Lunar volcanic glass: From lunar samples to remote-sensing detection

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Last year

List of “Must try”

- Saint Estephe
- Pomerol
- Pessac-Leognan
- Graves
- Sauternes

Experiments?
This year ?!?!
Lunar volcanism

Hawaiian volcano (Earth)

Lunar volcano

Lunar sample

Apollo sample pick-up

0.1 mm

200 m
Lunar volcanic glass

Transcript of AP 17

- **26:22** Schmitt: Oh, hey!
  (Very brief pause)
- **26:25** Schmitt: Wait a minute...
- **26:27** Schmitt: Where are the reflections? I've been fooled once. There is orange soil!!
- **26:32** Cernan: Well, don't move it until I see it.
- **26:35** Schmitt: (Very excited) It's all over!! Orange!!!
- **26:38** Cernan: Don't move it until I see it.
- **26:40** Schmitt: I stirred it up with my feet.
- **26:42** Cernan: (Excited, too) Hey, it is!! I can see it from here!
- **26:44** Schmitt: It's orange!
- **26:46** Cernan: Wait a minute, let me put my visor up. It's still orange!
- **26:49** Schmitt: Sure it is! Crazy!
- **26:53** Cernan: Orange!
Next 8 minutes about:

- Volcanic glass
- Pyroclastic volcanism
- Spectroscopy
- Two examples
  - Crater Walther
  - Birt E
Lunar surface, 750 nm

Major lunar minerals
Crater Walther

- R 750 nm
- IBD 1000 nm
- RGB: IBD 1000, IBD 2000, R 750 nm
- R 2940 nm
Crater Walther
Important results

• Identification of volcanic glass
• Not present everywhere
Conclusion

• Remote identification of volcanic glass for the first time

• Other observations show that not all the DMDs have Volcanic Glass

• Open large field of study of pyroclastic volcanism