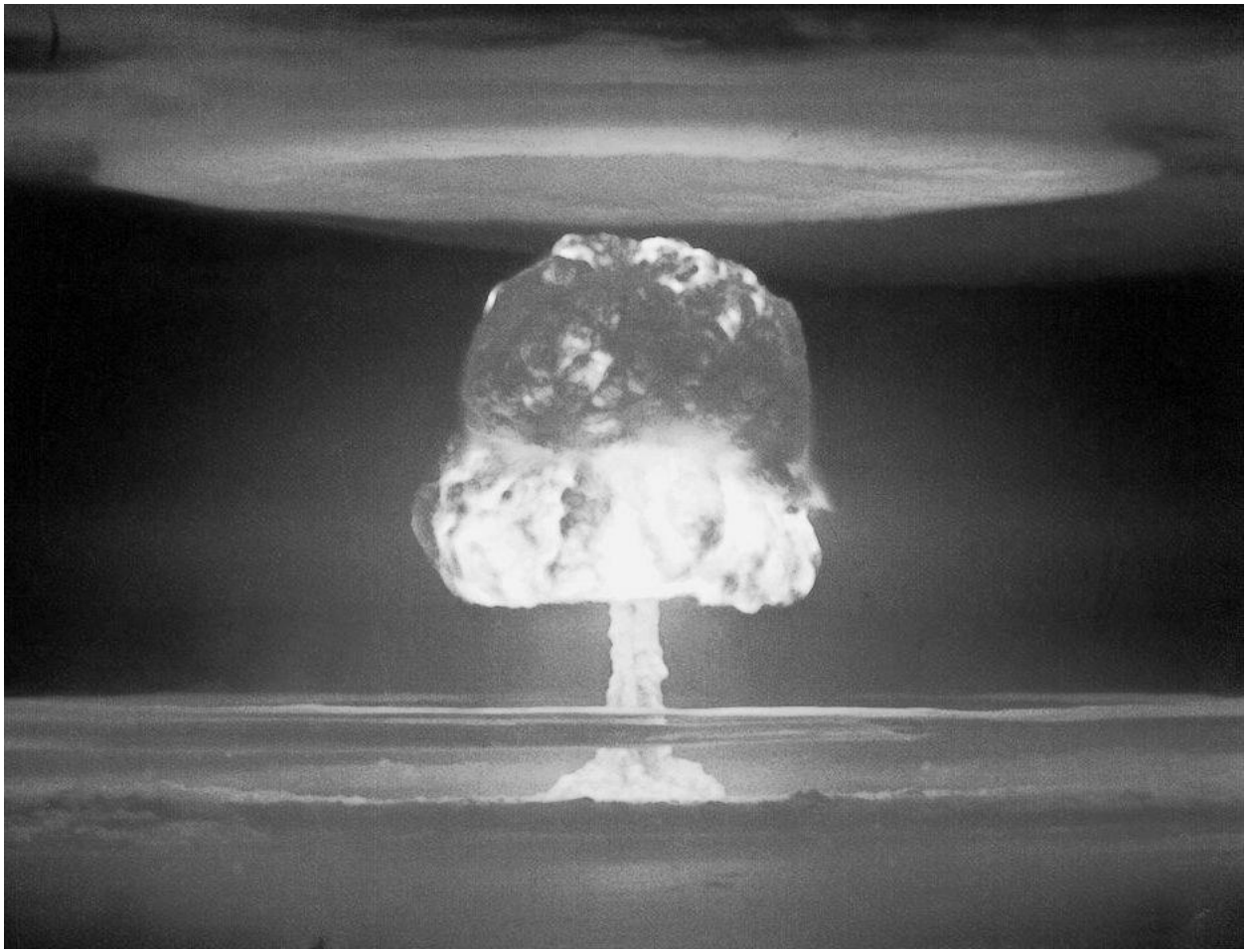
- Image ≠ Object
- Image = Imaging Device ⊙ Object
- Aim of Image Processing
  - Enhancement
  - Analysis
  - Compression
  - Restoration

Image Processing and Physics

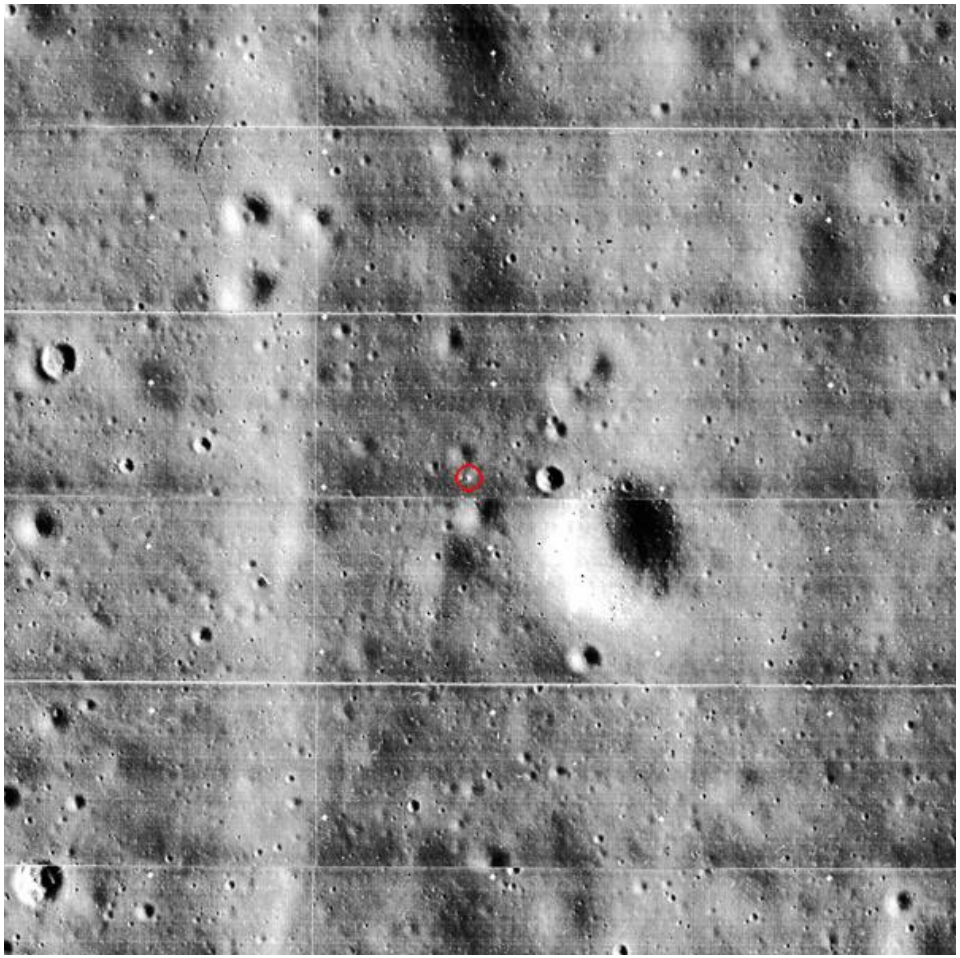
- Bubble Chamber Tracks



High Dynamic Range Imaging



Moon landing



Nobel Prize in Physics 2009 to Boyle and Smith for CCD

What we do to the image depends on who are our end-user will be

- Human
- Computer

Activity 1 – Practical Image Processing

- Compress figures to fit in a paper or presentation while maintaining high quality.
- Compare before and after file sizes.
- Use GIMP

Activity 1 – Ratio and Proportion

- Output : Movie Poster
- Grab an image of a movie poster
- Take photos of your team members
- Replace the faces with your faces.
  - Use Ratio and Proportion to embed faces seamlessly.
  - Note: Use any image processing software : GIMP, photoshop