This seminar is being streamed on YouTube

Designing Accessible LPSC Presentations

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Dr. Cassandra Runyon is an Associate Professor of Geology at the College of Charleston, Director of the NASA SC Space Grant Consortium and SC NASA EPSCoR program and the education/public engagement lead for a NASA Solar System Exploration Research Virtual Institute (SSERVI) team. Her passion is helping to provide access to STEM for all audiences, including those with visible and invisible disabilities.

Dr. Jennifer Piatek (she/her) is a Professor and the Planetary Geology & Chair in the Department of Earth & Space Sciences at Central Connecticut State University. Her research interests include thermal and near infrared spectroscopy, thermophysics of planetary surfaces, Martian geology, and remote sensing theory. In addition to her research, Dr. Piatek is valued for her expertise in accessibility; her participation in diversity, equity, accessibility, and inclusion committees within the planetary science community; and her activities supporting student and early-career women in planetary science.

Your Goals

What would you like to learn in or get out of today's session?

Chat Storm: type our answer in the chat

but don't hit "return" until we say to do so

Think of your audience(s)

Cassandra Runyon

College of Charleston
NASA SC Space Grant Consortium

Who is your audience?

- Visible & Invisible

Hearing

Sight

Physical

Learning

Multiple

less is more

If including figures – do not cover, minimize colors

If using text – be sure that it is large enough to be seen

A Marsden Giberter

Glis was very fraper. She had dermarpen Farle's marsden. She did not talp a giberter for him. So, she contanted to plimp a marsden blinky for him. She had just sparved the binky when he gibbed in the gorger.

"Clorsty marsden!" she bolfed.

"That'a a crouistish marsden blinky." boffed Farle, "but my marsden is on Stansan. Agsan is Kelsan."

"In that ruspen," boffed Glis. "I won't wank you your giberter until Stansan."

1. Why was Glis Fraper?
2. What did Glis plimp?
3. Who jibbed the gorger when Glis sparved the blinky?
4. Why didn't Glis wank Farfle his giberter?

Recommendations / Premises

Use high contrast

- for text – black / white or white / black
- Stay away from default blue / yellow, red or blue /black

Use SIMPLE fonts – sans serifs

- Arial, Calibri, Tahoma, Comic Sans, Verdana, Microsoft Sans Serif
- *vs.* Times Roman, Bookman

Use descriptive (oral or caption) **text** for each image/figure included

Use color images / dynamic graphics whenever possible

THINK of the AUDIENCE and presentation mode/venue!

Recommendations / Premises

Use high contrast

- lighter text – black / white or white / black
- Stay away from default blue / yellow, red or **blue** / black

Use SIMPLE fonts – sans serifs

- Arial, Calibri, Tahoma, *Comic Sans*, Verdana, Microsoft Sans Serif
- *vs.* Times Roman, Bookman

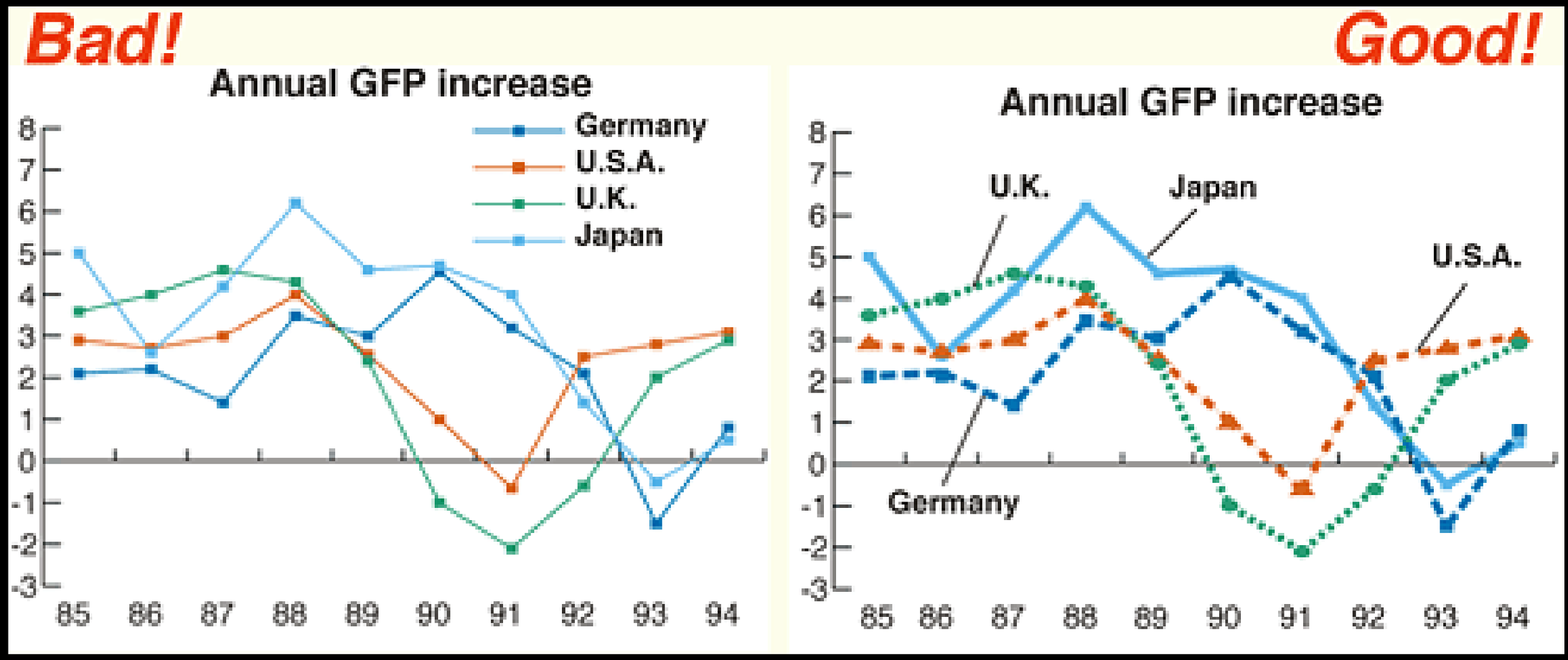
Use descriptive text (oral, captions) for each image/figure included

Use color images / dynamic graphics whenever possible

THINK of the AUDIENCE and presentation mode/venue!

For figures and data

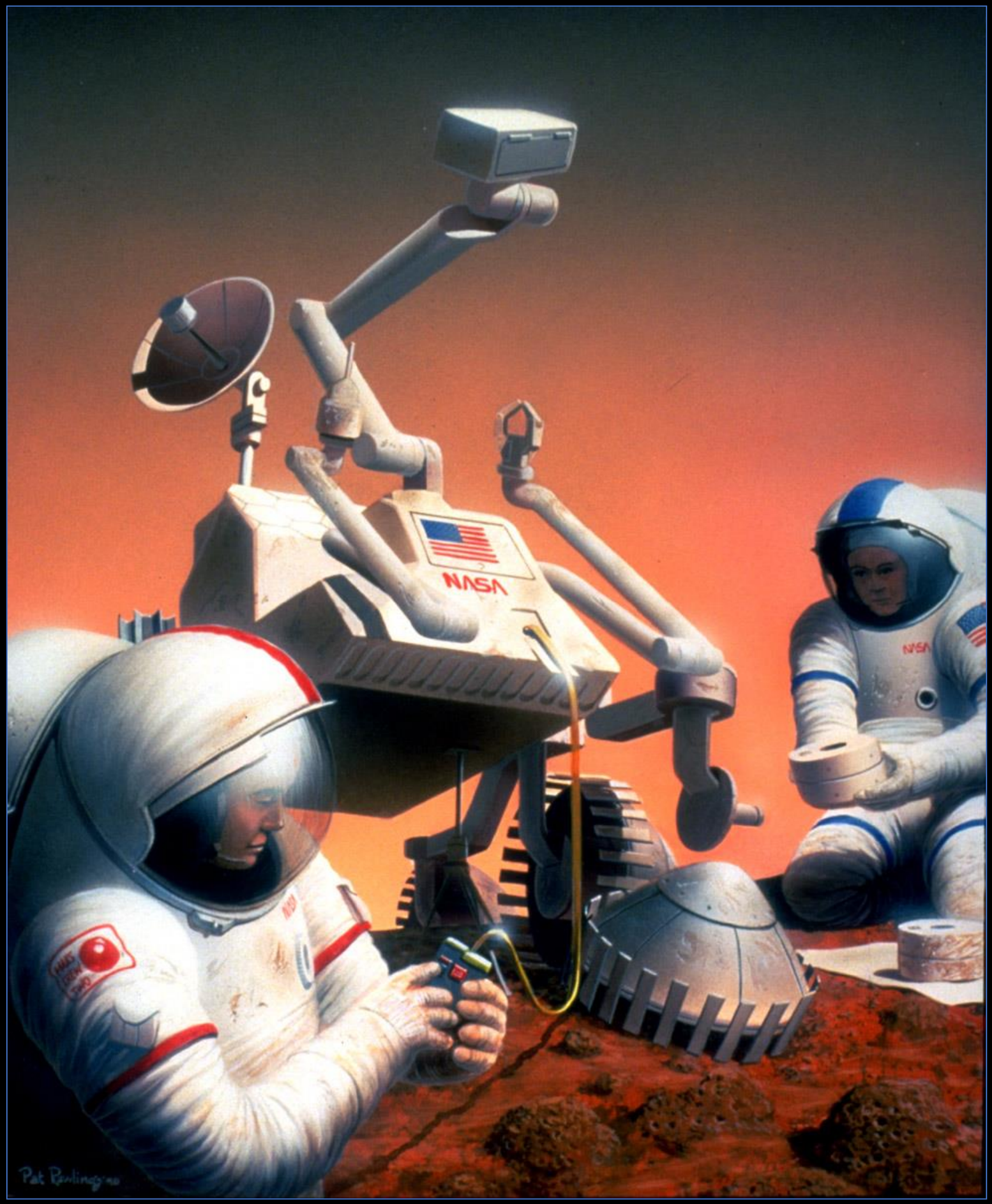
- Do not convey information with color only – show BOTH color and shape or texture
- Keep number of colors to a minimum



https://jfly.uni-koeln.de/color/

Be descriptive!

Explain the figures and data you are sharing


NASA
NASA
Pat Rawlings

Jim Allan's Tag lines (TSBVI)

- Changing a tire on Mars.
- Astronaut in spacesuit in left foreground looking at a small hand- held device. Fingers of gloves are covered in orange dust, orange smudges on suit.
- NASA 6 wheeled vehicle in the middle of the picture. Vehicle's front left wheel is lying on the ground in front of the vehicle. The vehicle has 3 manipulator arms, one with a 2-prong claw, one with a drill(?), and one with a camera(?),. There is also an antenna mounted on the vehicle.
- Near the wheel on the ground, another space suited astronaut is kneeling holding a replacement part for the vehicle.

The description really depends on the purpose of the picture.

- leave out the other stuff.

Questions?

Questions?

Accessible Presentations

Sharing your science with the widest audience…

What to say?

- Follow a logical order
  - Take some advice from the King of Hearts: “Begin at the beginning, and then go on till you come to the end, then stop.” (*after Kurtz, 2006 - ASP Conference Series, v.349*)
- Tell a story (see Emily Lakdawalla’s thoughts at https://www.planetary.org/articles/0206-speak-your-science)

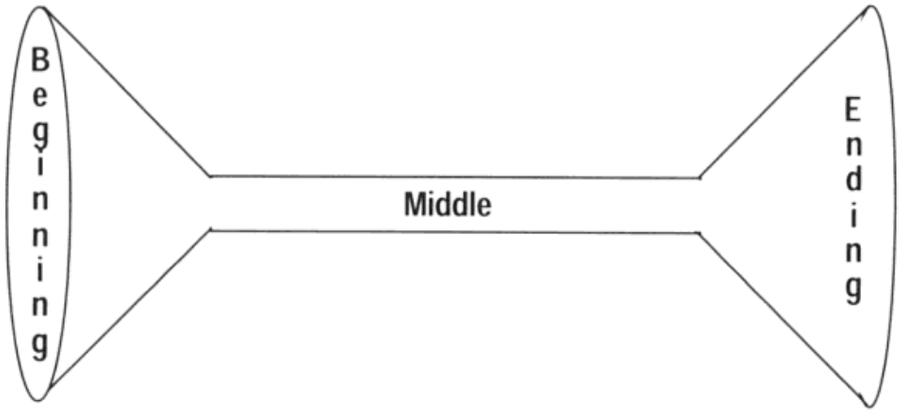


Figure 3-1. Visual depiction of the organization of a scientific presentation. The speaker begins with the big picture, focuses on the work in the middle, and comes back out to the big picture in the ending. In essence, the ending discusses the repercussions of the work on the big picture, which was introduced in the presentation's beginning.

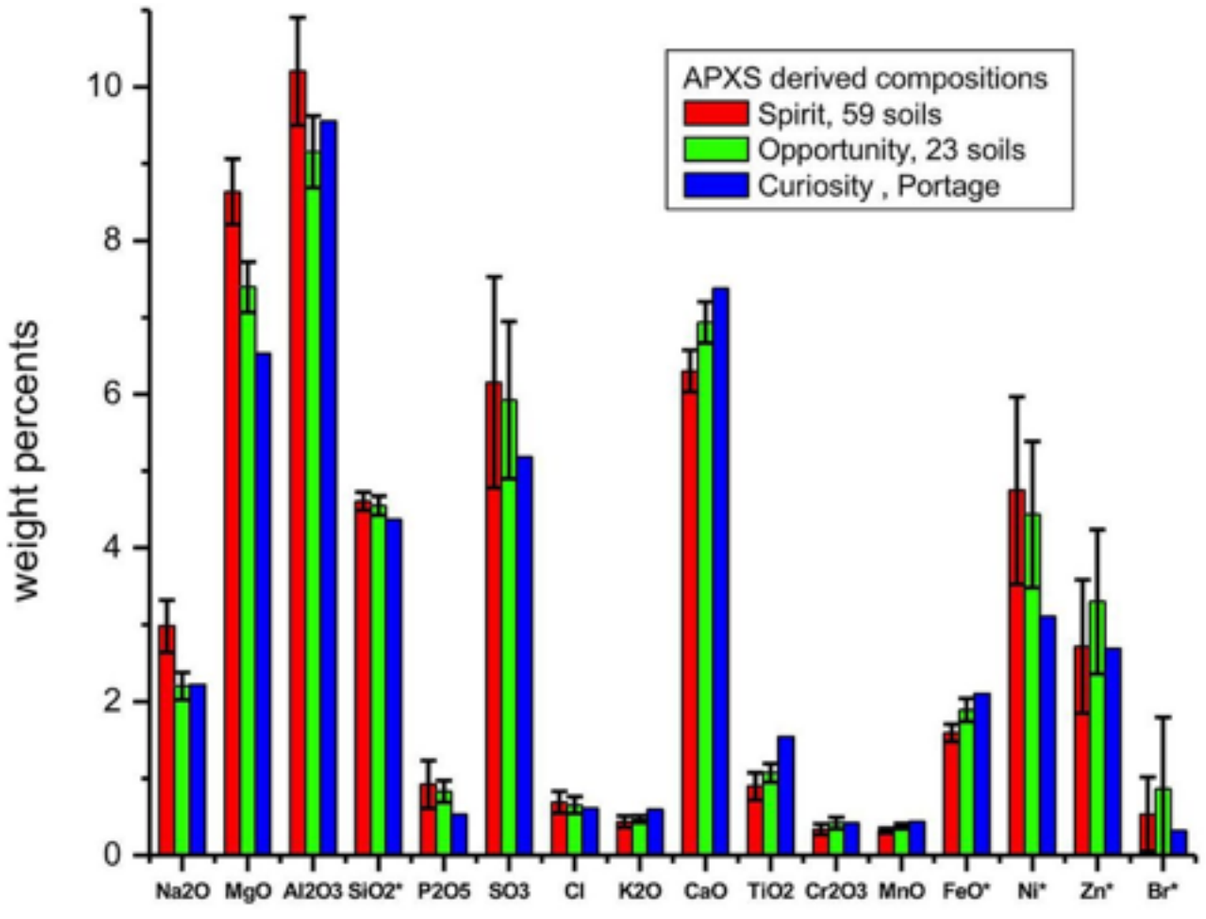
Figure from Alley, “The Craft of Scientific Communication”

Text

- Avoid uncommon jargon / acronyms
  - Define
  - Put tech terms on slides
    - Auto-captions will miss many
- Use bullets, avoid complete sentences
- Poster “rule of thirds”
  - One-third text, one-third figures, one-third blank

Figures

- Use multiple ways to convey information
  - Don’t rely on color
  - Separate data series, different point style
- Label axes / maps / legends
- Check color scheme
  - Coblis: https://www.color-blindness.com/coblis-color-blindness-simulator/
- Simplify!
- **Avoid tables**



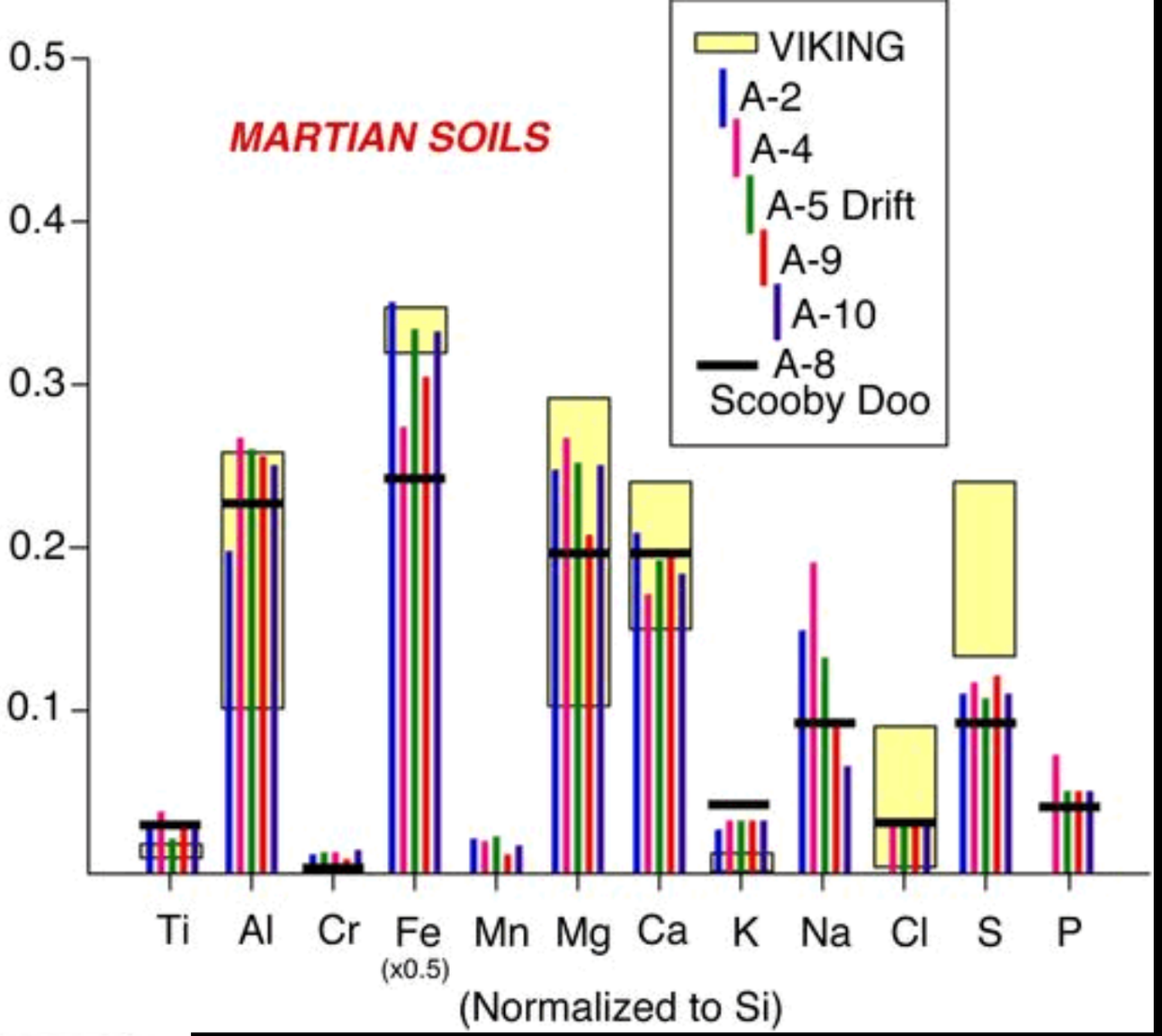


Table 6.2 Chemical Composition of Sedimentary Rocks

	Average Igneous Rock	Average Shale	Average Sandstone	Average Limestone	Average Sediment*	Average Sediment†	Average Sediment‡
SiO_2	59.14	58.10	78.33	5.19	58.49	59.7	46.20
TiO_2	1.05	0.65	0.25	0.06	0.56	—	0.58
Al_2O_3	15.34	15.40	4.77	0.81	13.08	14.6	10.50
Fe_2O_3	3.08	4.02	1.07	0.54	3.41	3.5	3.32
FeO	3.80	2.45	0.30	—	2.01	2.6	1.95
MgO	3.49	2.44	1.16	7.89	2.51	2.6	2.87
CaO	5.08	3.11	5.50	42.57	5.45	4.8	14.00
Na_2O	3.84	1.30	0.45	0.05	1.11	0.9	1.17
K_2O	3.13	3.24	1.31	0.33	2.81	3.2	2.07
H_2O	1.15	5.00	1.63	0.77	4.28	3.4	3.85
P_2O_5	0.30	0.17	0.08	0.04	0.15	—	0.13
CO_2	0.10	2.63	5.03	41.54	4.93	4.7	12.10
SO_3	—	0.64	0.07	0.05	0.52	—	0.50
BaO	0.06	0.05	0.05	—	0.05	—	—
C	—	0.80	—	—	0.64	—	0.49
	99.56	100.00	100.00	99.84	100.00	100.0	100.13

*Shale 80, sandstone 15, limestone 5; after Clarke.
†Garrels and Mackenzie, 1971.
‡Ronov and Yaroshevsky, 1969; includes MnO 0.16, Cl 0.24.

Bad slide design…

How many rules are broken here?

(Earth abundances from Mason and Moore, 1982)

Drag and drop or paste your file in the area below or: Choose File c2880x2160.jpeg

Trichromatic view:

- (•) Normal

Anomalous Trichromacy:

- ( ) Red-Weak/Protanomaly
- ( ) Green-Weak/Deuteranomaly
- ( ) Blue-Weak/Tritanomaly

Dichromatic view:

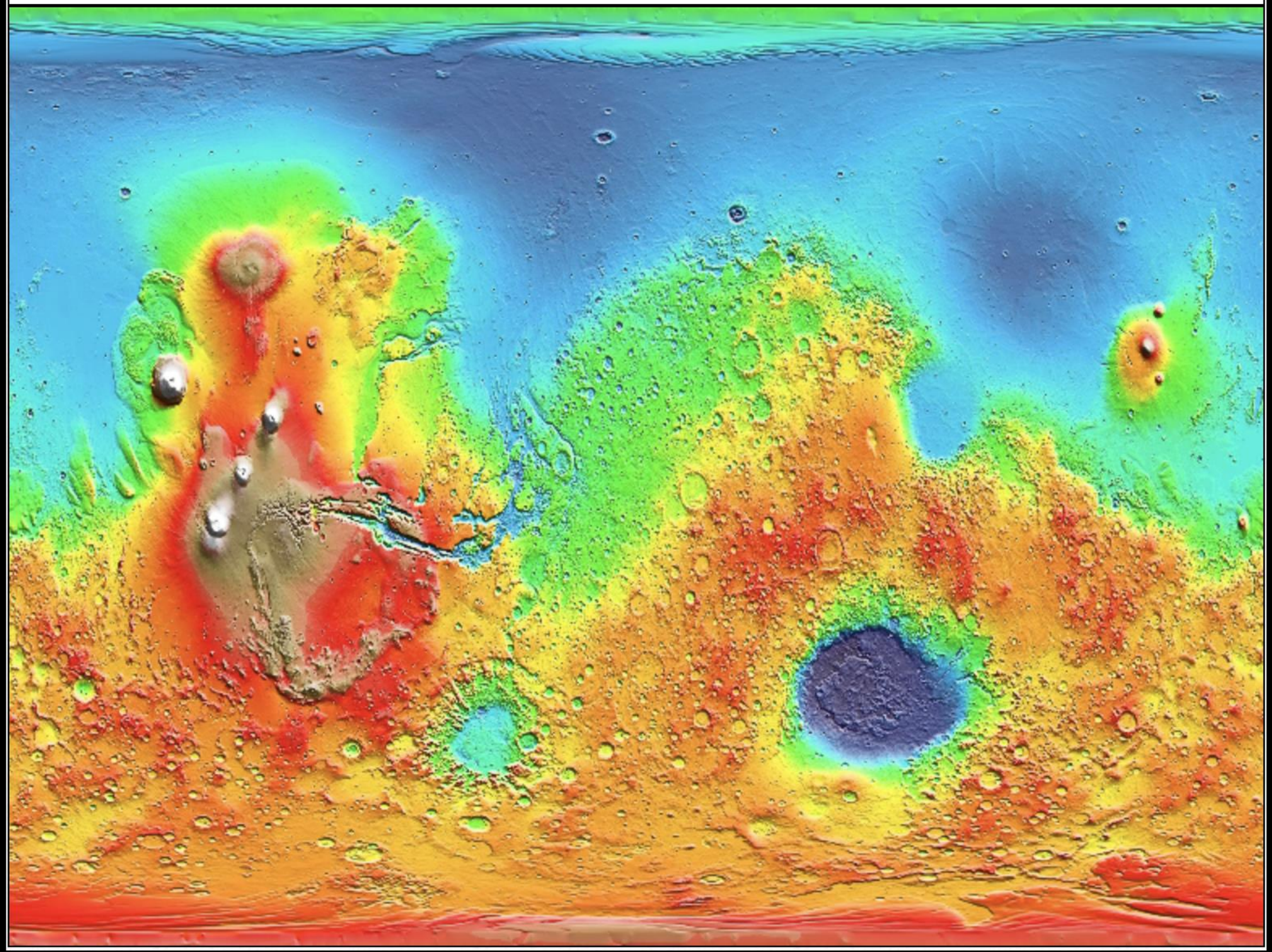
- ( ) Red-Blind/Protanopia
- ( ) Green-Blind/Deuteranopia
- ( ) Blue-Blind/Tritanopia

Monochromatic view:

- ( ) Monochromacy/Achromatopsia
- ( ) Blue Cone Monochromacy

Use lens to compare with normal view: (•) No Lens ( ) Normal Lens ( ) Inverse Lens

Reset View



Drag and drop or paste your file in the area below or: Choose File c2880x2160.jpeg

Trichromatic view:

- ○ Normal

Anomalous Trichromacy:

- ○ Red-Weak/Protanomaly
- ○ Green-Weak/Deuteranomaly
- ○ Blue-Weak/Tritanomaly

Dichromatic view:

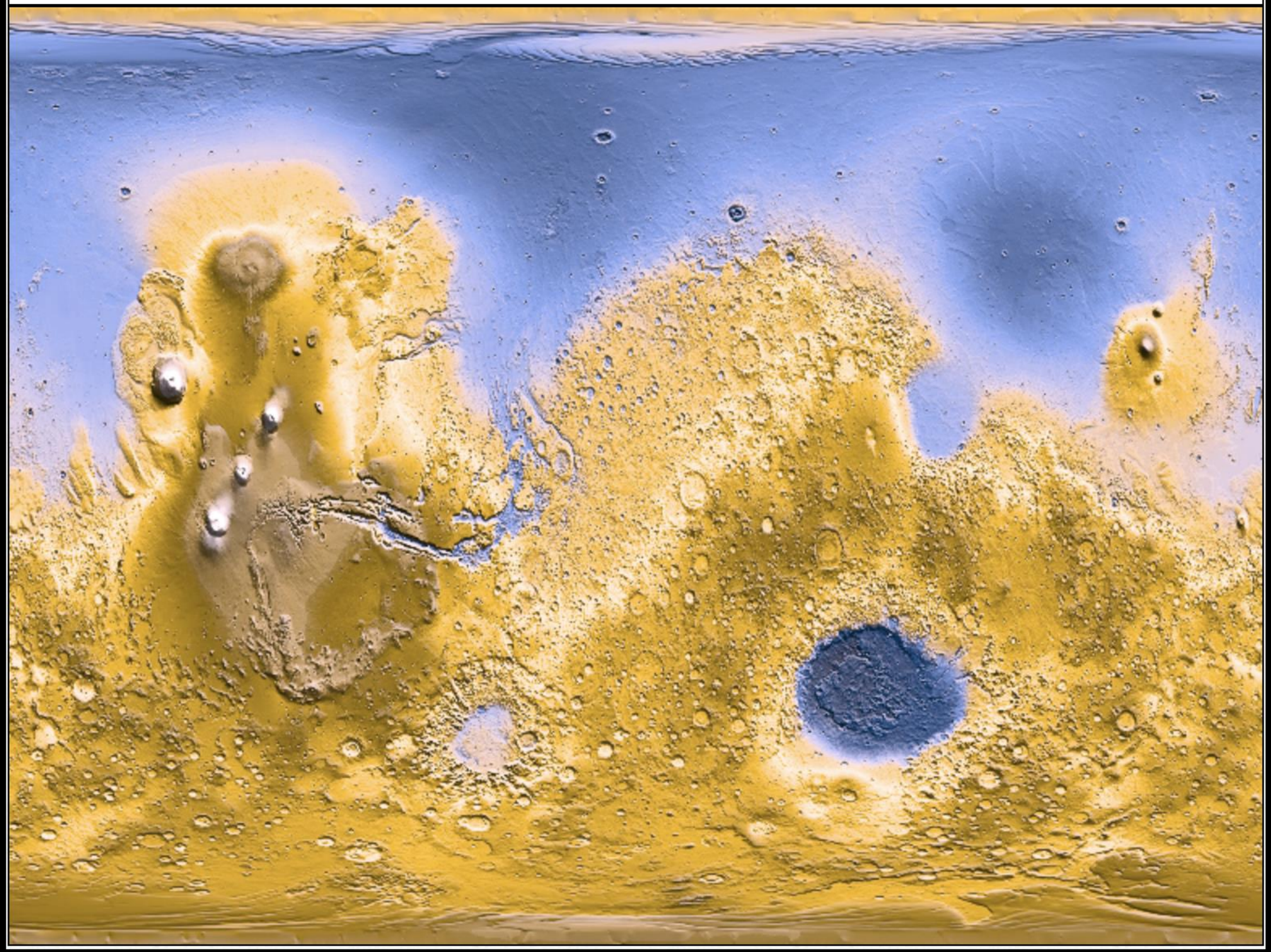
- ○ Red-Blind/Protanopia
- ◉ Green-Blind/Deuteranopia
- ○ Blue-Blind/Tritanopia

Monochromatic view:

- ○ Monochromacy/Achromatopsia
- ○ Blue Cone Monochromacy

Use lens to compare with normal view: ◉ No Lens ○ Normal Lens ○ Inverse Lens

Reset View Open simulated image in new window



Visual Design: Talks

- Highlight your content, don’t obscure it
- Tweak built-in/downloaded themes

- Multiple background styles OK
  - Edit Slide Masters for consistency

- Follow common slide layouts
- Keep to aspect ratio specified by conference

The room lights may wash out this part of your slide

Slides need margins

The back few rows might not even see this far down.

Only the front rows will be able to see the very bottom.

Backgrounds

- Images can be used as backgrounds
  - Or color gradients
  - Or textures
- How do these affect readability??

Backgrounds

- Images can be used as backgrounds
  - –Or color gradients
  - –Or textures
- How do these affect readability??

Avoid distractions

- Use consistent fonts
  - (Same style, size, color)
- **Use <u>emphasis</u> *sparingly***
  - (Boldface, italics, underlining)
- Leave out extraneous graphics
  - (If it isn't part of your talk, don't add it)
- Use simple animations to enhance your talk
  - (If it isn't necessary, don't add it)

Avoid distractions

- Use consistent fonts
  - (Same style, size, color)
- Use emphasis sparingly
  - (**Boldface**, *italics*, underlining)
- Limit use of extraneous graphics
  - Does it improve your talk?
- Use simple animations to enhance your talk
  - (If it isn’t necessary, don’t add it)

Presenting

- Speak clearly at a reasonable speed
  - Practice!
- Leave silence; take a breath
  - Let your audience absorb and read
- Face your audience, not notes or slides
- Memorize / write down key phrases
  - Practice!
- “Minute markers”
    - What pace do you need to fit within time?
- Practice!

Laser pointers

- Practice
- Stabilize your arm
- Draw attention to important parts of figures
- Don’t!
  - Highlight as you read (“karaoke laser”)
  - Assume everyone can see it
- Move slowly, stay put for a few seconds
  - Fast motion hard to track

Presenting Virtually

- Check your audio/video before you join the meeting
- Virtual backgrounds
  - You should be clearly visible
  - Avoid complex backgrounds (no videos!)
- Your audio may sound better w/a headset

Ending

- End at the end.
  - “Conclusions”, “Outcomes”

- <u>This is the last thing your audience sees</u>.
  - What do you want them to remember?
  - Your references?
  - Acknowledgments?
  - “Thank you”, “Questions?”

Thanks!

We have a short poll and an optional survey; we appreciate your feedback!

Past seminar recordings and presentations are available at ***www.lpi.usra.edu/education/scientist-engagement*.**