

ANEXO

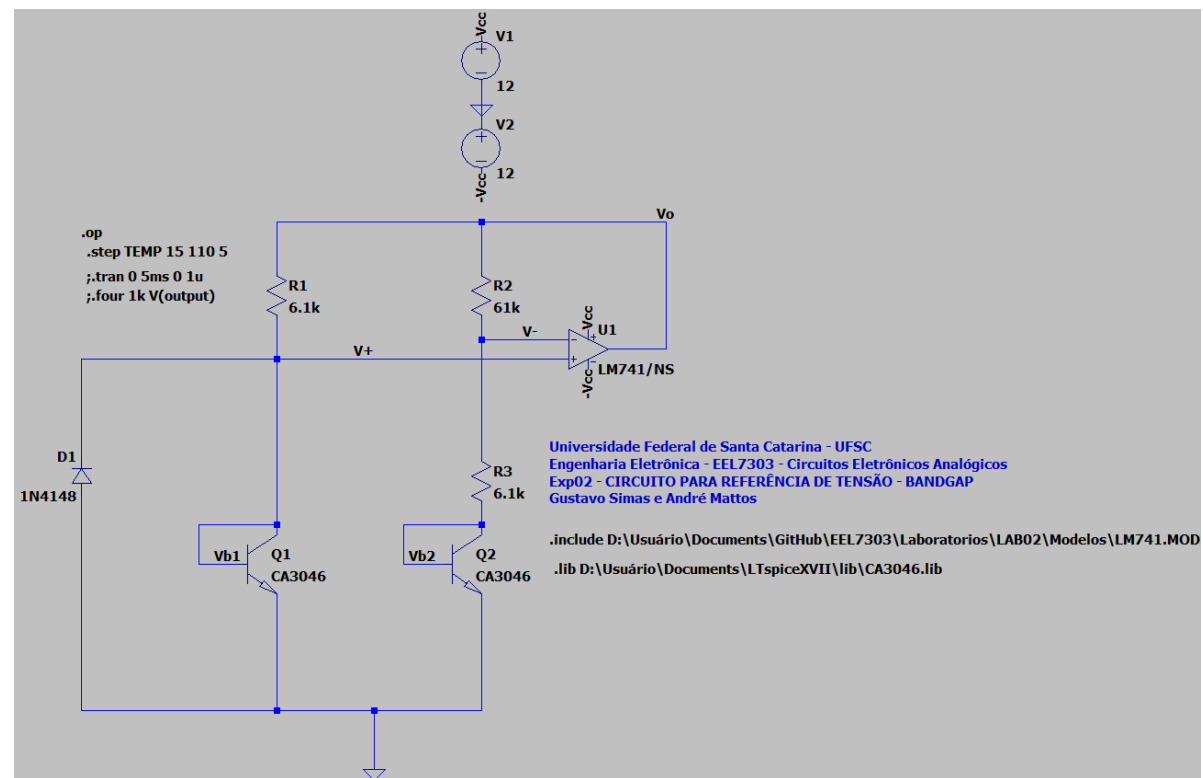


Figura 1 - Circuito Simulado

--- Operating Point ---		
V(v+) :	0.595765	voltage
V(vo) :	1.21404	voltage
V(v-) :	0.596778	voltage
V(n001) :	0.535673	voltage
V(-vcc) :	-12	voltage
V(vcc) :	12	voltage
Ic(Q2) :	9.81686e-006	device_current
Ib(Q2) :	2.004e-007	device_current
Ie(Q2) :	-1.00173e-005	device_current
Ic(Q1) :	9.997e-005	device_current
Ib(Q1) :	1.32702e-006	device_current
Ie(Q1) :	-0.000101297	device_current
I(D1) :	-2.52059e-009	device_current
I(R3) :	1.00173e-005	device_current
I(R2) :	1.01191e-005	device_current
I(R1) :	0.000101357	device_current
I(V2) :	-0.00158767	device_current
I(V1) :	-0.00169899	device_current
Ix(u1:1) :	5.78457e-008	subckt_current
Ix(u1:2) :	1.01877e-007	subckt_current
Ix(u1:99) :	0.00169899	subckt_current
Ix(u1:50) :	-0.00158767	subckt_current
Ix(u1:28) :	-0.000111476	subckt_current

Figura 2 - Ponto Quiescente Simulado

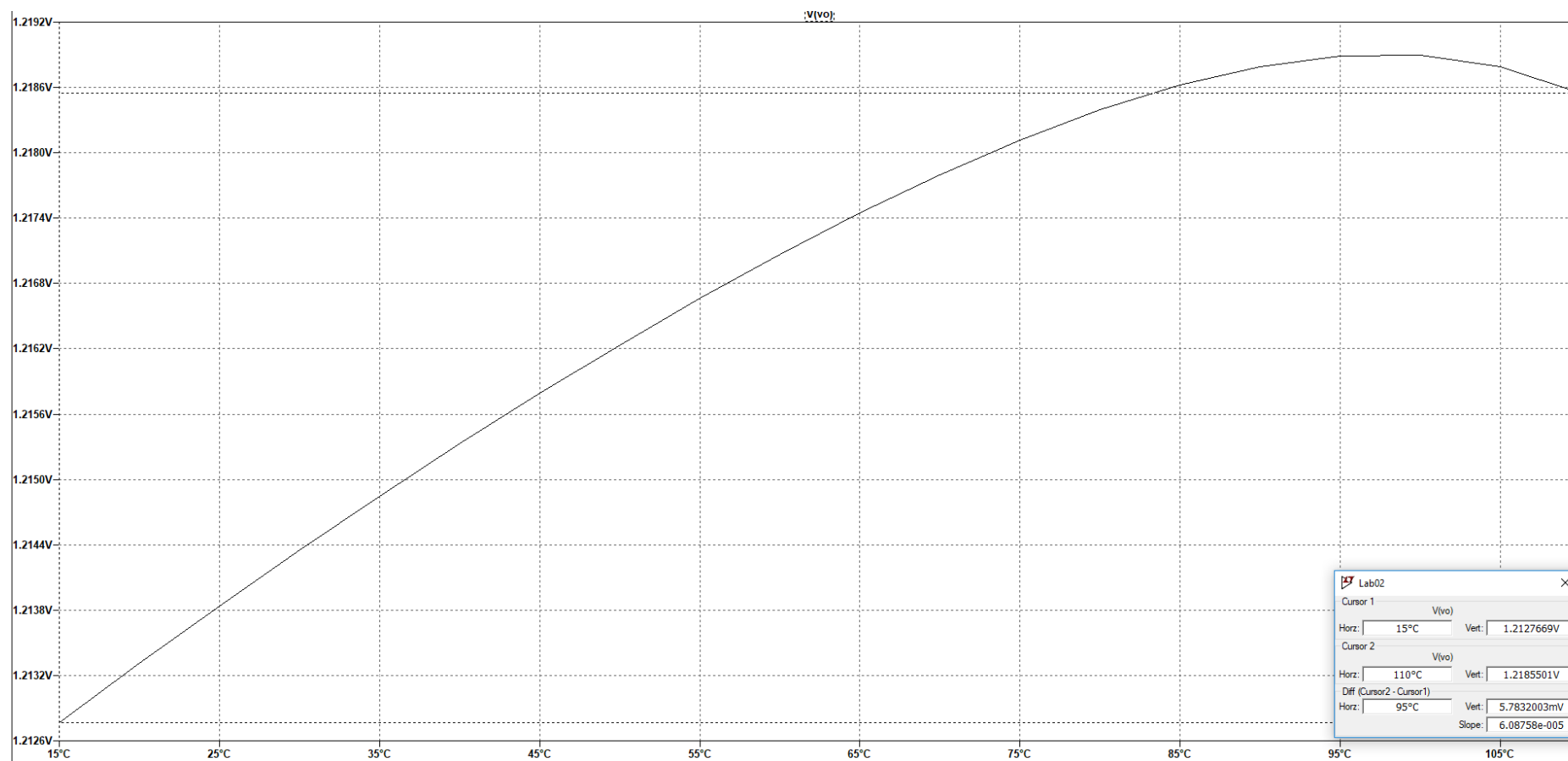


Figura 3 - Curva de Variação de V_o com a temperatura simulado

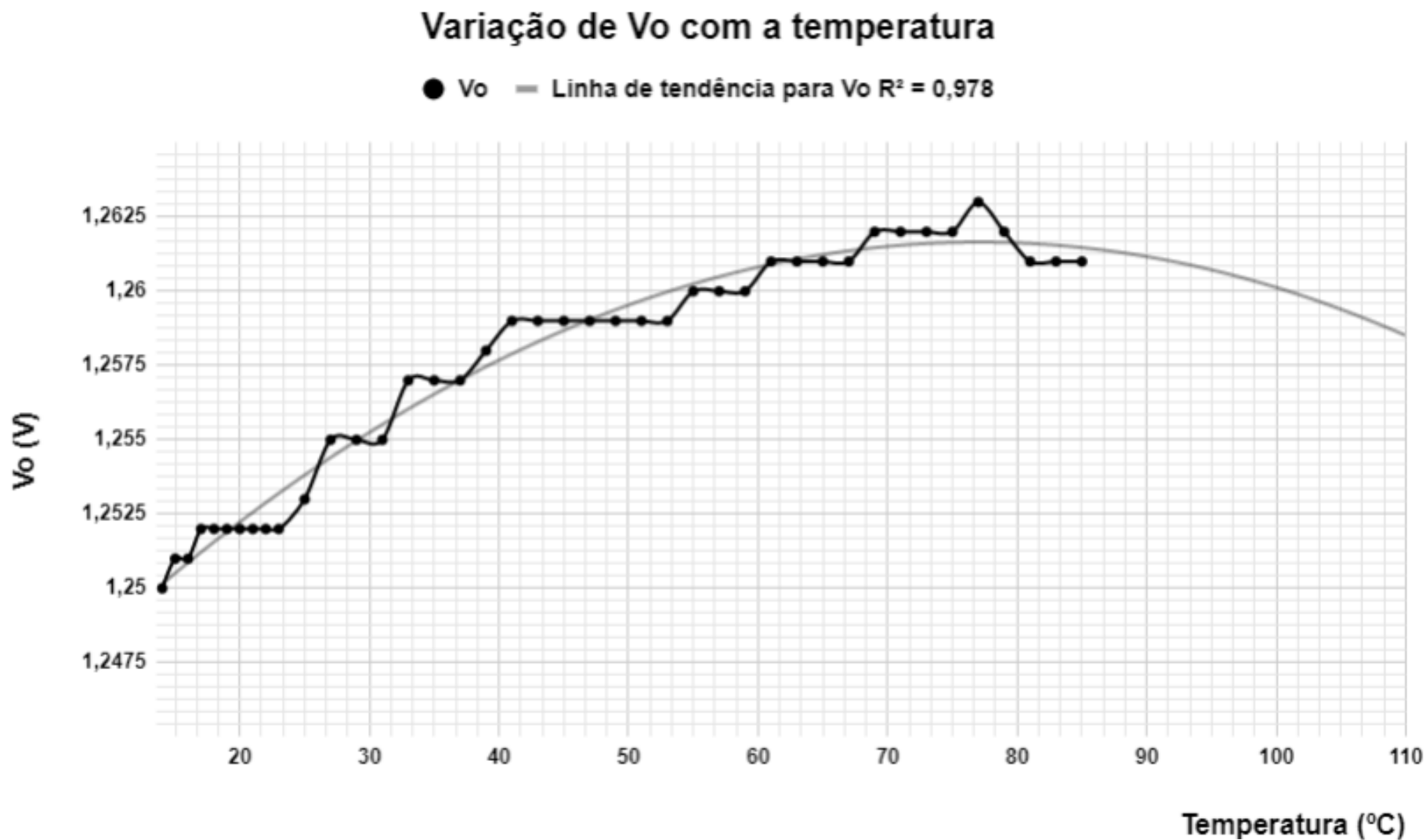


Figura 4 - Curva de Variação de V_o com a temperatura experimental

Tabela 1 - Dados experimentais de variação de V_o com a temperatura

Temperatura (°C)	V_o (V)
14	1,250
15	1,251
16	1,251
17	1,252
18	1,252
19	1,252
20	1,252
21	1,252
22	1,252
23	1,252
25	1,253
27	1,255
29	1,255
31	1,255
33	1,257
35	1,257
37	1,257
39	1,258
41	1,259
43	1,259
45	1,259
47	1,259
49	1,259
51	1,259
53	1,259
55	1,260
57	1,260
59	1,260
61	1,261
63	1,261
65	1,261
67	1,261
69	1,262
71	1,262
73	1,262
75	1,262
77	1,263
79	1,262
81	1,261
83	1,261
85	1,261

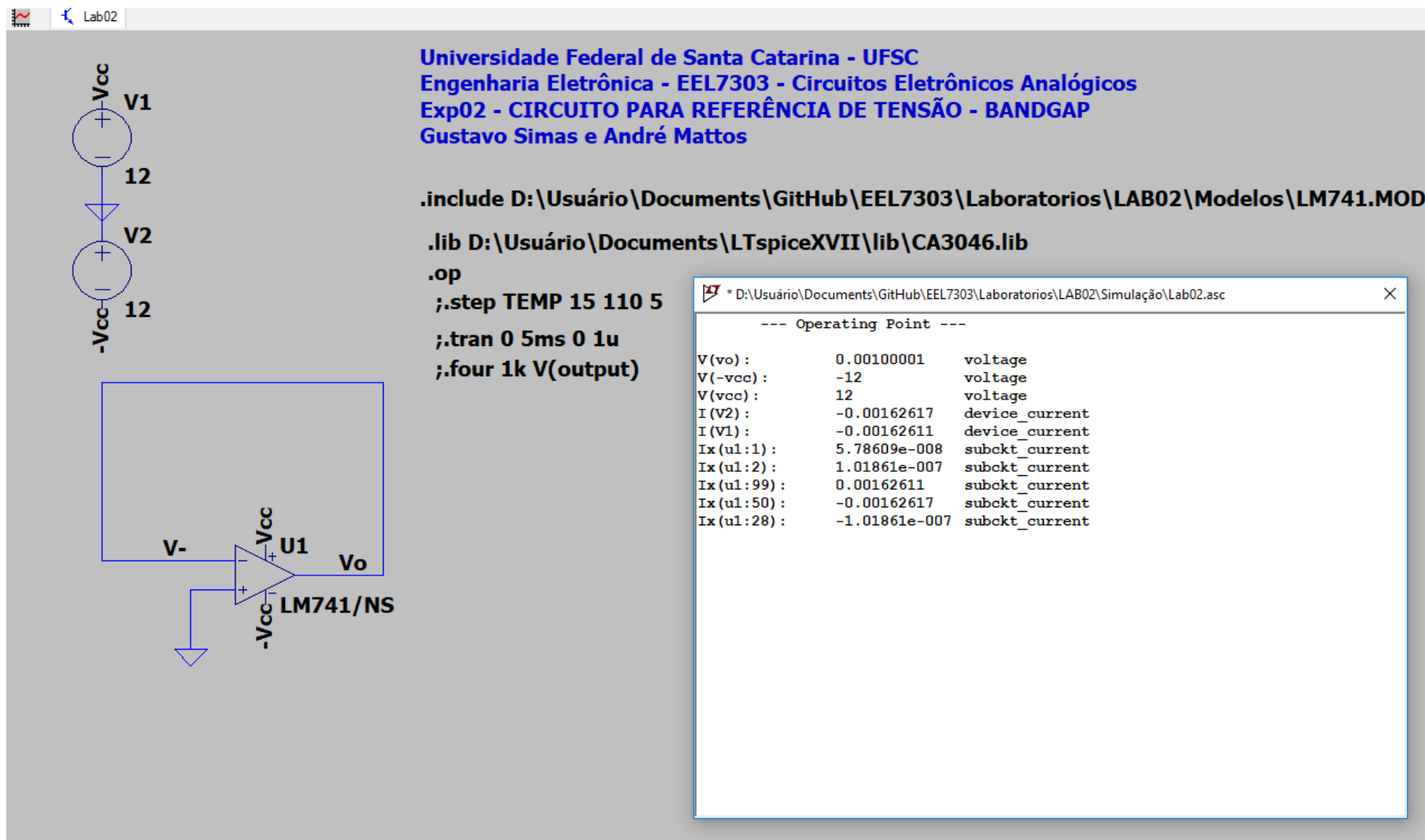


Figura 5 – Circuito simulado para verificar offset do ampop