Preliminaries

Check Possible shortcoming (only put a check next to any shortcoming you find)

Level of measurement All variables scalar?

Absolute minimum # var Absolute minimum What we have

STV ratio What is our STV ratio?

Min # observations Ideal minimum How many we have

Normalcy Number of chemicals with skews ≥ 1

First Look at Output

How many components were extracted using the ≥1 eigenvalue default?

Number of components to the left of the scree plot nick point?

Are these two measures of extraction the same or no more than one component off?

Rotated Output

List variables loading highly in the positive direction on PC1

List variables loading highly in the negative direction on PC1

List variables with loadings ~ ≤ |0.35| on PC1 (closer to zero than an absolute value of 0.35)

What do the chemicals loading highly on PC1 in the positive direction have in common?

What do the chemicals loading highly on PC1 in the negative direction have in common?

List anything loading highly in the positive direction on PC2 (>0.600)

List variables loading highly in the negative direction on PC2 (more extreme than -0.600)

Of those variables loading highly in the negative direction on PC2, what do two of them have in common?
What is up with the other high negative loader on PC2?

What loads pathetically on PC2 (e.g., loadings \( \leq |0.35| \))? (closer to 0 than absolute 0.35)?

Crazy high loading in the positive direction on PC3 and in the negative direction on PC3

+ [ ] - [ ]

Where (on Earth) do you tend to find the high loaders on PC3?

+ [ ] - [ ]

What is the polarity that PC3 is picking up on?

The Geography of Geology (Areography of Areology?)

Coarse scale zonation

What kind of terrain/rock material is Spirit traversing in segment one?

What kind of terrain/rock material is Spirit traversing in segment two?

What about segment three?

Finer scale features

sols 52 to about 65

sols 85 to 115

sols 112 to 122

after sols 150 to 158, Spirit is crossing the West Spur of which feature?

Interpretation of the areological history of the terrain crossed by Spirit from sol 14 to sol 470