UNITED STATES

DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

TECHNICAL LETTER: NASA-13 (Supplement)

13A

Infrared spectral emittance of rocks from the Pisgah Crater and Mono Craters areas, California*

by

D. L. Daniels**

June 1967

This report is preliminary and has not been edited or reviewed for conformity with U. S. Geological Survey standards.

Prepared by the U. S. Geological Survey for the National Aeronautics and Space Administration (NASA)

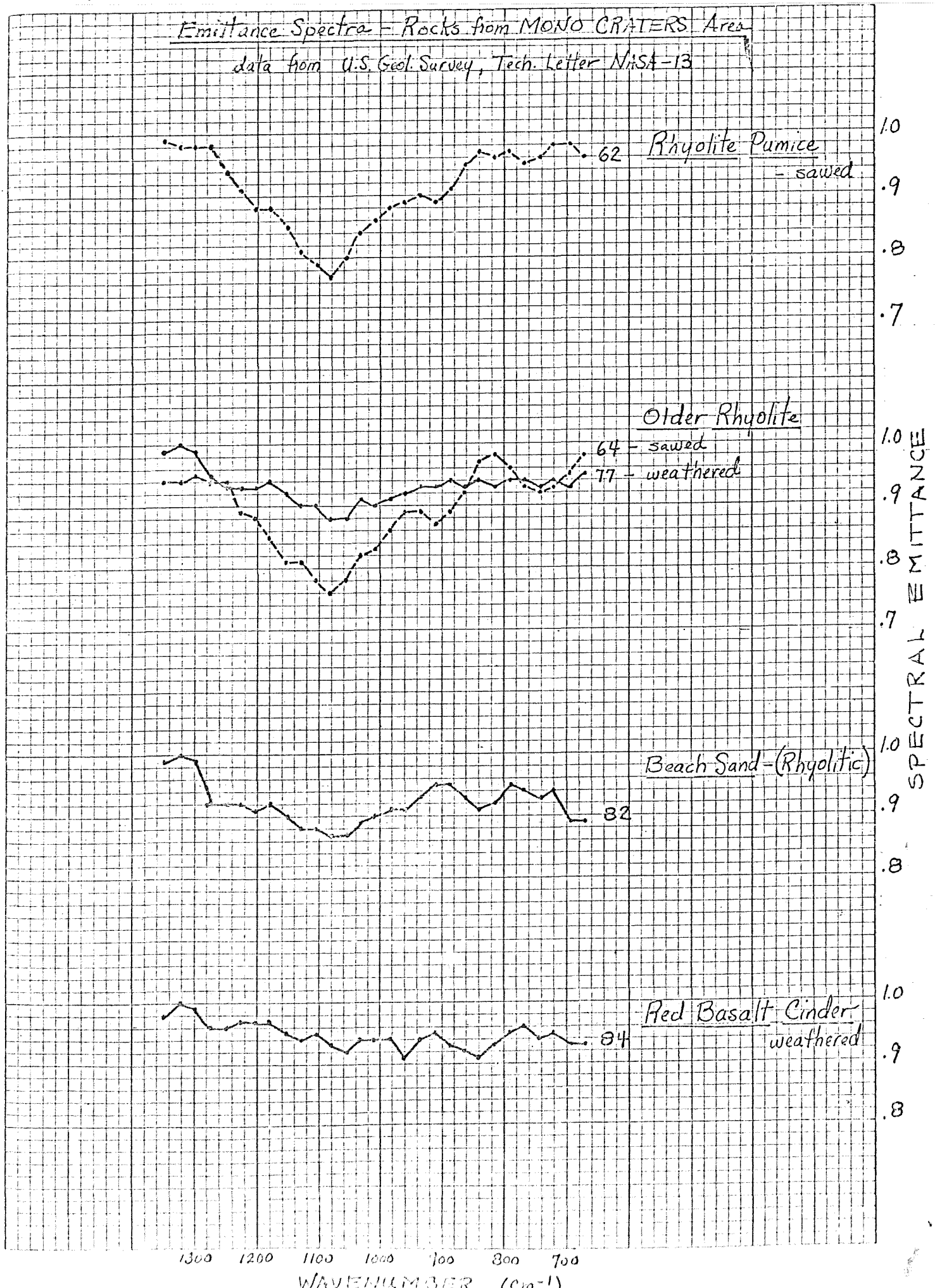
*Work performed under NASA Contract No. R-146 and Order no. T-65754-G
**U. S. Geological Survey, Washington, D. C.

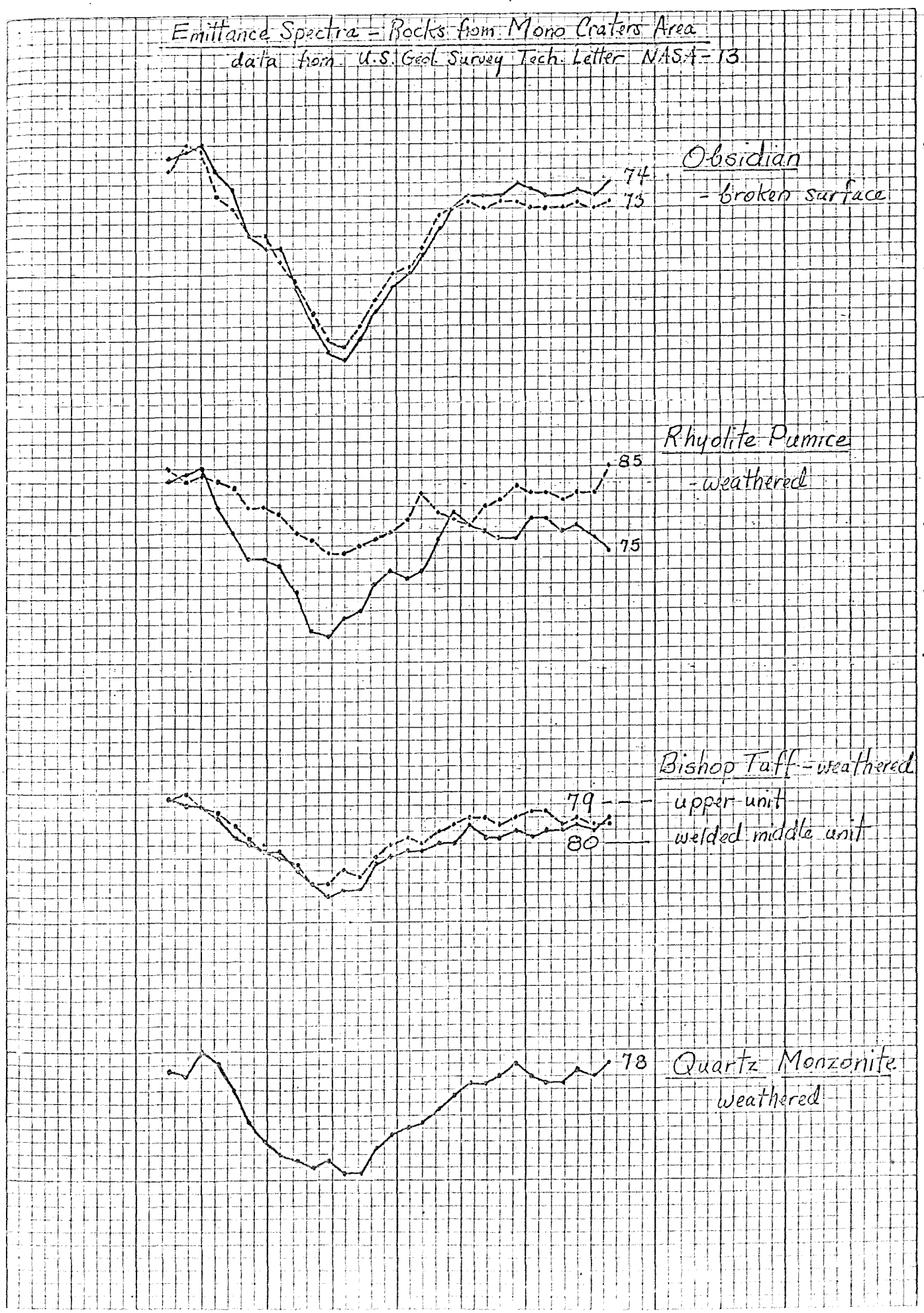
Infrared spectral emittance of rocks from the Pisgah Crater and Mono Craters areas, California

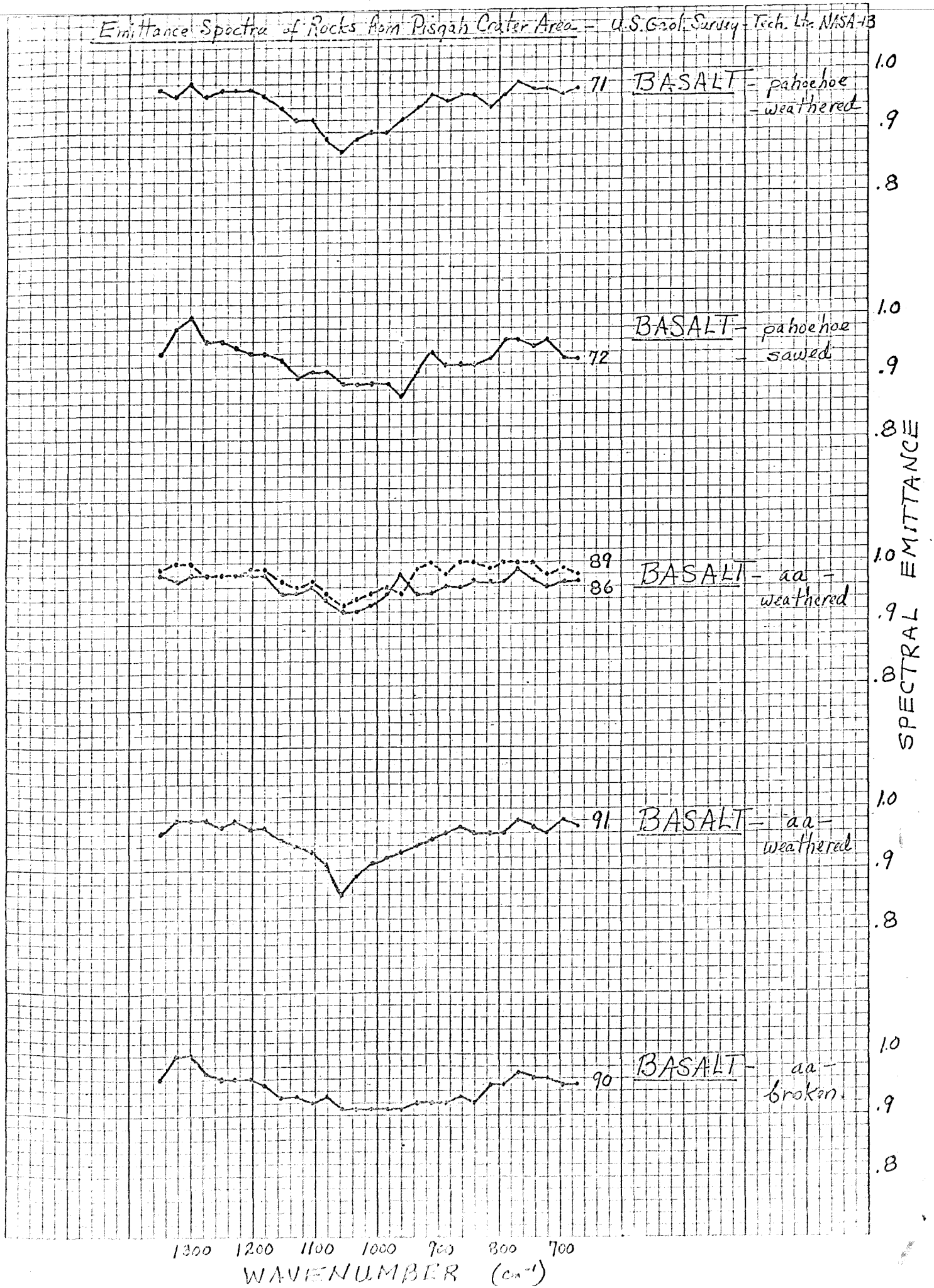
by

D. L. Daniels

Spectral emittance curves were previously obtained for samples from the Pisgah Crater and Mono Craters areas, California and were presented in Technical Letter NASA-13 (TL-13). The data in TL-13 were plotted in the form ε_λ vs wavelength in microns. For convenience of comparison of these curves with data obtained by other experimenters, we have replotted our curves in the form ε_λ vs wavelength in cm^{-1}, which are contained in this supplement to TL-13.


Emittance Spectra - Rocks from MONO CRATERS Area
data from U.S. Geol. Survey, Tech. Letter NASA-13
Rhyolite Pumice
- sawed
62
1.0
.9
.8
.7
Older Rhyolite
64 - sawed
77 - weathered
1.0
.9
.8
.7
SPECTRAL EMITTANCE
Beach Sand - (Rhyolitic)
82
1.0
.9
.8
Red Basalt Cinder
weathered
84
1.0
.9
.8
1300
1200
1100
1000
900
800
700
WAVENUMBER (cm-1)


Emittance Spectra - Rocks from Mono Craters Area
data from U.S. Geol. Survey Tech. Letter NASA-13
Obsidian
- broken surface
74
73
Rhyolite Pumice
- weathered
85
75
Bishop Tuff - weathered
upper unit
welded middle unit
79
80
Quartz Monzonite
weathered
78
1.0
.9
.8
.7
SPECTRAL EMITTANCE
1300
1200
1100
1000
900
800
700
WAVENUMBER (cm⁻¹)


Emittance Spectra of Rocks from Pisgah Crater Area – U.S. Geol. Survey – Tech. Ltr. NASA-13
71
BASALT – pahoehoe – weathered
72
BASALT – pahoehoe – sawed
89
86
BASALT – aa – weathered
91
BASALT – aa – weathered
90
BASALT – aa – broken
1.0
.9
.8
SPECTRAL EMITTANCE
1300
1200
1100
1000
900
800
700
WAVENUMBER (cm⁻¹)