
Stack Rock data: Depths vs. elevation

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stackrock1_data = [80, 54, 54, 56, 90, 94, 45, 96, 96, 95, 59,
38]; %12
stackrock2_data = [40, 60, 35, 25, 35, 32, 55, 33, 25, 50, 28, 48, 26,
48, 50]; %15

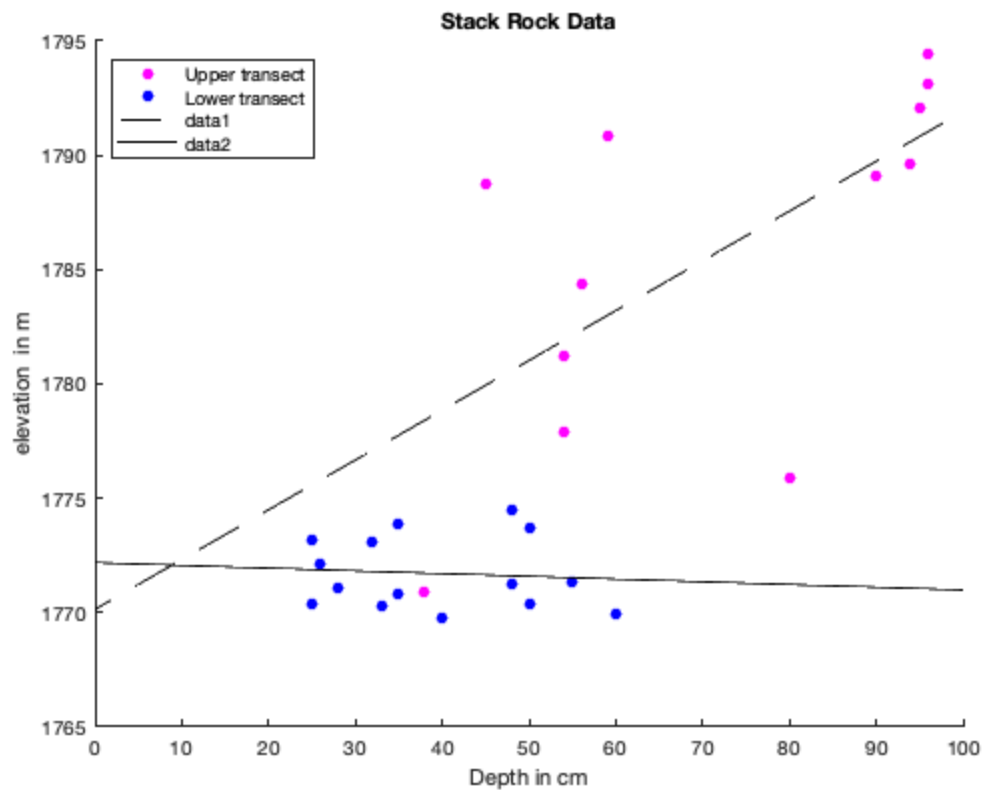
stackrock1_elevation = [1775.925, 1777.916, 1781.262, 1784.395,
1789.082, 1789.616, 1788.746, 1793.084, 1794.456, 1792.107,
1790.816, 1770.898]; %12
stackrock2_elevation = [1769.787, 1769.979, 1770.839, 1773.148,
1773.921, 1773.095, 1771.299, 1770.276, 1770.391, 1770.347, 1771.067,
1771.283, 1772.092, 1774.494, 1773.712]; %15

scatter(stackrock1_data, stackrock1_elevation, 'o', 'Filled', 'm');
xlabel('Depth in cm');
ylabel('elevation in m');

hold on;
scatter(stackrock2_data, stackrock2_elevation, 'o', 'Filled', 'b');
legend('Upper transect', 'Lower transect', 'Location', 'northwest');
title('Stack Rock Data');

p1 = polyfit(stackrock1_data, stackrock1_elevation, 1);
p2 = polyfit(stackrock2_data, stackrock2_elevation, 1);
x = 0:100;
y1 = polyval(p1, x);
y2 = polyval(p2, x);

plot(x, y1, 'k--', 'LineWidth', 1);
plot(x, y2, 'k-', 'LineWidth', 1);
```



Stats

```
mean_stackrock1 = mean(stackrock1_elevation);
str = 'The mean of the upper transect of Stack Rock elevation data is:
';
disp([str, num2str(mean_stackrock1)]);

mean_stackrock2 = mean(stackrock2_elevation);
str = 'The mean of the lower transect of Stack Rock elevation data is:
';
disp([str, num2str(mean_stackrock2)]);

fprintf('\n');

median_stackrock1 = median(stackrock1_elevation);
str = 'The median of the upper transect of Stack Rock elevation data
is: ';
disp([str, num2str(median_stackrock1)]);

median_stackrock2 = median(stackrock2_elevation);
str = 'The median of the lower transect of Stack Rock elevation data
is: ';
disp([str, num2str(median_stackrock2)]);

fprintf('\n');
```

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range_stackrock1 = range(stackrock1_elevation);
str = 'The range of the upper transect of Stack Rock elevation data
is: ';
disp([str, num2str(range_stackrock1)]);

range_stackrock2 = range(stackrock2_elevation);
str = 'The range of the lower transect of Stack Rock elevation data
is: ';
disp([str, num2str(range_stackrock2)]);

fprintf('\n');

mode_stackrock1 = mode(stackrock1_elevation);
str = 'The mode of the upper transect of Stack Rock elevation data is:
';
disp([str, num2str(mode_stackrock1)]);

mode_stackrock2 = mode(stackrock2_elevation);
str = 'The mode of the lower transect of Stack Rock elevation data is:
';
disp([str, num2str(mode_stackrock2)]);

The mean of the upper transect of Stack Rock elevation data is:
1785.6919
The mean of the lower transect of Stack Rock elevation data is:
1771.7153

The median of the upper transect of Stack Rock elevation data is:
1788.914
The median of the lower transect of Stack Rock elevation data is:
1771.283

The range of the upper transect of Stack Rock elevation data is:
23.558
The range of the lower transect of Stack Rock elevation data is: 4.707

The mode of the upper transect of Stack Rock elevation data is:
1770.898
The mode of the lower transect of Stack Rock elevation data is:
1769.787

```

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