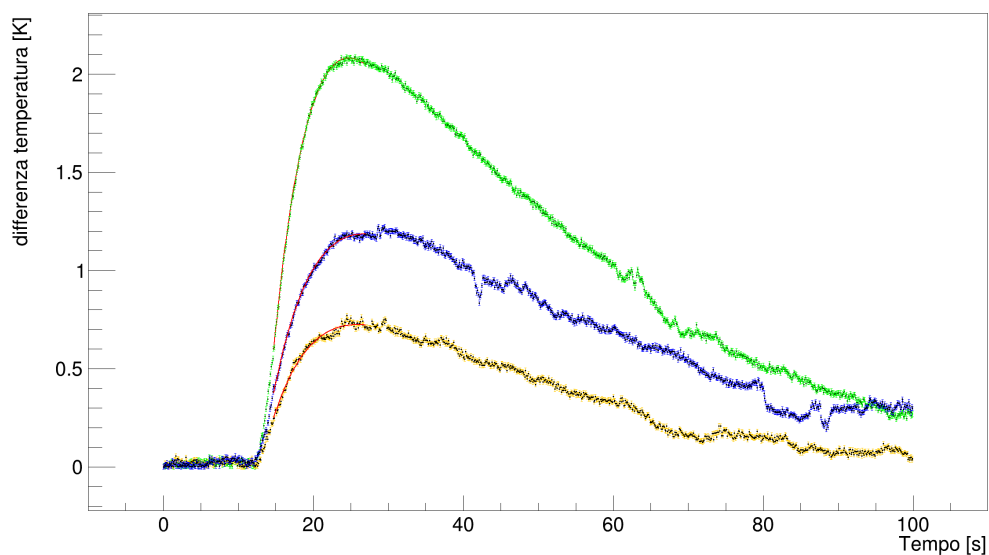


Risultsti_esp_1

April 12, 2023

Temperatura differenziale



FCN=113.444 FROM MIGRAD STATUS=CONVERGED 400 CALLS 401 TOTAL
EDM=5.2474e-08 STRATEGY= 1 ERROR MATRIX UNCERTAINTY

2.0 per cent

| EXT PARAMETER | | | | STEP | FIRST |
|---------------|------|--------------|-------------|--------------|--------------|
| NO. | NAME | VALUE | ERROR | SIZE | DERIVATIVE |
| 1 | p0 | 4.70578e-01 | 3.92589e-03 | -2.59540e-07 | -1.02061e+00 |
| 2 | p1 | 8.89907e-06 | 1.59469e-08 | 1.85100e-12 | 1.30018e+04 |
| 3 | p2 | 2.10000e-02 | fixed | | |
| 4 | p3 | -1.71397e+01 | 1.60980e-01 | 1.10062e-05 | -2.62579e-02 |

p-value (1.5s): 0.674759

FCN=129.654 FROM MIGRAD STATUS=CONVERGED 201 CALLS 202 TOTAL
EDM=1.17459e-07 STRATEGY= 1 ERROR MATRIX ACCURATE

| EXT PARAMETER | | | | STEP | FIRST |
|---------------|------|-------------|-------------|-------------|--------------|
| NO. | NAME | VALUE | ERROR | SIZE | DERIVATIVE |
| 1 | p0 | 1.92843e-01 | 3.52929e-03 | 1.50981e-07 | 2.66779e+00 |
| 2 | p1 | 8.25385e-06 | 4.16838e-08 | 3.36369e-11 | -3.80782e+04 |
| 3 | p2 | 2.10000e-02 | fixed | | |

4 p3 -6.69151e+00 1.45981e-01 5.99580e-06 5.41284e-02
p-value (1.0s): 0.278869

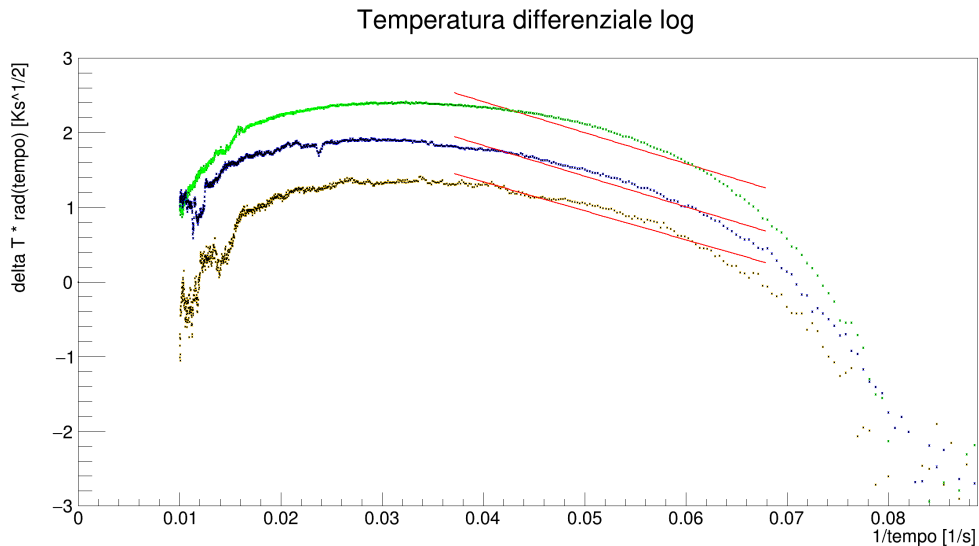
FCN=299.504 FROM MIGRAD STATUS=CONVERGED 170 CALLS 171 TOTAL
EDM=8.12397e-07 STRATEGY= 1 ERROR MATRIX ACCURATE

| EXT | PARAMETER | NO. | NAME | VALUE | ERROR | STEP | SIZE | FIRST | DERIVATIVE |
|-----|-----------|-----|------|--------------|-------------|------|-------------|-------|--------------|
| 1 | p0 | | | 1.26235e-01 | 3.58160e-03 | | 2.27949e-07 | | -4.70558e+01 |
| 2 | p1 | | | 8.51414e-06 | 6.04509e-08 | | 8.78736e-11 | | -1.02196e+05 |
| 3 | p2 | | | 2.10000e-02 | fixed | | | | |
| 4 | p3 | | | -4.43197e+00 | 1.47546e-01 | | 9.09308e-06 | | -1.18264e+00 |

p-value (0.5s): 3.84454e-17

I risultati dei fit sono nell'ordine seguente: Impulso di 1.5 secondi, 1.0 secondi, 0.5 secondi.
Parametri: p0 = C, p1 = D diffusivita termica, p2 = offset. Mediamo sui tre valori di D ottenuti:

Coefficiente di diffusione ottenuto da T(t): 8.55569e-06 +/- 7.61055e-08 m²/s
Coefficiente di diffusione ottenuto dal valore massimo di temperatura ad x fissato è: 9.03689e-06 m²/s



FCN=11035.3 FROM MIGRAD STATUS=CONVERGED 169 CALLS 170 TOTAL
EDM=1.43992e-07 STRATEGY= 1 ERROR MATRIX ACCURATE

| EXT | PARAMETER | NO. | NAME | VALUE | ERROR | STEP | SIZE | FIRST | DERIVATIVE |
|-----|-----------|-----|------|-------------|-------------|------|-------------|-------|--------------|
| 1 | p0 | | | 9.55422e-02 | 4.53260e-04 | | 5.28643e-06 | | -3.59880e+00 |
| 2 | p1 | | | 2.65927e-06 | 7.95694e-09 | | 9.27974e-11 | | -1.50889e+05 |
| 3 | p2 | | | 2.10000e-02 | fixed | | | | |

p-value (1.5s): 0

FCN=6423.34 FROM MIGRAD STATUS=CONVERGED 139 CALLS 140 TOTAL
EDM=1.00589e-08 STRATEGY= 1 ERROR MATRIX ACCURATE

| EXT PARAMETER | | | | STEP | FIRST |
|---------------|------|-------------|-------------|-------------|--------------|
| NO. | NAME | VALUE | ERROR | SIZE | DERIVATIVE |
| 1 | p0 | 5.26296e-02 | 2.49077e-04 | 2.22176e-06 | -1.20805e+00 |
| 2 | p1 | 2.68272e-06 | 8.10027e-09 | 7.22498e-11 | -2.08416e+04 |
| 3 | p2 | 2.10000e-02 | fixed | | |

p-value (1.0s): 0

FCN=7791.74 FROM MIGRAD STATUS=CONVERGED 98 CALLS 99 TOTAL
EDM=4.71486e-09 STRATEGY= 1 ERROR MATRIX ACCURATE

| EXT PARAMETER | | | | STEP | FIRST |
|---------------|------|-------------|-------------|-------------|--------------|
| NO. | NAME | VALUE | ERROR | SIZE | DERIVATIVE |
| 1 | p0 | 3.03271e-02 | 1.40857e-04 | 1.41004e-06 | -8.42243e-01 |
| 2 | p1 | 2.84259e-06 | 9.09345e-09 | 9.10237e-11 | -2.44963e+03 |
| 3 | p2 | 2.10000e-02 | fixed | | |

p-value (0.5s): 0

Coefficiente di diffusione ottenuto dalla relazione lineare: 2.72819e-06 +/-
4.55172e-08 m²/s

Il risultato della linearizzazione non pu' essere preso in considerazione in quanto non compatibile
sia visivamente sul grafico che numericamente con i valori ottenuti dalla relazione T(t)

