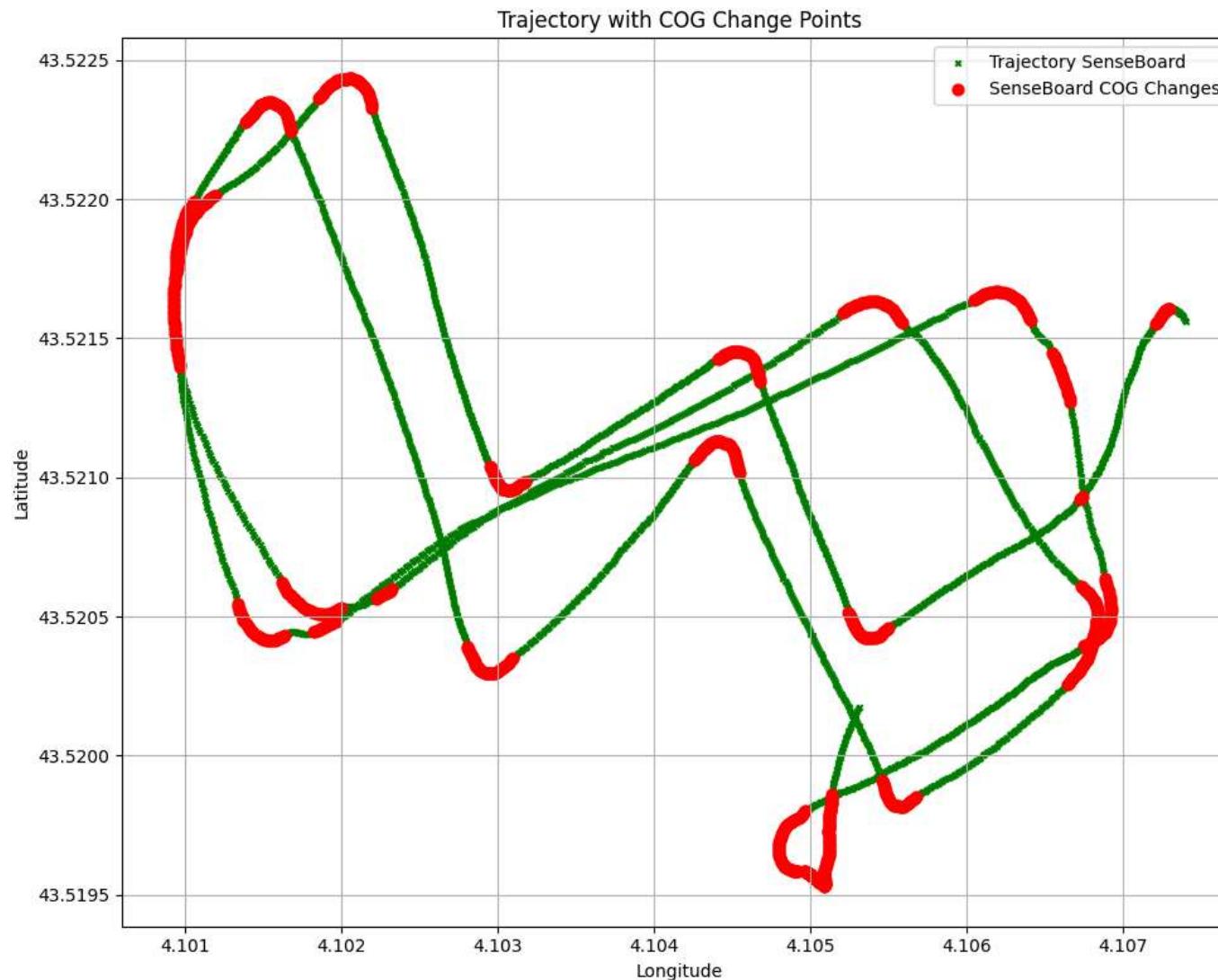


```
In [1]:  
import os  
import json  
from cog_analysis import analyze_session  
from natsort import natsorted  
  
summary = []  
  
base_dir = "../Data_Sailnjord/Maneuvers"  
  
# Parcours tous les dossiers de date  
for date_folder in sorted(os.listdir(base_dir)):  
    date_path = os.path.join(base_dir, date_folder)  
  
    if not os.path.isdir(date_path):  
        continue  
  
    # Parcours tous les dossiers de personne dans chaque date  
    for person_folder in sorted(os.listdir(date_path)):  
        person_path = os.path.join(date_path, person_folder)  
  
        if not os.path.isdir(person_path):  
            continue  
  
        # Parcours tous les dossiers de run dans chaque dossier de personne  
        for run_folder in natsorted(os.listdir(person_path)):  
            run_path = os.path.join(person_path, run_folder)  
  
            if not os.path.isdir(run_path):  
                continue  
  
            # Cherche un fichier CSV dans le run  
            csv_files = [f for f in os.listdir(run_path) if f.endswith(".csv")]  
            if len(csv_files) != 1:  
                print(f"Ignoré: {run_path} (attendu 1 CSV, trouvé {len(csv_files)})")  
                continue  
  
            csv_path = os.path.join(run_path, csv_files[0])  
            print(f"Analyse: {csv_files[0]} dans {run_path}")  
            try:  
                intervals = analyze_session(csv_path)  
                print(f"✓ Analyse réussie, nombre d'intervalles : {len(intervals)}")  
  
                summary.append({  
                    "date": date_folder,  
                    "person": person_folder,  
                    "run": run_folder,  
                    "intervals": intervals  
                })  
  
            except Exception as e:  
                import traceback  
                print(f"✗ Erreur dans {run_path} : {type(e).__name__} - {e}")  
                traceback.print_exc()  
  
# Sauvegarde du résumé
```

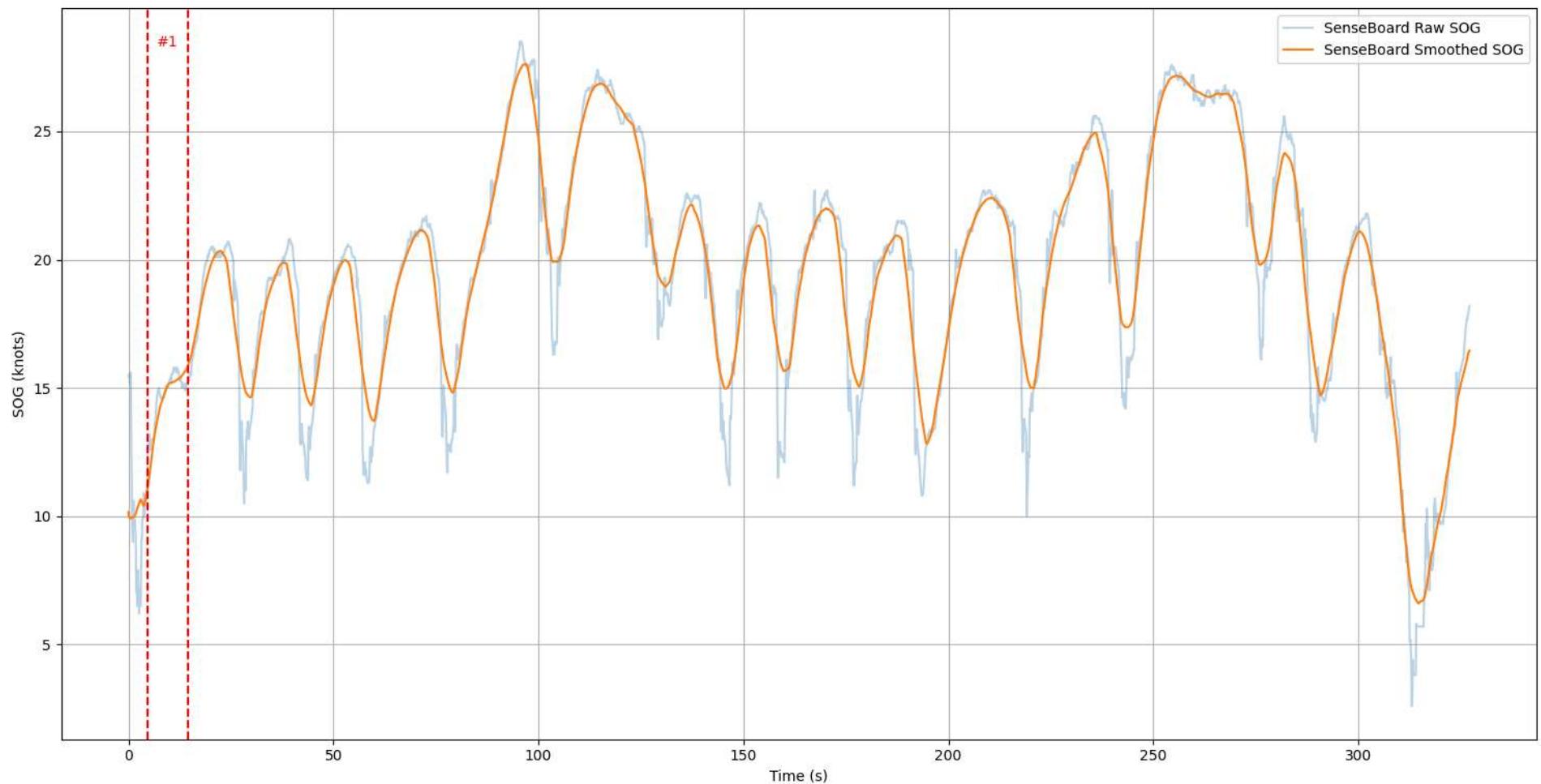
```
summary_file = "summary.json"
with open(summary_file, "w") as f:
    json.dump(summary, f, indent=2)

print(f"Résumé complet sauvagardé ({len(summary)} runs)")
```

Analyse: SenseBoard.csv dans .../Data_Sailnjord/Maneuvers/08_06/Gian/08_06_Run1

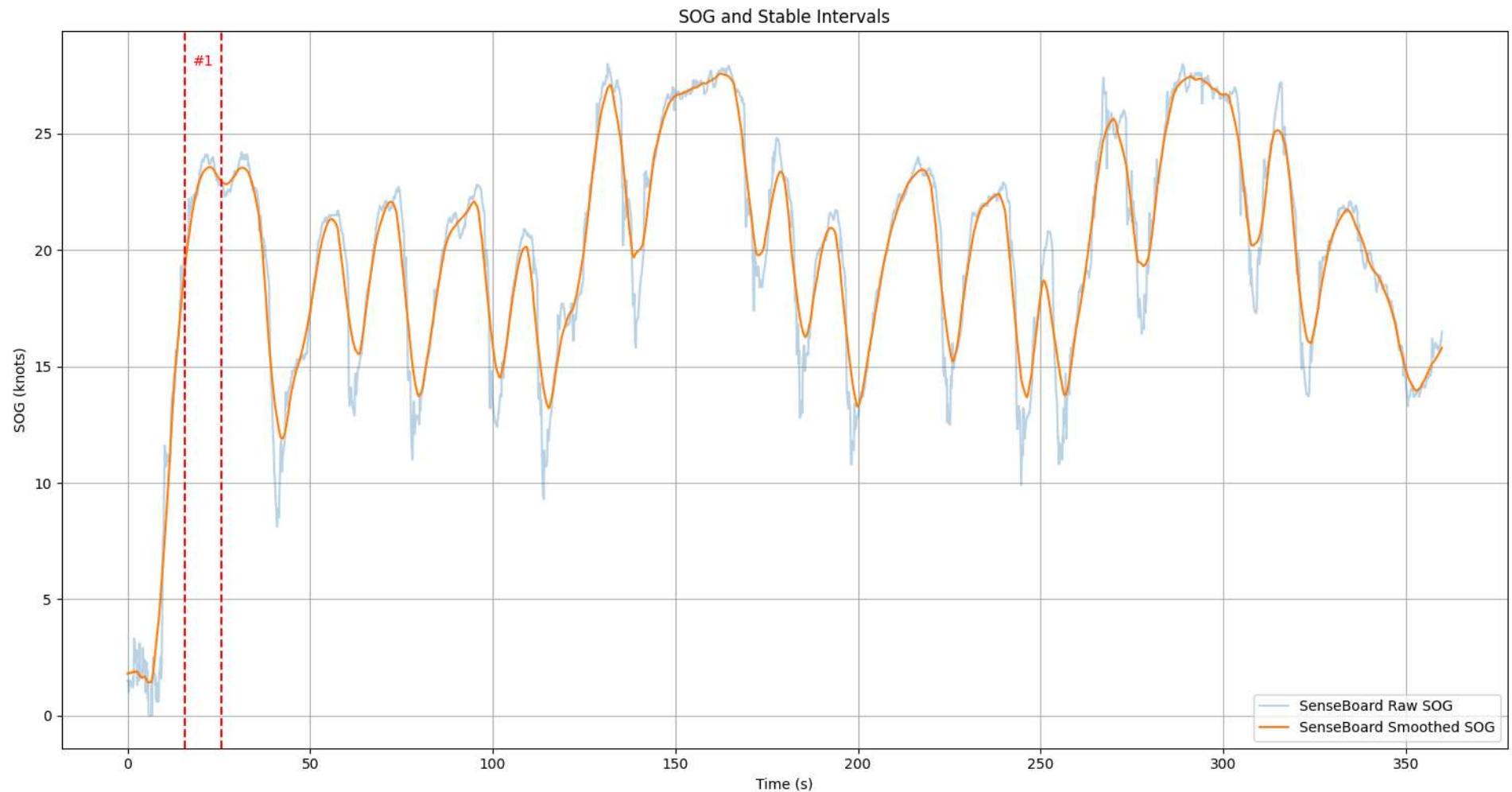


SOG and Stable Intervals

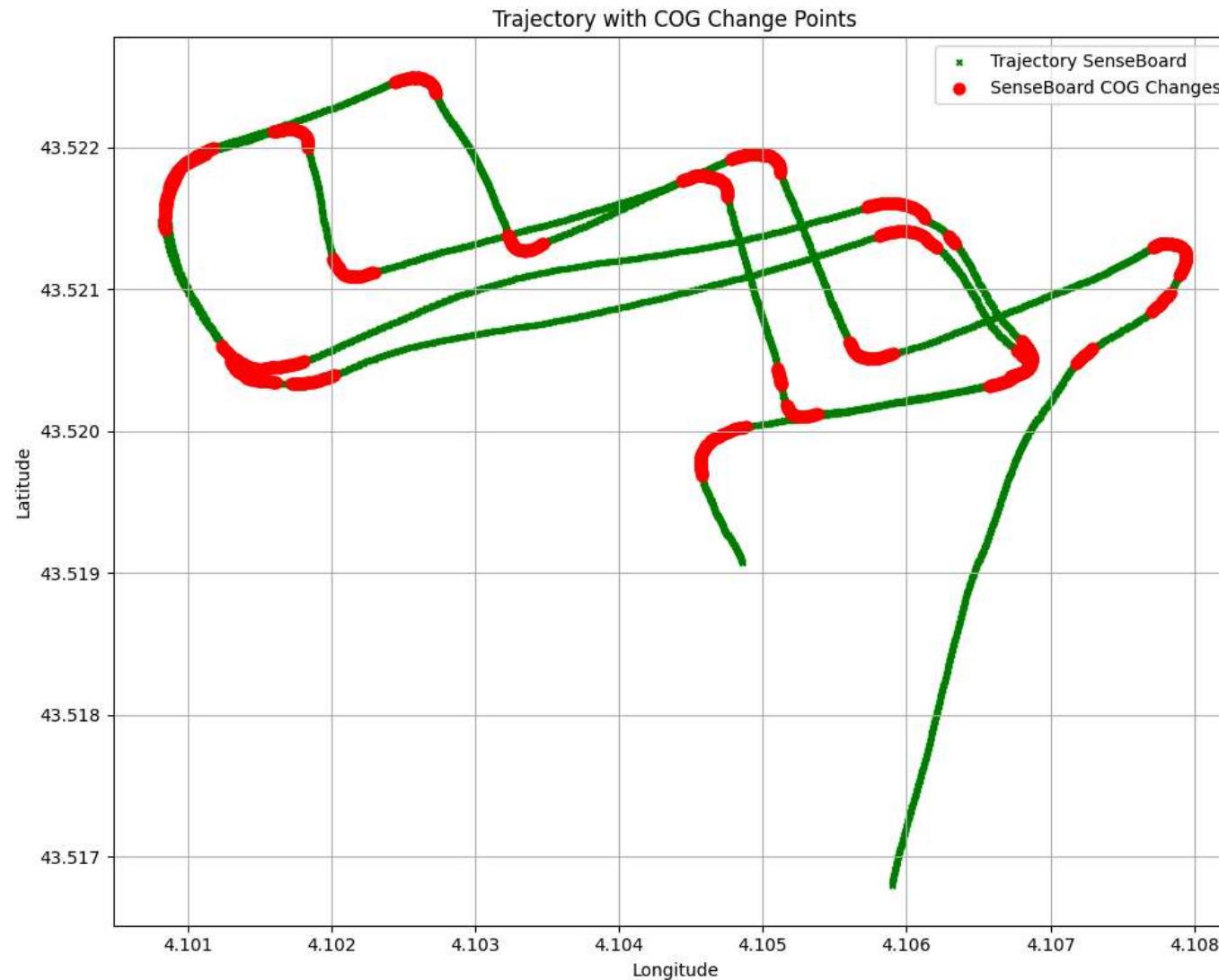


✓ Analyse réussie, nombre d'intervalles : 1
Analyse: SenseBoard.csv dans ..\Data_Sailnjord\Maneuvers\08_06\Gian\08_06_Run2

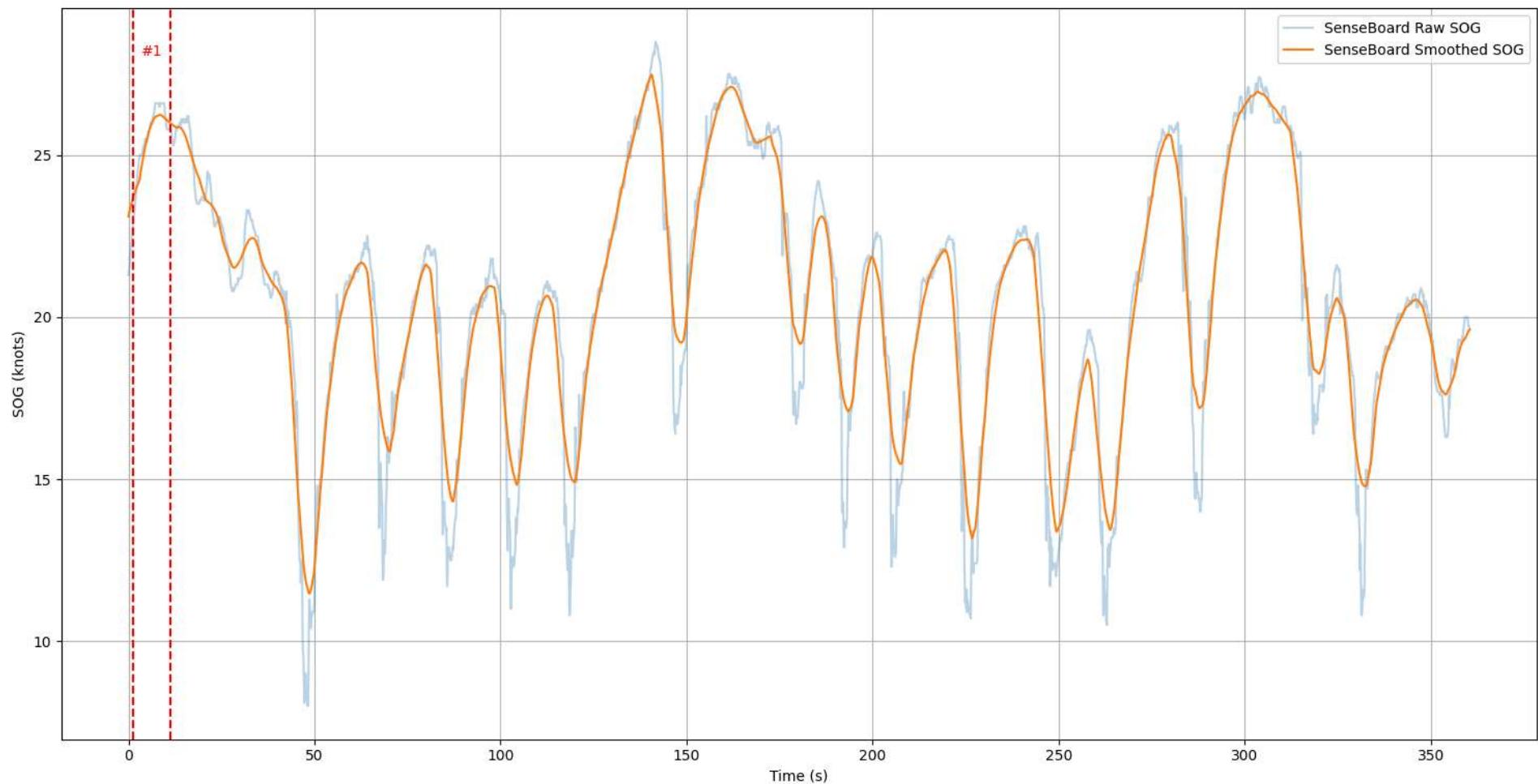




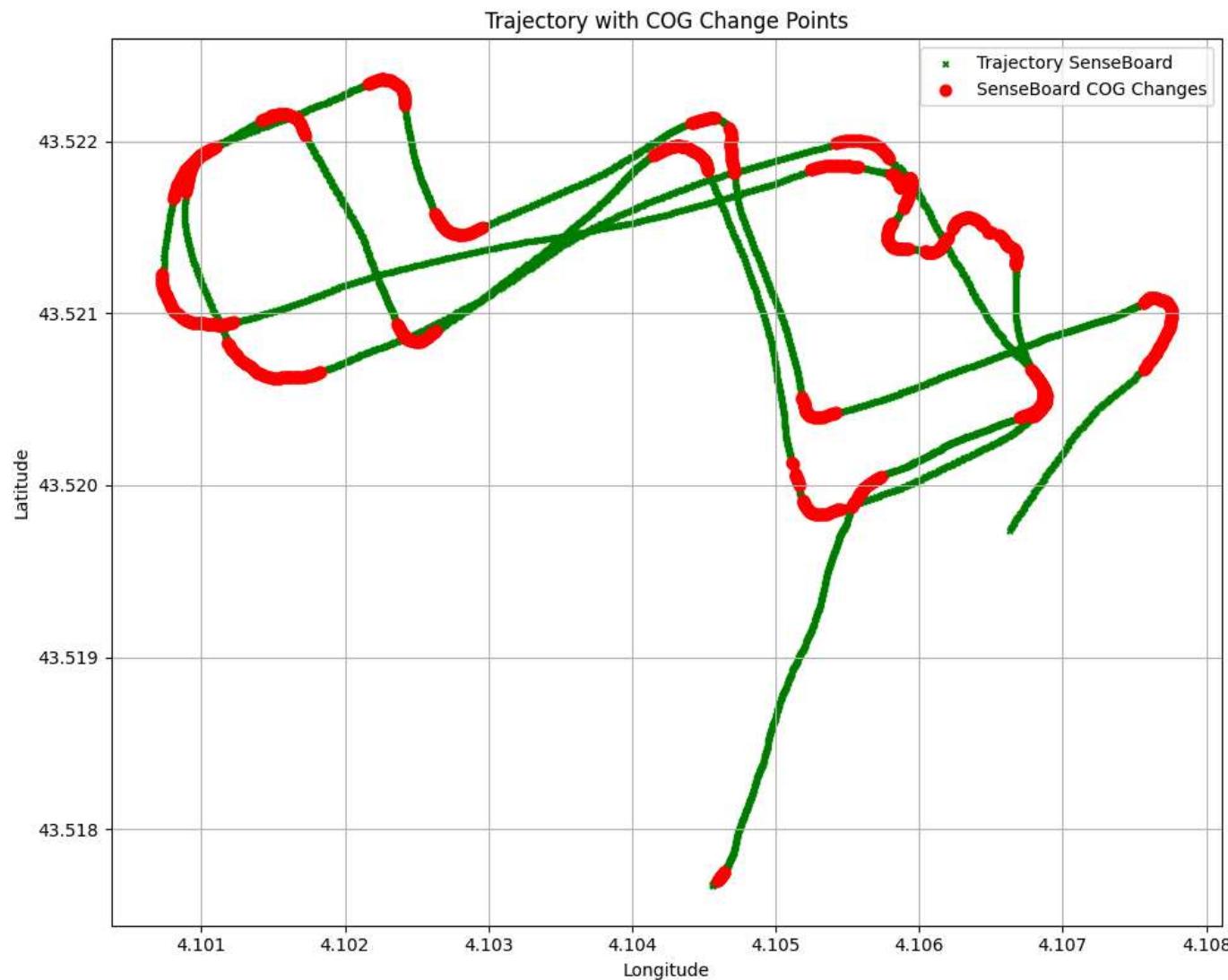
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: SenseBoard.csv dans ..\Data_Sailnjord\Maneuvers\08_06\Gian\08_06_Run3



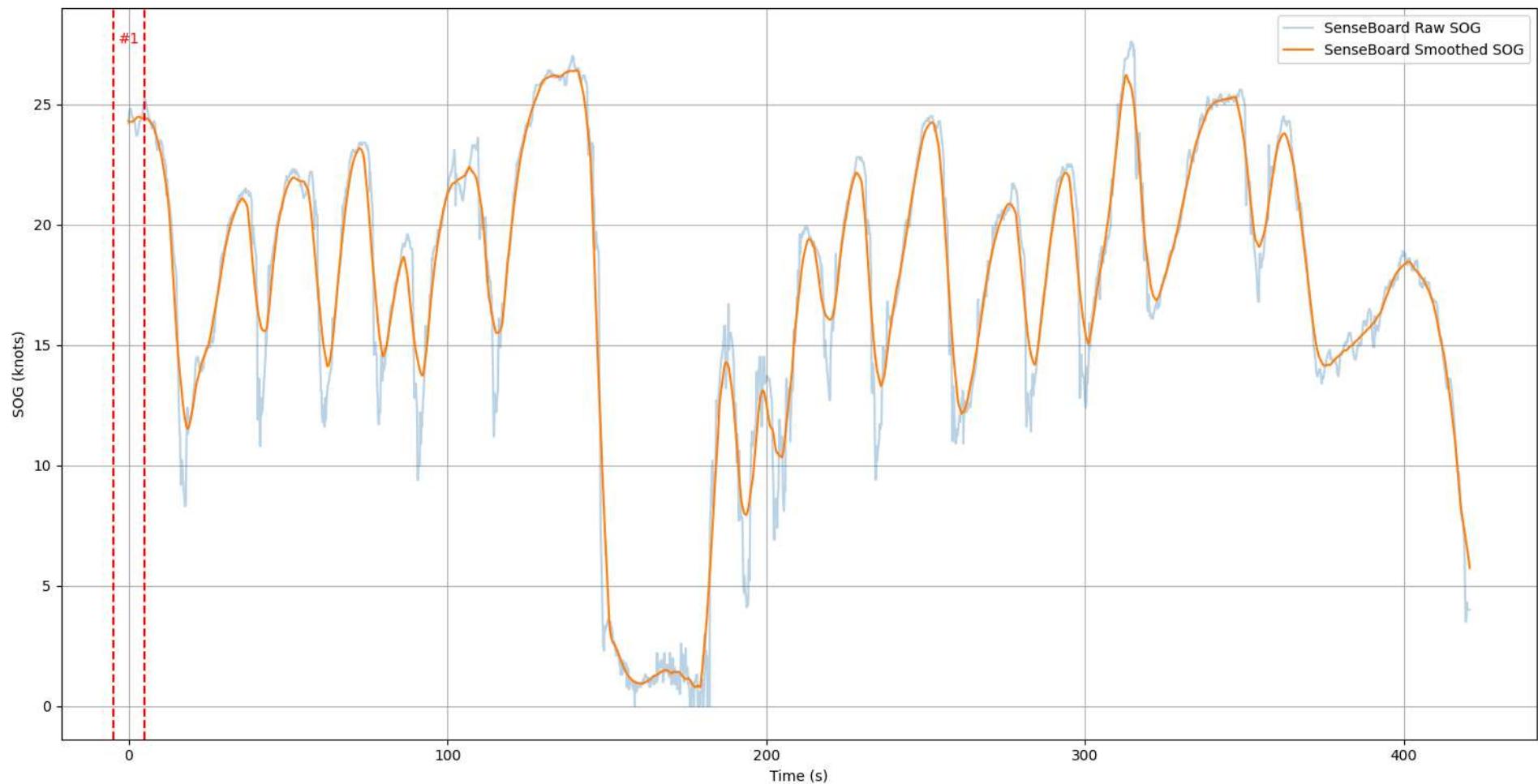
SOG and Stable Intervals



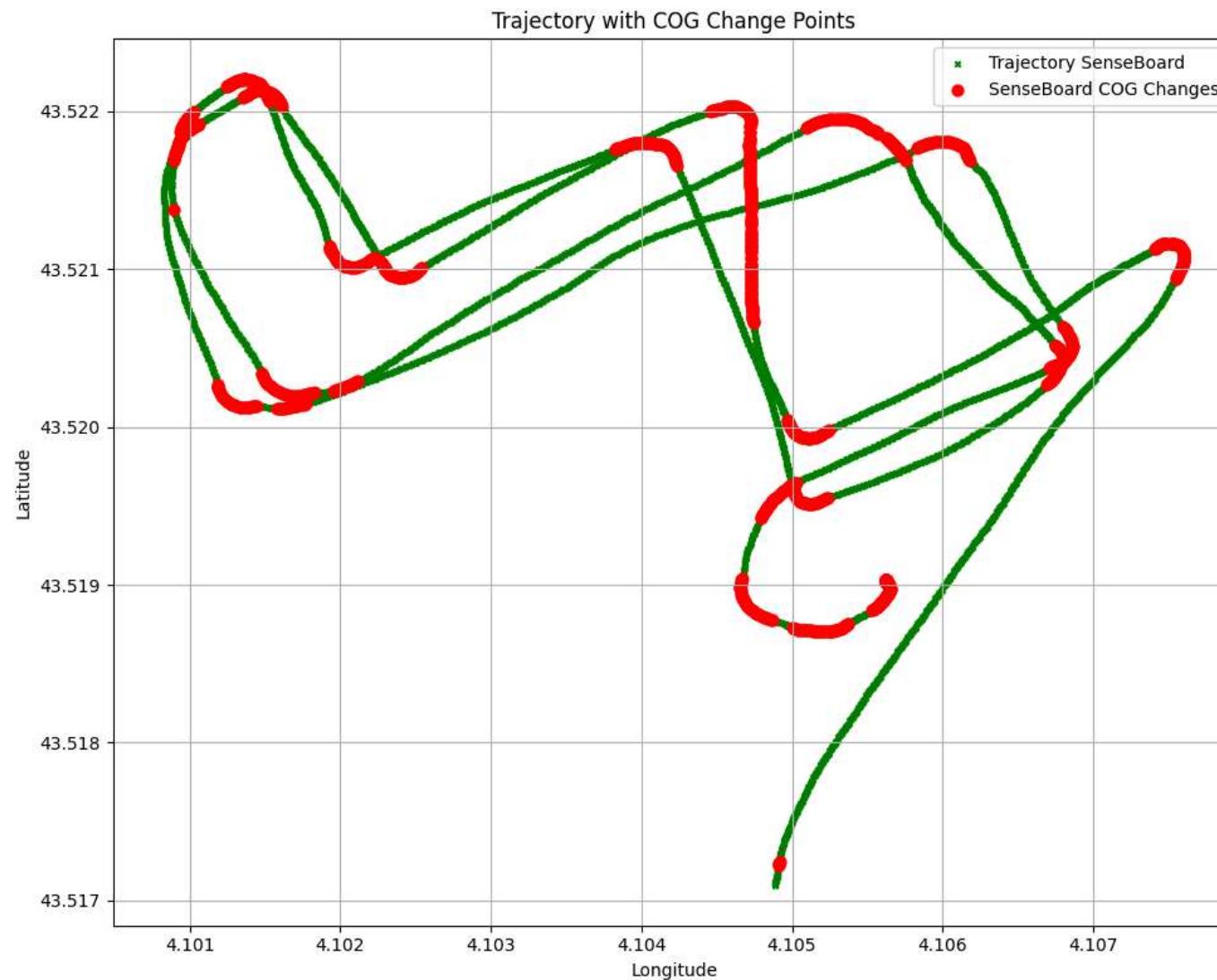
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: SenseBoard.csv dans ..\Data_Sailnjord\Maneuvers\08_06\Gian\08_06_Run4



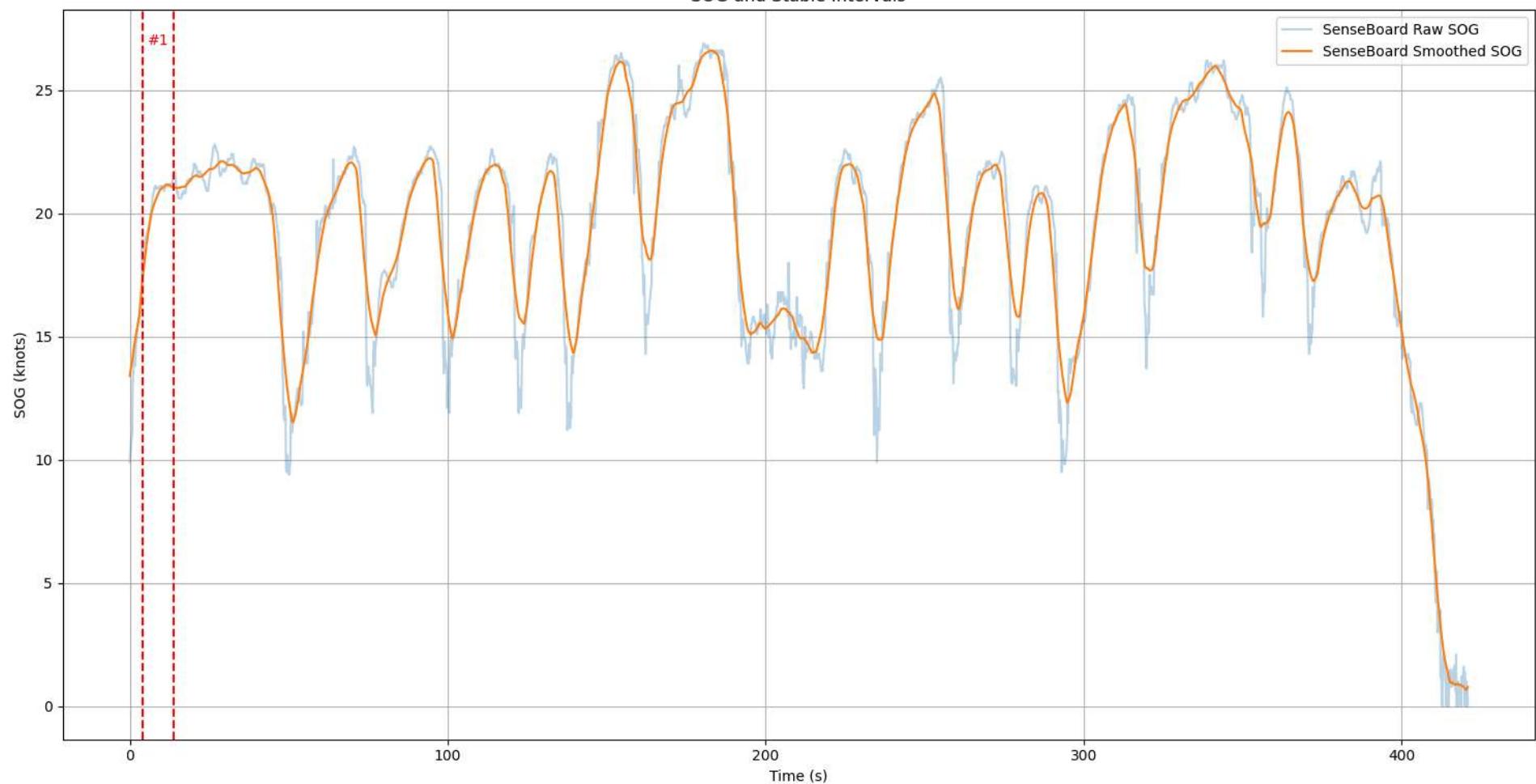
SOG and Stable Intervals



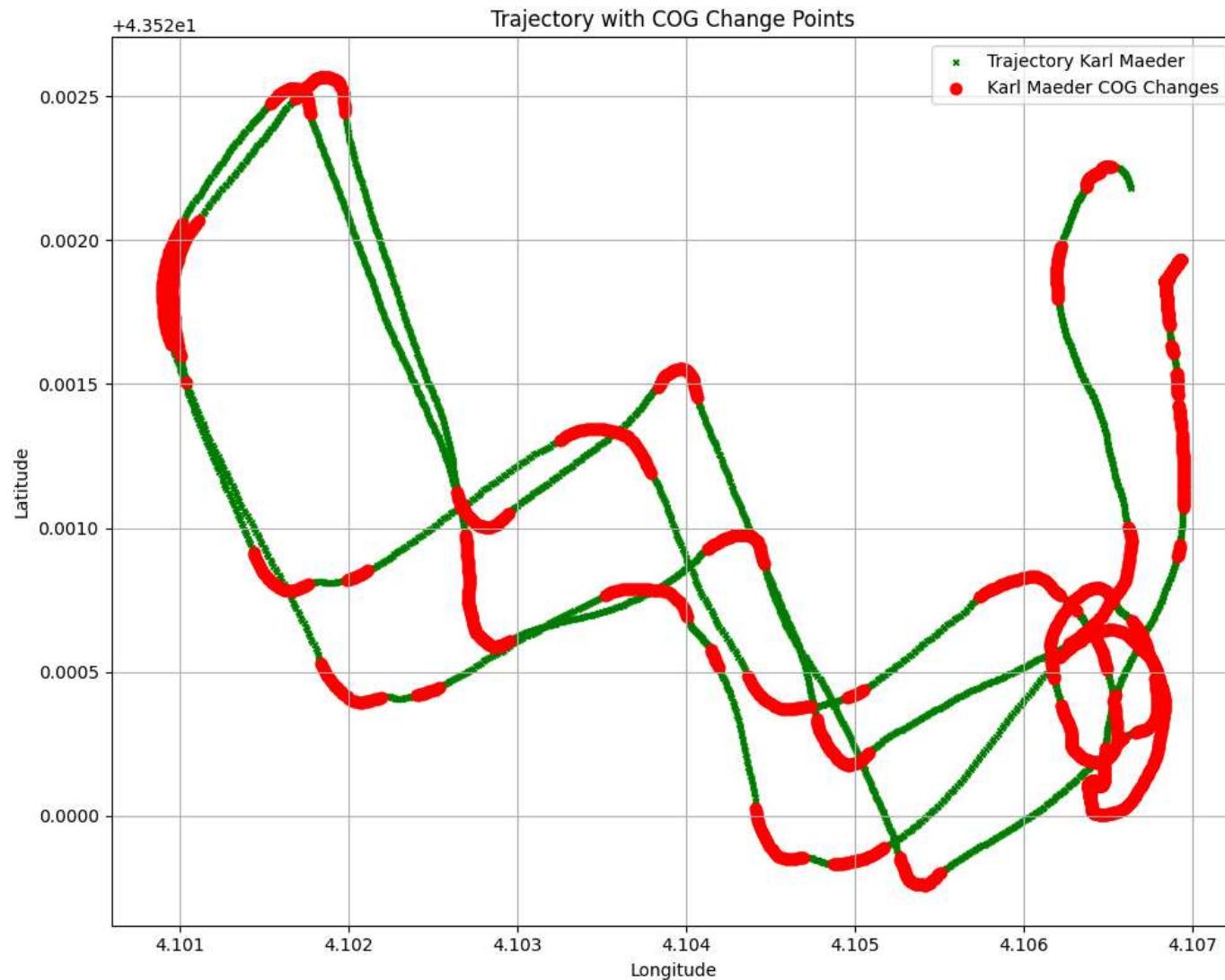
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: SenseBoard.csv dans ..\Data_Sailnjord\Maneuvers\08_06\Gian\08_06_Run5



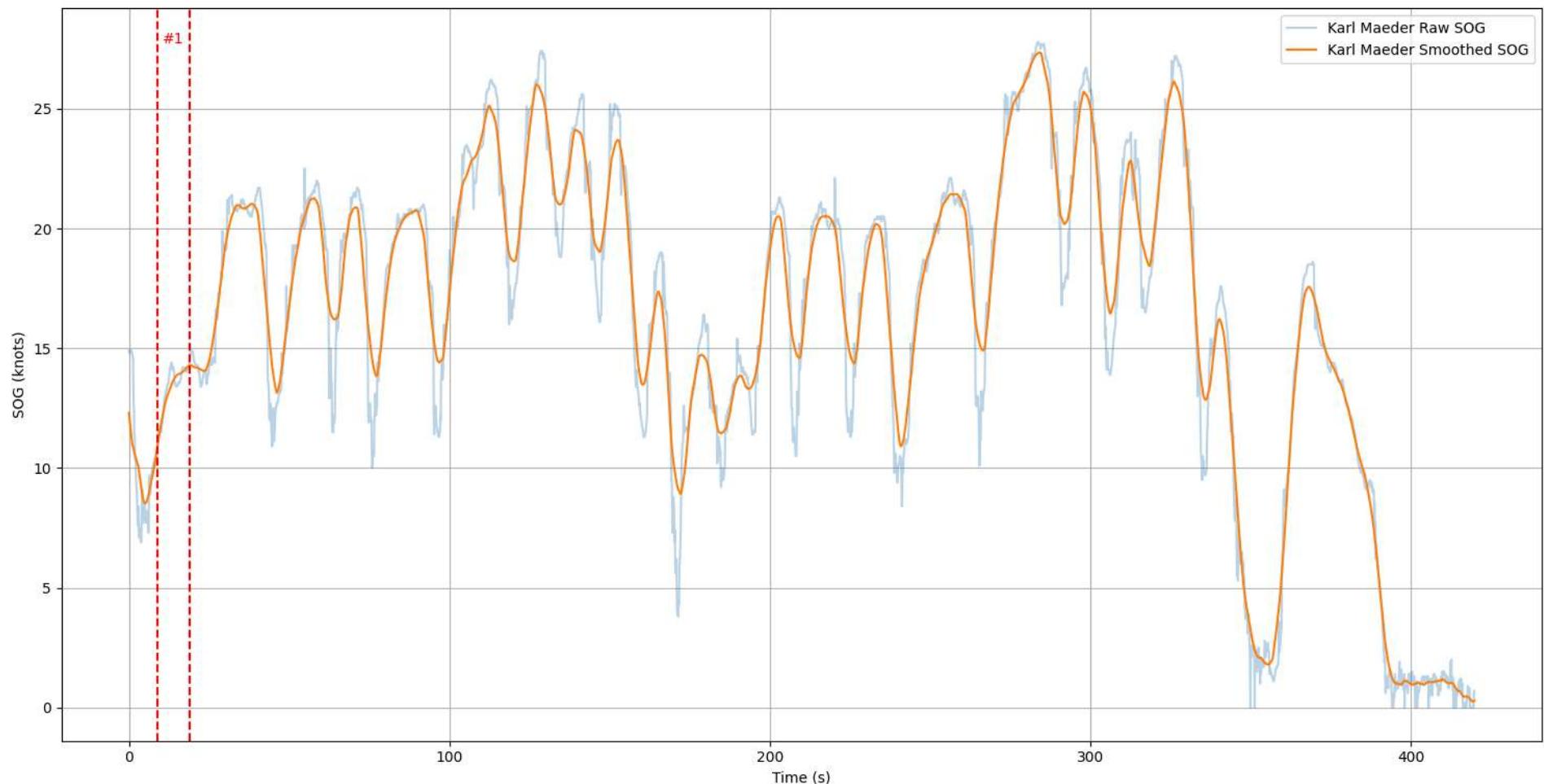
SOG and Stable Intervals



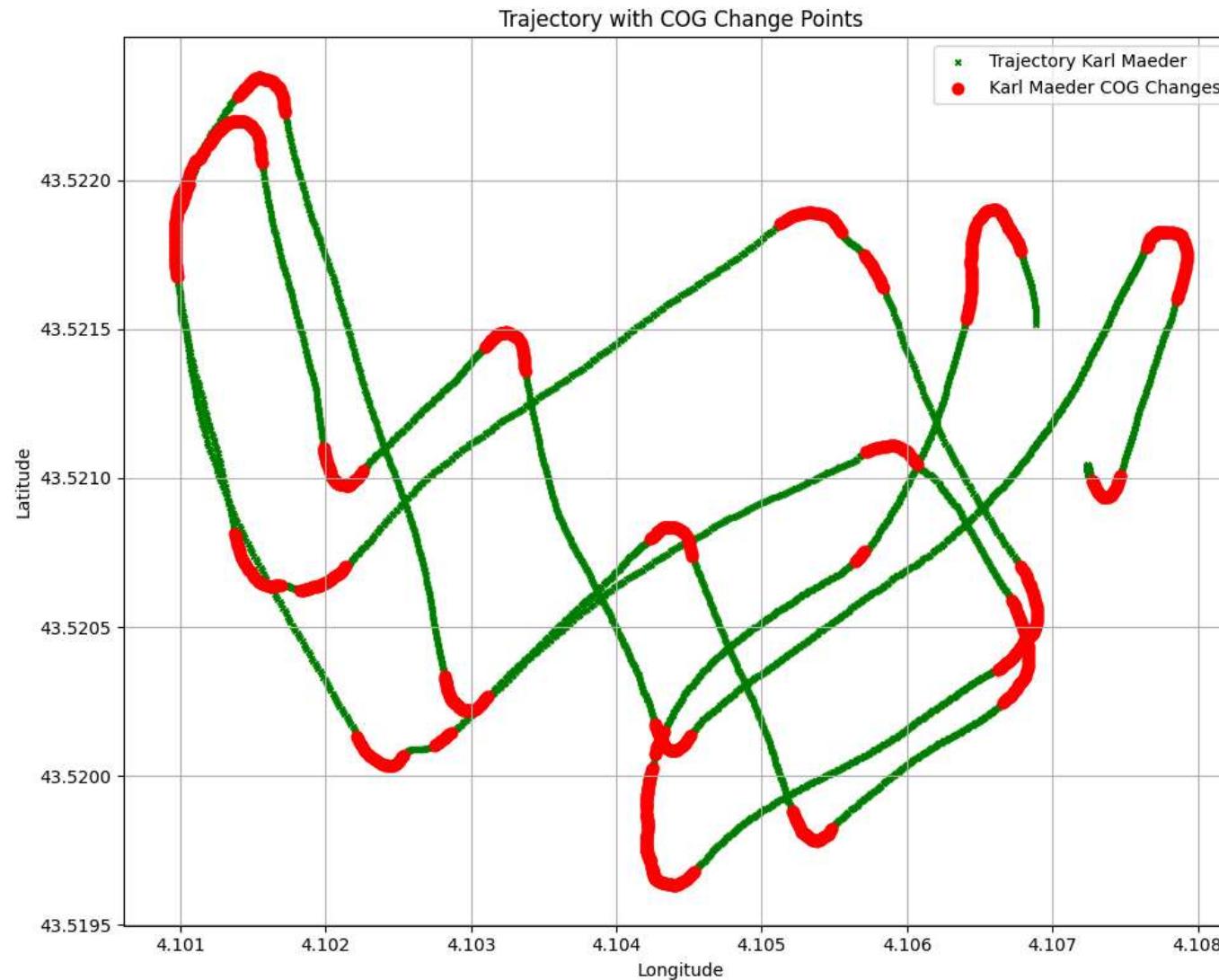
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\08_06\Karl\08_06_Run1



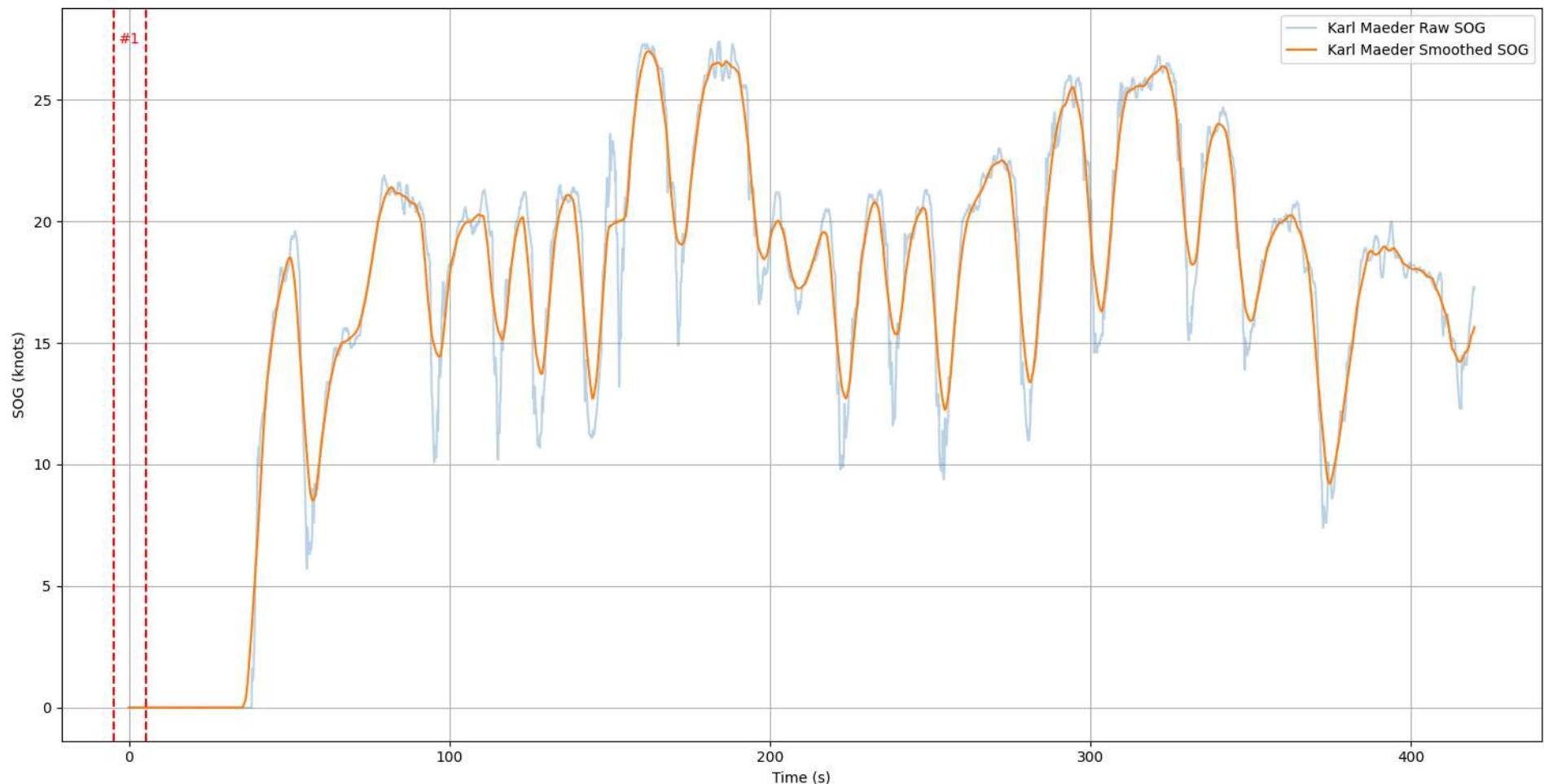
SOG and Stable Intervals



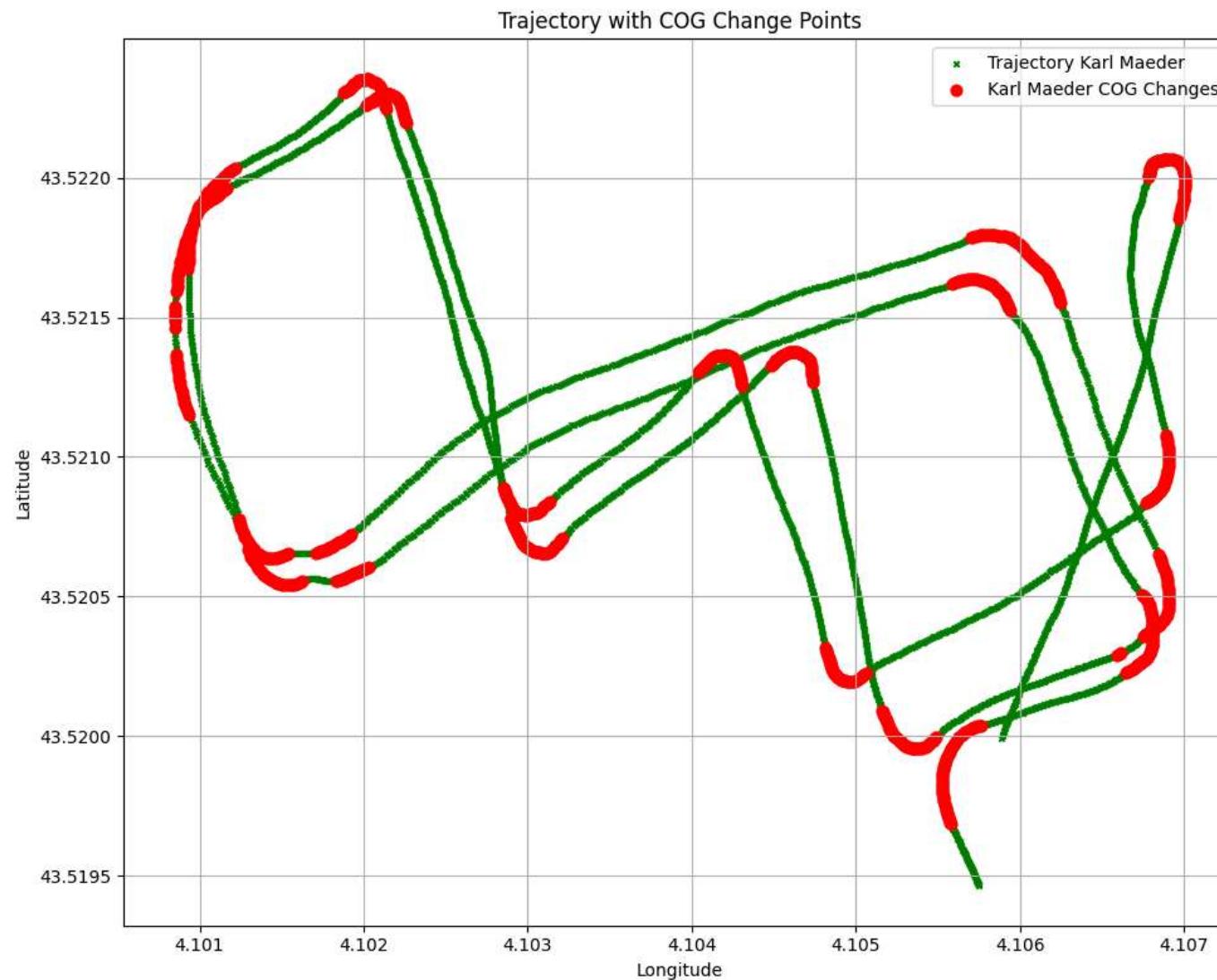
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\08_06\Karl\08_06_Run2

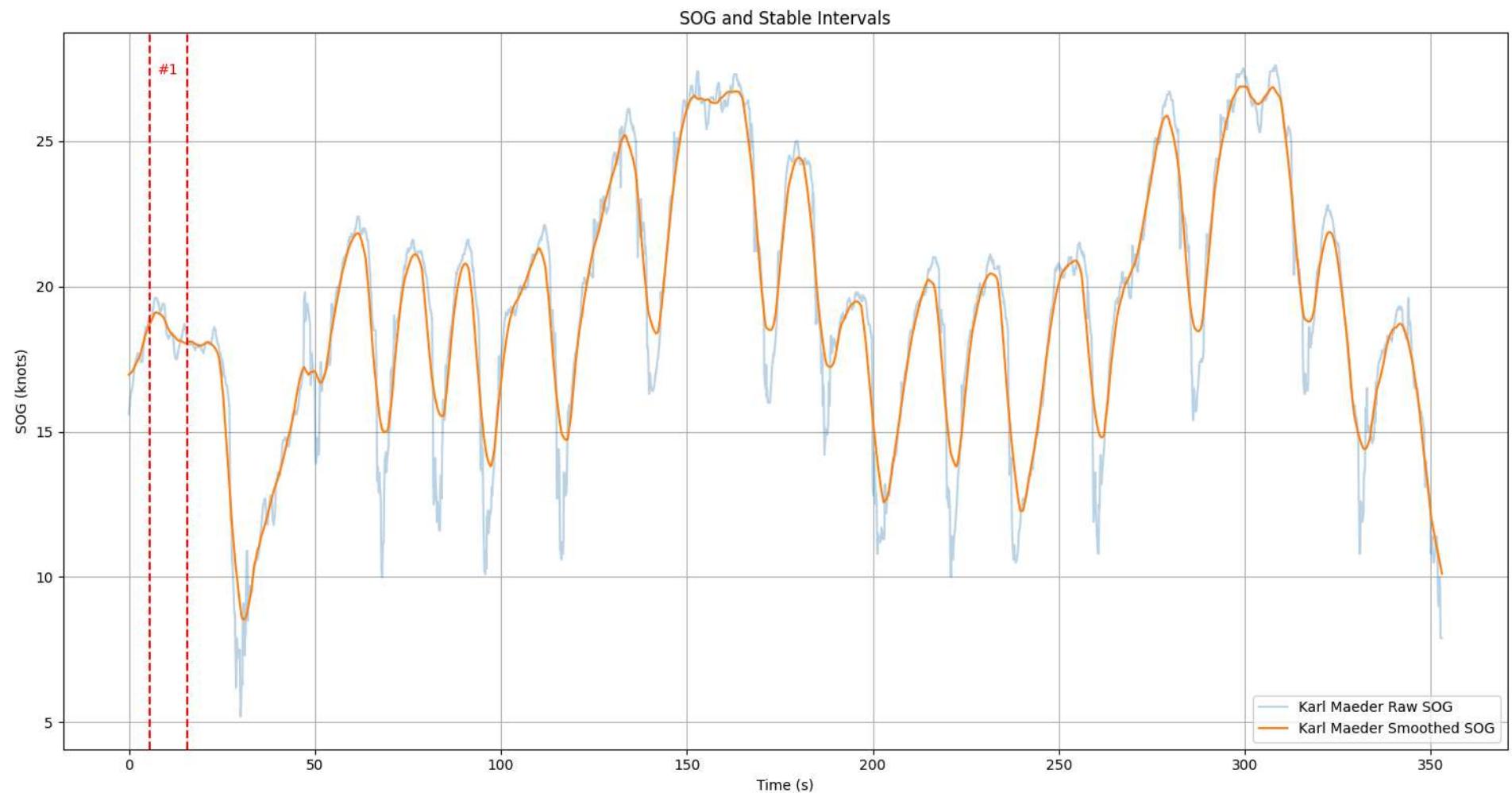


SOG and Stable Intervals

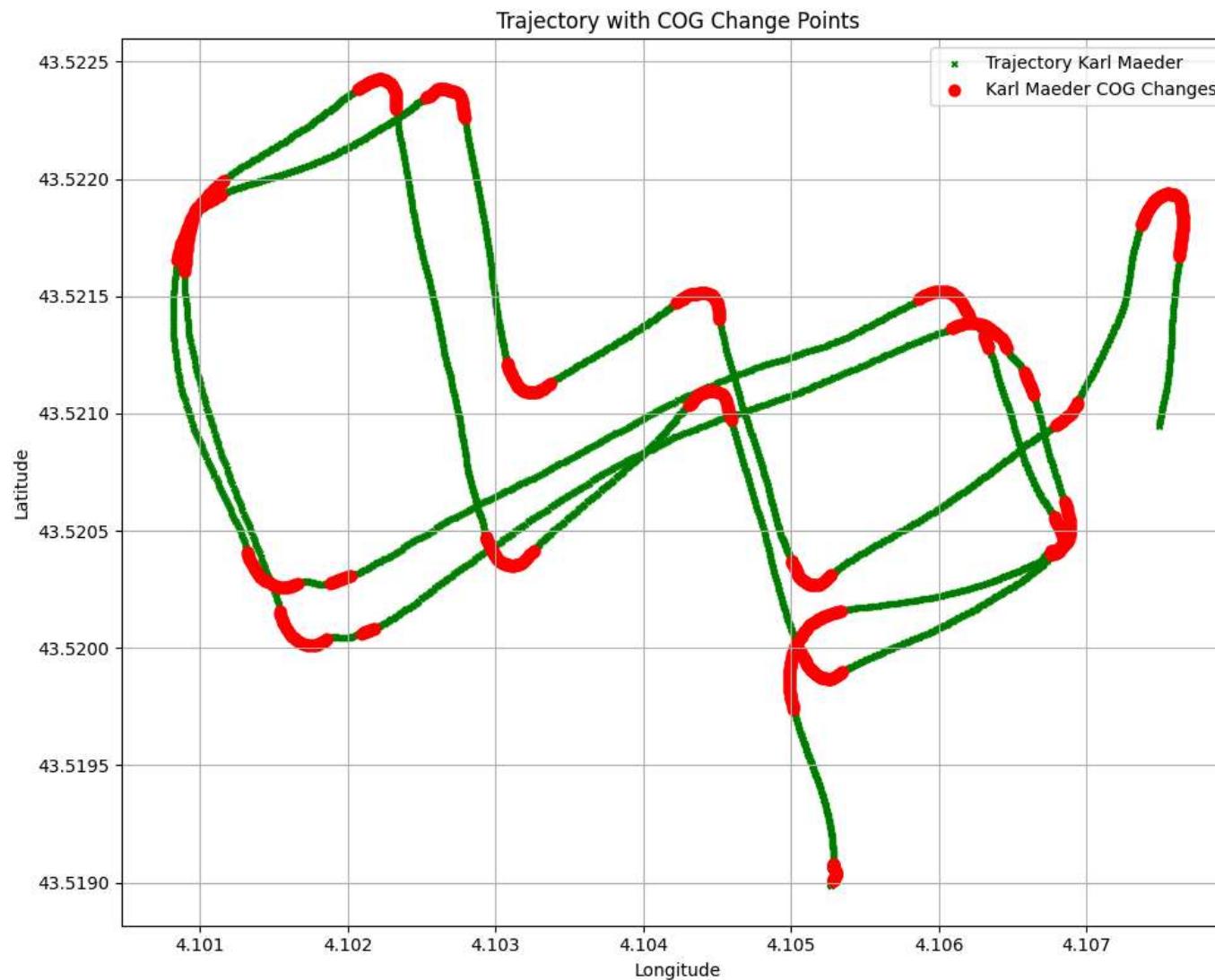


✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\08_06\Karl\08_06_Run3

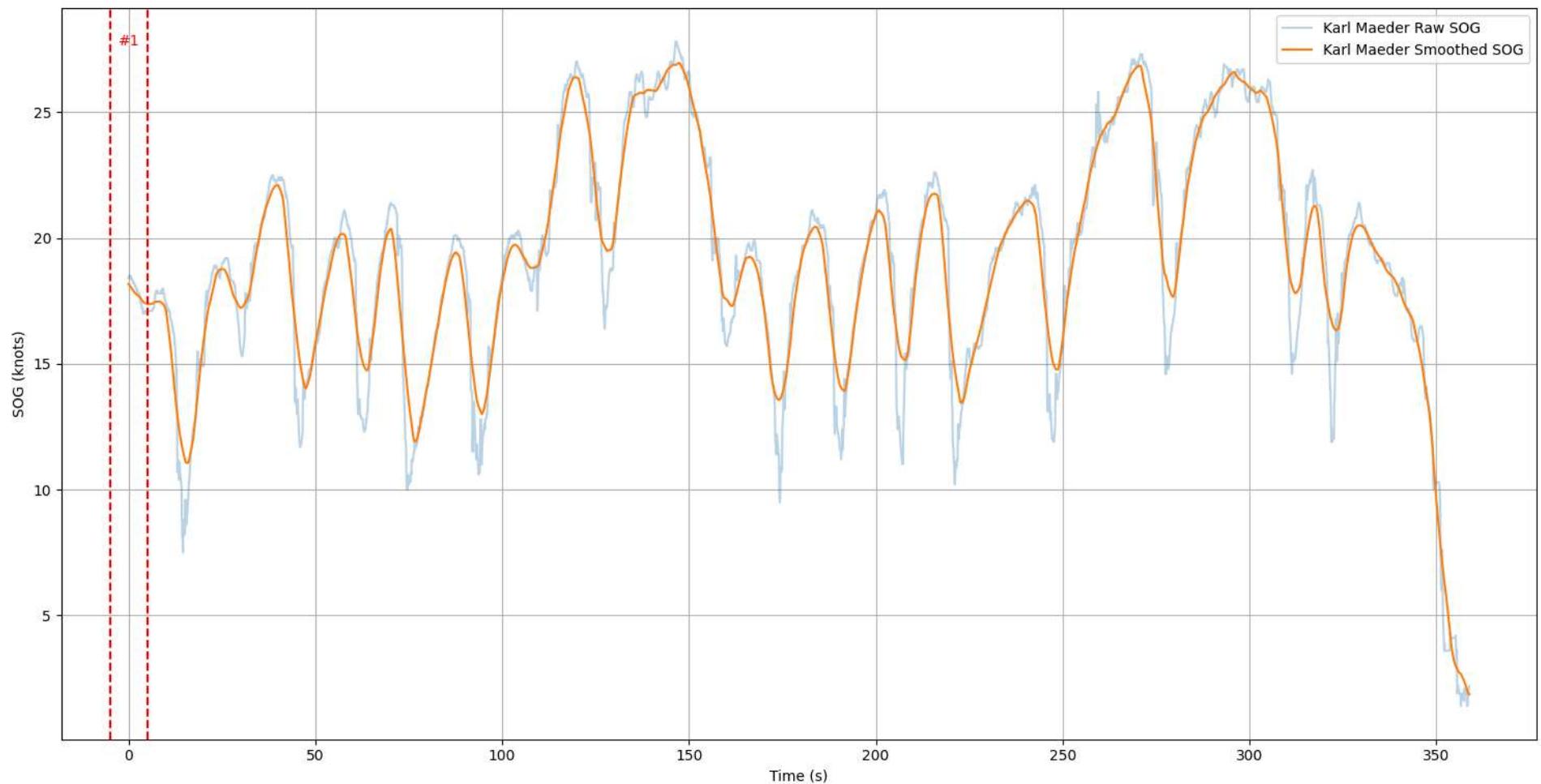




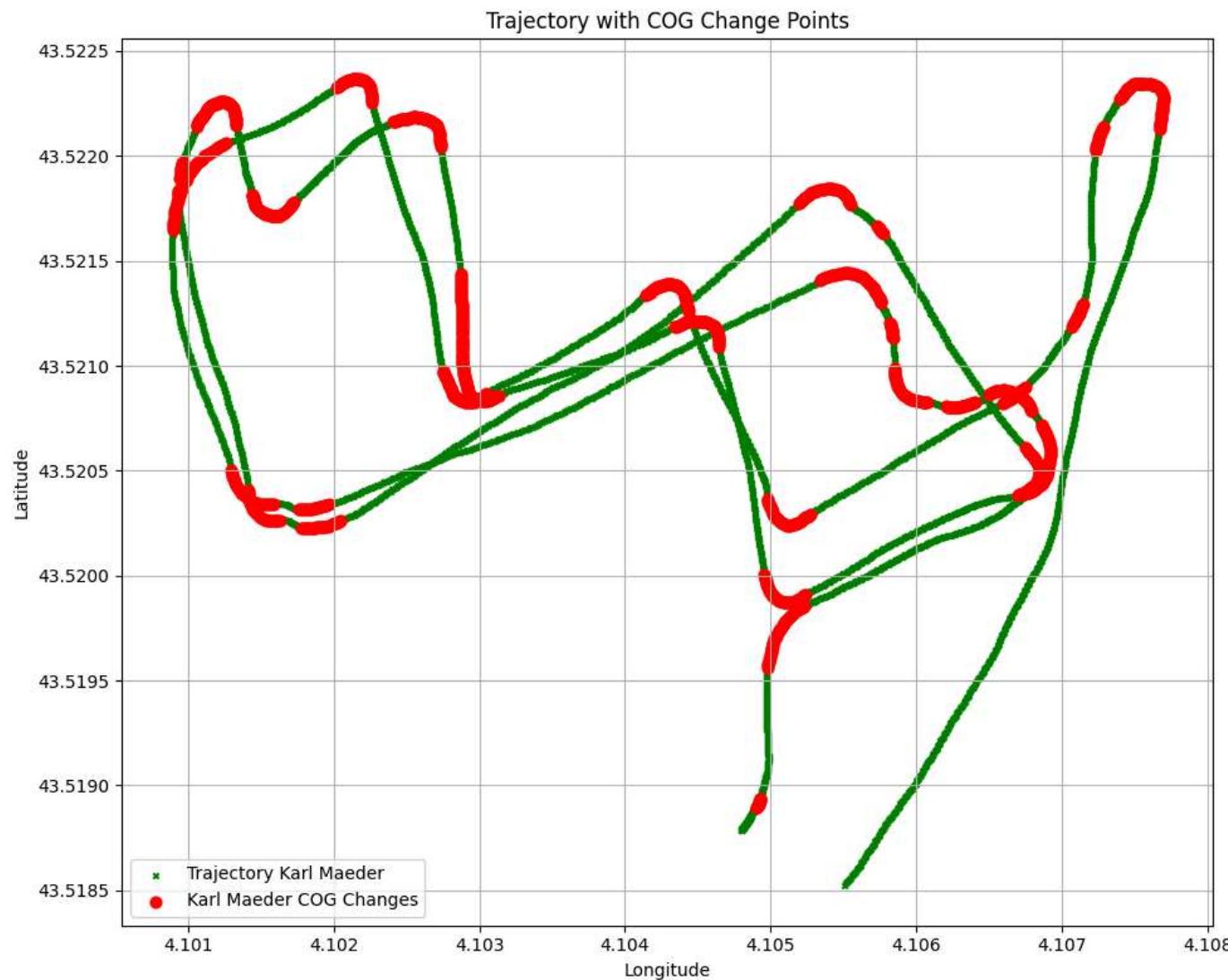
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\08_06\Karl\08_06_Run4



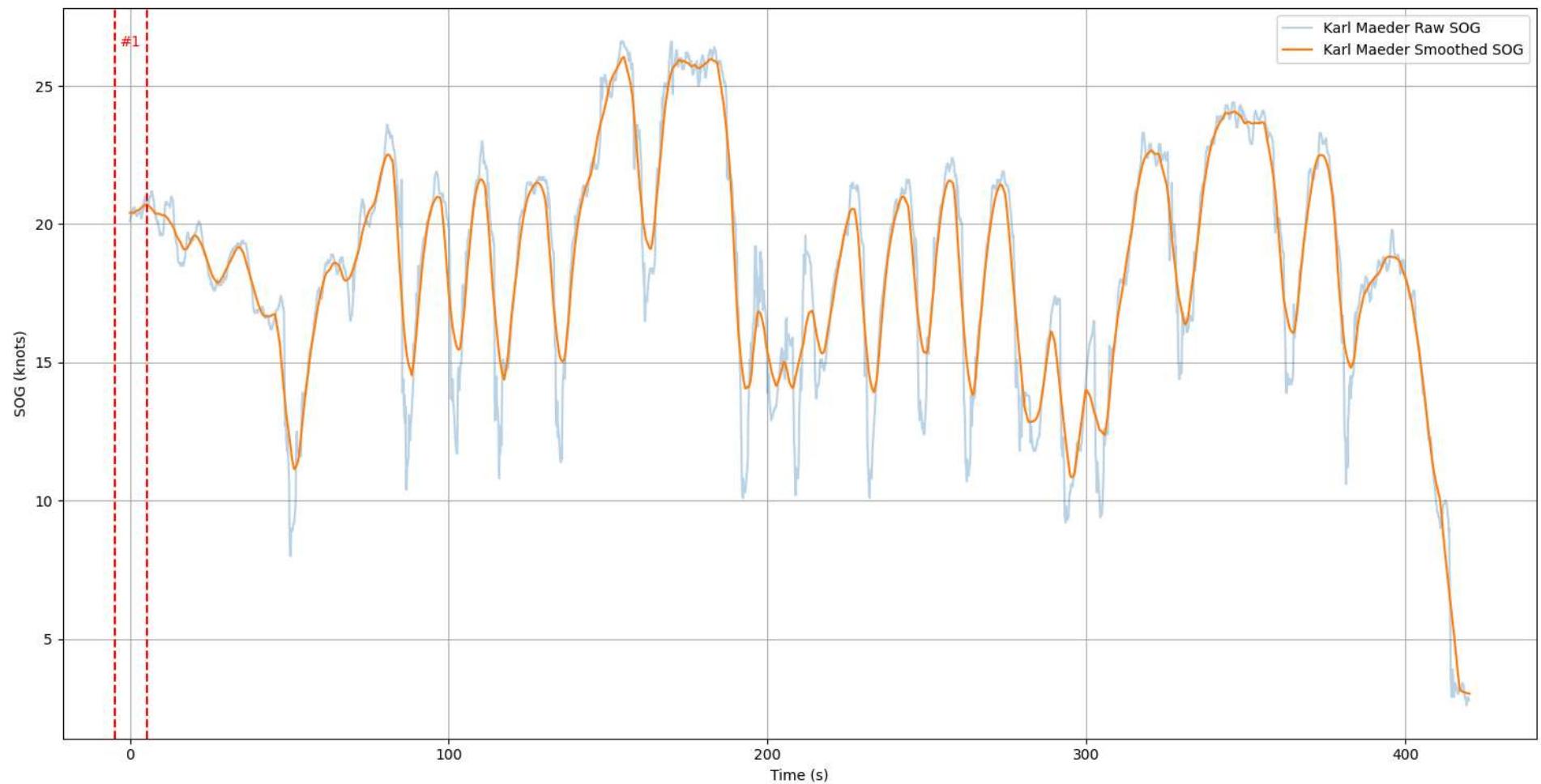
SOG and Stable Intervals



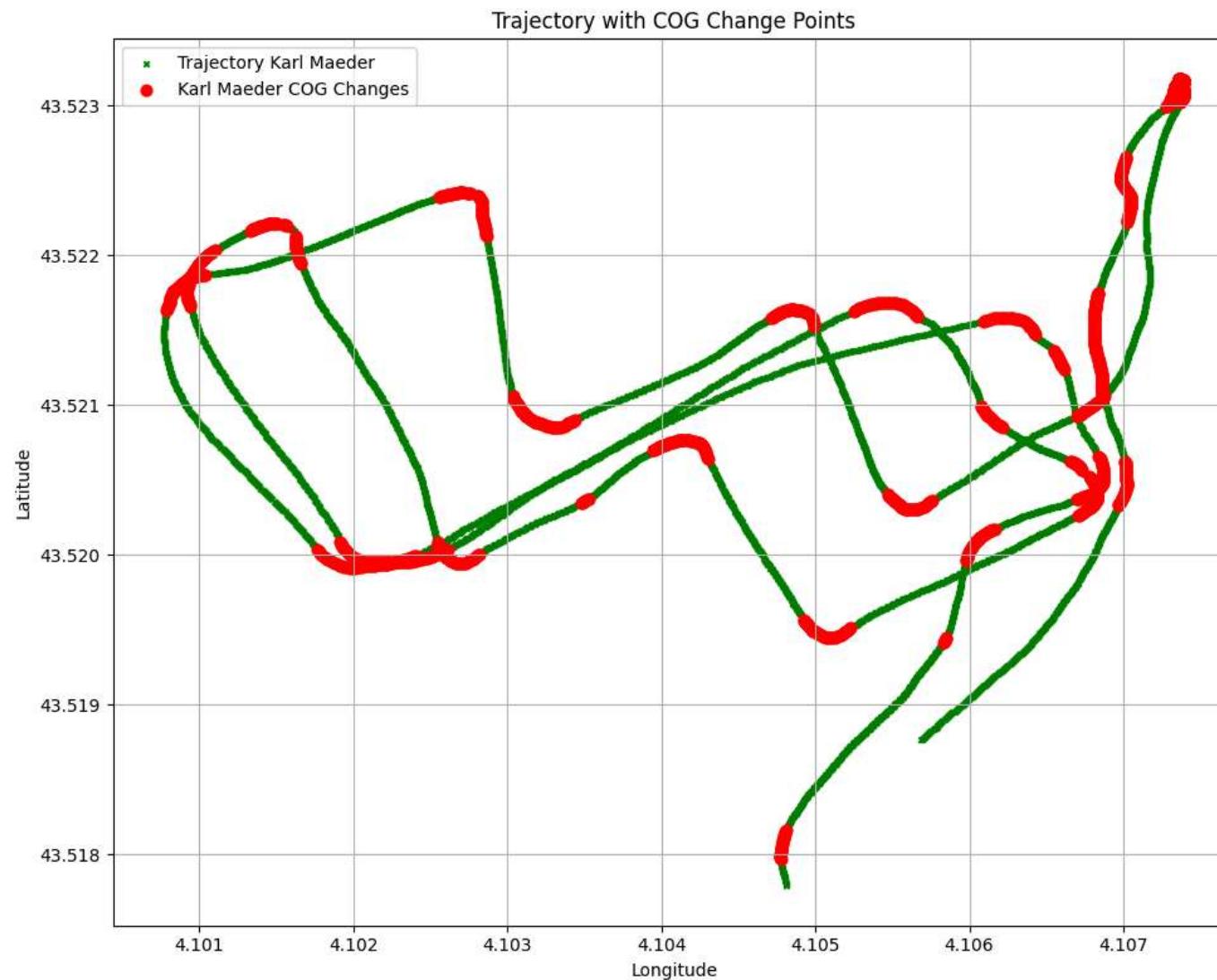
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans/Data_Sailnjord/Maneuvers\08_06\Karl\08_06_Run5

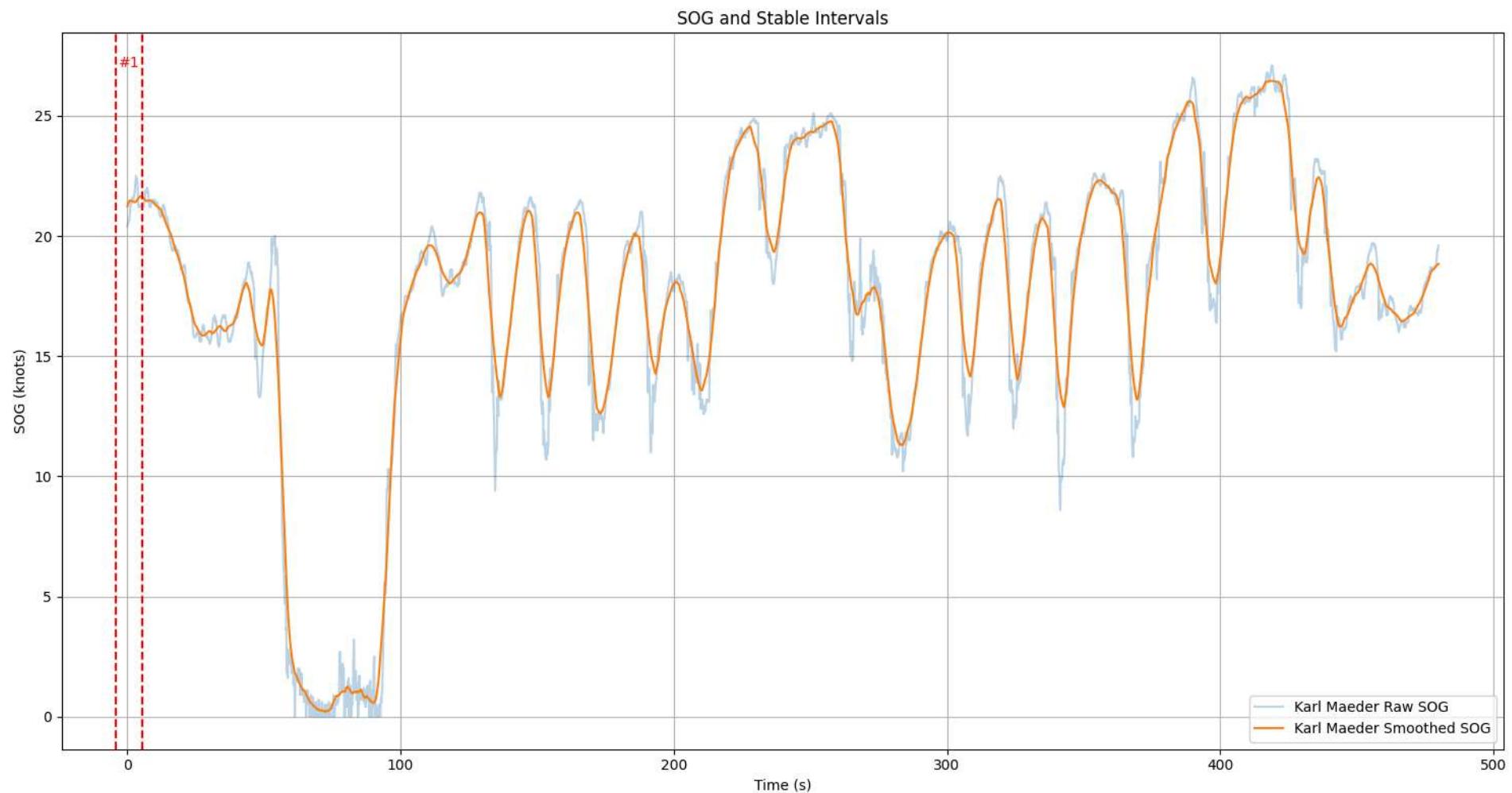


SOG and Stable Intervals

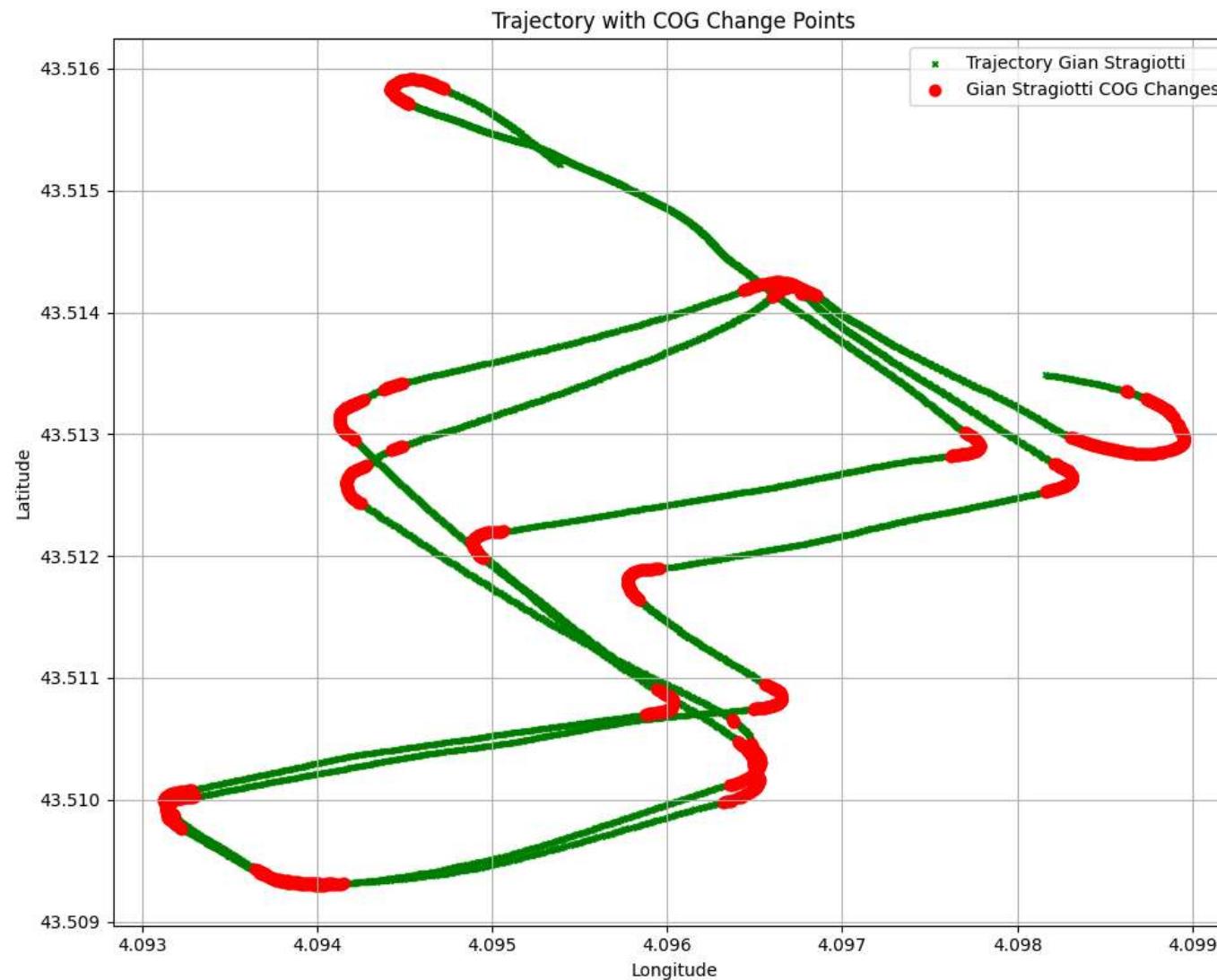


✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\08_06\Karl\08_06_Run6

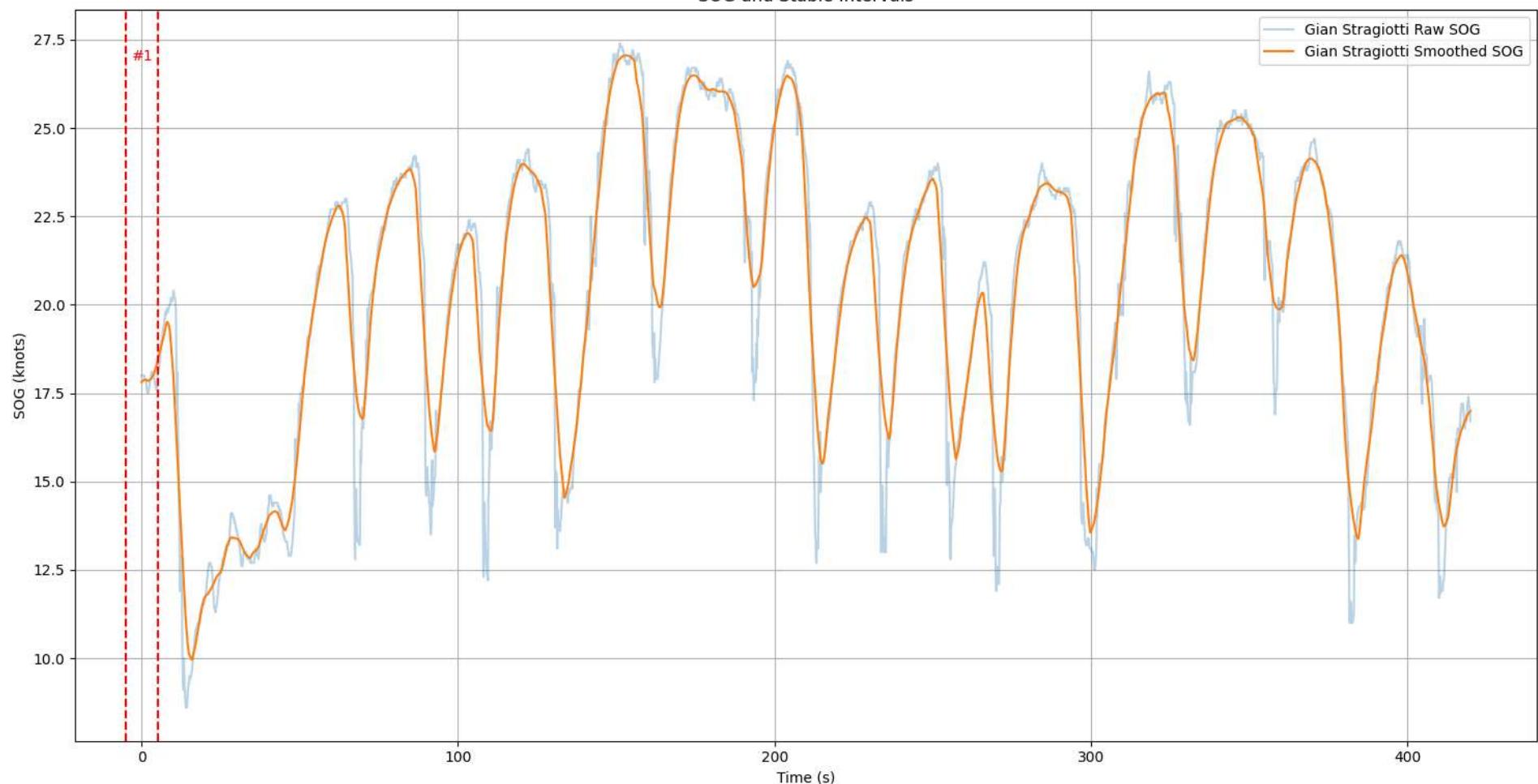




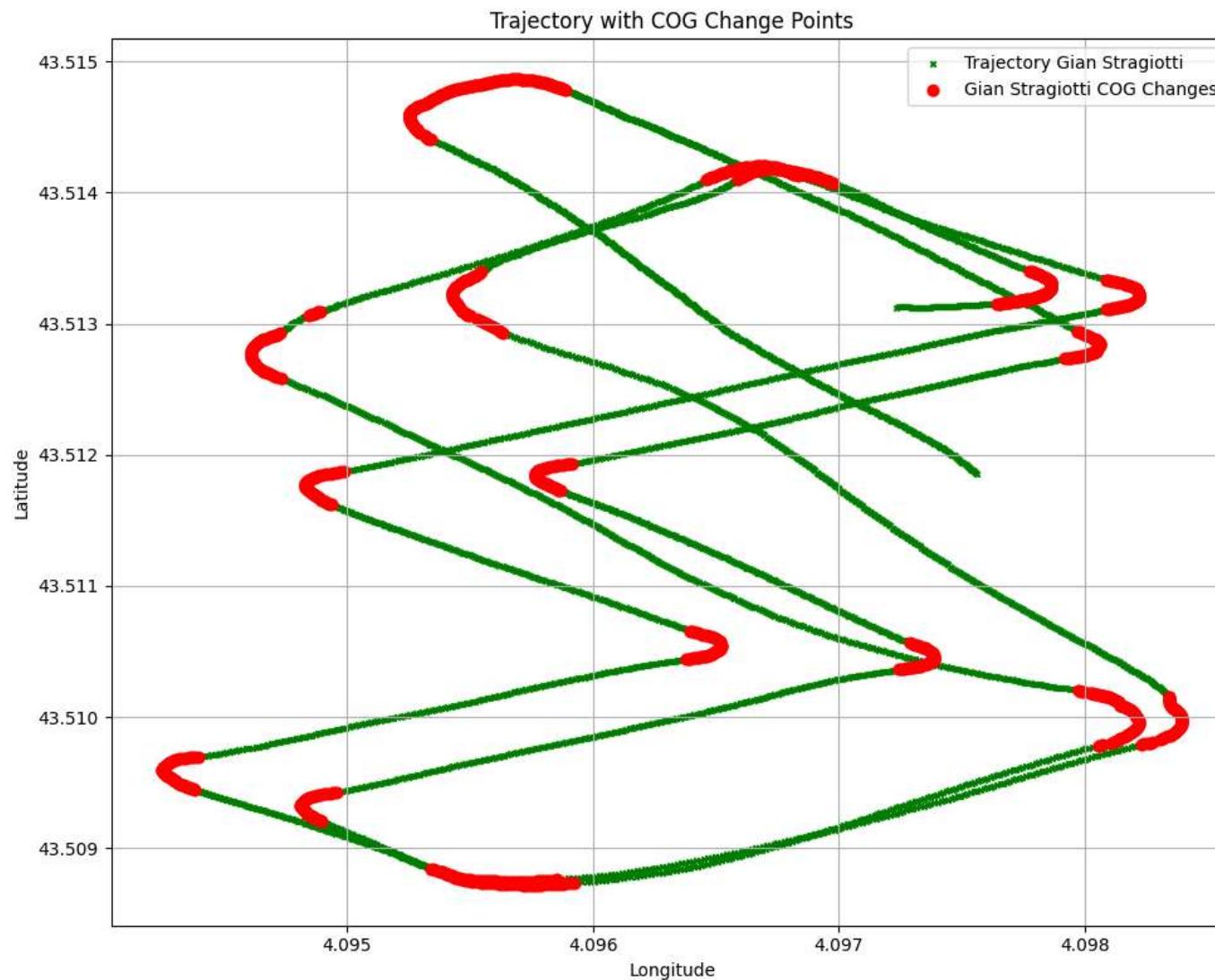
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Gian Stragiotti.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Gian\11_06_Run1



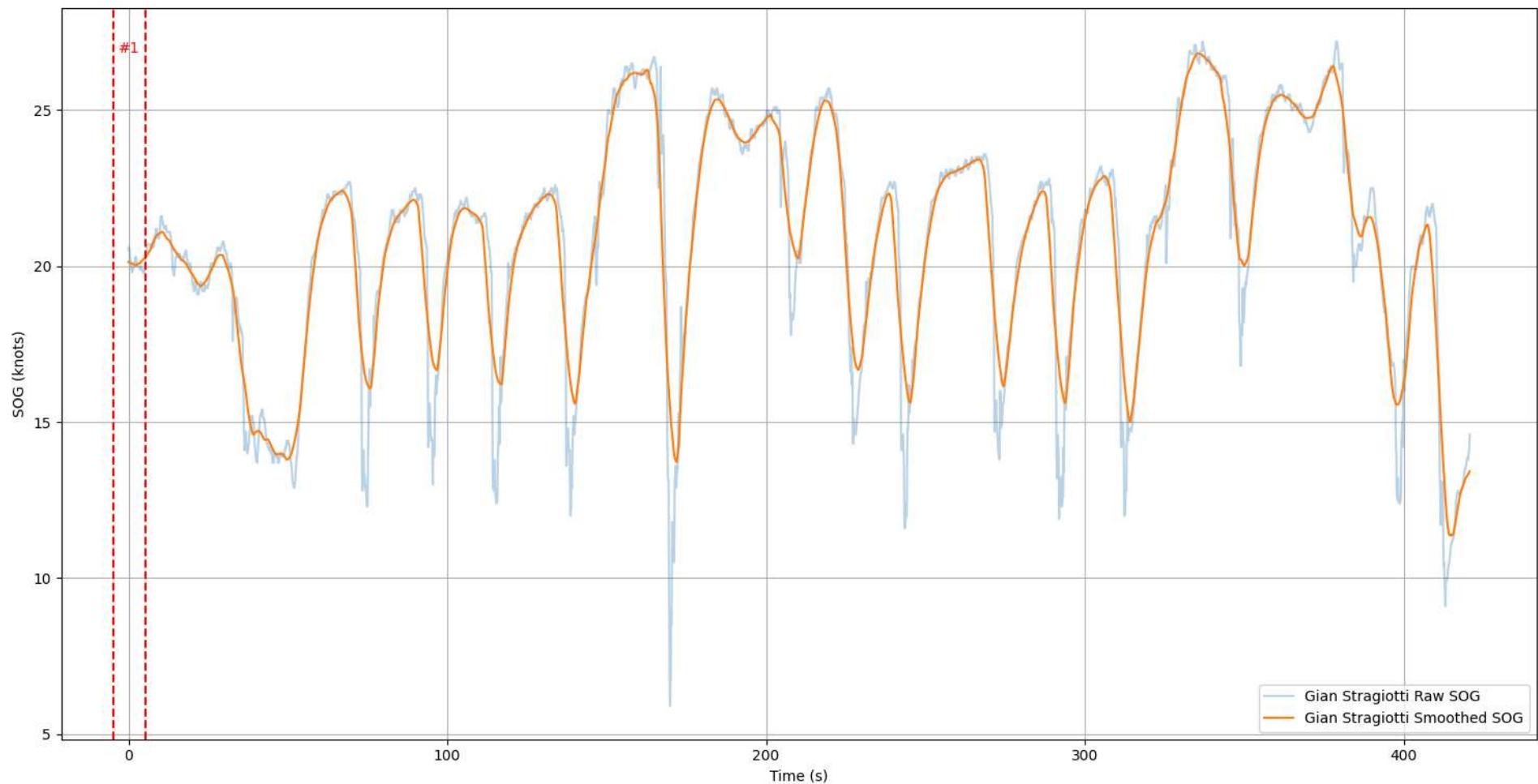
SOG and Stable Intervals



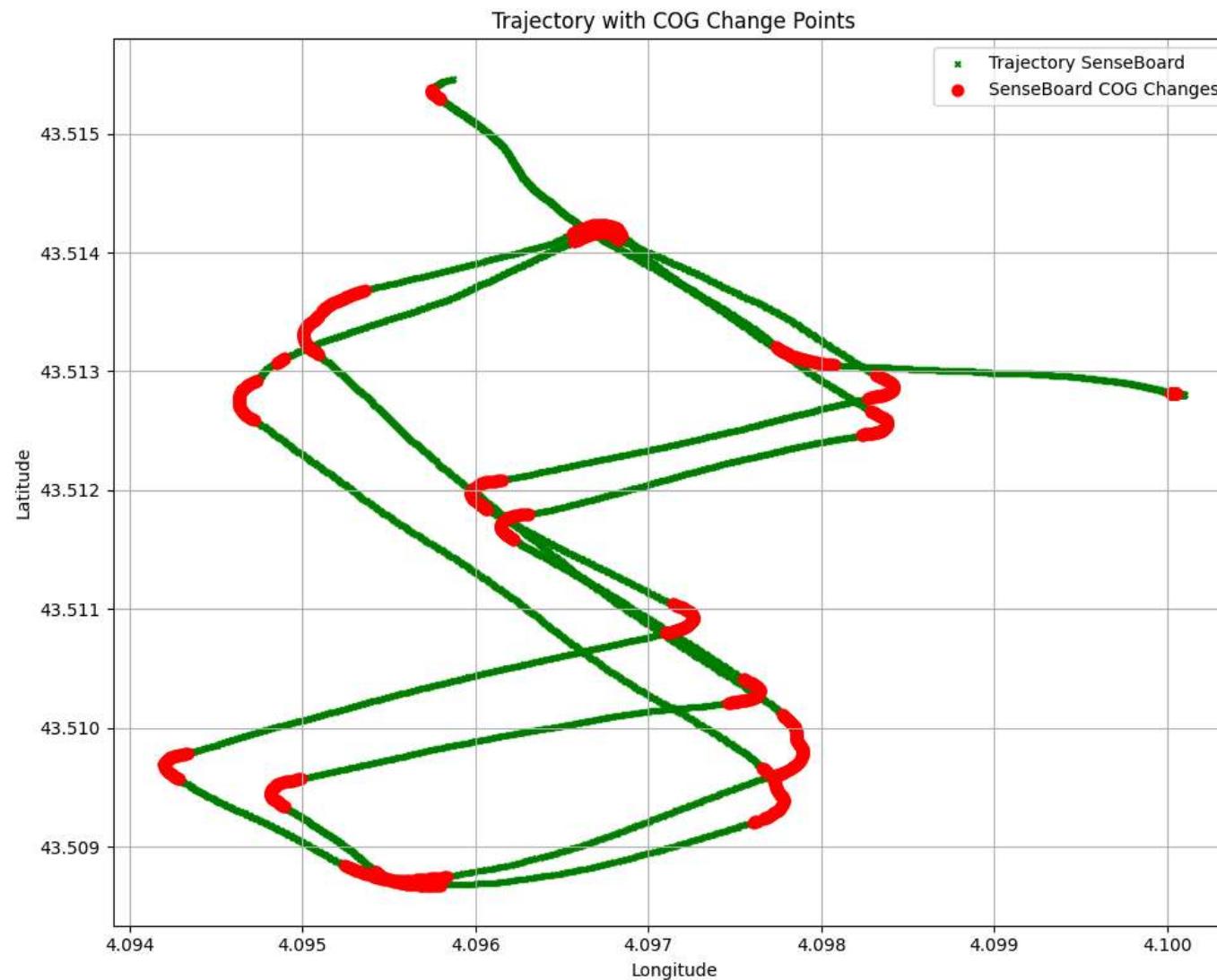
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Gian Stragiotti.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Gian\11_06_Run2



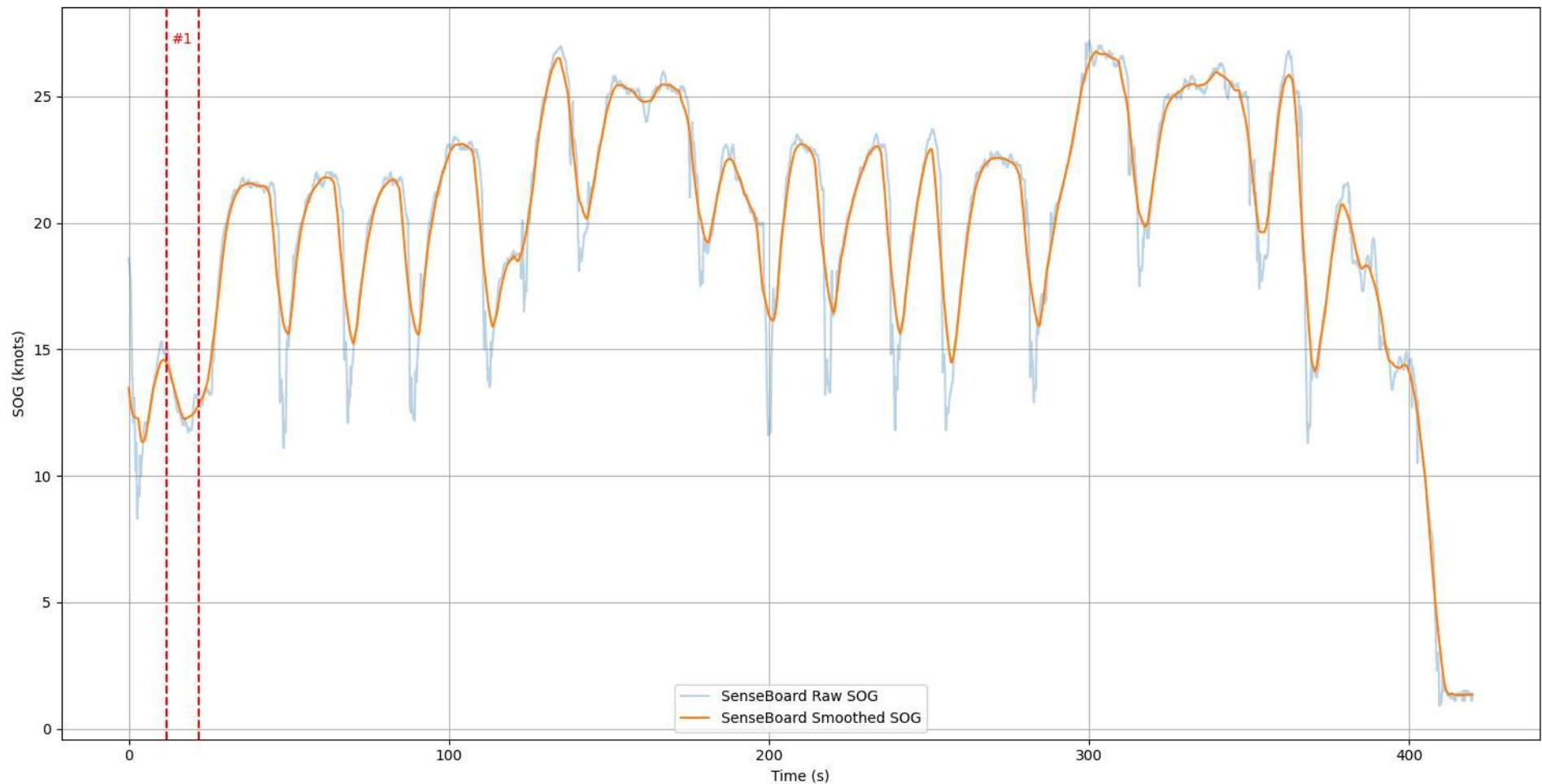
SOG and Stable Intervals



✓ Analyse réussie, nombre d'intervalles : 1
Analyse: SenseBoard.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Gian\11_06_Run3



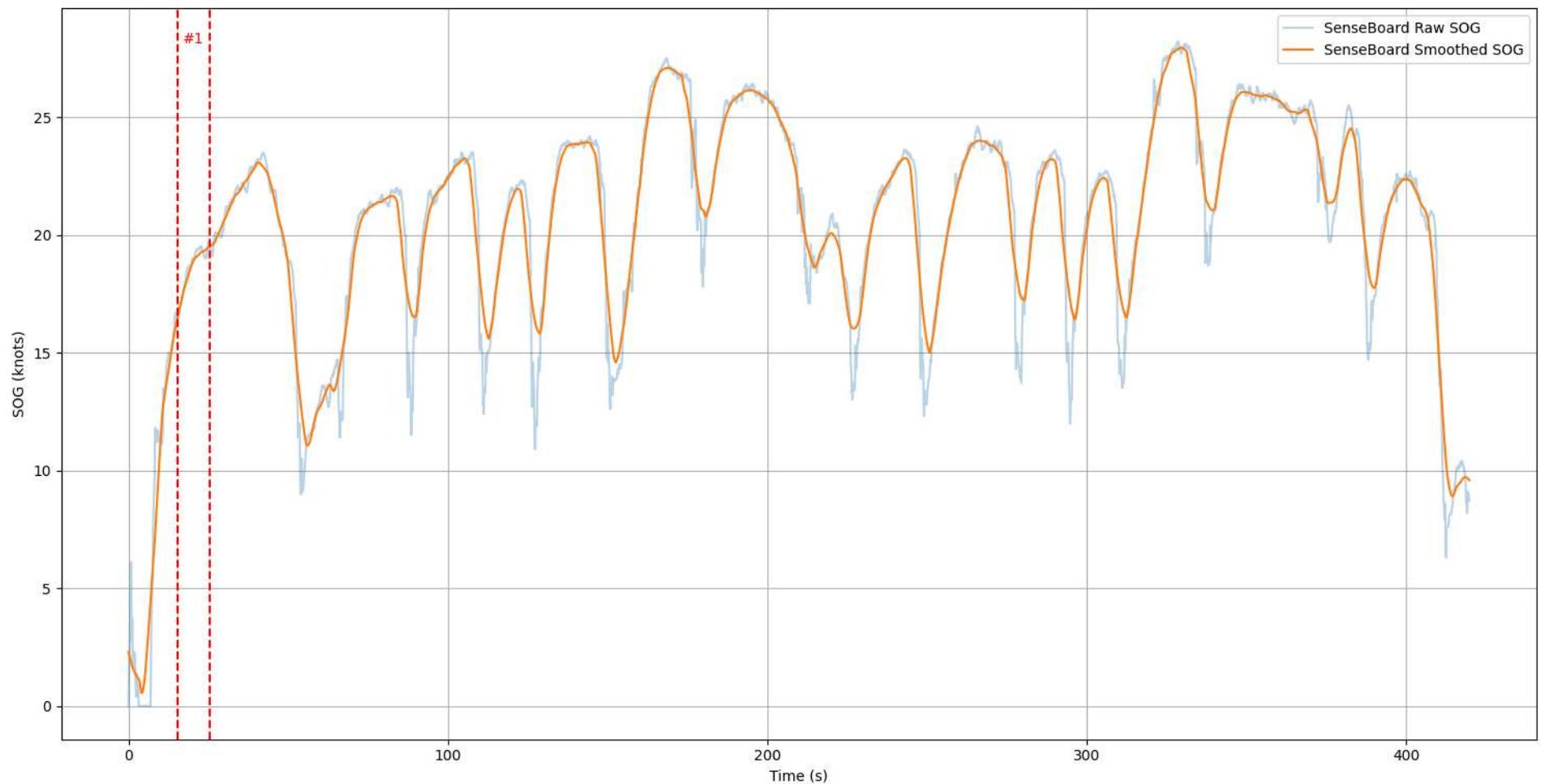
SOG and Stable Intervals



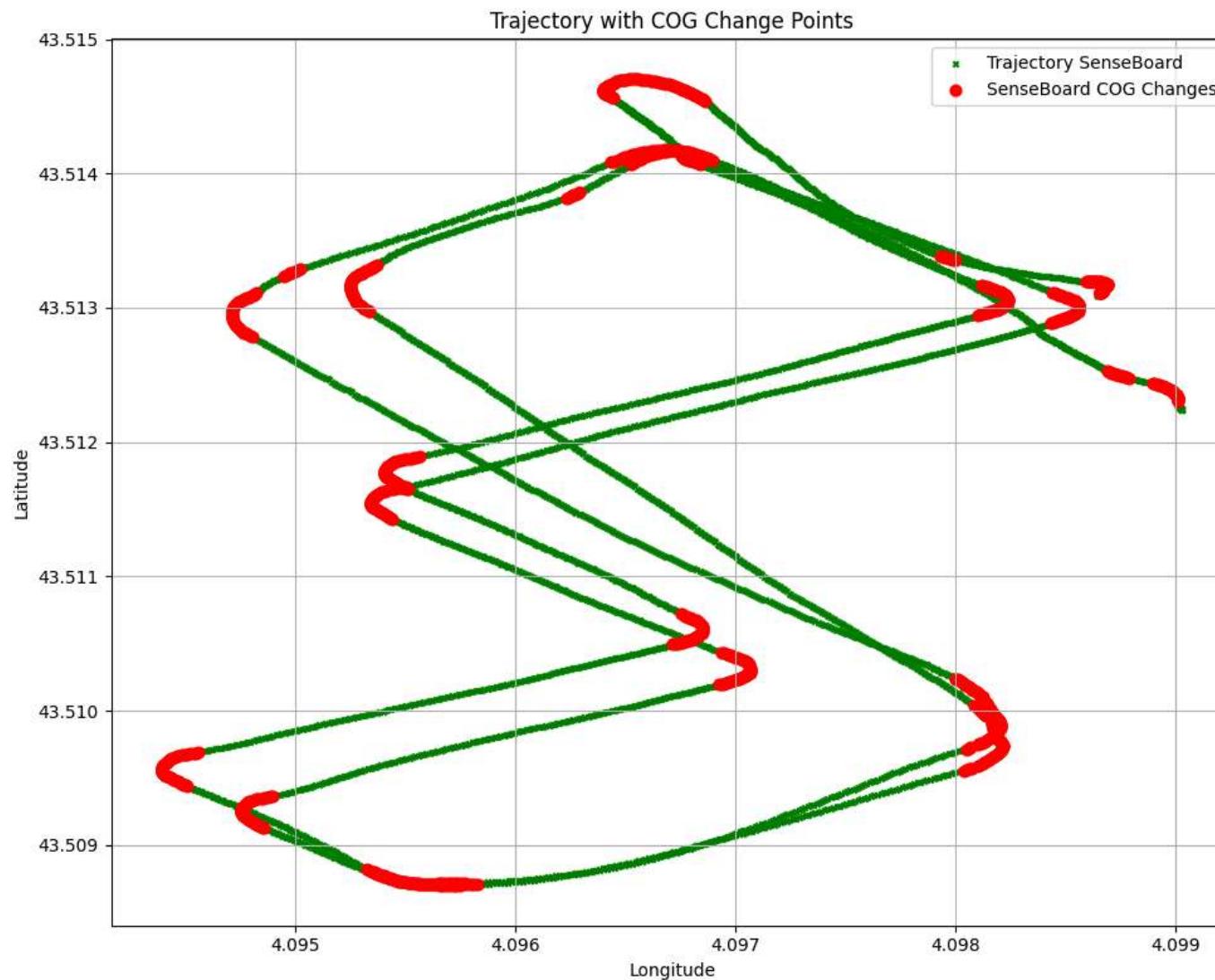
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: SenseBoard.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Gian\11_06_Run4



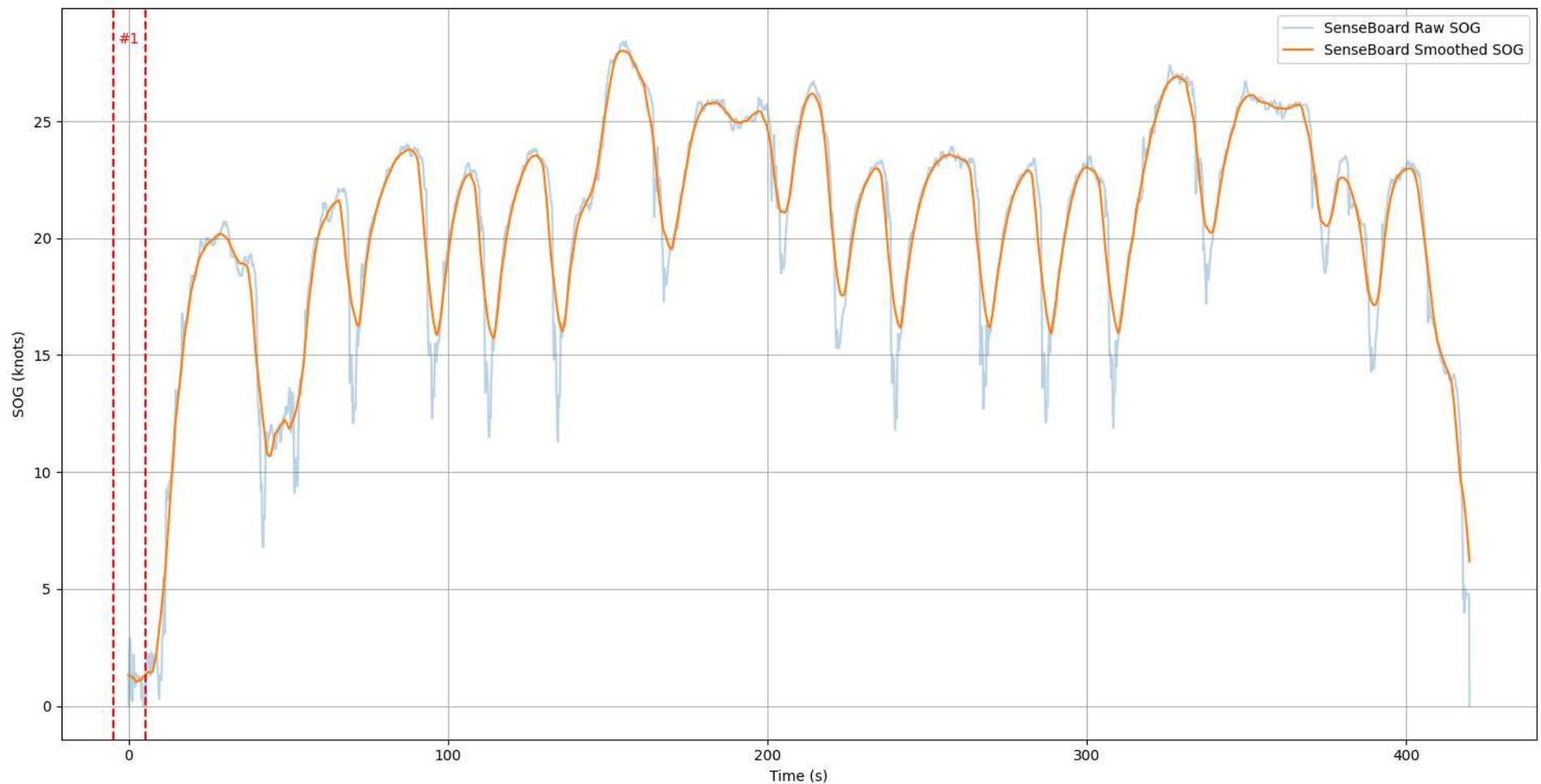
SOG and Stable Intervals



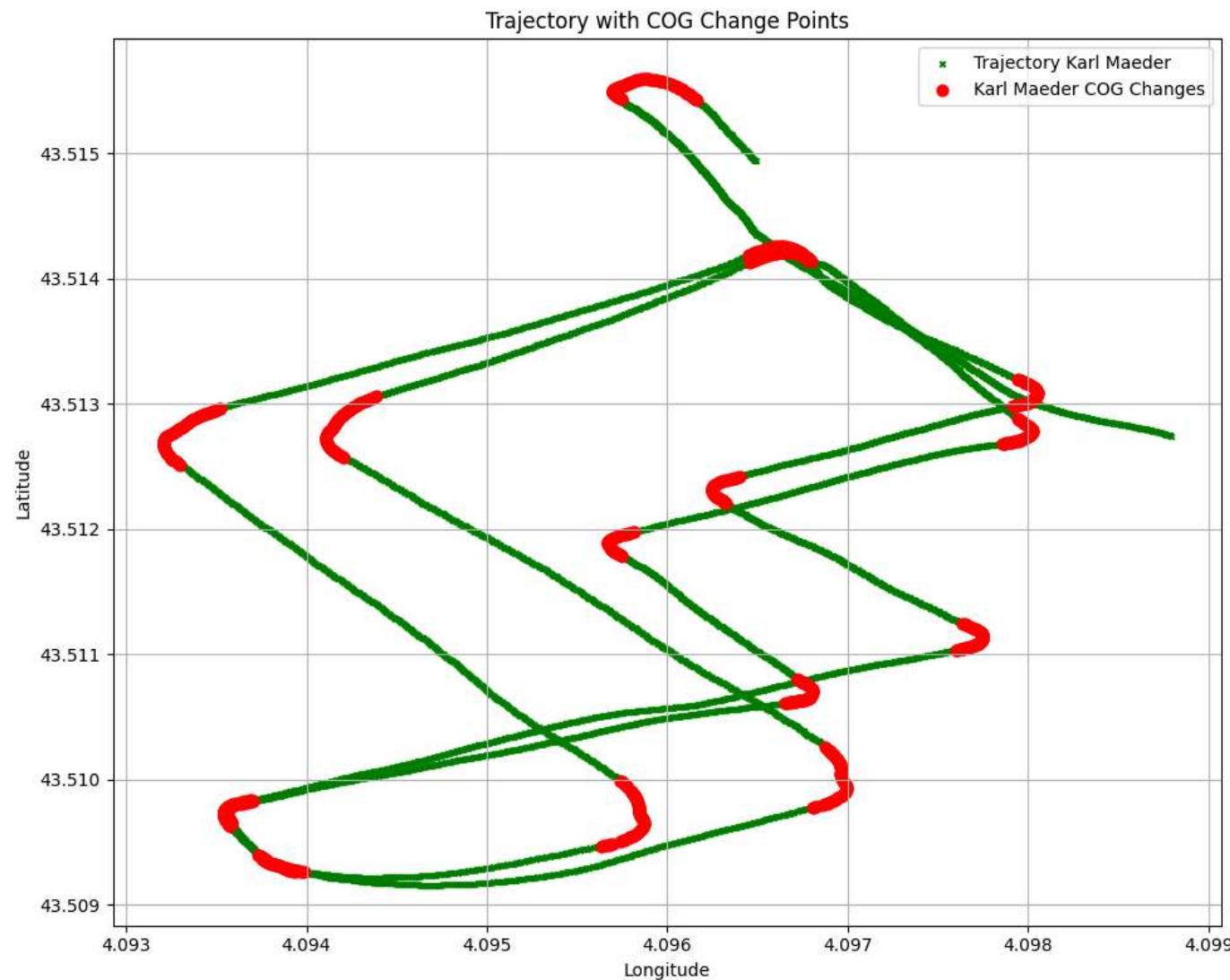
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: SenseBoard.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Gian\11_06_Run5



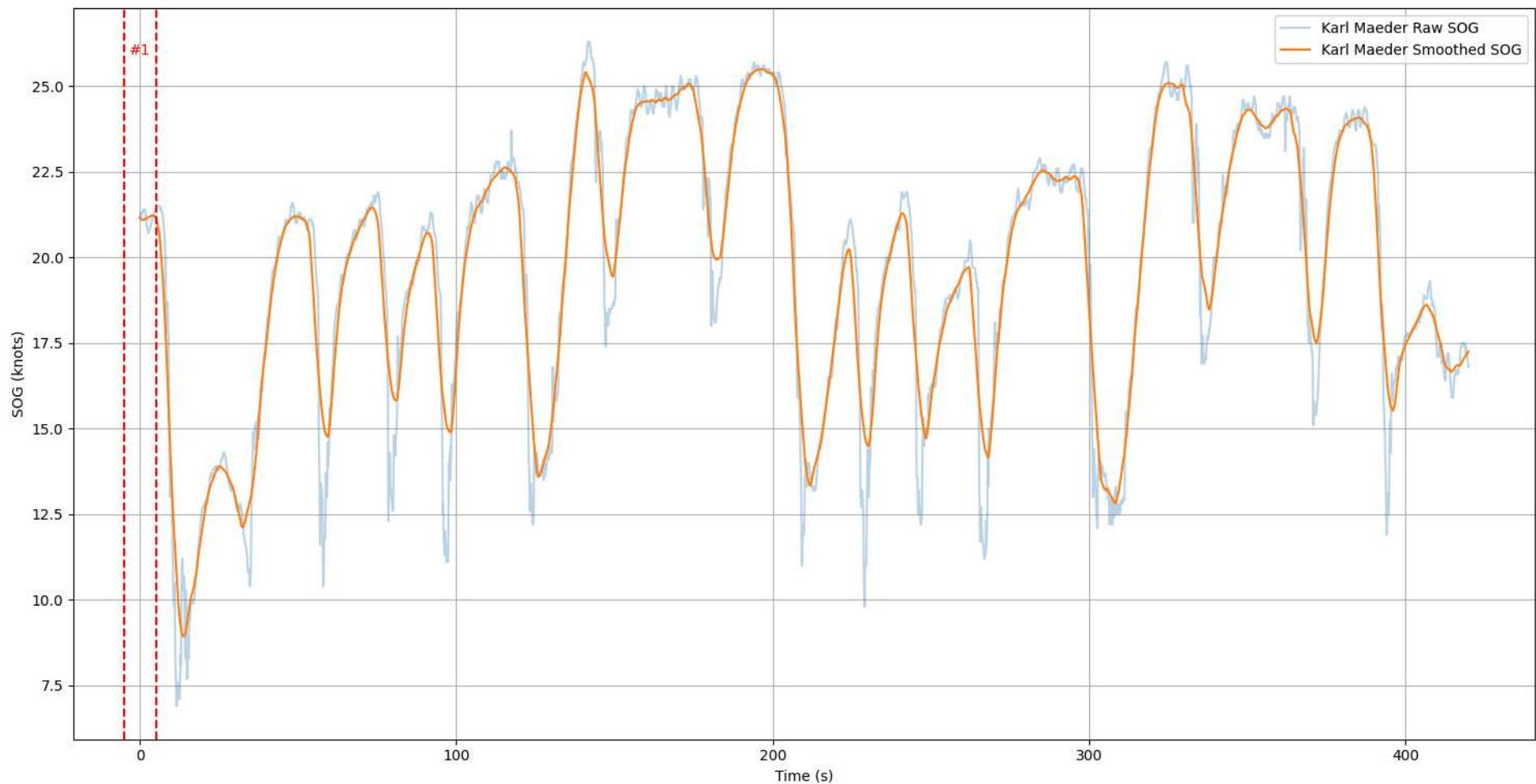
SOG and Stable Intervals



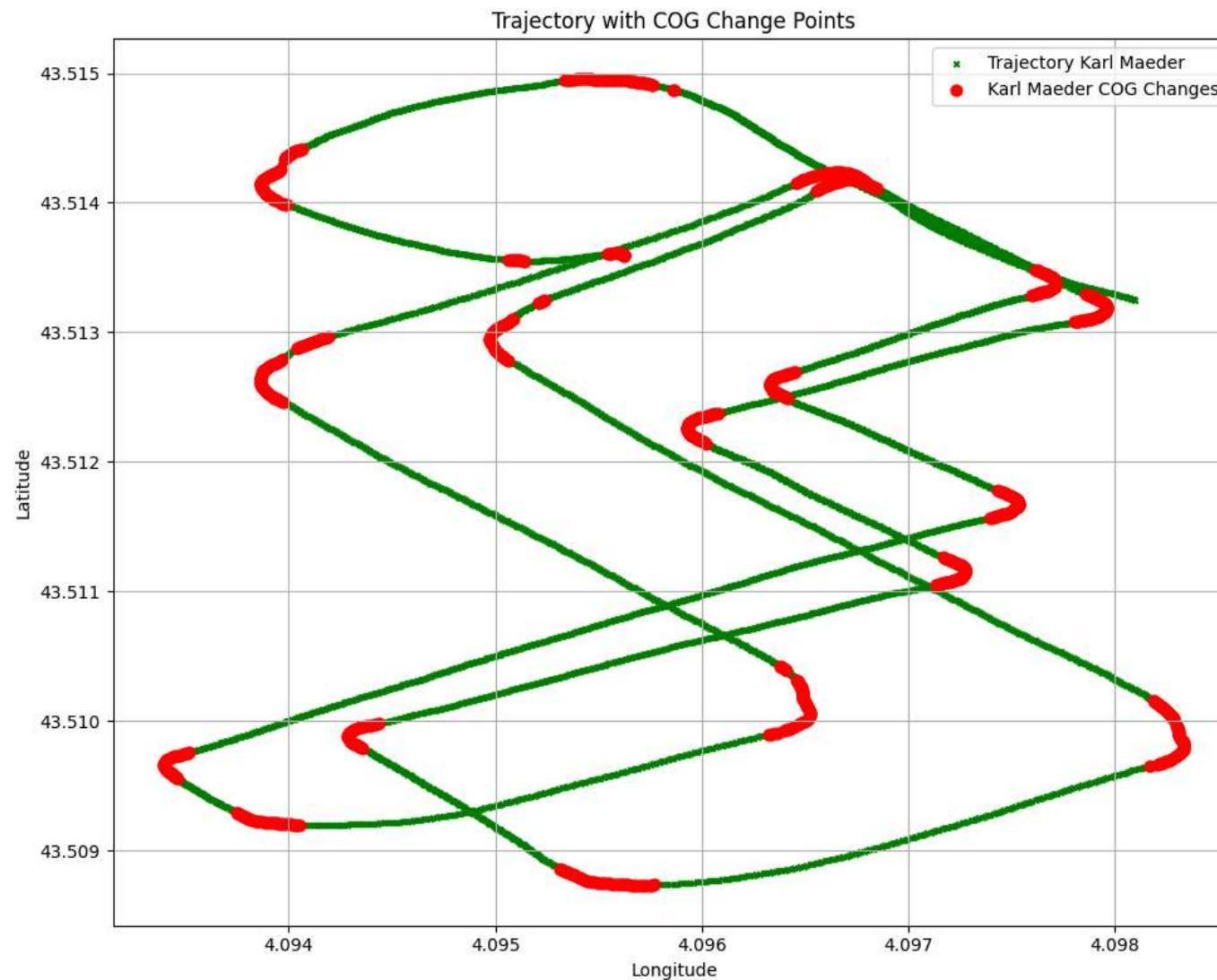
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Karl\11_06_Run1

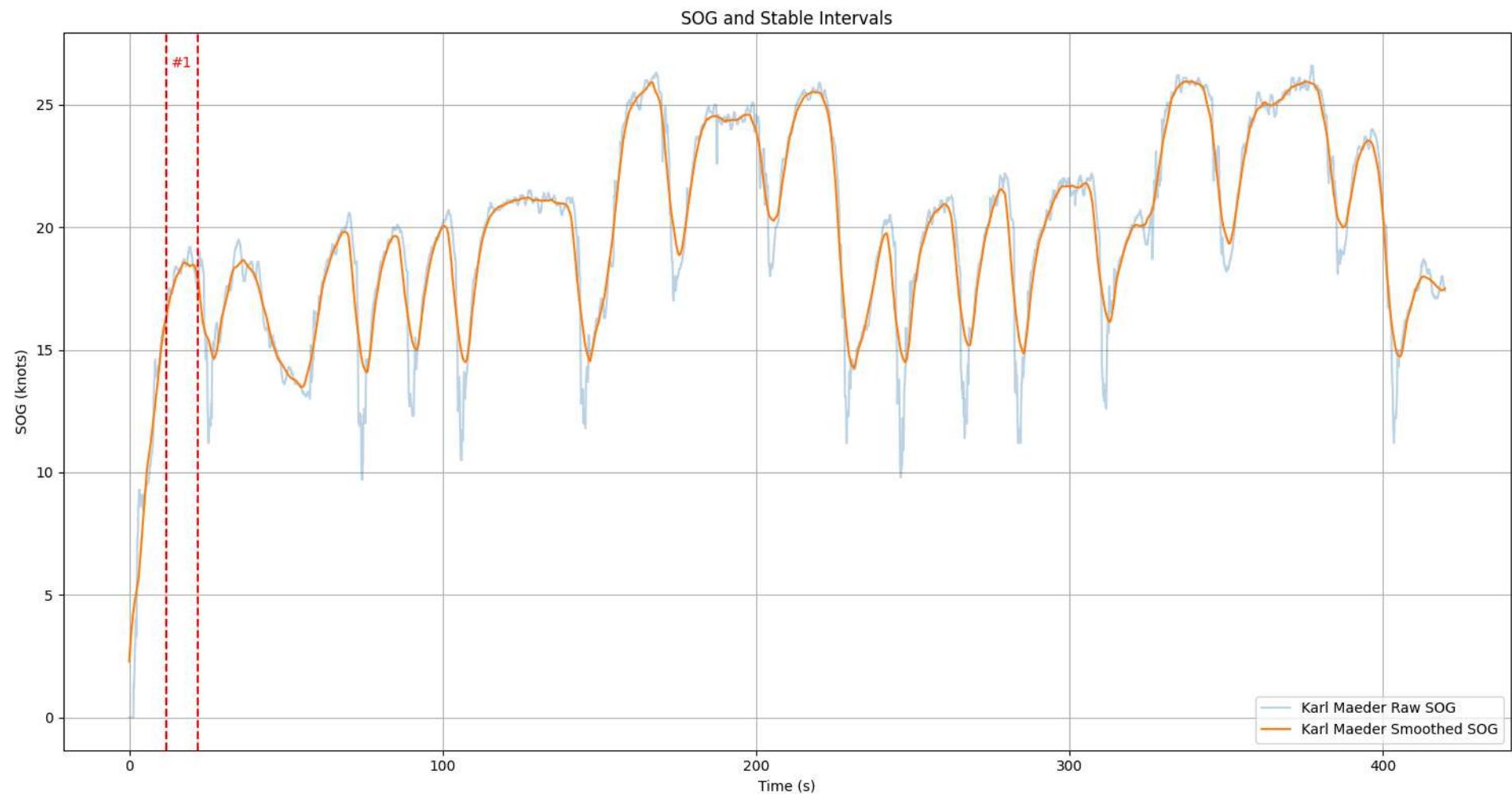


SOG and Stable Intervals

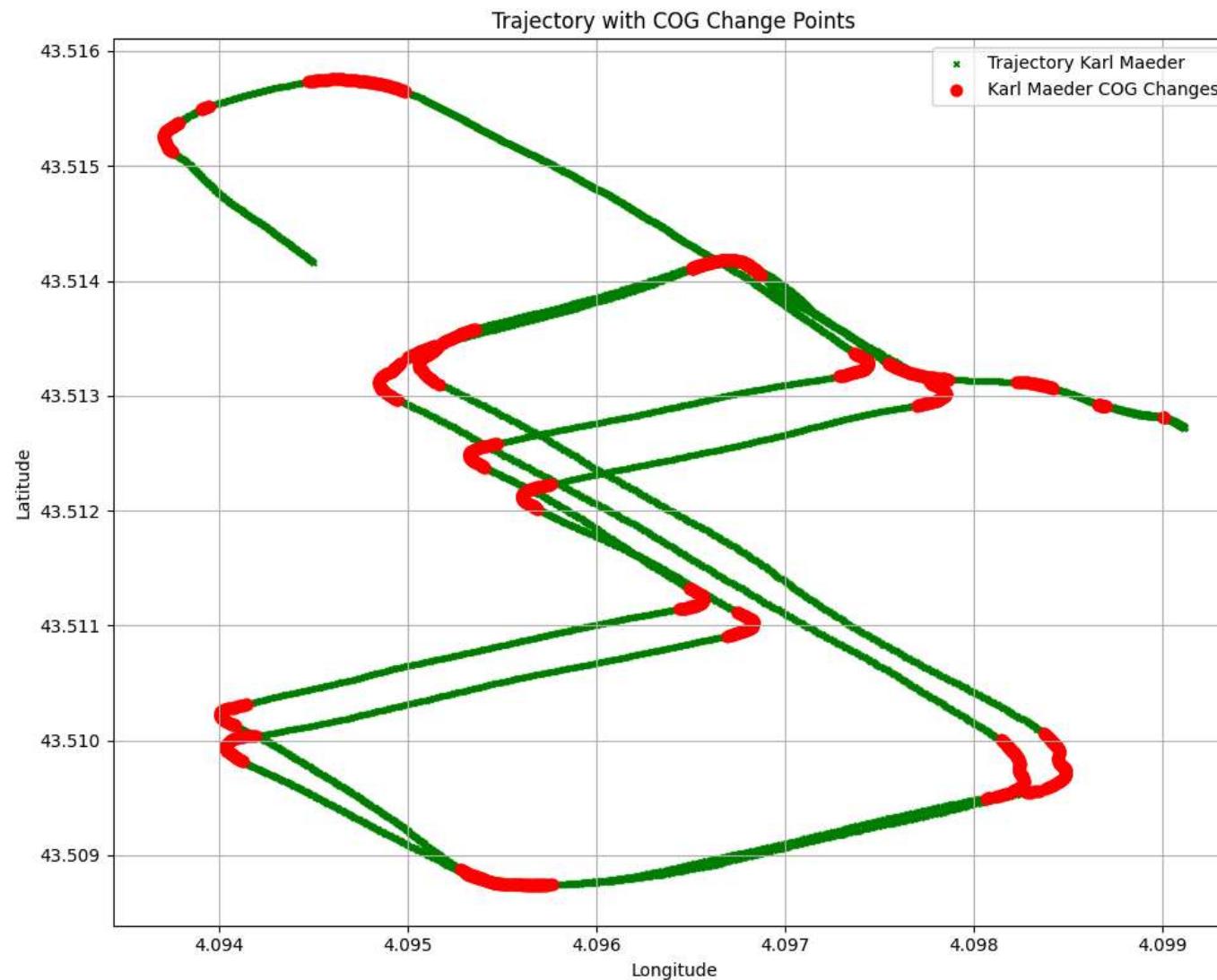


✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Karl\11_06_Run2

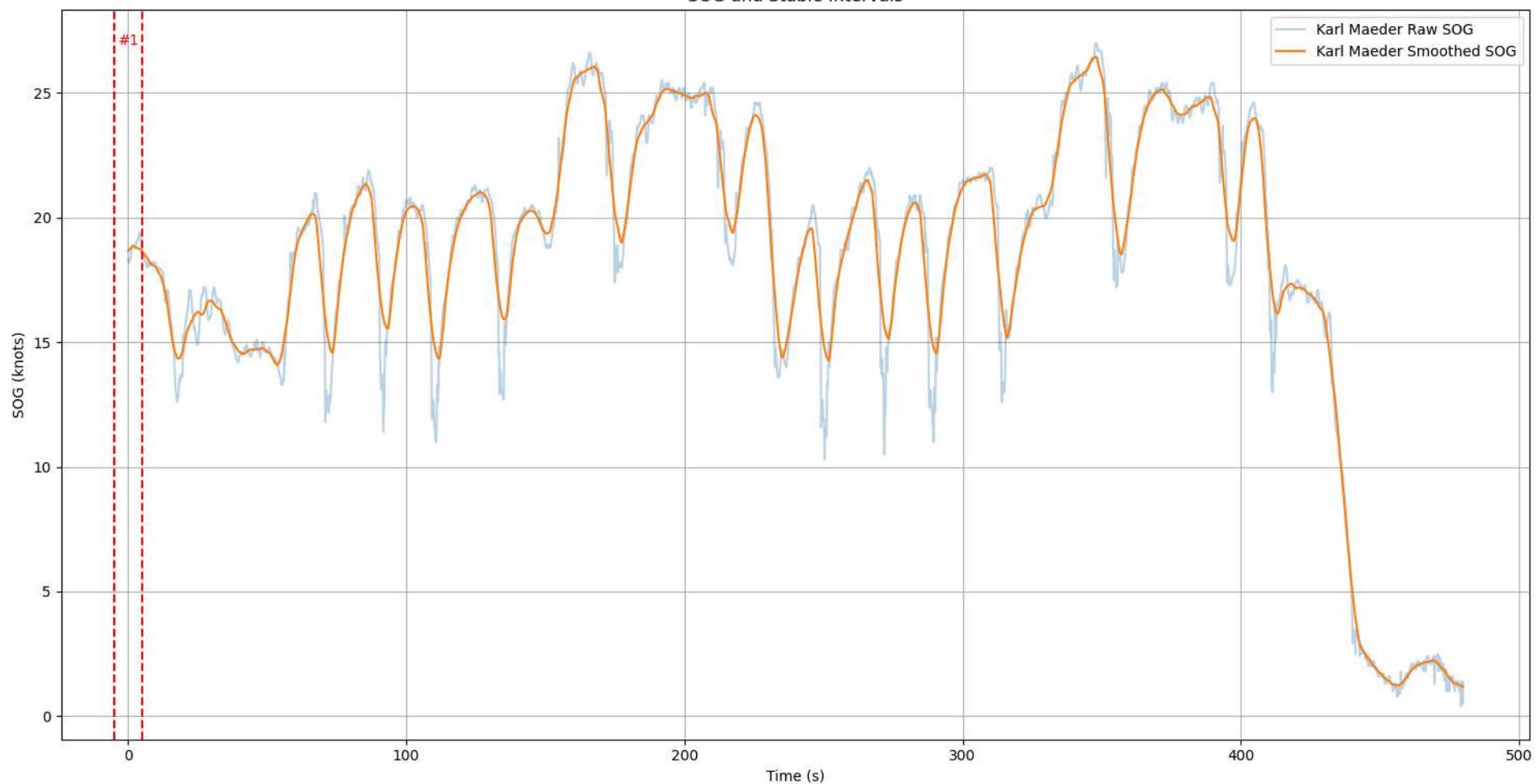




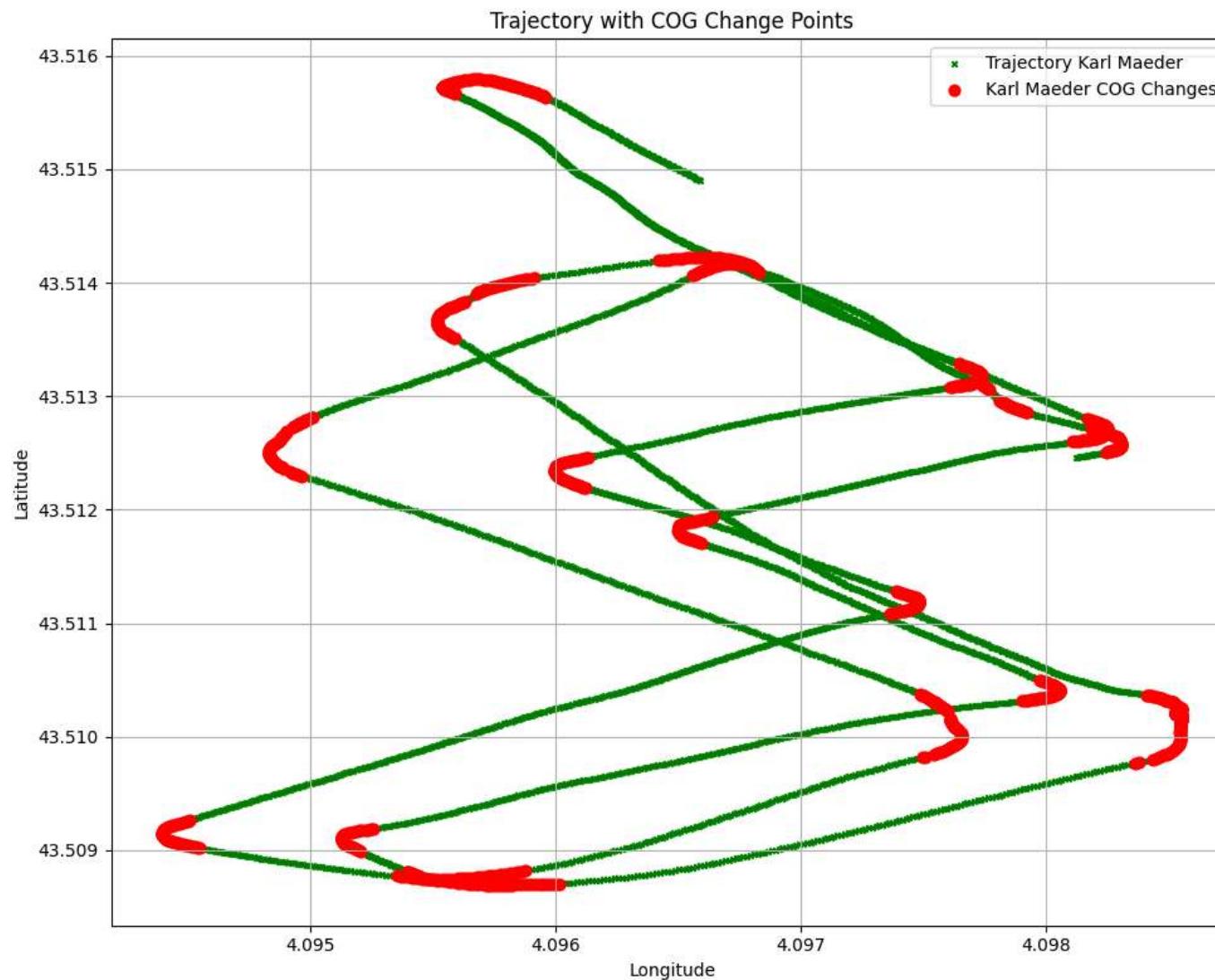
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Karl\11_06_Run3



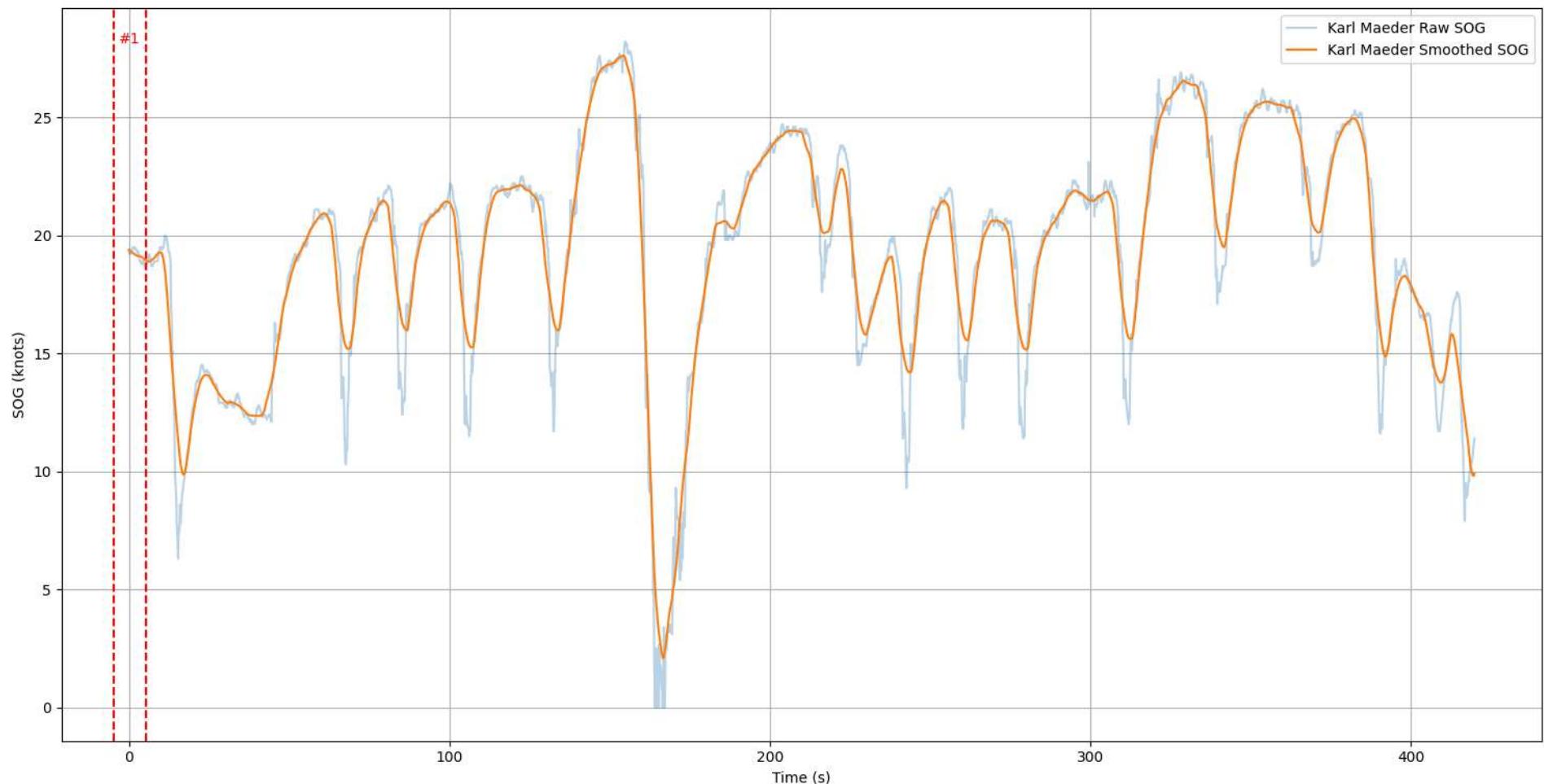
SOG and Stable Intervals



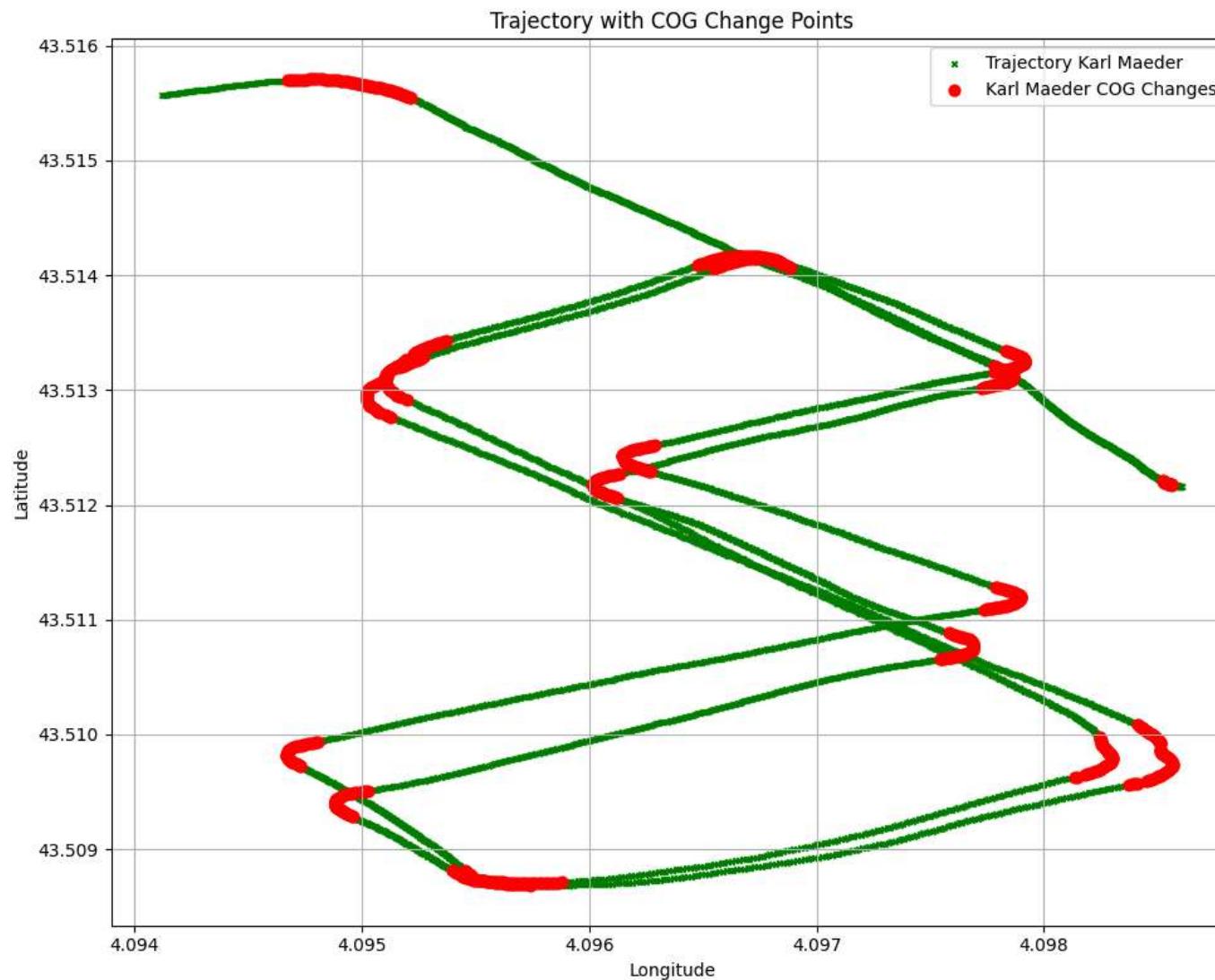
✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Karl\11_06_Run4

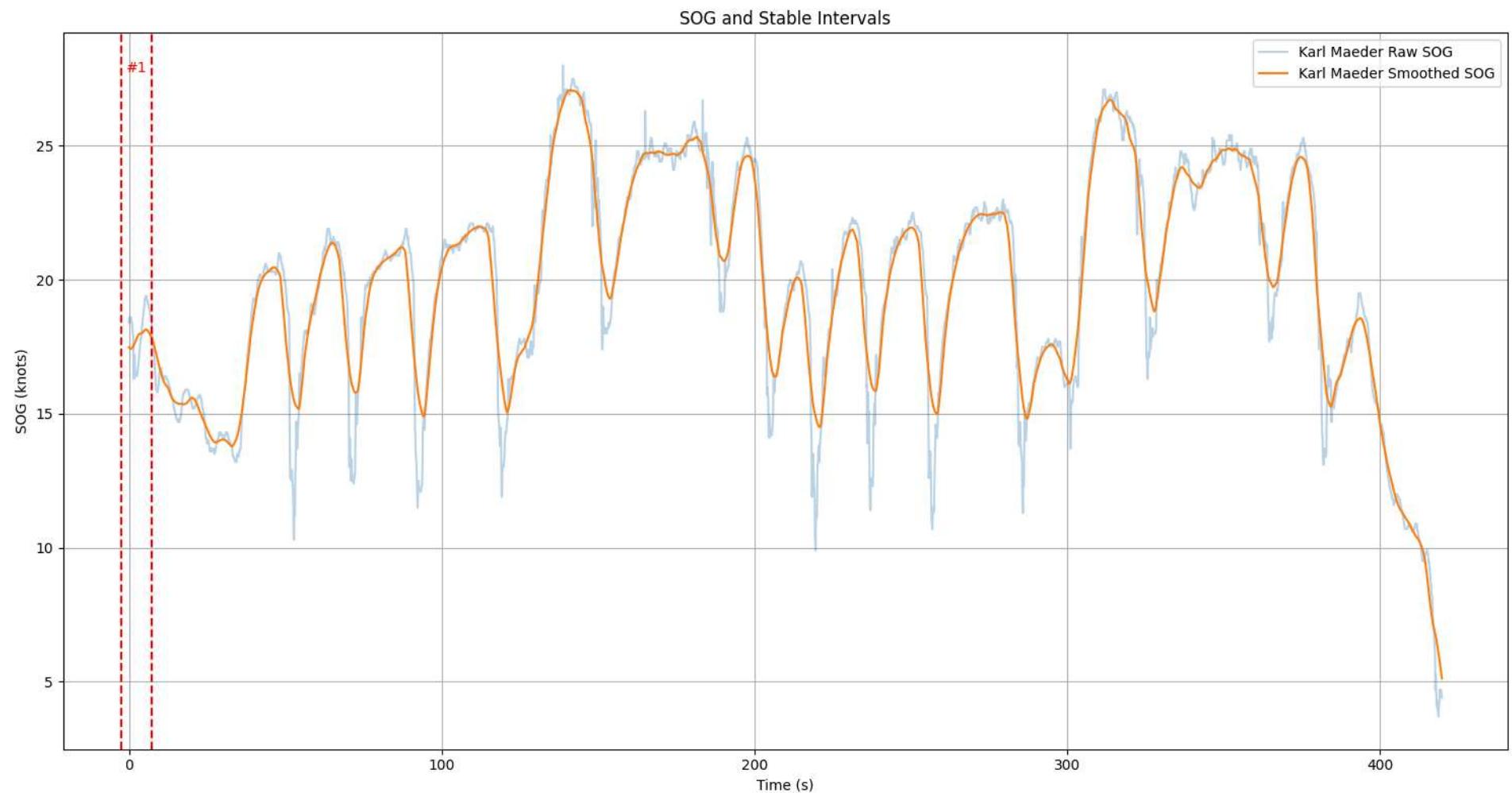


SOG and Stable Intervals

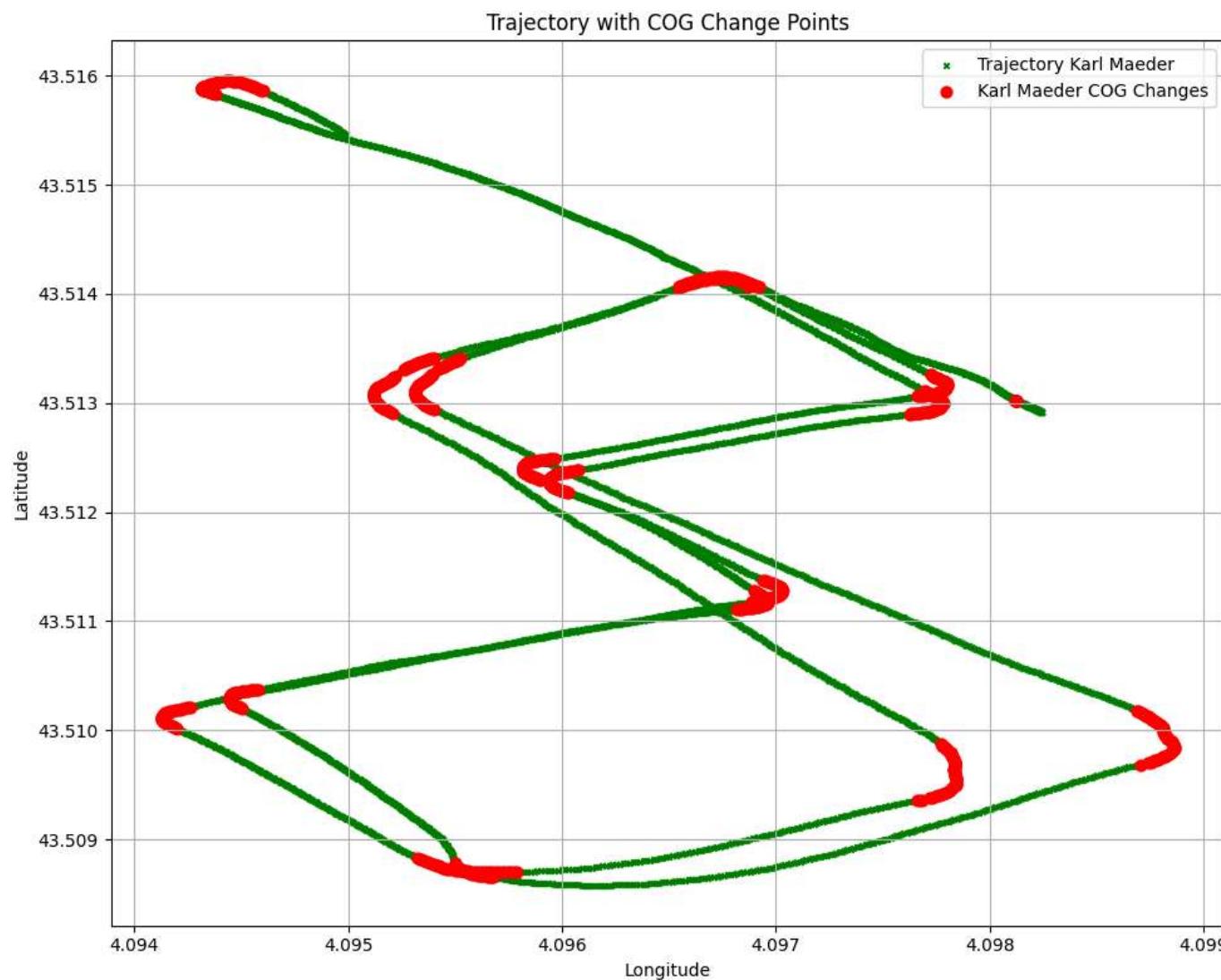


✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Karl\11_06_Run5

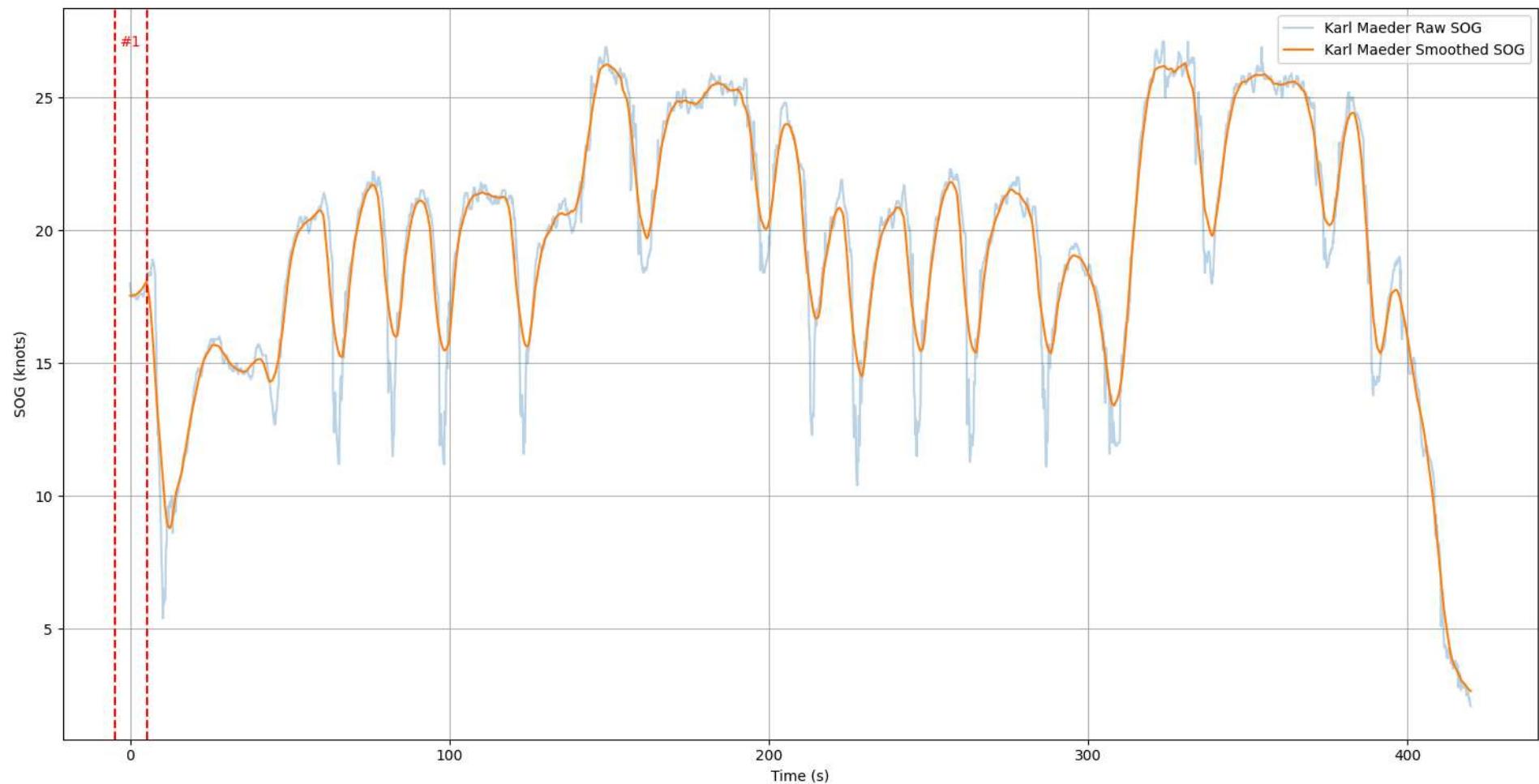




✓ Analyse réussie, nombre d'intervalles : 1
Analyse: Karl Maeder.csv dans ..\Data_Sailnjord\Maneuvers\11_06\Karl\11_06_Run6



SOG and Stable Intervals



✓ Analyse réussie, nombre d'intervalles : 1
Résumé complet sauvégarde (22 runs)

In [2]: `print(json.dumps(summary, indent=2))`

```
[  
  {  
    "date": "08_06",  
    "person": "Gian",  
    "run": "08_06_Run1",  
    "intervals": [  
      {  
        "start_time": 1749369697.661,  
        "end_time": 1749369707.661,  
        "duration": 10.0,  
        "avg_SOG": 14.7070707070704,  
        "SOG_variation": 0.9418016305337475,  
        "stability_score": 0.672637863890963,  
        "boat_name": "SenseBoard"  
      }  
    ]  
  },  
  {  
    "date": "08_06",  
    "person": "Gian",  
    "run": "08_06_Run2",  
    "intervals": [  
      {  
        "start_time": 1749370455.755,  
        "end_time": 1749370465.755,  
        "duration": 10.0,  
        "avg_SOG": 22.81600000000001,  
        "SOG_variation": 1.1553756658736283,  
        "stability_score": 0.6582600162193185,  
        "boat_name": "SenseBoard"  
      }  
    ]  
  },  
  {  
    "date": "08_06",  
    "person": "Gian",  
    "run": "08_06_Run3",  
    "intervals": [  
      {  
        "start_time": 1749370981.354,  
        "end_time": 1749370991.354,  
        "duration": 10.0,  
        "avg_SOG": 25.61100000000004,  
        "SOG_variation": 0.9611540832338862,  
        "stability_score": 0.7778514561575225,  
        "boat_name": "SenseBoard"  
      }  
    ]  
  },  
  {  
    "date": "08_06",  
    "person": "Gian",  
    "run": "08_06_Run4",  
    "intervals": [  
      {  
        "start_time": 1749371575.247,  
        "end_time": 1749371585.247,  
        "duration": 10.0,  
        "avg_SOG": 25.61100000000004,  
        "SOG_variation": 0.9611540832338862,  
        "stability_score": 0.7778514561575225,  
        "boat_name": "SenseBoard"  
      }  
    ]  
  }]
```

```
        "avg_SOG": 24.384615384615383,  
        "SOG_variation": 0.3892600397962809,  
        "stability_score": 0.9341413910828347,  
        "boat_name": "SenseBoard"  
    }  
],  
,  
{  
    "date": "08_06",  
    "person": "Gian",  
    "run": "08_06_Run5",  
    "intervals": [  
        {  
            "start_time": 1749372243.953,  
            "end_time": 1749372253.953,  
            "duration": 10.0,  
            "avg_SOG": 20.477999999999994,  
            "SOG_variation": 0.9402965360765595,  
            "stability_score": 0.6979908660163111,  
            "boat_name": "SenseBoard"  
        }  
    ]  
,  
{  
    "date": "08_06",  
    "person": "Karl",  
    "run": "08_06_Run1",  
    "intervals": [  
        {  
            "start_time": 1749368828.959,  
            "end_time": 1749368838.959,  
            "duration": 10.0,  
            "avg_SOG": 13.36930693069307,  
            "SOG_variation": 0.9718788581152925,  
            "stability_score": 0.7407038757237728,  
            "boat_name": "Karl Maeder"  
        }  
    ]  
,  
{  
    "date": "08_06",  
    "person": "Karl",  
    "run": "08_06_Run2",  
    "intervals": [  
        {  
            "start_time": 1749369595.256,  
            "end_time": 1749369605.256,  
            "duration": 10.0,  
            "avg_SOG": 0.0,  
            "SOG_variation": 0.0,  
            "stability_score": 1.0,  
            "boat_name": "Karl Maeder"  
        }  
    ]  
,  
{  
    "date": "08_06",  
    "person": "Karl",
```

```
"run": "08_06_Run3",
"intervals": [
  {
    "start_time": 1749370272.559,
    "end_time": 1749370282.559,
    "duration": 10.0,
    "avg_SOG": 18.64700000000002,
    "SOG_variation": 0.6304487739425436,
    "stability_score": 0.8701341032530209,
    "boat_name": "Karl Maeder"
  }
],
},
{
  "date": "08_06",
  "person": "Karl",
  "run": "08_06_Run4",
  "intervals": [
    {
      "start_time": 1749370856.263,
      "end_time": 1749370866.263,
      "duration": 10.0,
      "avg_SOG": 17.735849056603776,
      "SOG_variation": 0.549858142413058,
      "stability_score": 0.8668252600852491,
      "boat_name": "Karl Maeder"
    }
  ]
},
{
  "date": "08_06",
  "person": "Karl",
  "run": "08_06_Run5",
  "intervals": [
    {
      "start_time": 1749371455.25,
      "end_time": 1749371465.25,
      "duration": 10.0,
      "avg_SOG": 20.49423076923077,
      "SOG_variation": 0.2217695867853076,
      "stability_score": 0.9425659652059947,
      "boat_name": "Karl Maeder"
    }
  ]
},
{
  "date": "08_06",
  "person": "Karl",
  "run": "08_06_Run6",
  "intervals": [
    {
      "start_time": 1749372115.657,
      "end_time": 1749372125.657,
      "duration": 10.0,
      "avg_SOG": 21.417857142857144,
      "SOG_variation": 0.5400697405662759,
      "stability_score": 0.9042970919566947,
      "boat_name": "Karl Maeder"
    }
  ]
}
```

```
        }
    ],
},
{
    "date": "11_06",
    "person": "Gian",
    "run": "11_06_Run1",
    "intervals": [
        {
            "start_time": 1749644515.257,
            "end_time": 1749644525.257,
            "duration": 10.0,
            "avg_SOG": 17.85,
            "SOG_variation": 0.18311038136792207,
            "stability_score": 0.887000829331072,
            "boat_name": "Gian Stragiotti"
        }
    ]
},
{
    "date": "11_06",
    "person": "Gian",
    "run": "11_06_Run2",
    "intervals": [
        {
            "start_time": 1749645595.26,
            "end_time": 1749645605.26,
            "duration": 10.0,
            "avg_SOG": 20.033962264150944,
            "SOG_variation": 0.207497355151277,
            "stability_score": 0.9387863224202455,
            "boat_name": "Gian Stragiotti"
        }
    ]
},
{
    "date": "11_06",
    "person": "Gian",
    "run": "11_06_Run3",
    "intervals": [
        {
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            "end_time": 1749646341.956,
            "duration": 10.0,
            "avg_SOG": 12.839603960396042,
            "SOG_variation": 0.8947713906826472,
            "stability_score": 0.7815465815145274,
            "boat_name": "SenseBoard"
        }
    ]
},
{
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    "person": "Gian",
    "run": "11_06_Run4",
    "intervals": [
        {
            "start_time": 1749646875.357,
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        "end_time": 1749646885.357,
        "duration": 10.0,
        "avg_SOG": 18.58118811881188,
        "SOG_variation": 0.9391179767512842,
        "stability_score": 0.763371296114111,
        "boat_name": "SenseBoard"
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},
{
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    "run": "11_06_Run5",
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            "start_time": 1749647455.259,
            "end_time": 1749647465.259,
            "duration": 10.0,
            "avg_SOG": 1.0634615384615385,
            "SOG_variation": 0.7145624867786667,
            "stability_score": 0.8930570080943446,
            "boat_name": "SenseBoard"
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},
{
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    "person": "Karl",
    "run": "11_06_Run1",
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            "end_time": 1749644645.257,
            "duration": 10.0,
            "avg_SOG": 21.14905660377359,
            "SOG_variation": 0.22499798418706715,
            "stability_score": 0.9506802405719211,
            "boat_name": "Karl Maeder"
        }
    ]
},
{
    "date": "11_06",
    "person": "Karl",
    "run": "11_06_Run2",
    "intervals": [
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            "end_time": 1749645381.855,
            "duration": 10.0,
            "avg_SOG": 18.138613861386137,
            "SOG_variation": 0.651148262230608,
            "stability_score": 0.7700871254910471,
            "boat_name": "Karl Maeder"
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    ]
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"person": "Karl",
"run": "11_06_Run3",
"intervals": [
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    "end_time": 1749646025.257,
    "duration": 10.0,
    "avg_SOG": 18.836538461538463,
    "SOG_variation": 0.3389886030554837,
    "stability_score": 0.9259038742176654,
    "boat_name": "Karl Maeder"
  }
],
{
  "date": "11_06",
  "person": "Karl",
  "run": "11_06_Run4",
  "intervals": [
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      "end_time": 1749646685.257,
      "duration": 10.0,
      "avg_SOG": 19.15660377358491,
      "SOG_variation": 0.2685498334805095,
      "stability_score": 0.9250332263651599,
      "boat_name": "Karl Maeder"
    }
  ]
},
{
  "date": "11_06",
  "person": "Karl",
  "run": "11_06_Run5",
  "intervals": [
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      "end_time": 1749647347.456,
      "duration": 10.0,
      "avg_SOG": 18.104,
      "SOG_variation": 0.969736659711898,
      "stability_score": 0.868814283003886,
      "boat_name": "Karl Maeder"
    }
  ]
},
{
  "date": "11_06",
  "person": "Karl",
  "run": "11_06_Run6",
  "intervals": [
    {
      "start_time": 1749648055.26,
      "end_time": 1749648065.26,
      "duration": 10.0,
      "avg_SOG": 17.620754716981132,
      "SOG_variation": 0.20225506608282626,
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    "stability_score": 0.9091588961385519,  
    "boat_name": "Karl Maeder"  
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]
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In []: