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zpracovani letu - nacteni dat

```
clear all;
close all;
clc;

directory = uigetdir;
if directory~=0
    filenames = dir(directory);

if isempty(filenames)==0;

%for idir = 3:size(filenames,1)
for idir = 3:3

disp(['Filename: ' filenames(idir).name]);

filename = filenames(idir).name;
FlightNo=str2double(filename(end-4));

A=importdata([directory, '\', filename]);

Data=A.data;

plot(Data(:,17),Data(:,16))
plot3(Data(:,17),Data(:,16),Data(:,6))
hold on
plot3(Data(1,17),Data(1,16),Data(1,6), 'or')
hold off
xlabel('Longitude (°)')
ylabel('Latitude (°)')
zlabel('Altitude (°)')

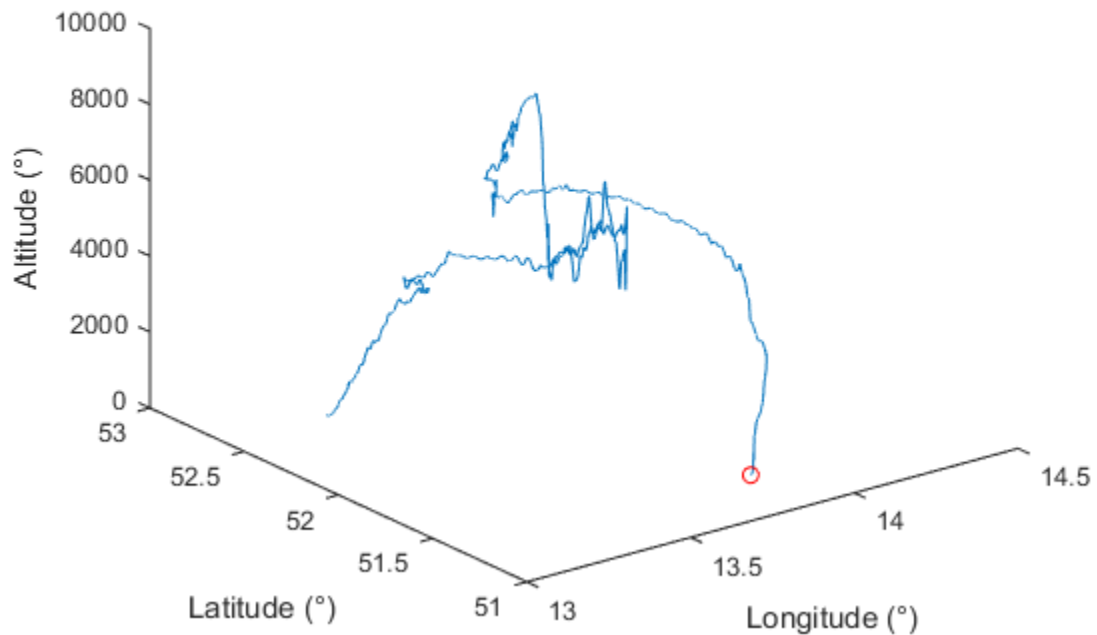
points=xlsread('points.xlsx');

Index=(1:length(points(:,1)))';
PtE=zeros(length(Index(points(:,3)==-100,1))+1,1);
PtE(2:end)=Index(points(:,3)==-100,1);

IdxSep1=[];
IdxSep2=[];
Differ=[];
Points=[];
```

```
Index2=(1:length(Data(:,1)))';
```

```
Filename: david1.dat
```



nalezeni prvního bodu v letu

```
TaskNo=PtE(FlightNo+1,1)-PtE(FlightNo,1);

i=1+PtE(FlightNo,1);

IdxSep1(:,1)=Index2(Data(:,17)<=(points(i,2)+0.0003) & Data(:,17)>=...
(points(i,2)-0.0003),1);
IdxSep2(:,1)=Index2(Data(:,16)<=(points(i,1)+0.0003) & Data(:,16)>=...
(points(i,1)-0.0003),1);

Differ(:,1)=Data(IdxSep1(:,1),17)-points(i,2);
Differ(:,2)=Data(IdxSep1(:,1),16)-points(i,1);
Differ(:,3)=IdxSep1(:,1);

Differ(length(IdxSep1)+1:length(IdxSep1)+length(IdxSep2),1)=...
Data(IdxSep2(:,1),17)-points(i,2);
Differ(length(IdxSep1)+1:length(IdxSep1)+length(IdxSep2),2)=Data...
(IdxSep2(:,1),16)-points(i,1);
Differ(length(IdxSep1)+1:length(IdxSep1)+length(IdxSep2),3)=IdxSep2(:,1);

Differ(:,4)=Differ(:,1).*Differ(:,2);
```

```
Pts(:,1)=Differ(find(abs(Differ(:,4)) == min(abs(Differ(:,4))))),3);
Points(1,1)=Pts(1,1);
```

```
clear IdxSep1 IdxSep2 Differ Pts
```

rozdeleni na jednotlivé ukoly

```
for j=2:TaskNo
```

```
IdxSep1=[];
IdxSep2=[];
Differ=[];
DataSep=[];
```

```
i=j+PtE(FlightNo,1);
```

```
IdxSep1(:,1)=Index2(Data(:,17)<=(points(i,2)+0.0003) & Data(:,17)>=...
(points(i,2)-0.0003),1);
IdxSep2(:,1)=Index2(Data(:,16)<=(points(i,1)+0.0003) & Data(:,16)>=...
(points(i,1)-0.0003),1);
```

```
Differ(:,1)=Data(IdxSep1(:,1),17)-points(i,2);
Differ(:,2)=Data(IdxSep1(:,1),16)-points(i,1);
Differ(:,3)=IdxSep1(:,1);
```

```
Differ(length(IdxSep1)+1:length(IdxSep1)+length(IdxSep2),1)=...
Data(IdxSep2(:,1),17)-points(i,2);
Differ(length(IdxSep1)+1:length(IdxSep1)+length(IdxSep2),2)=...
Data(IdxSep2(:,1),16)-points(i,1);
Differ(length(IdxSep1)+1:length(IdxSep1)+length(IdxSep2),3)=IdxSep2(:,1);
```

```
Differ(:,4)=Differ(:,1).*Differ(:,2);
```

```
Pts(:,1)=Differ(find(abs(Differ(:,4)) == min(abs(Differ(:,4))))),3);
Points(j,1)=Pts(1,1);
```

```
DataSep(:,:)=Data(Points(j-1,1):Points(j,1),:);
xlswrite([pwd, '\results\'], filename(1:end-4), '_T0',...
num2str(j-1),'.xlsx'],DataSep);
```

```
clear DataSep IdxSep1 IdxSep2 Differ Pts
```

```
end
```

```
clear Points;
```

```
end
end
end
```

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