

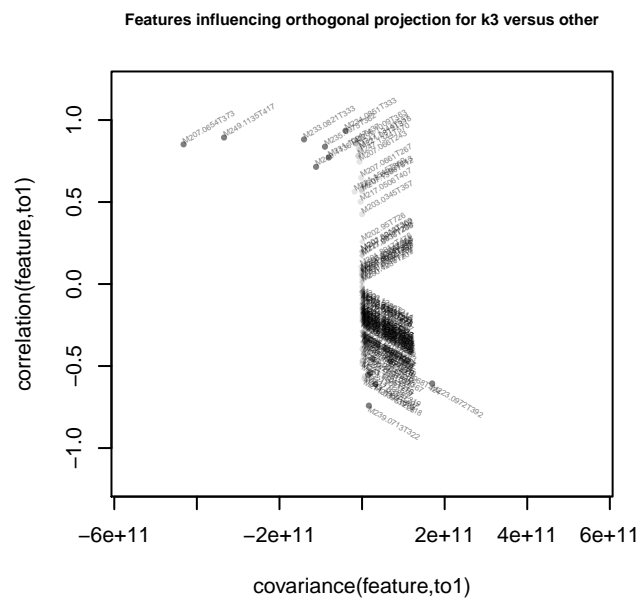
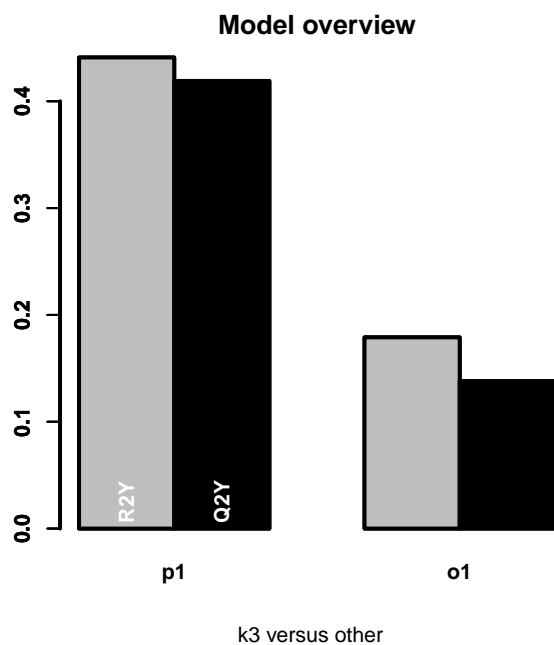
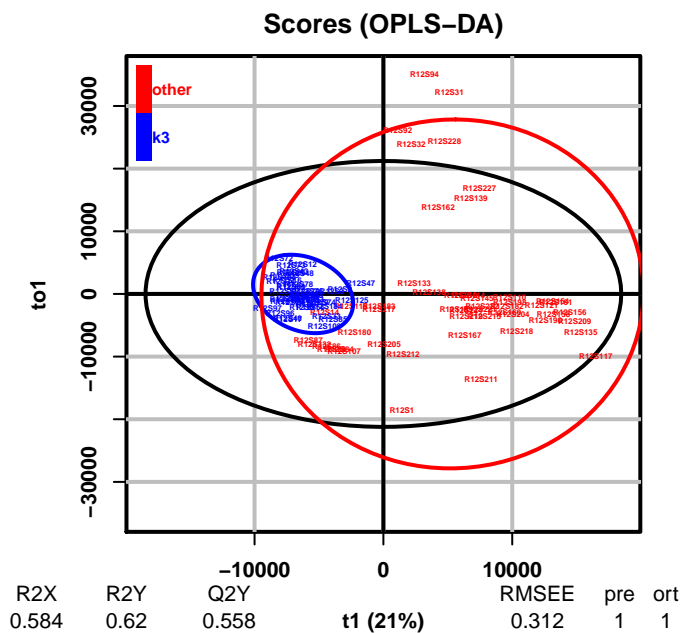
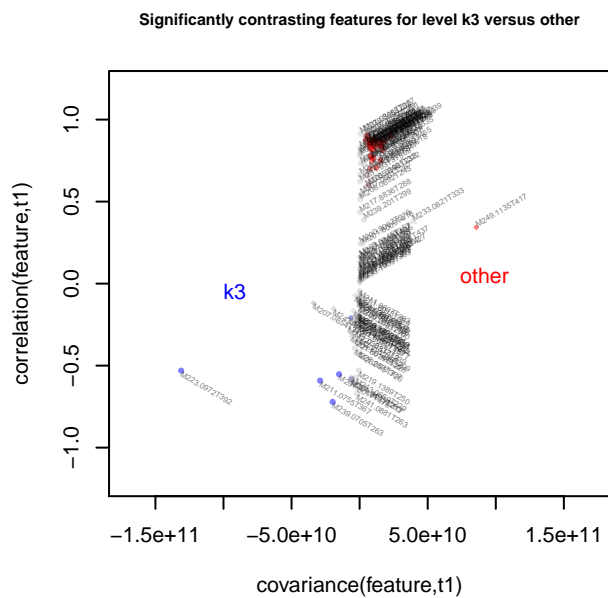
A scatter plot showing the relationship between the covariance of a feature with t_1 (x-axis) and the correlation of a feature with t_1 (y-axis). The x-axis ranges from -1.5×10^{11} to 1.5×10^{11} , and the y-axis ranges from -1.0 to 1.0. The plot displays a dense cluster of points, primarily concentrated between -5×10^{10} and 5×10^{10} on the x-axis. A few points are outliers, located at higher covariance values (around 1.5×10^{11}). The points are labeled with IDs such as M234, M235, M236, M237, M238, M239, M240, M241, M242, M243, M244, M245, M246, M247, M248, M249, M250, M251, M252, M253, M254, M255, M256, M257, M258, M259, M260, M261, M262, M263, M264, M265, M266, M267, M268, M269, M270, M271, M272, M273, M274, M275, M276, M277, M278, M279, M280, M281, M282, M283, M284, M285, M286, M287, M288, M289, M290, M291, M292, M293, M294, M295, M296, M297, M298, M299, M300, M301, M302, M303, M304, M305, M306, M307, M308, M309, M310, M311, M312, M313, M314, M315, M316, M317, M318, M319, M320, M321, M322, M323, M324, M325, M326, M327, M328, M329, M330, M331, M332, M333, M334, M335, M336, M337, M338, M339, M340, M341, M342, M343, M344, M345, M346, M347, M348, M349, M350, M351, M352, M353, M354, M355, M356, M357, M358, M359, M360, M361, M362, M363, M364, M365, M366, M367, M368, M369, M370, M371, M372, M373, M374, M375, M376, M377, M378, M379, M380, M381, M382, M383, M384, M385, M386, M387, M388, M389, M390, M391, M392, M393, M394, M395, M396, M397, M398, M399, M400, M401, M402, M403, M404, M405, M406, M407, M408, M409, M410, M411, M412, M413, M414, M415, M416, M417, M418, M419, M420, M421, M422, M423, M424, M425, M426, M427, M428, M429, M430, M431, M432, M433, M434, M435, M436, M437, M438, M439, M440, M441, M442, M443, M444, M445, M446, M447, M448, M449, M450, M451, M452, M453, M454, M455, M456, M457, M458, M459, M460, M461, M462, M463, M464, M465, M466, M467, M468, M469, M470, M471, M472, M473, M474, M475, M476, M477, M478, M479, M480, M481, M482, M483, M484, M485, M486, M487, M488, M489, M490, M491, M492, M493, M494, M495, M496, M497, M498, M499, M500, M501, M502, M503, M504, M505, M506, M507, M508, M509, M510, M511, M512, M513, M514, M515, M516, M517, M518, M519, M520, M521, M522, M523, M524, M525, M526, M527, M528, M529, M530, M531, M532, M533, M534, M535, M536, M537, M538, M539, M540, M541, M542, M543, M544, M545, M546, M547, M548, M549, M550, M551, M552, M553, M554, M555, M556, M557, M558, M559, M560, M561, M562, M563, M564, M565, M566, M567, M568, M569, M570, M571, M572, M573, M574, M575, M576, M577, M578, M579, M580, M581, M582, M583, M584, M585, M586, M587, M588, M589, M590, M591, M592, M593, M594, M595, M596, M597, M598, M599, M600, M601, M602, M603, M604, M605, M606, M607, M608, M609, M610, M611, M612, M613, M614, M615, M616, M617, M618, M619, M620, M621, M622, M623, M624, M625, M626, M627, M628, M629, M630, M631, M632, M633, M634, M635, M636, M637, M638, M639, M640, M641, M642, M643, M644, M645, M646, M647, M648, M649, M650, M651, M652, M653, M654, M655, M656, M657, M658, M659, M660, M661, M662, M663, M664, M665, M666, M667, M668, M669, M670, M671, M672, M673, M674, M675, M676, M677, M678, M679, M680, M681, M682, M683, M684, M685, M686, M687, M688, M689, M690, M691, M692, M693, M694, M695, M696, M697, M698, M699, M700, M701, M702, M703, M704, M705, M706, M707, M708, M709, M710, M711, M712, M713, M714, M715, M716, M717, M718, M719, M720, M721, M722, M723, M724, M725, M726, M727, M728, M729, M730, M731, M732, M733, M734, M735, M736, M737, M738, M739, M740, M741, M742, M743, M744, M745, M746, M747, M748, M749, M750, M751, M752, M753, M754, M755, M756, M757, M758, M759, M760, M761, M762, M763, M764, M765, M766, M767, M768, M769, M770, M771, M772, M773, M774, M775, M776, M777, M778, M779, M780, M781, M782, M783, M784, M785, M786, M787, M788, M789, M790, M791, M792, M793, M794, M795, M796, M797, M798, M799, M800, M801, M802, M803, M804, M805, M806, M807, M808, M809, M810, M811, M812, M813, M814, M815, M816, M817, M818, M819, M820, M821, M822, M823, M824, M825, M826, M827, M828, M829, M830, M831, M832, M833, M834, M835, M836, M837, M838, M839, M840, M841, M842, M843, M844, M845, M846, M847, M848, M849, M850, M851, M852, M853, M854, M855, M856, M857, M858, M859, M860, M861, M862, M863, M864, M865, M866, M867, M868, M869, M870, M871, M872, M873, M874, M875, M876, M877, M878, M879, M880, M881, M882, M883, M884, M885, M886, M887, M888, M889, M890, M891, M892, M893, M894, M895, M896, M897, M898, M899, M900, M901, M902, M903, M904, M905, M906, M907, M908, M909, M910, M911, M912, M913, M914, M915, M916, M917, M918, M919, M920, M921, M922, M923, M924, M925, M926, M927, M928, M929, M930, M931, M932, M933, M934, M935, M936, M937, M938, M939, M940, M941, M942, M943, M944, M945, M946, M947, M948, M949, M950, M951, M952, M953, M954, M955, M956, M957, M958, M959, M960, M961, M962, M963, M964, M965, M966, M967, M968, M969, M970, M971, M972, M973, M974, M975, M976, M977, M978, M979, M980, M981, M982, M983, M984, M985, M986, M987, M988, M98

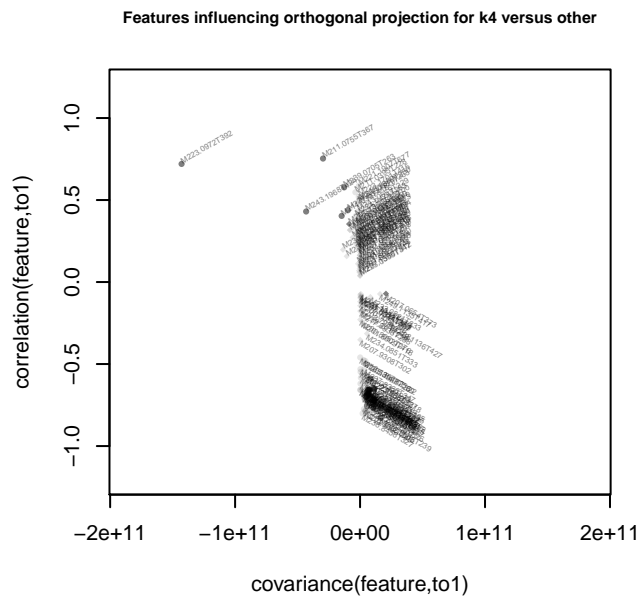
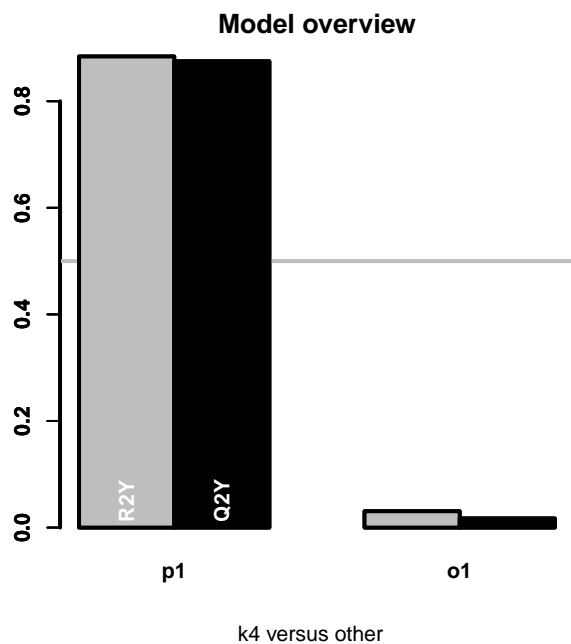
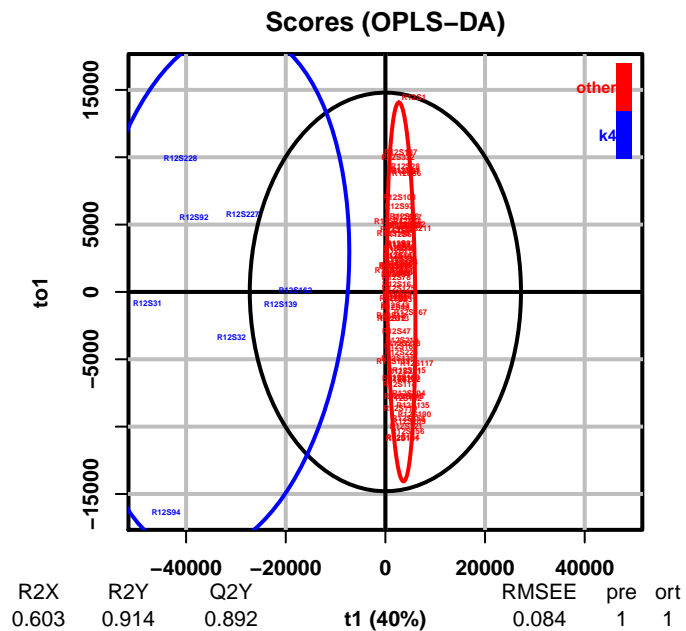
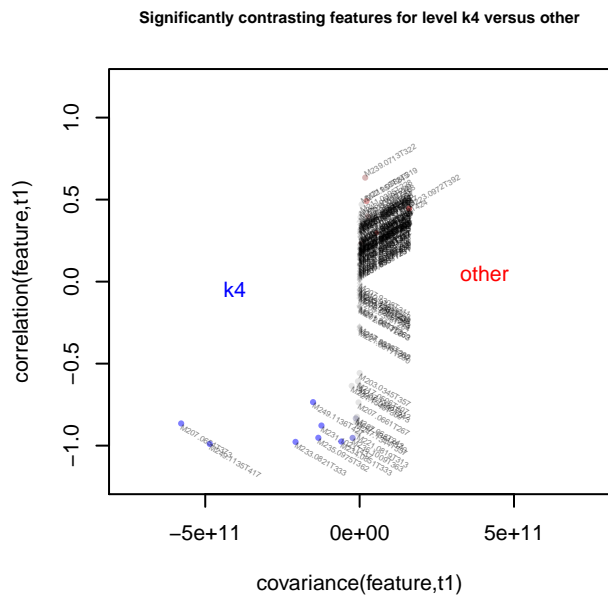
R2X 0.39
 R2Y 0.827
 Q2Y 0.757
 t1 (22%)
 RMSEE 0.198
 pre 1
 ort 1

A bar chart comparing the proportion of 'k2 versus other' for two categories, p1 and o1. The y-axis represents the proportion, ranging from 0.0 to 0.6. A horizontal line is drawn at y=0.5. For category p1, the proportion is approximately 0.75 for R2Y (grey) and 0.75 for Q2Y (black). For category o1, the proportion is approximately 0.05 for R2Y (grey) and 0.02 for Q2Y (black).

Category	R2Y (Grey)	Q2Y (Black)
p1	~0.75	~0.75
o1	~0.05	~0.02

A scatter plot showing the relationship between covariance and correlation for feature 'to1'. The x-axis is 'covariance(feature,to1)' ranging from -2e+11 to 2e+11. The y-axis is 'correlation(feature,to1)' ranging from -1.0 to 1.0. Data points are labeled with gene IDs. Points with high negative covariance (e.g., -1.5e+11) have high positive correlation (e.g., 0.8). Points with low covariance (near 0) have correlations ranging from approximately -0.2 to 0.8.





A scatter plot showing the relationship between the covariance of a feature with t_1 (x-axis) and the correlation of a feature with t_1 (y-axis). The x-axis ranges from -1.5×10^{10} to 1.5×10^{10} , and the y-axis ranges from -1.0 to 1.0. Two clusters are identified: k_1 (blue) and k_2 (red). Cluster k_1 contains a single point labeled $M239_07057293$. Cluster k_2 contains a large group of points, many of which are labeled with IDs such as $M207_03087096$, $M208_03087096$, $M209_03087096$, $M210_03087096$, $M211_03087096$, $M212_03087096$, $M213_03087096$, $M214_03087096$, $M215_03087096$, $M216_03087096$, $M217_03087096$, $M218_03087096$, $M219_03087096$, $M220_03087096$, $M221_03087096$, $M222_03087096$, $M223_03087096$, $M224_03087096$, $M225_03087096$, $M226_03087096$, $M227_03087096$, $M228_03087096$, $M229_03087096$, $M230_03087096$, $M231_03087096$, $M232_03087096$, $M233_03087096$, $M234_03087096$, $M235_03087096$, $M236_03087096$, $M237_03087096$, $M238_03087096$, $M239_03087096$, $M240_03087096$, $M241_03087096$, $M242_03087096$, $M243_03087096$, $M244_03087096$, $M245_03087096$, $M246_03087096$, $M247_03087096$, $M248_03087096$, $M249_03087096$, $M250_03087096$, $M251_03087096$, $M252_03087096$, $M253_03087096$, $M254_03087096$, $M255_03087096$, $M256_03087096$, $M257_03087096$, $M258_03087096$, $M259_03087096$, $M260_03087096$, $M261_03087096$, $M262_03087096$, $M263_03087096$, $M264_03087096$, $M265_03087096$, $M266_03087096$, $M267_03087096$, $M268_03087096$, $M269_03087096$, $M270_03087096$, $M271_03087096$, $M272_03087096$, $M273_03087096$, $M274_03087096$, $M275_03087096$, $M276_03087096$, $M277_03087096$, $M278_03087096$, $M279_03087096$, $M280_03087096$, $M281_03087096$, $M282_03087096$, $M283_03087096$, $M284_03087096$, $M285_03087096$, $M286_03087096$, $M287_03087096$, $M288_03087096$, $M289_03087096$, $M290_03087096$, $M291_03087096$, $M292_03087096$, $M293_03087096$, $M294_03087096$, $M295_03087096$, $M296_03087096$, $M297_03087096$, $M298_03087096$, $M299_03087096$, $M300_03087096$, $M301_03087096$, $M302_03087096$, $M303_03087096$, $M304_03087096$, $M305_03087096$, $M306_03087096$, $M307_03087096$, $M308_03087096$, $M309_03087096$, $M310_03087096$, $M311_03087096$, $M312_03087096$, $M313_03087096$, $M314_03087096$, $M315_03087096$, $M316_03087096$, $M317_03087096$, $M318_03087096$, $M319_03087096$, $M320_03087096$, $M321_03087096$, $M322_03087096$, $M323_03087096$, $M324_03087096$, $M325_03087096$, $M326_03087096$, $M327_03087096$, $M328_03087096$, $M329_03087096$, $M330_03087096$, $M331_03087096$, $M332_03087096$, $M333_03087096$, $M334_03087096$, $M335_03087096$, $M336_03087096$, $M337_03087096$, $M338_03087096$, $M339_03087096$, $M340_03087096$, $M341_03087096$, $M342_03087096$, $M343_03087096$, $M344_03087096$, $M345_03087096$, $M346_03087096$, $M347_03087096$, $M348_03087096$, $M349_03087096$, $M350_03087096$, $M351_03087096$, $M352_03087096$, $M353_03087096$, $M354_03087096$, $M355_03087096$, $M356_03087096$, $M357_03087096$, $M358_03087096$, $M359_03087096$, $M360_03087096$, $M361_03087096$, $M362_03087096$, $M363_03087096$, $M364_03087096$, $M365_03087096$, $M366_03087096$, $M367_03087096$, $M368_03087096$, $M369_03087096$, $M370_03087096$, $M371_03087096$, $M372_03087096$, $M373_03087096$, $M374_03087096$, $M375_03087096$, $M376_03087096$, $M377_03087096$, $M378_03087096$, $M379_03087096$, $M380_03087096$, $M381_03087096$, $M382_03087096$, $M383_03087096$, $M384_03087096$, $M385_03087096$, $M386_03087096$, $M387_03087096$, $M388_03087096$, $M389_03087096$, $M390_03087096$, $M391_03087096$, $M392_03087096$, $M393_03087096$, $M394_03087096$, $M395_03087096$, $M396_03087096$, $M397_03087096$, $M398_03087096$, $M399_03087096$, $M400_03087096$, $M401_03087096$, $M402_03087096$, $M403_03087096$, $M404_03087096$, $M405_03087096$, $M406_03087096$, $M407_03087096$, $M408_03087096$, $M409_03087096$, $M410_03087096$, $M411_03087096$, $M412_03087096$, $M413_03087096$, $M414_03087096$, $M415_03087096$, $M416_03087096$, $M417_03087096$, $M41$

Scatter plot showing the relationship between t_1 (47%) on the x-axis and t_{01} on the y-axis. The plot displays two clusters of data points, labeled k_1 (blue) and k_2 (red), each enclosed by an ellipse. The axes range from -10000 to 10000 on the x-axis and -6000 to 6000 on the y-axis. A legend at the top left indicates the cluster colors.

R2X	R2Y	Q2Y	t_1 (47%)	RMSEE	pre	ort
0.901	0.788	0.747		0.216	1	1

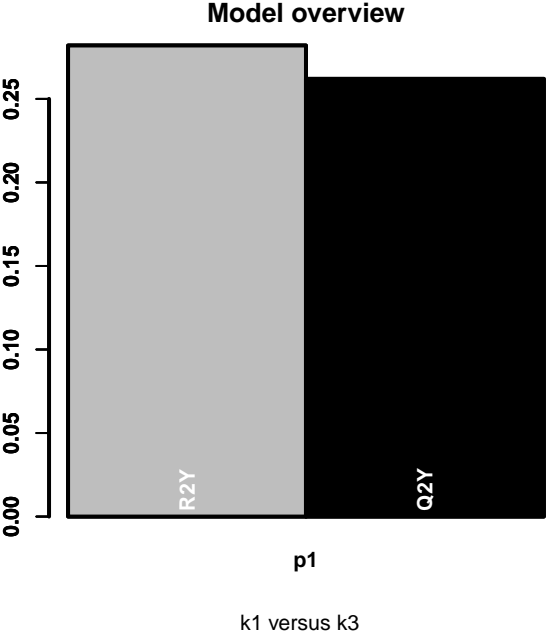
Condition	R2Y	Q2Y
p1	0.50	0.48
o1	0.29	0.27

A scatter plot showing the relationship between covariance and correlation for feature 'to1'. The x-axis is labeled 'covariance(feature,to1)' and ranges from -1e+10 to 1e+10. The y-axis is labeled 'correlation(feature,to1)' and ranges from -1.0 to 1.0. Data points are labeled with IDs. Most points are clustered in the upper-left quadrant, indicating negative covariance and high positive correlation. A few points are in the lower-right quadrant, indicating positive covariance and low or negative correlation.

ID	covariance(feature,to1)	correlation(feature,to1)
M222.35857465	-7.5e+09	0.95
M222.8687326	-6.5e+09	0.90
M222.8694818	-5.5e+09	0.85
M222.9501707	-4.5e+09	0.80
M222.9501707	-4.5e+09	0.75
M222.9501707	-4.5e+09	0.70
M222.9501707	-4.5e+09	0.65
M222.9501707	-4.5e+09	0.60
M222.9501707	-4.5e+09	0.55
M222.9501707	-4.5e+09	0.50
M222.9501707	-4.5e+09	0.45
M222.9501707	-4.5e+09	0.40
M222.9501707	-4.5e+09	0.35
M222.9501707	-4.5e+09	0.30
M222.9501707	-4.5e+09	0.25
M222.9501707	-4.5e+09	0.20
M222.9501707	-4.5e+09	0.15
M222.9501707	-4.5e+09	0.10
M222.9501707	-4.5e+09	0.05
M222.9501707	-4.5e+09	0.00
M222.9501707	-4.5e+09	-0.05
M222.9501707	-4.5e+09	-0.10
M222.9501707	-4.5e+09	-0.15
M222.9501707	-4.5e+09	-0.20
M222.9501707	-4.5e+09	-0.25
M222.9501707	-4.5e+09	-0.30
M222.9501707	-4.5e+09	-0.35
M222.9501707	-4.5e+09	-0.40
M222.9501707	-4.5e+09	-0.45
M222.9501707	-4.5e+09	-0.50
M222.9501707	-4.5e+09	-0.55
M222.9501707	-4.5e+09	-0.60
M222.9501707	-4.5e+09	-0.65
M222.9501707	-4.5e+09	-0.70
M222.9501707	-4.5e+09	-0.75
M222.9501707	-4.5e+09	-0.80
M222.9501707	-4.5e+09	-0.85
M222.9501707	-4.5e+09	-0.90
M222.9501707	-4.5e+09	-0.95
M222.9501707	-4.5e+09	-1.00
M222.9501707	-4.5e+09	-0.95
M222.9501707	-4.5e+09	-0.90
M222.9501707	-4.5e+09	-0.85
M222.9501707	-4.5e+09	-0.80
M222.9501707	-4.5e+09	-0.75
M222.9501707	-4.5e+09	-0.70
M222.9501707	-4.5e+09	-0.65
M222.9501707	-4.5e+09	-0.60
M222.9501707	-4.5e+09	-0.55
M222.9501707	-4.5e+09	-0.50
M222.9501707	-4.5e+09	-0.45
M222.9501707	-4.5e+09	-0.40
M222.9501707	-4.5e+09	-0.35
M222.9501707	-4.5e+09	-0.30
M222.9501707	-4.5e+09	-0.25
M222.9501707	-4.5e+09	-0.20
M222.9501707	-4.5e+09	-0.15
M222.9501707	-4.5e+09	-0.10
M222.9501707	-4.5e+09	-0.05
M222.9501707	-4.5e+09	0.00
M222.9501707	-4.5e+09	0.05
M222.9501707	-4.5e+09	0.10
M222.9501707	-4.5e+09	0.15
M222.9501707	-4.5e+09	0.20
M222.9501707	-4.5e+09	0.25
M222.9501707	-4.5e+09	0.30
M222.9501707	-4.5e+09	0.35
M222.9501707	-4.5e+09	0.40
M222.9501707	-4.5e+09	0.45
M222.9501707	-4.5e+09	0.50
M222.9501707	-4.5e+09	0.55
M222.9501707	-4.5e+09	0.60
M222.9501707	-4.5e+09	0.65
M222.9501707	-4.5e+09	0.70
M222.9501707	-4.5e+09	0.75
M222.9501707	-4.5e+09	0.80
M222.9501707	-4.5e+09	0.85
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M222.9501707	-4.5e+09	0.50
M222.9501707	-4.5e+09	0.45
M222.9501707	-4.5e+09	0.40
M222.9501707	-4.5e+09	0.35

too few covariance data

no orthogonal projection is possible



no orthogonal projection is possible

