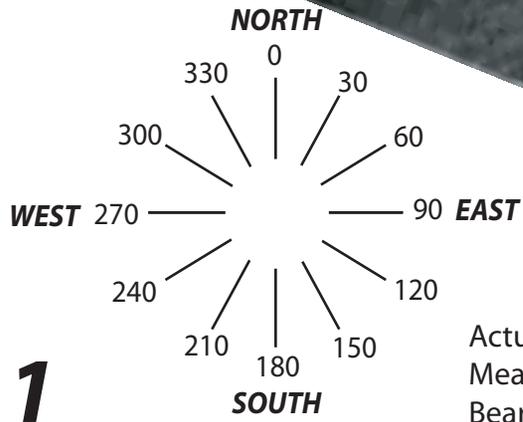
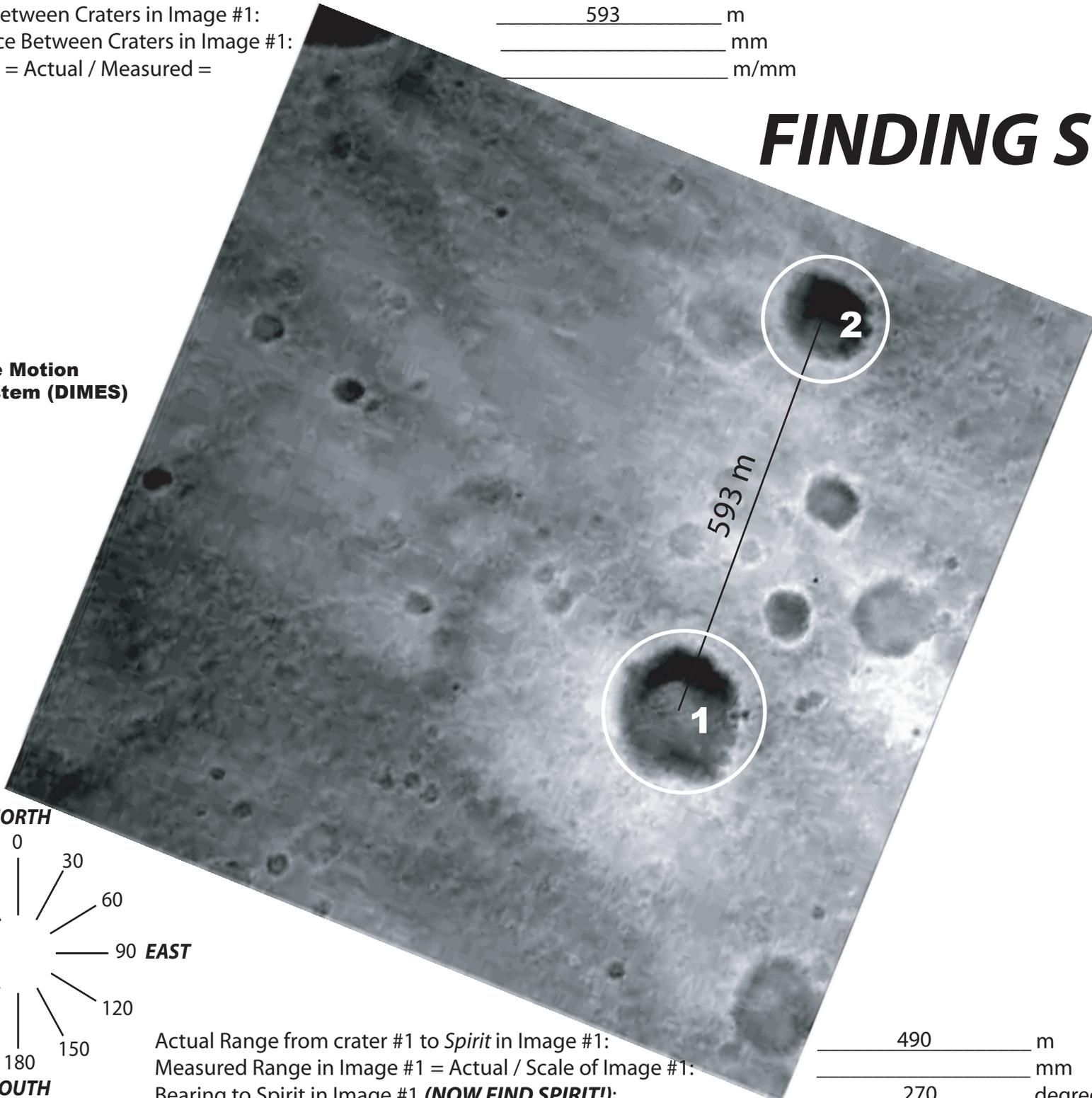


Actual Distance Between Craters in Image #1:  
 Measured Distance Between Craters in Image #1:  
 Scale of Image #1 = Actual / Measured =

\_\_\_\_\_ 593 \_\_\_\_\_ m  
 \_\_\_\_\_ mm  
 \_\_\_\_\_ m/mm

# FINDING SPIRIT

**Descent Image Motion  
 Estimation System (DIMES)**

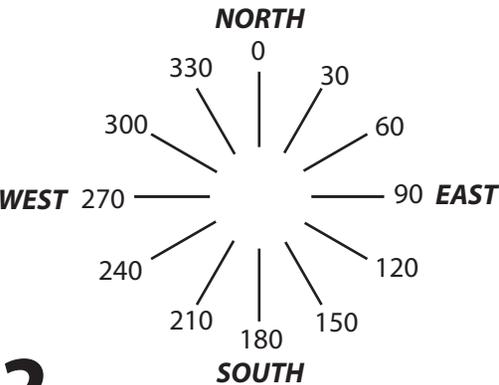
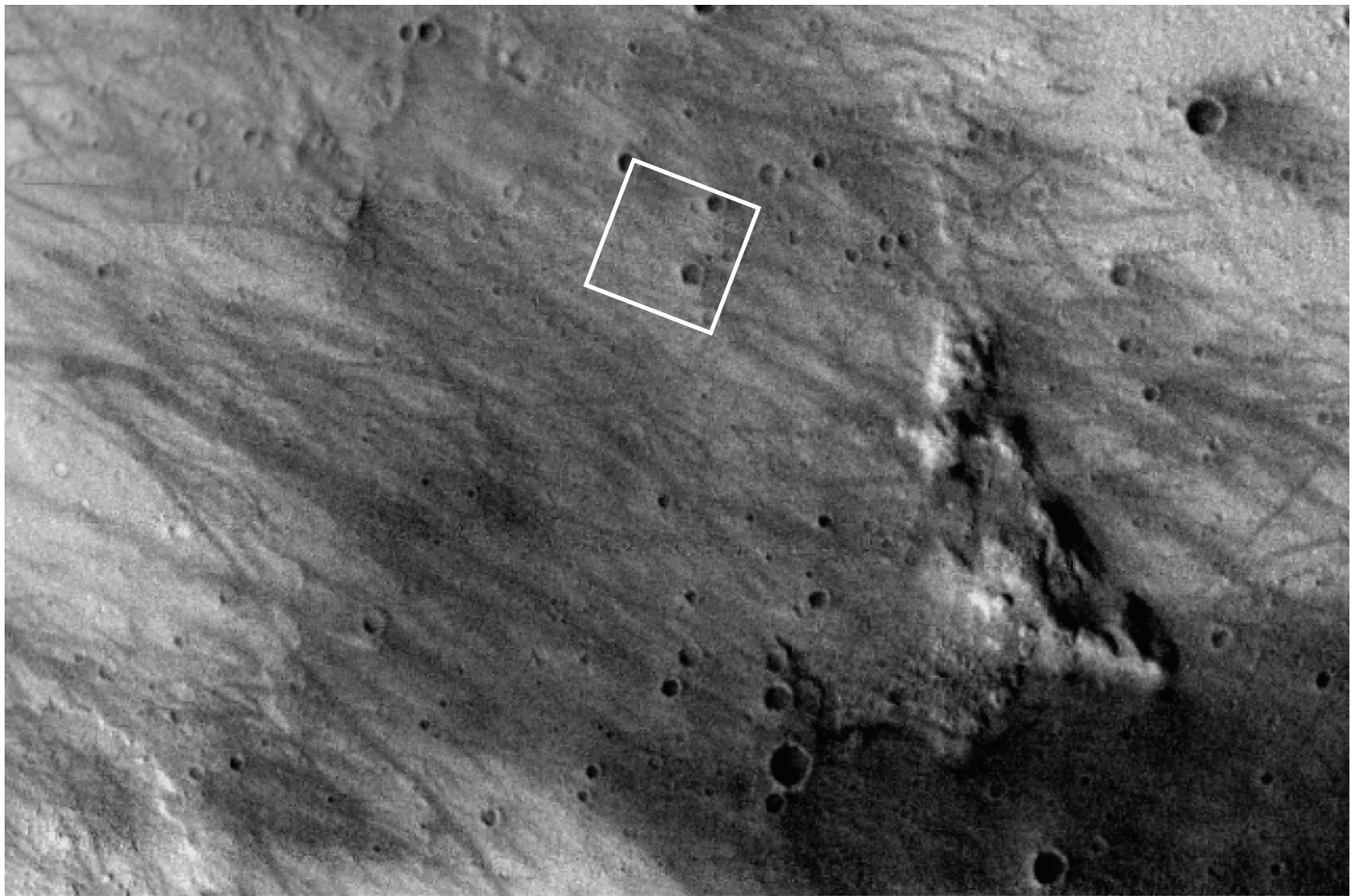


Actual Range from crater #1 to *Spirit* in Image #1:  
 Measured Range in Image #1 = Actual / Scale of Image #1:  
 Bearing to *Spirit* in Image #1 (**NOW FIND SPIRIT!**):

\_\_\_\_\_ 490 \_\_\_\_\_ m  
 \_\_\_\_\_ mm  
 \_\_\_\_\_ 270 \_\_\_\_\_ degrees

**Thermal Emission Imaging System (THEMIS)**

**Visible Camera**



Actual Distance Between Two Largest Craters in Image #1: \_\_\_\_\_ m  
 Measured Distance Between Craters in Image #2 (**Circle them and measure!**): \_\_\_\_\_ mm  
 Scale of Image #2 (**Actual Distance / Measured Distance**): \_\_\_\_\_ m/mm

**Step 1:** Find the Scale of the Current Image

Actual Range from Largest Crater in Image #1 to Spirit: \_\_\_\_\_ m  
 Measured Range in Image #2 (**Actual Range / Scale of Image #2**): \_\_\_\_\_ mm  
 Bearing from Crater in Image #1 to Spirit (**NOW FIND SPIRIT!**): \_\_\_\_\_ degrees

**Step 2:** Find Spirit In the Current Image

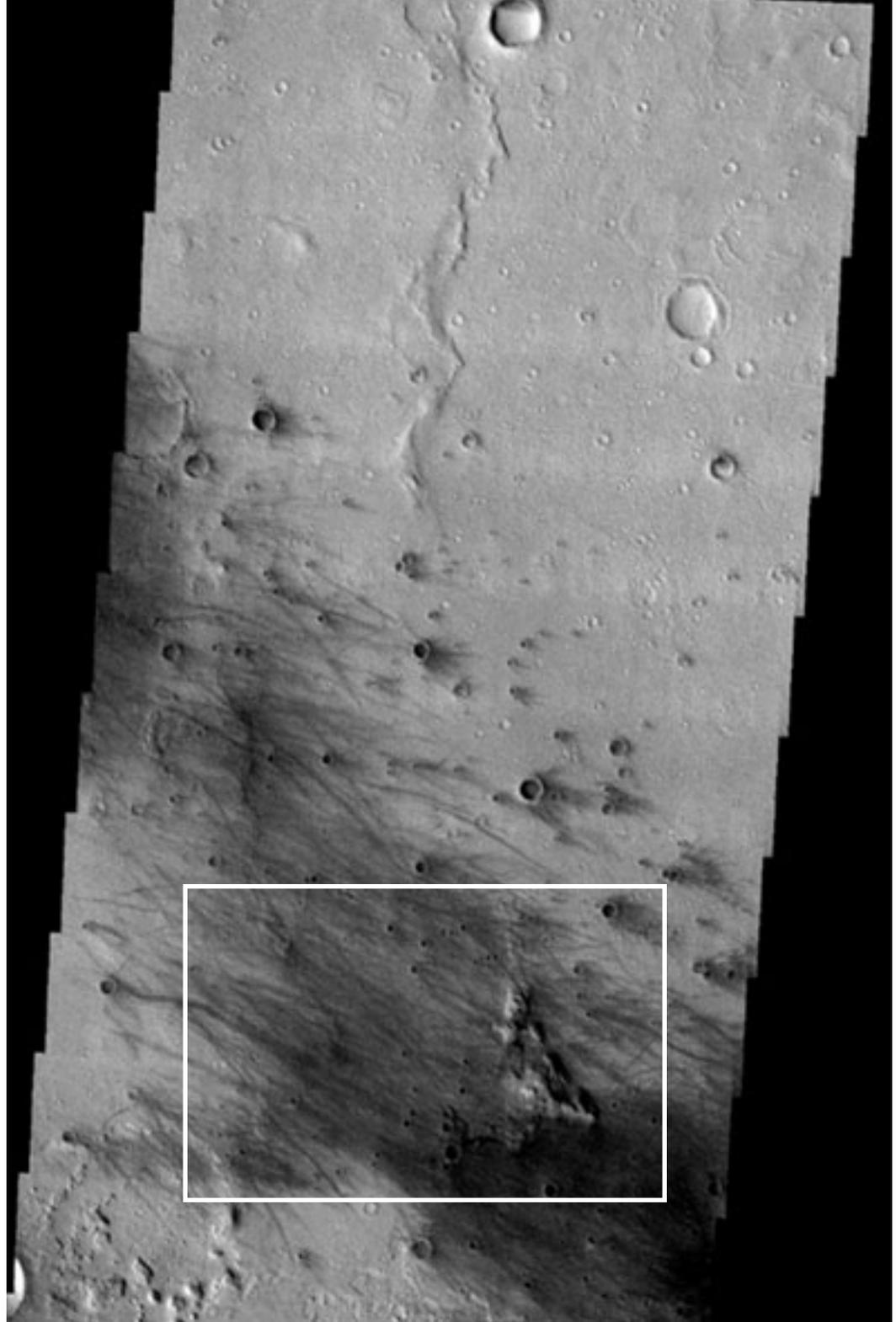
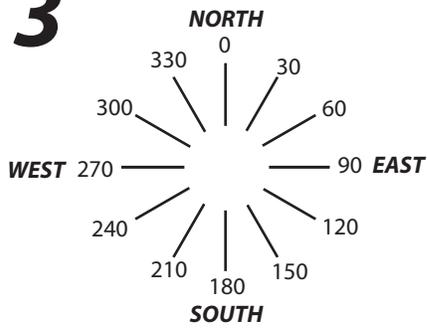
Measured Distance Between Two Largest Craters in Image #2 (**Circle and measure!**): \_\_\_\_\_ mm  
 Actual Distance (**Measured Distance x Scale of Image #2**): \_\_\_\_\_ m

**Step 3:** Find Actual Dist. Between Two Largest Craters

Measured Range to Spirit from Largest Crater in Image #2 (**Measure it!**): \_\_\_\_\_ mm  
 Actual Range (**Measured Range x Scale of Image #2**) to Spirit: \_\_\_\_\_ m  
 Bearing to Spirit from Largest Crater in Image #2 (**Measure it!**): \_\_\_\_\_ degrees

**Step 4:** Find Range & Bearing to Spirit From Largest Crater

# 3



**Thermal Emission Imaging System (THEMIS)**

**Visible Camera**

Actual Distance Between Two Largest Craters in Image #2: \_\_\_\_\_ m  
 Measured Distance Between Craters in Image #3 (**Circle them and measure!**): \_\_\_\_\_ mm  
 Scale of Image #3 (**Actual Distance / Measured Distance**): \_\_\_\_\_ m/mm

**Step 1:** Find the Scale of the Current Image

Actual Range from Largest Crater in Image #2 to Spirit: \_\_\_\_\_ m  
 Measured Range in Image #3 (**Actual Range / Scale of Image #3**): \_\_\_\_\_ mm  
 Bearing from Crater in Image #2 to Spirit (**NOW FIND SPIRIT!**): \_\_\_\_\_ degrees

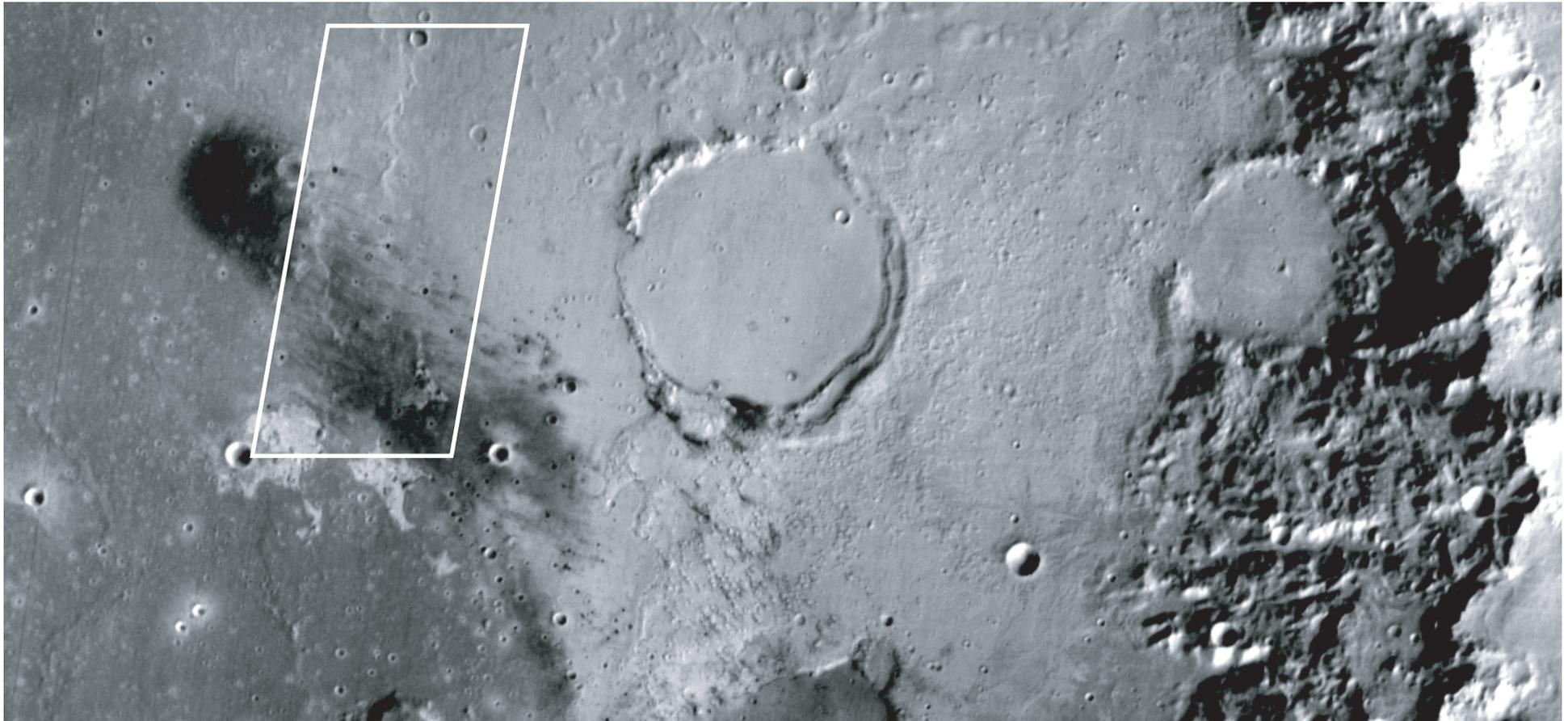
**Step 2:** Find Spirit In the Current Image

Measured Distance Between Two Largest Craters in Image #3 (**Circle and measure!**): \_\_\_\_\_ mm  
 Actual Distance (**Measured Distance x Scale of Image #3**): \_\_\_\_\_ m

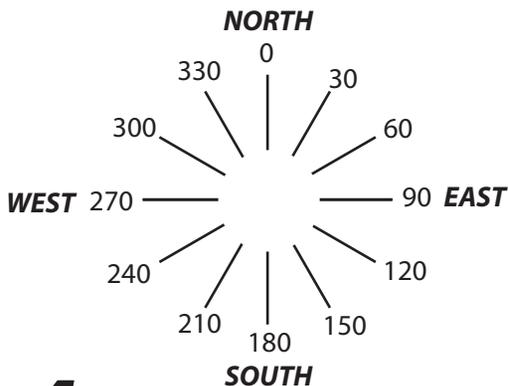
**Step 3:** Find Actual Dist. Between Two Largest Craters

Measured Range to Spirit from Largest Crater in Image #3 (**Measure it!**): \_\_\_\_\_ mm  
 Actual Range (**Measured Range x Scale of Image #3**) to Spirit: \_\_\_\_\_ m  
 Bearing to Spirit from Largest Crater in Image #3 (**Measure it!**): \_\_\_\_\_ degrees

**Step 4:** Find Range & Bearing to Spirit From Largest Crater



**Thermal Emission Imaging System (THEMIS)  
Infrared Camera (Colors Inverted)**



**4**

Actual Distance Between Two Largest Craters in Image #3:	_____ m
Measured Distance Between Craters in Image #4 ( <b>Circle them and measure!</b> ):	_____ mm
Scale of Image #4 ( <b>Actual Distance / Measured Distance</b> ):	_____ m/mm

**Step 1:** Find the Scale of the Current Image

Actual Range from Largest Crater in Image #3 to <i>Spirit</i> :	_____ m
Measured Range in Image #4 ( <b>Actual Range / Scale of Image #4</b> ):	_____ mm
Bearing from Crater in Image #3 to <i>Spirit</i> ( <b>NOW FIND SPIRIT!</b> ):	_____ degrees

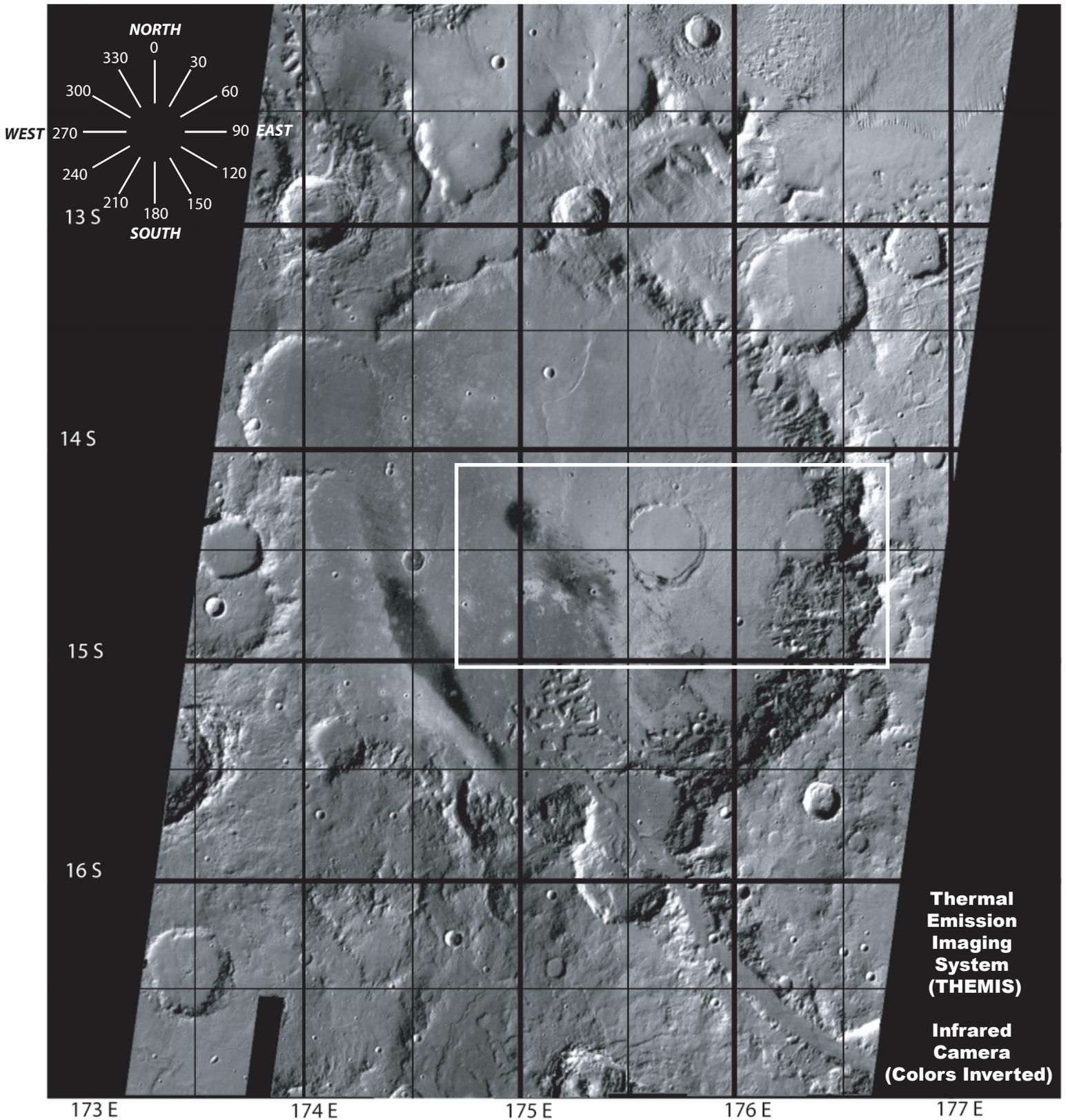
**Step 2:** Find *Spirit* In the Current Image

Measured Distance Between Two Largest Craters in Image #4 ( <b>Circle and measure!</b> ):	_____ mm
Actual Distance ( <b>Measured Distance x Scale of Image #4</b> ):	_____ m

**Step 3:** Find Actual Dist. Between Two Largest Craters

Measured Range to <i>Spirit</i> from Largest Crater in Image #4 ( <b>Measure it!</b> ):	_____ mm
Actual Range ( <b>Measured Range x Scale of Image #4</b> ) to <i>Spirit</i> :	_____ m
Bearing to <i>Spirit</i> from Largest Crater in Image #4 ( <b>Measure it!</b> ):	_____ degrees

**Step 4:** Find Range & Bearing to *Spirit* From Largest Crater



Actual Distance Between Two Largest Craters in Image #4: \_\_\_\_\_ m  
 Measured Distance Between Craters in Image #5 (**Circle them and measure!**): \_\_\_\_\_ mm  
 Scale of Image #5 (**Actual Distance / Measured Distance**): \_\_\_\_\_ m/mm

**Step 1:** Find the Scale of the Current Image

Actual Range from Largest Crater in Image #4 to Spirit: \_\_\_\_\_ m  
 Measured Range in Image #5 (**Actual Range / Scale of Image #5**): \_\_\_\_\_ mm  
 Bearing from Crater in Image #4 to Spirit (**NOW FIND SPIRIT!**): \_\_\_\_\_ degrees

**Step 2:** Find Spirit In the Current Image

**WHERE IS SPIRIT?**

Latitude: \_\_\_\_\_ degrees Longitude: \_\_\_\_\_ degrees