

Electronic supplementary information

Role of Sulfur Vacancies in MoS₂ Monolayers in Stabilizing Co Atoms for Efficient CO Oxidation

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Table S1 Comparison of the binding energy (E_b , eV) of Co atom and adsorption energies (E_{ads} , eV) of CO and O₂ on Co-SMoS₂ calculated with the 2 × 2, 3 × 3, 4 × 4 and 5 × 5 supercells. All the adsorption energies are for the most favored adsorption configurations. The negative values represent the exothermic adsorption.

Supercell	2×2	3×3	4×4	5×5
$E_b(\text{Co})$	-4.45	-4.39	-4.39	-4.38
$E_{ads}(\text{CO})$	-1.78	-1.77	-1.78	-1.78
$E_{ads}(\text{O}_2)$	-1.69	-1.64	-1.64	-1.64

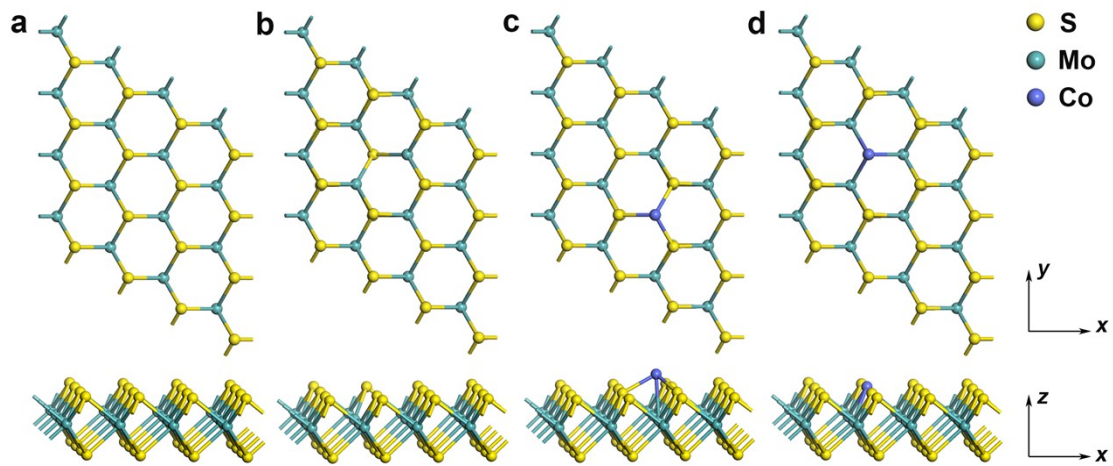


Fig. S1 Top (upper) and side (lower) view of the optimized most energetically favorable configurations of (a) defect-free MoS₂, (b) MoS₂-Sv, (c) Co/MoS₂ and (d) Co^SMoS₂, respectively.

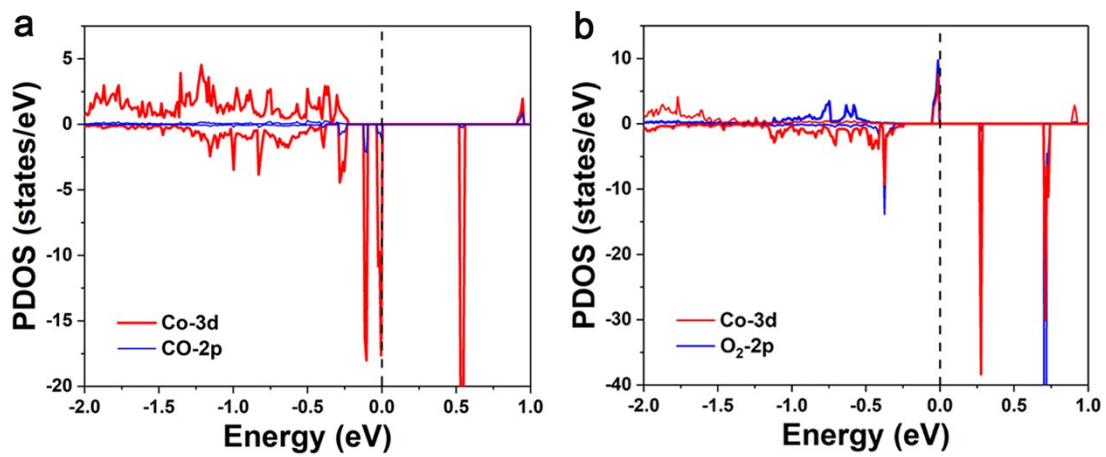


Fig. S2 The PDOS of adsorbed (a) CO and (b) O₂ on the Co^SMoS₂. The Fermi level is set to zero.

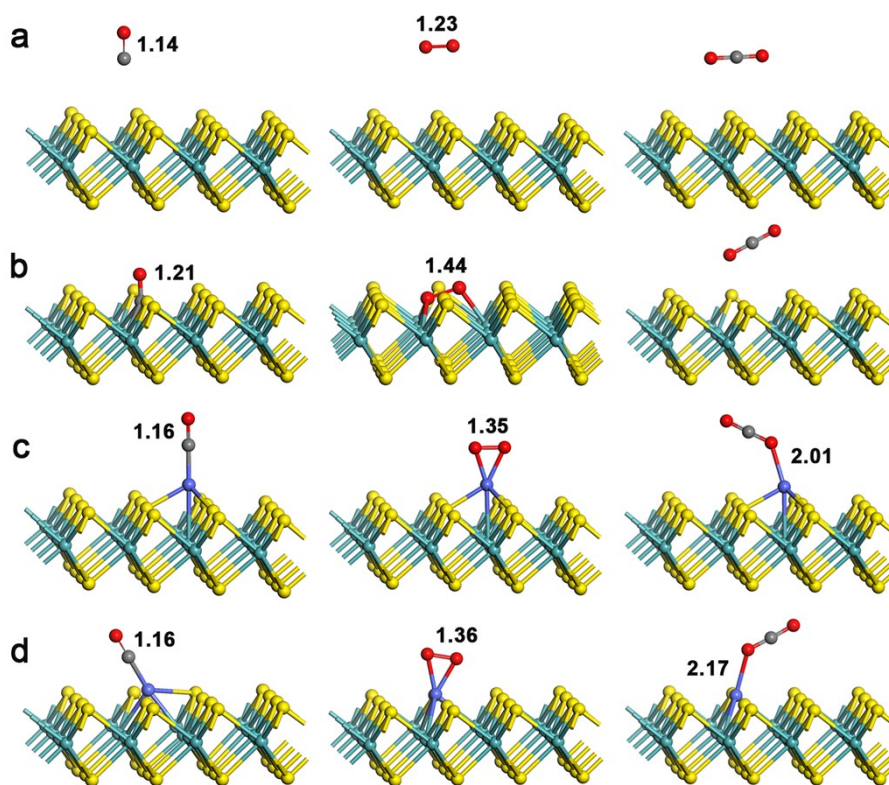


Fig. S3 The optimized structure for CO, O₂ and CO₂ adsorbed on (a) defect-free MoS₂, (b) MoS₂-Sv, (c) Co/MoS₂ and (d) Co^SMoS₂. The green, yellow, blue, gray and red spheres represent Mo, S, Co, C and O elements, respectively.

Table S2 Comparison of the binding energy (E_b , eV) of Co atom, bond lengths (d , Å) and adsorption energies (E_{ads} , eV) of CO, O₂, CO₂, CO+O₂ and 2CO on defect-free MoS₂, MoS₂-Sv, Co/MoS₂ and Co^SMoS₂. All the adsorption energies are for the most favored adsorption configurations. The negative values represent the exothermic adsorption.

	defect-free MoS ₂	MoS ₂ -Sv	Co/MoS ₂	Co ^S MoS ₂
$E_b(\text{Co})$	-	-	-3.28	-4.39
$E_{\text{ads}}(\text{CO})$	-0.15	-1.24	-2.30	-1.78
$d(\text{C-O})$	1.14	1.21	1.16	1.16
$E_{\text{ads}}(\text{O}_2)$	-0.09	-2.14	-1.90	-1.64
$d(\text{O-O})$	1.23	1.44	1.35	1.36
$E_{\text{ads}}(\text{CO}_2)$	-0.19	-0.23	-0.48	-0.48

d(Co-C)	-	-	2.01	2.17
$E_{\text{ads}}(\text{CO}+\text{O}_2)$	-0.28	-2.33	-2.67	-2.04
d(C-O)	1.14	1.14	1.16	1.16
d(O-O)	1.23	1.44	1.29	1.29
$E_{\text{ads}}(2\text{CO})$	-0.33	-1.32	-3.29	-2.81
d(C-O)	1.14	1.23/1.14	1.16	1.16

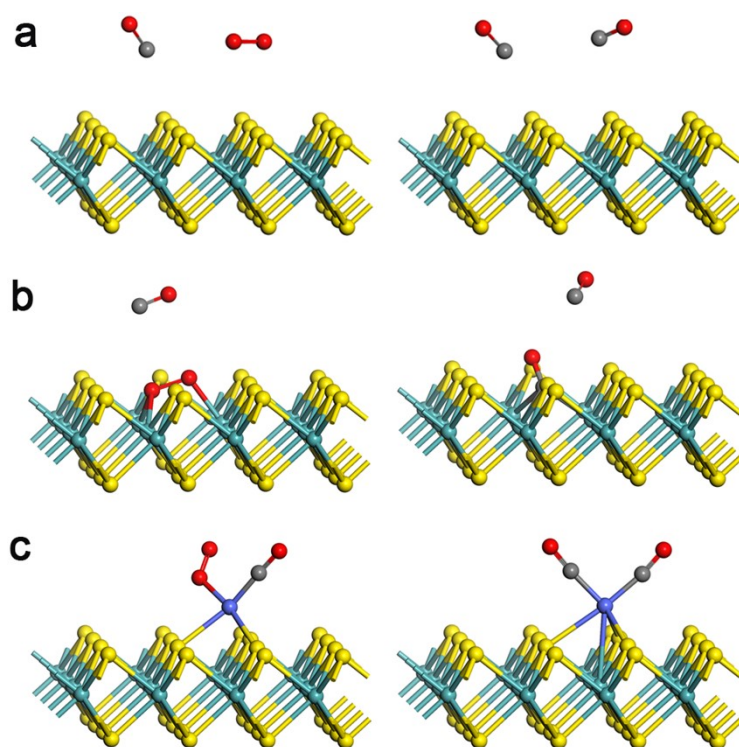


Fig. S4 The optimized structure for $\text{CO}+\text{O}_2$ and 2CO adsorbed on (a) defect-free MoS_2 , (b) $\text{MoS}_2\text{-Sv}$ and (c) Co/MoS_2 .

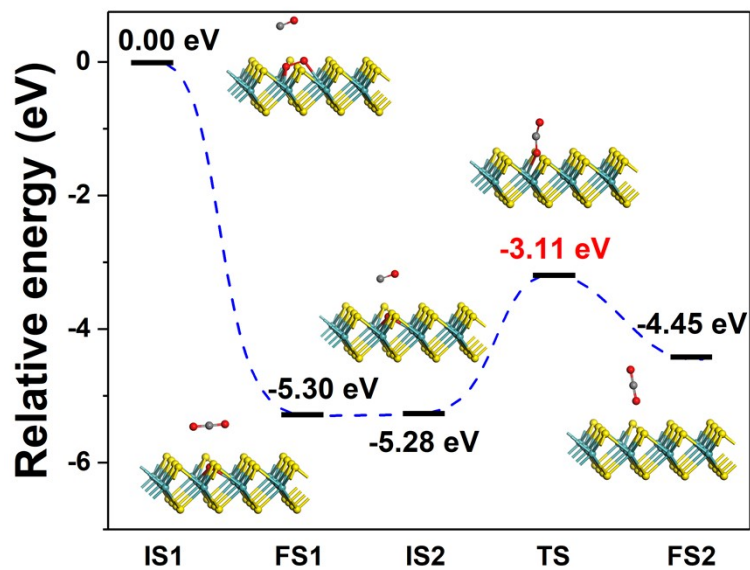


Fig. S5 The potential energy diagram for reaction process of O₂ adsorbed on MoS₂-Sv with CO molecules.

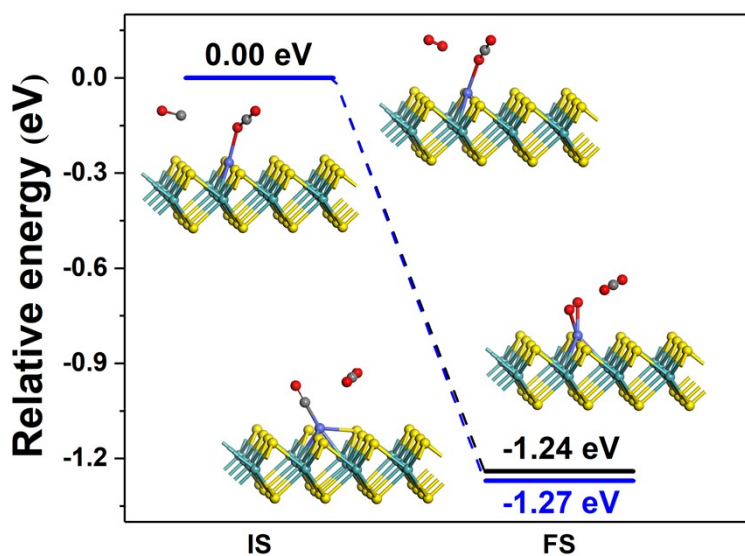


Fig. S6 Reaction pathway for the substitute adsorption of O₂ (black line) and CO (blue line) with CO₂ produced by the reaction on Co-SMoS₂.

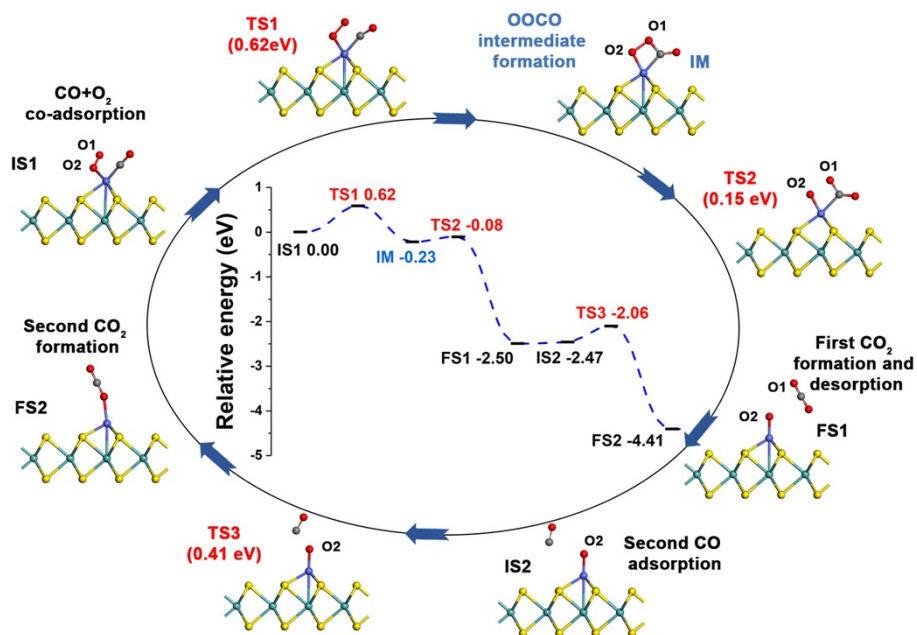


Fig. S7 Reaction pathway for CO oxidation on Co/MoS₂ based on the LH mechanism.

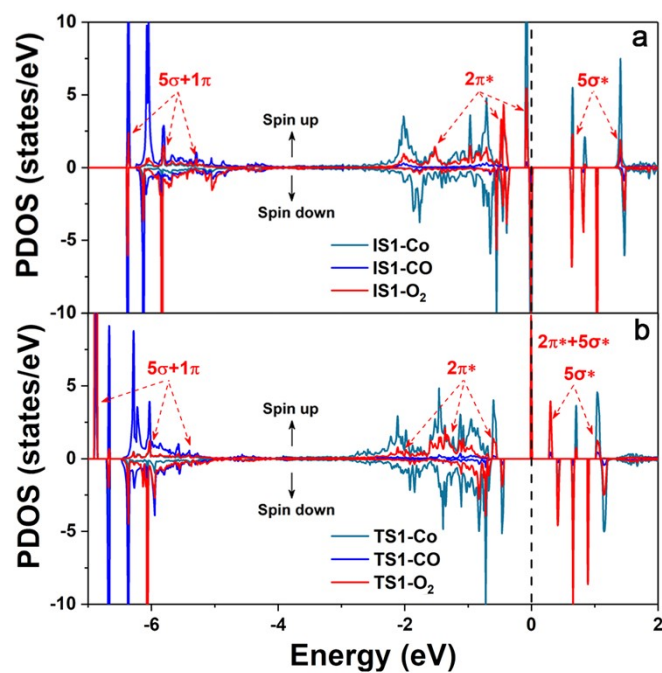


Fig. S8 The PDOS projected onto Co (green curve), adsorbed O₂ (red curve), and CO (blue curve) in the (a) IS1 and (b) TS1 in the reaction pathway via LH mechanism on Co-^SMoS₂.

Atomic coordinates of the optimized pristine MoS₂, MoS₂-Sv, Co/MoS₂ and Co-^SMoS₂ monolayers, and Co-^SMoS₂ adsorbed with CO, O₂ and different intermediates of CO oxidation along the ER, NER, LH and TER mechanisms are as follows.

Defect-free MoS₂ monolayer

X	Y	Z
0.0824706664551820	0.1659586506714432	0.5000048598045711
0.3324706668709111	0.1659587361297206	0.5000048655280402
0.5824706467545375	0.1659587085179870	0.5000048586266799
0.8324707203214565	0.1659586989461552	0.5000048718829735
0.0824707054674611	0.4159587741331430	0.5000048602686352
0.3324707417564429	0.4159587611719753	0.5000048567336625
0.5824706732122382	0.4159587463967336	0.5000048648191466
0.8324706966448794	0.4159587166985819	0.5000048598503632
0.0824707414309221	0.6659587661326638	0.5000048598104926
0.3324706574040456	0.6659587196545742	0.5000048653218663
0.5824706515884308	0.6659586652872341	0.5000048646149923
0.8324706390615951	0.6659587255327922	0.5000048704128671
0.0824706941335551	0.9159587236051027	0.5000048618406129
0.3324706311358859	0.9159586852366731	0.5000048659614122
0.5824706359661209	0.9159586867586985	0.5000048645405335
0.8324707082808234	0.9159587389323103	0.5000048614230591
0.1657891703725962	0.0826317692319448	0.5781516099240381
0.1657802979788535	0.0826296288348445	0.4218535204584600
0.4157891135403129	0.0826317448554022	0.5781516010002891
0.4157802161741417	0.0826296079009773	0.4218535190500215
0.6657890692409006	0.0826317066164206	0.5781516408317592
0.6657801800295631	0.0826295443924608	0.4218534709217859
0.9157891210696295	0.0826317342184250	0.5781516631517734
0.9157802403343173	0.0826295888198841	0.4218534572920501
0.1657891395499890	0.3326317405892357	0.5781516139836066
0.1657802725528759	0.3326296208519384	0.4218535237547689
0.4157891134777165	0.3326316959832785	0.5781515386877843
0.4157802132078504	0.3326295587704575	0.4218535840996247
0.6657890352880389	0.3326317311612691	0.5781515897585264
0.6657801795729001	0.3326296092369077	0.4218535366385965
0.9157891389999326	0.3326317300616873	0.5781516421676250
0.9157802565130305	0.3326296106945530	0.4218534685870620
0.1657891323476857	0.5826317114558971	0.5781516178096253
0.1657802526520736	0.5826295758788171	0.4218534944658164
0.4157890418252665	0.5826316944795046	0.5781515688814846
0.4157801973499077	0.5826295666945297	0.4218535498389593
0.6657891146696292	0.5826317110799457	0.5781515481346612
0.6657802439850630	0.5826295694340319	0.4218535658480771
0.9157891041212357	0.5826317877915279	0.5781516127893569
0.9157802371258429	0.5826296254522102	0.4218535059734612
0.1657890898462770	0.8326316804349382	0.5781516491444136
0.1657802174001090	0.8326295699079015	0.4218534769987835

0.4157890840774075	0.8326316994118319	0.5781516324659681
0.4157802127166533	0.8326295551525340	0.4218534848458334
0.6657890982778887	0.8326316908586420	0.5781516760133042
0.6657802015815665	0.8326295480719443	0.4218534530369815
0.9157891124546282	0.8326316523441265	0.5781516296511295
0.9157801891816569	0.8326294875260933	0.4218534863544934

MoS₂-Sv monolayer

X	Y	Z
0.0833404601581850	0.1668372016060566	0.5010056676482100
0.3325263923150306	0.1668922275460864	0.5009981769163313
0.5819959030607370	0.1657382307703207	0.5004075557340865
0.8327388597481540	0.1656855812245228	0.5004033067672057
0.0853500928022082	0.4174226764291998	0.4990722956897291
0.3348384931253244	0.4207711166741488	0.4972958653248278
0.5809650252072935	0.4174353472901322	0.4991002920150345
0.8327076633241336	0.4165009787165797	0.5004384145937856
0.0833474444169992	0.6659585225537129	0.5010437245266371
0.3348095297829379	0.6635491126170737	0.4973299477408135
0.5776324132199592	0.6635274819501534	0.4973473500953948
0.8315531225573369	0.6659260335366419	0.5010754673165109
0.0824656413894951	0.9159783994458689	0.5017399834007726
0.3324888004730469	0.9150975663403234	0.5009971591478402
0.5809398863540319	0.9130129305487146	0.4990882722267486
0.8315611727430386	0.9150756183208583	0.5010522574841781
0.1664169774136342	0.0837111410729557	0.5795351617439596
0.1656421899321892	0.0822719506020035	0.4234097584266980
0.4162496715369445	0.0828333172712284	0.5790004753863172
0.4147818357949056	0.0821101891886936	0.4229040668919347
0.6647675871279419	0.0804664222905639	0.5777112867045566
0.6656952731994673	0.0824090377365587	0.4221997988959779
0.9156618061748116	0.0829122752685385	0.5790731553089444
0.9163328532593711	0.0819887908984486	0.4229325210107922
0.1721512172593088	0.3393379081683775	0.5772841025153319
0.1672728182798360	0.3320058880135526	0.4210117281613778
0.4161385567551550	0.3393700668435219	0.5773034007579835
0.4136447442222241	0.3320472785398818	0.4210011130796739
0.6647233264327362	0.3337196080914350	0.5777382764482629
0.6656765116892512	0.3327821124537076	0.4222370140356879
0.9179189869139377	0.3336860566696684	0.5777258022229507
0.9159185248830974	0.3327173244084609	0.4222162020956723
0.1721509874230197	0.5821858071177655	0.5773362753500574
0.1673067709747556	0.5848229433268490	0.4210237420254613
0.4158417691268382	0.5826995281376324	0.4186845334993936

0.6590308757501037	0.5822224455645186	0.5773354954871680
0.6664072603159243	0.5848042010967032	0.4210360697622107
0.9156646908444195	0.5822445807998217	0.5790879812395117
0.9163231343377484	0.5837086842365606	0.4229773368255108
0.1663422808021894	0.8321616752386372	0.5795457567368671
0.1655781955073740	0.8328079589953862	0.4234159117576610
0.4160826189110659	0.8262625182393450	0.5773235565201941
0.4136137670953586	0.8310425062874570	0.4210231045244481
0.6589980406854495	0.8262754409819265	0.5773073976001891
0.6663493323390457	0.8310092196891760	0.4210514786994780
0.9148294419400630	0.8321516255561870	0.5795618912362166
0.9160772923939118	0.8327123926441033	0.4234594144213656

Co/MoS₂ monolayer

X	Y	Z
0.0826499620004977	0.1660773500147732	0.4997320779399325
0.3324719020844399	0.1648843777121916	0.5000250451005260
0.5813633284129580	0.1648323113053403	0.5000142278013039
0.8323971446469708	0.1660581647644120	0.4997281182417543
0.0824397201120018	0.4159220259708241	0.4995756100165649
0.3325286872991700	0.4170930589353963	0.5000121023169735
0.5824254183369728	0.4158898988001339	0.4997219167155394
0.8335711969643647	0.4170767633167377	0.4999953300557439
0.0825962409684177	0.6660597210609371	0.4999740246248787
0.3324327787174345	0.6660317889102670	0.4999677491652496
0.5814306808491371	0.6659574590206031	0.4999625601827716
0.8335497711354256	0.6659348213166847	0.4999852354316158
0.0824365414243984	0.9160008061678605	0.4996024023264611
0.3323781572270960	0.9158437462175989	0.5000029154469835
0.5825254379973459	0.9159684678392738	0.4995660879270590
0.8324199535848049	0.9158472776124148	0.4996982721375046
0.1652095011497907	0.0819914547242295	0.5778637732232202
0.1660880000296348	0.0828685857727216	0.4215272379021202
0.4155749028756064	0.0821622656798927	0.5784118927096613
0.4156984244362421	0.0824253707679119	0.4216846642076978
0.6656986572117577	0.0818965666333888	0.5778530450380981
0.6658188714503140	0.0828828025026598	0.4215128606955323
0.9157517097868004	0.0826035455510551	0.5777746458212274
0.9159219612714571	0.0827394025298701	0.4215896341177709
0.1652050131552656	0.3327166009614291	0.5778372554436205
0.1661420770358697	0.3327205112054422	0.4215136847289531
0.4093351205258640	0.3294038650055428	0.5816364284277213
0.4167452908845564	0.3330751879372900	0.4225839763548760
0.6690066394463903	0.3293803135631548	0.5815933658168567

0.6653000959370881	0.3330423972932857	0.4225871941127550
0.9164089027195870	0.3326672183351739	0.5778558683290873
0.9155944206439353	0.3327045398929819	0.4215066832730185
0.1657027288516017	0.5824592923286155	0.5779271930106276
0.1659512716201018	0.5829101820441882	0.4216178607187819
0.4156798455448730	0.5829500877977696	0.5783874004067953
0.4157814196907174	0.5828246196957267	0.4216439125262704
0.6690376981284930	0.5890713470113438	0.5815647727651451
0.6652897405782709	0.5815429982807603	0.4225603345419845
0.9162950857801859	0.5828781949295948	0.5784068561038355
0.9160543944383920	0.5827795467426439	0.4216453709308460
0.1656709082433595	0.8326781433073833	0.5779645952616282
0.1659495628111045	0.8326423262902268	0.4216263178045852
0.4159539786495867	0.8326854904243203	0.5779492635398540
0.4156023644328617	0.8325792633914705	0.4216354422839631
0.6657351845384202	0.8332055998401372	0.5778308954805617
0.6658457221063457	0.8324458487022875	0.4214746337915374
0.9163856951299758	0.8332068161359861	0.5778238281688387
0.9156652420771241	0.8324328383904829	0.4215030751741353
0.5822828950569808	0.4158886503656463	0.6272018668574901

Co-^SMoS₂ monolayer

X	Y	Z
0.0829574029213410	0.1666201113735442	0.5009064806302035
0.3327274737277075	0.1666659212858356	0.5007729535585842
0.5822899400900154	0.1659080478467558	0.5004721186209369
0.8327429810116384	0.1658646872642567	0.50064444610525986
0.0846307800995843	0.4170747968471472	0.4995122187526150
0.3334774200170156	0.4162949716107133	0.4966799056926022
0.5815894896860759	0.4162952134740228	0.4992141122189696
0.8327292745425163	0.4163230901398581	0.5006677254167791
0.0828736491237995	0.6657905903229695	0.5008697719757090
0.3333951136797531	0.6667874271334056	0.4966296676959278
0.5803182287974782	0.6649793409838828	0.4969757617616936
0.8313855869713249	0.6655262834996647	0.5009870353025072
0.0822332428841480	0.9158758702976104	0.5015799292031466
0.3326720103357040	0.9155596467654052	0.5007159882796386
0.5815841953451639	0.9148518283577839	0.4991888065671413
0.8314058060850069	0.9153239088232163	0.5009971247891194
0.1663274495554199	0.0834735426921205	0.5793031664448555
0.1654518299120108	0.0821812893023496	0.4232596518110503
0.4160611761514193	0.0827322531848554	0.5788625887243767
0.4151668376715681	0.0823796906948554	0.4227199944003345
0.6650846751831618	0.0813320985184522	0.5780604262758039

0.6662698152108415	0.0833983854493406	0.4221494458394170
0.9157226372509423	0.0827038259166441	0.5790988285575384
0.9160014491316923	0.0820626750881009	0.4229573880707150
0.1717432355974361	0.3381809434575521	0.5774949854255232
0.1646262102108169	0.3310842882701263	0.4205562849721324
0.4162787722031551	0.3380255365167247	0.5775226384554638
0.4155769894998546	0.3307971768242384	0.4201473076756166
0.6651043217325368	0.3332918123825839	0.5780825545745444
0.6662748763461547	0.3324197495662764	0.4221849182702573
0.9176356213826130	0.3335303276275877	0.5781620745379885
0.9158794074263022	0.3327005669637624	0.4225235210920653
0.1716793957680825	0.5831579279970368	0.5774712489309899
0.1645501532347368	0.5830133127731449	0.4205061705157229
0.4156358918915897	0.5826086283995029	0.4191438249649210
0.6593949821560658	0.5815403937053159	0.5774196107948639
0.6671199937845530	0.5829519654411203	0.4206479314446102
0.9157101575326596	0.5824716384601311	0.5790853680612560
0.9159389647445542	0.5832759240030490	0.4229426140812991
0.1662318635777747	0.8322807385998833	0.5792373232012762
0.1653544305740304	0.8327348992915776	0.4232198356008654
0.4162101828990102	0.8278534591089947	0.5774848728715606
0.4156120105392132	0.8343095259276511	0.4200878750836151
0.6594121765678427	0.8275082502531965	0.5774243738230290
0.6671584863170292	0.8337625214100713	0.4206180989605851
0.9146159438890282	0.8320127808387452	0.5793858306242394
0.9156585660325670	0.8325257294043590	0.4233640721453479
0.4175189877070659	0.5837263319045762	0.5829310142499690

Co-SMoS₂ with adsorption of CO

X	Y	Z
0.0814150909139287	0.1654442223449511	0.5014965415391596
0.3296053400454783	0.1651510070176092	0.5017194950139503
0.5793006405184636	0.1635541828746403	0.5002594788365794
0.8302323756296022	0.1637630924448006	0.5000607586451551
0.0814891228839277	0.4146556195877987	0.4994688163697278
0.3341270427184294	0.4222375000421508	0.5002194551362998
0.5783435473665405	0.4140429900142334	0.4984598789172457
0.8297582235988025	0.4138215919022657	0.4996545930457600
0.0798774854803952	0.6638379066832614	0.4997254552674273
0.3326507679724435	0.6633539387763522	0.4957528263758159
0.5824835026336012	0.6677021146450326	0.4897162298342018
0.8285429539788800	0.6634660134467154	0.4988185905898282
0.0800298535016162	0.9143125975799642	0.5012870533803896
0.3298287424412502	0.9123573495660259	0.5009382121732373

0.5788069032341145	0.9121873096596161	0.4970152106253901
0.8288822813003878	0.9133931250247905	0.4996508225726792
0.1632322806516401	0.0811298865767257	0.5799360358221640
0.1638137108214194	0.0815622968392333	0.4235936461760437
0.4134866511288616	0.0799835588726326	0.5790139080956520
0.4112293595559431	0.0801960470474012	0.4233028408574807
0.6619660723708943	0.0777213276070505	0.5769747560518930
0.6639284824874725	0.0825981921077191	0.4213672738895770
0.9122236251040599	0.0796413665431159	0.5785219381321340
0.9158264949584475	0.0818767329819879	0.4226246849616802
0.1680028997185041	0.3365331904916020	0.5782422070217880
0.1669743229175199	0.3320381156362540	0.4227405077955477
0.4147661252445088	0.3372485471286545	0.5781625499527452
0.4101102797036150	0.3311178221296161	0.4224296818585338
0.6624615817689020	0.3316276506177782	0.5773815906193899
0.6625168549088544	0.3293192246788337	0.4216218745155950
0.9142276859279945	0.3312331625107345	0.5777220469211092
0.9136762203018686	0.3302394680536868	0.4217592837665336
0.1685440012041121	0.5816793081543532	0.5756973726579715
0.1620017596628942	0.5804462169285809	0.4200772368258634
0.4123163506859811	0.5803360385551919	0.4170823223049971
0.6546126637719810	0.5820015755467473	0.5739423553897631
0.6656432266477882	0.5777284322693386	0.4170564801543293
0.9120044019563025	0.5805512227267321	0.5775527519357787
0.9134351961043476	0.5804227123269238	0.4215007902652648
0.1629295049211299	0.8292072272283365	0.5788759094931826
0.1636249811097358	0.8316536178302723	0.4228321856432907
0.4157244214255393	0.8227398723590714	0.5773427455556562
0.4111890327013847	0.8310525477957155	0.4195120798132853
0.6519938057532833	0.8202916013561500	0.5751516543719232
0.6684356112572345	0.8374904041483537	0.4164195184417974
0.9110022748862452	0.8289880453880849	0.5779535377573829
0.9146608787339299	0.8319036979489431	0.4221537011961067
0.4515572178318775	0.6289288545942447	0.5931447853527985
0.3768060074029126	0.5645028984504086	0.6706071381228677
0.3282520221549386	0.5178986409592994	0.7202390209570660

Co-SMoS₂ with adsorption of O₂

X	Y	Z
0.0826178237861071	0.1664313083416388	0.4994922255160604
0.3327087968390539	0.1668531925995263	0.4998641102766829
0.5821791868888878	0.1657616423836582	0.4996124840016591
0.8323170331800254	0.1655580536882240	0.4993157227948724
0.0832489368630850	0.4163720121404251	0.4979430737963009

0.3320022066757141	0.4174389348297914	0.4967933872885339
0.5822143931585912	0.4172367716937698	0.4991175294887347
0.8323429145824380	0.4161691222456792	0.4993304462458519
0.0826281109197000	0.6656491580651920	0.4994842437958018
0.3320340053713864	0.6639729441339804	0.4968406804774610
0.5797740379883887	0.6645384789501623	0.4994003928286050
0.8321533665896191	0.6661281779207499	0.4998490858211206
0.0826189684614850	0.9160597940407929	0.5001256213788340
0.3327035616670029	0.9152051009267053	0.4998683375747208
0.5822138915694811	0.9143514870866226	0.4991201940970047
0.8320858397245550	0.9154103538929048	0.4998383854380413
0.1660373760758893	0.0834001292034218	0.5780176626617203
0.1660410454105012	0.0826138443381926	0.4219334317991472
0.4158722218979680	0.0826032765239900	0.5779518596862669
0.4151532404375480	0.0822506108475312	0.4219111011677438
0.6654174233215747	0.0816133397923326	0.5773172218886136
0.6653608385324282	0.0820876268926681	0.4213799274564583
0.9157143138618595	0.0828645875608149	0.5777354873114278
0.9156122760881724	0.0818016210431003	0.4214987010587657
0.1684803735689355	0.3368466550994396	0.5765617825432103
0.1651429645614338	0.3313304036305787	0.4196486862418301
0.4160367405621950	0.3374815707659222	0.5768316723233137
0.4159216927699550	0.3322688256180922	0.4202736699054741
0.6654536199998204	0.3331263869324771	0.5773324308772330
0.6653680116946176	0.3326670432014014	0.4214238451963812
0.9167045348956646	0.3330513984463088	0.5767719334808488
0.9147057598914585	0.3320684661615186	0.4209220927207836
0.1684748351807052	0.5811381216212124	0.5765754562193531
0.1652514244396122	0.5833890748323821	0.4196793690321179
0.4166218736046681	0.5830366324632559	0.4200494993248374
0.6632702475730707	0.5826885881911352	0.5774037689953417
0.6656428345821184	0.5841222435315218	0.4212729272255388
0.9157844671482871	0.5822998813147523	0.5777547251374905
0.9156591716192647	0.5832203768476427	0.4214983643366459
0.1660002054001778	0.8320397360027479	0.5779901132320973
0.1660292912820557	0.8329139726185114	0.4219098140649674
0.4161071788820472	0.8279253166257852	0.5768729204834147
0.4159952134445099	0.8330154730893048	0.4203107177364434
0.6632278860513470	0.8298937522861404	0.5774129155866794
0.6654908773110851	0.8307736769965668	0.4212839246454428
0.9156070548087567	0.8325648244902070	0.5782273081346775
0.9160328504942891	0.8327576486148425	0.4218852628274248
0.3953703186275823	0.5722432659161291	0.5924330497727387
0.3707920279453170	0.5596284872006549	0.6859166429192090

0.4914666247695502 0.6196066813595731 0.6708656201861020

ER mechanisms:

IS1

X	Y	Z
0.0833681675415296	0.1668285869152139	0.4986235321397932
0.3335331598438531	0.1673524646220754	0.4990091998147649
0.5830111485039563	0.1661998218533509	0.4987558780097121
0.8330570203066522	0.1658490431928845	0.4984271944693142
0.0839162535416461	0.4166669174174918	0.4971474729760536
0.3327365292339701	0.4178952803276051	0.4959482611623187
0.5830038070085458	0.4176657841848228	0.4980896324873447
0.8330741291752457	0.4165583886902429	0.4983589882296407
0.0833602980915133	0.6659687002630275	0.4985836298419829
0.3326787034539302	0.6642361953440923	0.4959500778517272
0.5806390173489130	0.6650443390948930	0.4983102729622258
0.8328663505659905	0.6664955392670511	0.4987277146106333
0.0834157704332544	0.9164229310373859	0.4992068864526168
0.3334978653744445	0.9155577699451966	0.4990344639129365
0.5829553673641132	0.9147171632243145	0.4981573804036454
0.8328689158243660	0.9158053076245102	0.4987905532880287
0.1668224053265404	0.0837850899067034	0.5771029977718910
0.1668372950031721	0.0830694345835346	0.4210875262039354
0.4167484131494738	0.0830950187058252	0.5770688569503996
0.4159731733961165	0.0826363926438012	0.4211034566445757
0.6662125776629862	0.0819392814552441	0.5764409804798316
0.6660937923427304	0.0824856060601169	0.4205055106861111
0.9164661900770401	0.0830789846548560	0.5768320765131822
0.9164138125800362	0.0822730096195913	0.4205605345700401
0.1692325828869845	0.3372526804018359	0.5757841438979453
0.1658207066039642	0.3316996305484438	0.4188246739868256
0.4170584676110679	0.3382145745495716	0.5759243424899003
0.4165360897986222	0.3327214930560766	0.4194018413965375
0.6662775027249749	0.3337160002775208	0.5764130994965455
0.6661592517303215	0.3329835802397554	0.4204624311644986
0.9172136943424664	0.3333357657918863	0.5758246772578502
0.9155045070768604	0.3323193105472215	0.4200654487999216
0.1691164449190169	0.5814616131725165	0.5757699034674477
0.1658116747054971	0.5835095422754354	0.4188141641856722
0.4173209187497986	0.5834053710985130	0.4191031234181894
0.6641403550497876	0.5831598177948214	0.5763058730770299
0.6662449831220302	0.5843965655148731	0.4201628894144582
0.9164255395644949	0.5827646418626630	0.5767494354163542
0.9164585073857223	0.5835341662596769	0.4205019200761166

0.1667844443190389	0.8324020793385001	0.5771291900250926
0.1668788681005524	0.8332578467466250	0.4210742898134047
0.4169884054975174	0.8281937137298565	0.5759617975158355
0.4165326952202095	0.8332500438264080	0.4194266860434588
0.6641265897784930	0.8303717294006925	0.5763599385792436
0.6662709023850079	0.8314203419058582	0.4202126287977661
0.9162755016161244	0.8328443672834916	0.5771349255969501
0.9168933816910106	0.8332338339627164	0.4208155471962727
0.3966913157433645	0.5731045274352617	0.5914322388969199
0.3738894374311627	0.5617427741677754	0.6850490268654023
0.4943883551156319	0.6217857936987126	0.6693112431507977
0.3549778199751799	0.5511982227529985	0.8595405211802701
0.2665508557050652	0.5026727747264390	0.8294309233606040

TS1

X	Y	Z
0.0848701597974895	0.1682551947801159	0.4986324454582202
0.3334100470701600	0.1657614845792850	0.4975953166020161
0.5825296936097858	0.1648892916160278	0.4981134825020418
0.8329875490900136	0.1653536931975594	0.4983623214569519
0.0837166829277222	0.4182503417173961	0.4961770137245906
0.3345127935566410	0.4164866946387704	0.4918694932884122
0.5830946706610476	0.4163736558611930	0.4964609678195444
0.8327423241457694	0.4159004151929224	0.4976600970601694
0.0822014985513349	0.6662327008421229	0.4979462560675713
0.3309616571853979	0.6616523249890776	0.4965193384922628
0.5777347300542175	0.6612527509872876	0.4975599215018533
0.8314419705703884	0.6656287950516457	0.4988651972621909
0.0825765575121977	0.9161139891513911	0.4990761841936759
0.3324856617671159	0.9146152965407950	0.4985207473961707
0.5811315090749430	0.9126466609516156	0.4984011727401806
0.8321011567233327	0.9148786331939220	0.4993565026736845
0.1675644794832252	0.0840276441832231	0.5765368322048943
0.1655168282965107	0.0824905013194197	0.4206116730440640
0.4161746154162813	0.0822614327982905	0.5763752297364917
0.4158292373565259	0.0807563655764909	0.4200906089912450
0.6654558647114541	0.0807892731592403	0.5762514254213613
0.6656198271315716	0.0804583562077852	0.4205134759571151
0.9173068336120380	0.0836026022988889	0.5767826434374470
0.9168745684864135	0.0816962292337919	0.4210634853398929
0.1743441565799557	0.3443826162475006	0.5749841780233567
0.1640868600892347	0.3310742653560652	0.4172185558208099
0.4177283255759292	0.3370871590558480	0.5734570209880658
0.4175371308322724	0.3295189485100778	0.4166585916799405

0.6659618499245568	0.3329081767079742	0.5753712142749592
0.6665030399064946	0.3313045040745024	0.4194041779839707
0.9173359446150684	0.3335486681047897	0.5753049734872135
0.9149318740882534	0.3314254147439684	0.4194618557523668
0.1673246463887637	0.5826234631708402	0.5751978713031889
0.1661668088251744	0.5846070938126786	0.4184198492416371
0.4163760919193109	0.5831597474341237	0.4175544061444753
0.6606449572972650	0.5801330884952662	0.5759920327198742
0.6659996371795458	0.5845020234210381	0.4195135514123435
0.9154303504797667	0.5818131478709816	0.5763708853238967
0.9152859002927798	0.5834871937683772	0.4200780144544680
0.1660264889344844	0.8320512716067796	0.5767512619067290
0.1659184392422829	0.8334343918570895	0.4204757631479480
0.4141769243317839	0.8265396299539347	0.5755781889924378
0.4145965611094482	0.8300994137454509	0.4199362994067996
0.6613109402791864	0.8268844985036025	0.5760388702296524
0.6654185726567334	0.8296141207808319	0.4206770522115945
0.9155412347871419	0.8319100163468036	0.5774701382631662
0.9157722643436657	0.8326283073352982	0.4211598133473870
0.3742264425149671	0.5299234204659271	0.6000724766282346
0.3589297820528835	0.5395212637871389	0.6918566063520076
0.4490201778660096	0.6427739158667261	0.6627802986817506
0.4571908156922825	0.6513063849979013	0.8242077729531755
0.5074633898538965	0.6007326028020651	0.8095744591160673

IM

X	Y	Z
0.0856226663079130	0.1687275242769886	0.5002810509587255
0.3340976769665872	0.1681363385831459	0.5000623739933503
0.5837085956207801	0.1667101805129786	0.4999965609124991
0.8341558171775904	0.1668139080748003	0.5000413501944767
0.0852668642509279	0.4195481643258326	0.4980157077622910
0.3350162405852928	0.4188857302016565	0.4945343706818203
0.5849512684750977	0.4191242141583948	0.4982415141963721
0.8342248113940901	0.4175358340041129	0.4995233434535828
0.0843283699255072	0.6675789036311701	0.5001206378379673
0.3332496905420661	0.6631656197591304	0.4986628016415977
0.5801984433241236	0.6630634089387299	0.4990098047237909
0.8336663328291477	0.6674200217749569	0.5003009447470839
0.0841281534071812	0.9176341006303204	0.5008630731971402
0.3338752925185277	0.9163678942269275	0.5004857526165704
0.5824114743786566	0.9137647726595923	0.5000543138107234
0.8334472118450043	0.9164120151881369	0.5006217204084115
0.1681039709826574	0.0850705080044254	0.5787153051322702

0.1673333035199481	0.0841145226731446	0.4224771756610997
0.4174725095169399	0.0841379513133515	0.5783742026539582
0.4166267808658773	0.0830610551895744	0.4223136881866545
0.6665422355196093	0.0820443860047469	0.5779195779097877
0.6665197626396191	0.0818520751647022	0.4222978033397368
0.9179856052941834	0.0844563308397035	0.5783866031658957
0.9178318299565863	0.0832070365658496	0.4224785348441005
0.1728850355034570	0.3431434011046656	0.5764860789077859
0.1657767624805010	0.3323774823038725	0.4192889172895915
0.4204721218295748	0.3411110752585294	0.5761894180820674
0.4178069044999932	0.3321851180933194	0.4192390893899733
0.6672942268199682	0.3347942903389842	0.5771956968115488
0.6676848490665115	0.3331133953296745	0.4212552056606189
0.9187499873774978	0.3349931306295210	0.5771205164689853
0.9162541348330172	0.3330227165724677	0.4212144410988832
0.1697648458599998	0.5833259024884033	0.5774390554459675
0.1686163471788786	0.5864436482028956	0.4204612422891765
0.4177524842222730	0.5845251859364151	0.4197054975621561
0.6638128429292407	0.5829733900833911	0.5776137754840571
0.6680995095671387	0.5862191999502977	0.4208006472476211
0.9171326725133480	0.5834923424562634	0.5782302008696359
0.9176607506078038	0.5849528674448192	0.4218925403461197
0.1674394200287392	0.8336294376182201	0.5787913757688481
0.1674341800661718	0.8346723792410777	0.4224833445056277
0.4158066362931432	0.8282067511575990	0.5773740189226785
0.4155182328953708	0.8313956948269082	0.4217918938682517
0.6634790824922072	0.8283911549340797	0.5774849735932558
0.6666232748273867	0.8309773036236705	0.4219916674759744
0.9168838955318342	0.8335521984969809	0.5789145974356845
0.9176867051609556	0.8344337242578316	0.4225656383122195
0.3797935133485825	0.5193314992664886	0.6100686949757386
0.3577845545408181	0.4761901603989692	0.7029123700202924
0.4570948159537181	0.6573398253290059	0.6632999145366635
0.4464131444299574	0.6349264860566634	0.7775856880427194
0.4221741372979861	0.5923077048965923	0.7216352675579677

TS2

X	Y	Z
0.0877198795396268	0.1702497825285931	0.4986953585818909
0.3372491887484160	0.1706939382936383	0.4986379395188933
0.5864921466753330	0.1691974609031703	0.4987703202146178
0.8371945686819657	0.1690626796314163	0.4989189385011769
0.0890143661513818	0.4202665642057752	0.4990663442518652
0.3368905279729333	0.4194149936359466	0.4944974877687542

0.5859133460238866	0.4203753527943164	0.4990956359959213
0.8369341117276433	0.4190178780189839	0.5007176416925532
0.0876197428937431	0.6687991891835878	0.5002255487471814
0.3385773103877696	0.6700944113983027	0.4971016475948601
0.5856486461139241	0.6698793041073614	0.4973229782027104
0.8358020836862394	0.6687113808857390	0.5005021029595298
0.0862804772103374	0.9183357740555209	0.4990524734172936
0.3355760447881764	0.9209848936589679	0.4962163368800318
0.5864677688491042	0.9194279890427594	0.4963341912702219
0.8385367511480197	0.9202547040466696	0.4970545169222972
0.1704358028757369	0.0860612599835093	0.5768469232365163
0.1699492805924976	0.0853740467570745	0.4210872862265873
0.4192323878199815	0.0855064618900485	0.5762717669127895
0.4207731695754121	0.0887061600652785	0.4196608320098889
0.6690679206216004	0.0838626756545011	0.5762152717619387
0.6713034925086490	0.0880656612433341	0.4198984917808772
0.9208028392561047	0.0854867423712520	0.5766095364037582
0.9217209842396131	0.0876647974484044	0.4200740294558471
0.1761724484186402	0.3408130690284139	0.5762213066258468
0.1684195050085293	0.3349543749163146	0.4190318282963048
0.4193558623845846	0.3413712444528443	0.5763007275843961
0.4211332504845515	0.3354080471574576	0.4190553491219830
0.6683184609862280	0.3350571054339753	0.5776331532589012
0.6713222918287728	0.3371042866797183	0.4219088108127380
0.9215744873320659	0.3351435654833779	0.5776999037585639
0.9205134530447552	0.3368504495703917	0.4219277186496910
0.1759562190824866	0.5863889063273717	0.5773604202863751
0.1704265836331089	0.5865292954680115	0.4208695716400327
0.4207812864485376	0.5869460087621832	0.4191910397672629
0.6645302623576583	0.5859945734820613	0.5776475883418328
0.6711048182946371	0.5866317151643159	0.4210250856083632
0.9204410464038801	0.5857540154305241	0.5787784969921503
0.9198520955266858	0.5851644127127997	0.4228512120347929
0.1717112859981498	0.8368764111131526	0.5769659366004092
0.1668631884956966	0.8332544064216023	0.4203360006642284
0.4193342988239053	0.8386638726606179	0.5727389798201017
0.4183954359845430	0.8355585974452708	0.4180846081302149
0.6718763447998910	0.8380777172742312	0.5735068987171985
0.6711627601280696	0.8357805143342673	0.4183092600773861
0.9197132493163167	0.8368257230588013	0.5773030108386550
0.9200898577640331	0.8332660060303140	0.4208166662105554
0.4229243489339112	0.5876261005938446	0.5898803256286200
0.3835936303535721	0.4861367720869384	0.6876639231450455
0.4710370227423086	0.6920060079944479	0.6527245900879594

0.4648028685840597	0.6323582691881411	0.7723958351372640
0.4322763303818739	0.5811494975995989	0.7203204966630271

FS1

X	Y	Z
0.0845829457848215	0.1683044613417460	0.4992041617006522
0.3342857652207613	0.1676432016389797	0.4975963318234540
0.5841858133403551	0.1676625488499845	0.4983472854878437
0.8344153604946800	0.1674642947445487	0.4991584416098558
0.0865138512373807	0.4188836693179807	0.4971604081296451
0.3329188650763750	0.4156544326012868	0.4934915310772363
0.5834118390688509	0.4183985298799739	0.4981875817686568
0.8344568431683055	0.4182197433556304	0.4992621196269494
0.0845910668380977	0.6676200355648273	0.4993715857542015
0.3329675620677625	0.6683161581054656	0.4936539630006367
0.5762048018340080	0.6637727247870520	0.5003158213735710
0.8323055515673931	0.6675600843669710	0.5005324873257951
0.0832098645356218	0.9172641909531930	0.4996382530012256
0.3342636258498488	0.9179030534725323	0.4976036182993463
0.5834183552783684	0.9162524521736491	0.4981326537065054
0.8323814276637984	0.9161500467469098	0.5003409363046192
0.1686549045586559	0.0852584596605505	0.5769119958510673
0.1657486067832339	0.0832209660545595	0.4209320074142446
0.4173020329748589	0.0843131744191981	0.5761332079331857
0.4180282371577094	0.0845530740011771	0.4197498354209894
0.6666765181784113	0.0833216275561769	0.5765844007886946
0.6683702892285709	0.0842808517509644	0.4205891565656739
0.9176829992126327	0.0847996879831327	0.5776824941891732
0.9166283751881754	0.0823605305737967	0.4217085277938941
0.1743581761396630	0.3421145225809452	0.5763179714375668
0.1648311722049997	0.3311902479631966	0.4180661547532655
0.4162745320689137	0.3365442092046110	0.5744917339709116
0.4192868617168218	0.3328451559576376	0.4175830452272120
0.6666128840221773	0.3344802793927183	0.5766130284494030
0.6684286101201792	0.3352631507596004	0.4206942583933795
0.9198556842633659	0.3354903573124826	0.5763512006805596
0.9168551719065365	0.3340959726538941	0.4208337721397234
0.1742655135667366	0.5833872595481223	0.5765013905401417
0.1648452664738457	0.5850408838025571	0.4182399149046955
0.4167694071025834	0.5839478448722728	0.4184467426578580
0.6619455605983590	0.5828344638045180	0.5776202681259258
0.6654320677621582	0.5870070809818052	0.4219882392945161
0.9176882157605375	0.5842257938737531	0.5778447342334363
0.9165537132265292	0.5856541073833915	0.4219409350266635

0.1687690933774542	0.8348790802558373	0.5769787994787619
0.1656827950867457	0.8337266387218351	0.4210088669259193
0.4162531321230256	0.8310797817542896	0.5744505950250772
0.4190541368989655	0.8373466509341316	0.4176104594043785
0.6622598613880136	0.8306827125050873	0.5774605918911144
0.6653617615494405	0.8296251886402619	0.4218741137753113
0.9167572519358522	0.8341090737247875	0.5786021603249475
0.9156032403287102	0.8333669410778808	0.4221736239315622
0.3718321252831240	0.5617489782205557	0.5905290048482915
0.2970024719388059	0.3804168690018979	0.7383752855426394
0.4631390324953509	0.6117990540714764	0.6552502129702326
0.3808081237789376	0.5553815103042253	0.8062564120881528
0.3399486035735120	0.4689182717959307	0.7716676340112683

IS2

X	Y	Z
0.0814221318017458	0.1736975098825317	0.4944778948707413
0.3318030724610450	0.1743079313644715	0.4959108907997195
0.5811795452956688	0.1736069012369932	0.4960746451733246
0.8316170677684190	0.1738271083801720	0.4952510188925822
0.0829527110914977	0.4245936883118883	0.4951673392589567
0.3309925929655637	0.4219579789135246	0.4905304908083824
0.5804672240953158	0.4249894183503684	0.4941706298161059
0.8318294115164769	0.4243354606336716	0.4962062766363194
0.0831696317181018	0.6737432565765966	0.4973326014087620
0.3354246887631076	0.6700047616803420	0.4972254978047919
0.5835137960968910	0.6743463723423748	0.4905196452782201
0.8311394541278282	0.6736692036010986	0.4961403182694376
0.0821308424072324	0.9233654461298926	0.4963925999527695
0.3318827042489374	0.9223176971463407	0.4971917366213308
0.5810403680124023	0.9223649071930169	0.4950012067013916
0.8317926805808821	0.9239893109550714	0.4944927835839151
0.1646830650319281	0.0912972909654945	0.5736783728199364
0.1654858927557465	0.0892620565212546	0.4177054416839963
0.4151448600486931	0.0908963652433184	0.5745123064125651
0.4139762030015766	0.0883745867044164	0.4185398451223030
0.6647279257150983	0.0893776003548308	0.5734642613499047
0.6640339859879006	0.0905016300571206	0.4175192286581445
0.9151034134802158	0.0903752366171020	0.5730213674222066
0.9146815957481033	0.0907124501310498	0.4166079208931659
0.1682920851647748	0.3425817782204535	0.5713940975144771
0.1617643241585015	0.3390406735660492	0.4146499987450490
0.4153663994546312	0.3473799617853901	0.5731121053557525
0.4145845808198650	0.3375884103174773	0.4149958653269443

0.6636698970470012	0.3415777851291864	0.5733256466102045
0.6653555471378326	0.3402981557377561	0.4178213239933854
0.9158548802545501	0.3405749468396961	0.5735758602973194
0.9150017768271241	0.3415969401193202	0.4176140405277283
0.1685130549148800	0.5892397863524607	0.5744265412685818
0.1694049855554693	0.5930955960560705	0.4188807249897653
0.4152481330792273	0.5902135082865672	0.4153598312162845
0.6576497127280343	0.5898409071387724	0.5732493797305208
0.6683222928507099	0.5910406106621460	0.4150727211071993
0.9146524086587596	0.5904091040707765	0.5747097780522179
0.9170895383454803	0.5916683404559132	0.4187747906604659
0.1654235560020075	0.8403770776698207	0.5753815413608855
0.1659359403042924	0.8394710434137710	0.4189876984055416
0.4166321178113738	0.8371024378534692	0.5742947199146892
0.4124569174274939	0.8358109288726384	0.4187744084572048
0.6628674317396885	0.8369999314221778	0.5713857493831009
0.6665789702164149	0.8433983220953994	0.4145277367405059
0.9142986091281554	0.8409270310439765	0.5737620429957185
0.9160908128506271	0.8397362035954521	0.4178097483804757
0.4367930604515817	0.5684502383091844	0.5873909764430276
0.3880683589109363	0.6158664555500573	0.6500472067053734
0.4701346948164020	0.5230253298522949	0.7872940404179835
0.4950052686238166	0.5038244252908154	0.7355171641606232

TS3

X	Y	Z
0.0814199969999976	0.1737000050000006	0.4944800139999969
0.3318000140000024	0.1743099990000019	0.4959099889999975
0.5811799760000014	0.1736100019999967	0.4960699980000028
0.8316199779999991	0.1738300029999991	0.4952499870000010
0.0829500030000006	0.4245899920000014	0.4951699969999978
0.3309899870000024	0.4219599959999982	0.4905300140000007
0.5804700260000004	0.4249899980000009	0.4941700099999976
0.8318300250000021	0.4243299959999973	0.4962100090000020
0.0831699969999988	0.6737400290000011	0.4973300099999988
0.3354299960000020	0.6700099709999989	0.4972200099999994
0.5835099820000025	0.6743500230000024	0.4905199999999964
0.8311399820000034	0.6736699940000008	0.4961400030000006
0.0821299999999994	0.9233599900000016	0.4963900150000028
0.3318800030000020	0.9223200079999998	0.4971899989999996
0.5810400250000001	0.9223600030000014	0.4950000050000013
0.8317899700000027	0.9239900110000007	0.4944899979999987
0.1646800039999974	0.0913000030000006	0.5736799840000018
0.1654900010000020	0.0892599969999992	0.4176999929999993

0.4151400029999976	0.0908999959999974	0.5745099780000018
0.4139800069999993	0.0883700030000014	0.4185400009999966
0.6647300119999997	0.0893800039999988	0.5734599829999993
0.6640300150000016	0.0904999970000020	0.4175199869999985
0.9150999780000008	0.0903699990000035	0.5730199810000016
0.9146800039999974	0.0907099989999978	0.4166100030000023
0.1682900039999993	0.3425799910000009	0.5713899730000023
0.1617600020000012	0.3390400110000016	0.4146499929999975
0.4153699869999983	0.3473800120000021	0.5731099839999985
0.4145900010000005	0.3375900090000030	0.4149999919999984
0.6636700030000000	0.3415800029999971	0.5733299850000009
0.6653599739999976	0.3402999939999987	0.4178200070000030
0.9158499839999975	0.3405700030000034	0.5735800269999984
0.9150000209999972	0.3416000010000033	0.4176099900000024
0.1685100050000016	0.5892400150000014	0.5744299890000022
0.1694100050000031	0.5931000109999971	0.4188799860000002
0.4152500029999970	0.5902100209999972	0.4153600039999999
0.6576499940000033	0.5898399949999984	0.5732499960000013
0.6683200000000014	0.5910400149999973	0.4150699970000032
0.9146500230000001	0.5904099939999981	0.5747100110000005
0.1654199959999971	0.8403800130000008	0.5753800270000013
0.1659400019999993	0.8394700289999975	0.4189899859999996
0.4166299999999978	0.8371000289999984	0.5742999909999966
0.4124599989999995	0.8358100060000028	0.4187699849999972
0.6628699899999972	0.8370000119999971	0.5713899730000023
0.6665800210000015	0.8434000020000028	0.4145300090000034
0.9143000250000028	0.8409299850000024	0.5737599730000014
0.9160900119999980	0.8397399779999972	0.4178099929999987
0.4396569072007309	0.5671684217131181	0.5875868938437961
0.4019448315635772	0.6196291610018525	0.6525586280036662
0.3638067383880690	0.6187444054877861	0.8057671906677386
0.3940721143036384	0.5579745318166804	0.7791955615969457

FS2

X	Y	Z
0.0806742332910318	0.1752090013553665	0.4956087699962911
0.3302358868026101	0.1751555958645240	0.4957695532585745
0.5800165429047414	0.1748329416729221	0.4954962158351389
0.8302811303365139	0.1747189619682613	0.4952834229485259
0.0810239789800056	0.4245539390855747	0.4937641261982628
0.3296023124439299	0.4264006566781555	0.4919994324970728
0.5791103213321507	0.4256765395002749	0.4947179960436330
0.8302004294289327	0.4251484204648669	0.4954831923934653
0.0809024269838221	0.6741705527111396	0.4954628328199302

0.3310836541316163	0.6735106841949799	0.4900524501258773
0.5779974935875211	0.6748701393124213	0.4920341618057056
0.8296711061614270	0.6747917154822645	0.4957638480414507
0.0803955092050650	0.9245399065957547	0.4963083792921661
0.3308723560047083	0.9240529684885258	0.4953823177036361
0.5802242130746940	0.9237333472173130	0.4936769647308888
0.8295316493581242	0.9241819413541196	0.4956044928607994
0.1638478536887371	0.0919441767821037	0.5740869109134565
0.1635339509682741	0.0909505932124074	0.4180249761519718
0.4137159570625761	0.0910011057152237	0.5737291537614805
0.4131354780521185	0.0913986389054753	0.4176957648264571
0.6629221175616539	0.0899021605650447	0.5727903621613313
0.6640595344244611	0.0926273292348261	0.4169048611422459
0.9134173438650337	0.0915045119768497	0.5736408748261350
0.9138205657965248	0.0910374394909637	0.4176098965425004
0.1682068602775453	0.3466492034224232	0.5723526609415427
0.1622565330266057	0.3393448552755159	0.4151934658053794
0.4125175387614930	0.3464549190780861	0.5722103681259055
0.4129676555127870	0.3402535787501710	0.4159546901069213
0.6627734891869642	0.3423370047751618	0.5731809828587796
0.6633212149947457	0.3417875910361221	0.4174658365545146
0.9148744748601058	0.3421191754815945	0.5728179502469836
0.9123639776900301	0.3410021420178064	0.4168766704546235
0.1700070477661170	0.5901808812722380	0.5714737600304292
0.1609213854599832	0.5906784120845254	0.4146514290257338
0.4137206406572710	0.5907110232624551	0.4133039859699213
0.6582005622347104	0.5922408000939016	0.5721292415139042
0.6644218451803965	0.5918002368871546	0.4159656454056829
0.9138942595900833	0.5914633964162590	0.5737494034436551
0.9136122079272104	0.5920702389663471	0.4177203726584556
0.1645568164204309	0.8405531914030779	0.5738614396291898
0.1635896986945627	0.8414168312384599	0.4179548721459951
0.4145969177768550	0.8347951899046037	0.5713916350949109
0.4140315203021177	0.8435472080212997	0.4145256605729402
0.6578715524779758	0.8364513838884600	0.5722811515221550
0.6651953044945341	0.8420807889362363	0.4152241174161735
0.9128360971029251	0.8411361350442422	0.5740736175704422
0.9139829590599586	0.8415419883454101	0.4180431541397784
0.4069140703471968	0.5969515022426789	0.5803821221911681
0.4354818295061416	0.5695875620673997	0.6848907700302872
0.5394945935938361	0.4837640901080164	0.7392328998852968
0.4883631216511667	0.5259974741510343	0.7114711977822223

NER mechanisms:

IS1

X	Y	Z
0.0842638265928652	0.1678466428555917	0.5031590226492302
0.3342800548034841	0.1683266981309186	0.5033677135402622
0.5836879613812964	0.1671247882995648	0.5033127340691628
0.8339339985203149	0.1669100998503812	0.5031504895775323
0.0848488519097062	0.4177346633940874	0.5020584824493244
0.3337266326229109	0.4190669257458348	0.5004421685881385
0.5838819450491924	0.4187243142030949	0.5026684077615503
0.8338671781279925	0.4173733127898825	0.5031315222573342
0.0841617879607518	0.6668809976478776	0.5031618107671599
0.3336709326237411	0.6653967728520539	0.5004201563668529
0.5815136214784764	0.6661857557118036	0.5030929557292686
0.8337995702520753	0.6674852437661444	0.5034753242126636
0.0841994986868564	0.9173341883063671	0.5034541322098774
0.3341787724968361	0.9165214073653614	0.5033875001629032
0.5838297170643143	0.9159514806210000	0.5027333968812360
0.8337826336494281	0.9167723110318168	0.5034650500319527
0.1676238035469068	0.0845523963484393	0.5814866247316574
0.1675076294669686	0.0840483744771044	0.4253984624872845
0.4172291000369678	0.0838995594882125	0.5814611795002563
0.4167575590152541	0.0836288474012368	0.4254693993165171
0.6669803063219194	0.0831422251181602	0.5811198884012038
0.6670680154242420	0.0836745477782156	0.4251126307880208
0.9174306335958320	0.0840382648360755	0.5814667604618464
0.9171636154927042	0.0833113309342027	0.4252121031132311
0.1704397601666059	0.3382481504578992	0.5803804871758130
0.1665607264640288	0.3328357387828344	0.42345111076574942
0.4178194617021272	0.3390711234891392	0.5803743068976351
0.4175546961633742	0.3339654930679219	0.4238776188023763
0.6668522026046065	0.3344938061155653	0.5810162834902443
0.6669827411915501	0.3338841700564164	0.4251064302989596
0.9180464426988285	0.3341993450462702	0.5806547054043856
0.9164878041206073	0.3334095427886273	0.4248887118772645
0.1704012782097609	0.5828626797055041	0.5803755935938342
0.1665252838868640	0.5843325205589228	0.4234536217750544
0.4184590475333345	0.5846211862889368	0.4236519711088136
0.6650116316172215	0.5840903331109897	0.5809857567033623
0.6673618295708984	0.5857951179726578	0.4249101850864198
0.9173452100603583	0.5836427269988408	0.5814588947713785
0.9170387059941270	0.5841358678942259	0.4252150402854545
0.1674685835277957	0.8335042169498098	0.5814959181995993
0.1674395893216873	0.8338332189568960	0.4253773895976818
0.4177451208405704	0.8293838837310609	0.5804028704244003

0.4175421848201064	0.8344118289591054	0.4238669686123472
0.6649479561784836	0.8317130214287972	0.5809793075391436
0.6671487339736891	0.8325203141841656	0.4249370137563605
0.9176218366927080	0.8339964352079116	0.5815884998378029
0.9173812884945516	0.8338629056530091	0.4253240584627561
0.3971289128935987	0.5739699777861167	0.5961517914940007
0.3738230263962652	0.5623529016972699	0.6898893905297209
0.4943777975742367	0.6231052686977194	0.6740118358081347
0.1260009022092843	0.4093018542001854	0.7881518758289237
0.7234427750241280	0.7289592330539854	0.7947013020150506
0.0979503914797180	0.4182431028760238	0.7350551368773462
0.7572164434677864	0.7535127863297741	0.7408380680337655

TS1

X	Y	Z
0.0831099970000011	0.1666200009999983	0.5029799940000004
0.3332099909999968	0.1670600030000031	0.5032500029999980
0.5827500219999990	0.1660200059999966	0.5031600000000012
0.8328899739999968	0.1658300010000033	0.5029699800000031
0.0836699979999977	0.4164600069999977	0.5016300079999993
0.3323599989999977	0.4174500109999997	0.5000900029999968
0.5826900010000031	0.4173400099999966	0.5025100109999983
0.8329200149999991	0.4164800049999968	0.5029900070000011
0.0832199979999970	0.6658499839999976	0.5030000209999983
0.3324399890000010	0.6640700100000032	0.5001000170000012
0.5803999899999965	0.6647300119999997	0.5025600190000006
0.8327699900000027	0.6663799880000028	0.5032299760000001
0.0831699969999988	0.9163100119999967	0.5034499759999989
0.3332700130000034	0.9154599909999986	0.5032200220000007
0.5827400089999983	0.9144999979999966	0.5024099950000007
0.8326399919999972	0.9156399969999995	0.5031600000000012
0.1665399970000010	0.0835499989999988	0.5814200040000017
0.1665699930000031	0.0829799990000026	0.4252800049999976
0.4162999990000031	0.0827800040000000	0.5813699959999994
0.4159300029999998	0.0826700029999969	0.4253300129999999
0.6658499839999976	0.0816499960000030	0.5808100100000004
0.6661199930000024	0.0826100040000028	0.4249500040000029
0.9162700179999987	0.0828500020000007	0.5812600260000025
0.9161900280000026	0.0823699979999972	0.4250200090000006
0.1690099979999999	0.3368700150000024	0.5801500079999968
0.1652400050000011	0.3313499989999968	0.4231300060000009
0.4165599939999964	0.3377499879999987	0.5801799890000012
0.4163500069999983	0.3323700130000020	0.4236100019999966
0.6658700110000026	0.3334200079999974	0.5809000129999973

0.6661599870000002	0.3328999880000012	0.4249899980000009
0.9171199800000025	0.3332799969999982	0.5804799799999998
0.9151999950000018	0.3323099910000024	0.4246299859999993
0.1691800059999977	0.5813699959999994	0.5801399950000032
0.1652999969999982	0.5831599830000016	0.4231399889999991
0.4170300070000010	0.5830299850000031	0.4232600030000028
0.6638600229999980	0.5829300279999998	0.5806699990000013
0.6662899849999987	0.5840600129999984	0.4246299859999993
0.9164400100000023	0.5828099849999973	0.5813000200000005
0.9162799719999982	0.5833699699999997	0.4250499899999979
0.1666000040000029	0.8324599860000035	0.5813900229999973
0.1665499960000006	0.8330100180000031	0.4253099860000020
0.4166899920000020	0.8281000260000013	0.5801299809999989
0.4163199959999986	0.8331099749999993	0.4235999879999994
0.6637899879999977	0.8300399780000020	0.5806499720000033
0.6661599870000003	0.8310499789999994	0.4244799909999983
0.9161700009999976	0.8327999710000000	0.5815500020000002
0.9165999889999981	0.8329899909999980	0.4252099990000033
0.3960100110000013	0.5723599789999980	0.5954999920000006
0.2960796450351534	0.5170607703292385	0.6539966344359376
0.5396040941491015	0.6481523436570471	0.6115675363232204
0.2583611802712488	0.4906906507659259	0.8305968413941183
0.6083817168421464	0.6808836434924784	0.8221760615014134
0.1732758134254751	0.4622785475791596	0.7988356688391681
0.6467707332441764	0.7018057846218749	0.7690499764780854

IM

X	Y	Z
0.0852167070696956	0.1675147220405604	0.5003477764941584
0.3351095311441880	0.1689355002612470	0.50246761644481844
0.5846077160885079	0.1677881697167081	0.5016165655215680
0.8353349039647425	0.1677947992172431	0.5005207772886554
0.0864307317198974	0.4181309749300764	0.5005235881374983
0.3358856434708746	0.4211614198361500	0.5021166382161255
0.5839883731096873	0.4192548499649535	0.5012710512831107
0.8350912302771551	0.4181418148510140	0.5010739431825928
0.0852967379751312	0.6676793424230014	0.5010659819548687
0.3360166175678840	0.6669709499408023	0.5003464169643186
0.5841090581047463	0.6676006515696841	0.5003351187325382
0.8346989352002135	0.6678045850611332	0.5009372536247994
0.0856207291731220	0.9177835301261096	0.5013597960802842
0.3354075222864588	0.9169707509144993	0.5023030115325152
0.5846896191568496	0.9163343877487746	0.5002556417701074
0.8355661712068185	0.9180073708174148	0.4998733360374430

0.1674980134267532	0.0843346817652505	0.5796858337022586
0.1700395792537315	0.0846589030821892	0.4233288238457251
0.4186275190102990	0.0845228220623730	0.5802351097910756
0.4172485061449139	0.0841485762904428	0.4243378533062239
0.6686746953207271	0.0836332692503434	0.5786730620183970
0.6677540015477190	0.0846569778350665	0.4229630579789508
0.9182686524434680	0.0841838852268814	0.5784878323443163
0.9188761645688280	0.0849911556544819	0.4219121879374322
0.1676839076868254	0.3336271702828302	0.5781815457618690
0.1714735100711020	0.3356851602150003	0.4226940962534940
0.4188517894502110	0.3391620318105180	0.5803268655990139
0.4165297586083702	0.3354939527889378	0.4238369961610253
0.6681277460113614	0.3352957512157552	0.5792231001881770
0.6673338394775270	0.3346880489738785	0.4235433507061166
0.9190774422407757	0.3344965130677033	0.5786539298467188
0.9187266313349441	0.3350196847006970	0.4227477784811119
0.1695894138482572	0.5838780178229886	0.5785266047538824
0.1693905053046944	0.5852025445748128	0.4222377564515796
0.4184237137490839	0.5844146458320144	0.4235862776304192
0.6662403541227165	0.5853905605969457	0.5788701275680618
0.6680581079269227	0.5850909203472537	0.4223856195350282
0.9182047882933494	0.5844452365997219	0.5792485554131230
0.9185172158375914	0.5846820777020966	0.4229195418288099
0.1680072513755144	0.8337924228261685	0.5798788738894651
0.1696820206920538	0.8347652549425968	0.4236145998232692
0.4205771687130196	0.8309073112669970	0.5798998653535773
0.4174271587124128	0.8340674527583780	0.4226884974814968
0.6688469907708956	0.8343172428304174	0.5775420975671083
0.6681430721679404	0.8329786008200011	0.4216762469075305
0.9180770974721872	0.8346612927893677	0.5788671494452918
0.9195041531679481	0.8342720720285861	0.4226246609904195
0.4177766296308069	0.5994894068505610	0.6026688294644559
0.3065903954132245	0.5078954379520606	0.6712018522719887
0.5273875332640329	0.6618287077269168	0.6754933633305916
0.2850076058638424	0.4762779909250694	0.7833690391529770
0.5449224056919699	0.6483866399744455	0.7875193704602682
0.3448317284893872	0.5243927474173542	0.7336949442974000
0.4864426573786131	0.6205809727735003	0.7360201661925931

TS2

X	Y	Z
0.0852066761576040	0.1675447155754384	0.5004111172124368
0.3350988982493845	0.1690315460130520	0.5024443014634983
0.5847194149536108	0.1678887895647421	0.5016330509076141

0.8353019263763599	0.1678952581736013	0.5005421988394687
0.0857466153622966	0.4178739066717512	0.5004904179739427
0.3352620815578788	0.4218443778315404	0.5022834581316857
0.5844397450749597	0.4189427975888407	0.5014148093043076
0.8349866255708278	0.4180154014682955	0.5010829642442260
0.0851795703361234	0.6676739647550605	0.5010878965865189
0.3357578864168929	0.6655947333305505	0.5008562180557661
0.5840593398756155	0.6685076720931846	0.5005338188090036
0.8346567717671717	0.6678376099479095	0.5008913042584737
0.0855678789764553	0.9177765060667369	0.5013633227906951
0.3354562318864964	0.9169988553006263	0.5022870376184443
0.5852471353622235	0.9171546678827055	0.5003387717968479
0.8356887300511957	0.9181530895469904	0.4998234823855582
0.1675563412282841	0.0843452473732711	0.5796684689737219
0.1699810949724778	0.0846781902783889	0.4233682229803363
0.4186254056548364	0.0845578820435051	0.5802273567008243
0.4172919365773637	0.0842297475470914	0.4243972592309290
0.6687391375794504	0.0839090072577875	0.5787293308999182
0.6678308838296871	0.0849140268851158	0.4229138358992656
0.9182496045963974	0.0841796803780497	0.5784406985347132
0.9189172376608994	0.0851609403887039	0.4219536513147303
0.1677346171992795	0.3342445035411146	0.5781002970467100
0.1711718389567309	0.3356576079249436	0.4227802358934695
0.4189654152321580	0.3396337658275996	0.5802464342461917
0.4168890149611926	0.3356924033556794	0.4241391498853062
0.6682792192706940	0.3351476252557575	0.5792922823904405
0.6673973460471174	0.3346094934854165	0.4234922377214118
0.9187418163806811	0.3344065832349372	0.5787243855999051
0.9184274476435235	0.3348947715640236	0.4226735571913238
0.1694145907462925	0.5835706452515623	0.5784050611497591
0.1692688600814378	0.5851535131422949	0.4223704101056640
0.4183841330753566	0.5846193915199507	0.4234934083170998
0.6660109601421595	0.5854251022365276	0.5787823223376307
0.6678304562309663	0.5846889274882017	0.4226382480772130
0.9181248758628442	0.5844330003802654	0.5792328161470692
0.9184230298362834	0.5846267207681706	0.4229716773143934
0.1680586177944150	0.8337906122488689	0.5798590406456938
0.1696667544791453	0.8347971450209785	0.4236655169146317
0.4205947614922181	0.8306470453267707	0.5796780807293516
0.4174593579779681	0.8339541682394226	0.4230039010710981
0.6689951859894236	0.8345038584043181	0.5774489196223271
0.6683441140564526	0.8337743214663718	0.4217199738801369
0.9180188809583782	0.8346207755570488	0.5788511667398737
0.9195001700533538	0.8342429066108396	0.4226208237301634

0.4204545115807647	0.5963668243959219	0.5979949424036235
0.3044064511182658	0.5069011636768063	0.6722129028521134
0.5288505351734729	0.6637695720501517	0.6768106049767294
0.2856136971390276	0.4762664662493544	0.7862129102321002
0.5438654721059807	0.6467861082271094	0.7907163734567001
0.3337166505353311	0.5174258801466913	0.7332807026646074
0.4975725806392881	0.6285620474087595	0.7362758243345556

FS

X	Y	Z
0.0878609386180972	0.1694243292689492	0.4998505149637691
0.3378146461426477	0.1695458373770659	0.4997583607188612
0.5870021929119801	0.1680265621844308	0.4997593971644778
0.8372001081412370	0.1679266263852924	0.4998114372696315
0.0880654187016569	0.4190506242259185	0.4980229556302569
0.3377717050396065	0.4206976641567370	0.4946497031956497
0.5873314828915612	0.4191889453767231	0.4982761256023414
0.8372511885526572	0.4184492273331962	0.4996440905703057
0.0876839818320650	0.6680728216475458	0.4997162551005718
0.3362503631168913	0.6661603791672097	0.4951211512029230
0.5847207394258396	0.6659196453455168	0.4968959429597593
0.8369674850728215	0.6683605058052121	0.4999419520222369
0.0875837162661513	0.9186413644091869	0.5005655434326521
0.3375286105078990	0.9176075895667549	0.4997955733066021
0.5863833136413811	0.9162019183213116	0.4987091518586674
0.8368311784950119	0.9177094757232791	0.5001170763050105
0.1715349218368909	0.0865405280834163	0.5782267958489221
0.1706696996081649	0.0851357871963482	0.4222767032360770
0.4206323461527839	0.0850699036645191	0.5779994574157469
0.4201120447578400	0.0846674591867185	0.4219428720155990
0.6696588598631505	0.0831542409046866	0.5773869901350188
0.6704711678440016	0.0847004340095493	0.4216370334563952
0.9208247370766516	0.0852937966143567	0.5781570560233863
0.9206549735659224	0.0844093690563301	0.4220428565181514
0.1766006450071603	0.3423028622509900	0.5759851478212095
0.1681740037406281	0.3329956121110930	0.4191073415033813
0.4213699007252980	0.3425244961994524	0.5756707408059003
0.4210416436885294	0.3335735711981209	0.4191603080059060
0.6699725554778415	0.3355415391580736	0.5772798937180036
0.6709728779598858	0.3344766801342510	0.4212321763335355
0.9219524626138504	0.3357628013518780	0.5771663848244530
0.9192158569360170	0.3341697400431215	0.4212350560140867
0.1758814515317164	0.5844373249787111	0.5762546932841353
0.1683979823196101	0.5848988165695811	0.4190109908215550

0.4213382706518002	0.5856552900151847	0.4174786383459376
0.6658053460410424	0.5843749033561388	0.5765489587256232
0.6719730907351147	0.5857660216346362	0.4199825102825415
0.9207904046537456	0.5848815256367313	0.5780045957786271
0.9206812800554267	0.5854894441735597	0.4218109079791784
0.1712114866084402	0.8345433243567686	0.5782037078981488
0.1705609282892402	0.8353260102449727	0.4222021100338073
0.4198806920084233	0.8278157281671792	0.5760426025267098
0.4205635110680638	0.8360744808754389	0.4194300631262453
0.6655033863249186	0.8293500893053268	0.5765975546310732
0.6715774506142811	0.8348326117354090	0.4204191031114308
0.9201707029010104	0.8347142490667440	0.5784458711219441
0.9211830943020530	0.8353952529216214	0.4223428387129151
0.4096832210998810	0.5746829945958140	0.5845345884126922
0.1616992658233604	0.4516206736432384	0.7400494614094528
0.4665226697657653	0.6087508201984027	0.6884333008585017
0.3165298271711008	0.5352984550858653	0.8213067221810272
0.6585861918949580	0.7029978204216680	0.7406568953181997
0.2388229764118103	0.4933434370896249	0.7807717717282089
0.5640409565161449	0.6566382894701328	0.7141100647325934

LH mechanisms:

IS1

X	Y	Z
0.0795038635705003	0.1660066198498282	0.4985446892166816
0.3284985033605990	0.1662772890900720	0.4990622460427990
0.5788457446982470	0.1659571085950191	0.4977851739957957
0.8296564510044981	0.1664212604596746	0.4976600928915871
0.0816021771689708	0.4174646996628875	0.4990455241607067
0.3337305255101254	0.4211458460175742	0.5001129527457943
0.5773613110287107	0.4151673262726533	0.4965964551851728
0.8294616103463036	0.4163727310600141	0.4979648737234489
0.0795681571958751	0.6667743542320511	0.4989479205883116
0.3340556321382829	0.6657344093838694	0.5002869195368933
0.5798120754985603	0.6669277871653058	0.4920651000967191
0.8274120955019523	0.6653081765143365	0.4975790653927423
0.0784997585760504	0.9157950435781602	0.4987763523548348
0.3286709013338242	0.9152952407757103	0.4991141287919726
0.5779262657683303	0.9156695208081997	0.4962455546057598
0.8279664325216479	0.9156777967721702	0.4971039963339862
0.1616892404812453	0.0823733662072127	0.5771244208090410
0.1624191698970663	0.0825708008061973	0.4206782319215011
0.4131068581554165	0.0830886367866375	0.5767146728364463
0.4107934498523538	0.0818685856580179	0.4206737650857528

0.6621752606170201	0.0820229571615201	0.5751691565128573
0.6628989298619625	0.0840671722433938	0.4191775503227015
0.9109754472002365	0.0816193363967921	0.5759124612252516
0.9138789252906905	0.0836674258869463	0.4197045435260719
0.1640953040158162	0.3332064842921348	0.5761948961984256
0.1669426627116780	0.3350489167154145	0.4215934110877546
0.4142512958607751	0.3359535435159625	0.5769061440315100
0.4089622786778849	0.3329209297782791	0.4204622368023804
0.6617261875106299	0.3328754791516141	0.5753717071503691
0.6627551337304588	0.3321997535949659	0.4194666008342175
0.9127718326262093	0.3328353628463215	0.5761637916036371
0.9152044102655575	0.3344943619909762	0.4203229976777223
0.1645679284939045	0.5840817916169080	0.5764733853088225
0.1669488656952876	0.5853386340574528	0.4218178135647437
0.4110160350475613	0.5820618000743825	0.4198416892137819
0.6537258044681040	0.5799291567967414	0.5737218247550286
0.6637481686681915	0.5813104228257344	0.4167056643091789
0.9108492949701084	0.5825052791295938	0.5762739195428774
0.9136927424211074	0.5835065548613920	0.4202342320003913
0.1619815305118162	0.8329146986660270	0.5773163161789306
0.1624260650839800	0.8328360085957548	0.4208467452710586
0.4150417288237699	0.8316344159610339	0.5768520547643552
0.4090212425887525	0.8289574872998304	0.4204452033419693
0.6553020037372610	0.8283950431917552	0.5732870314472738
0.6641434730800386	0.8358502907836943	0.4164007255269309
0.9099563230341612	0.8317258508009928	0.5758464875170842
0.9124637493298094	0.8324065696094447	0.4199446935516146
0.4728933676905770	0.6154365306230216	0.6058192680630307
0.3417927393372100	0.5450327728583396	0.6552283685522692
0.2684650222682646	0.5065229583353815	0.6971027576189530
0.5545950656509701	0.7405921425163999	0.7245566147727878
0.5546109201216290	0.6576333041262024	0.6875276694100807

TS1

X	Y	Z
0.0792599990000014	0.1669899970000017	0.4985699949999968
0.3280600009999972	0.1668300030000012	0.4983400110000032
0.5784299970000006	0.1667000059999992	0.4974600079999972
0.8292300110000000	0.1670099939999972	0.4977700110000000
0.0815899970000018	0.4183700079999965	0.4989199939999976
0.3335399930000021	0.4217900040000017	0.4991500080000008
0.5769699809999979	0.4160600009999981	0.4961499870000025
0.8291699890000004	0.4171200099999979	0.4981600050000025
0.0794799999999967	0.6673399809999978	0.4993799920000014

0.3336899880000032	0.6664999719999969	0.4999200110000003
0.5791000130000015	0.6666300300000003	0.4916099909999970
0.8267199989999980	0.6660400029999991	0.4981200100000008
0.0778999999999997	0.9163500069999984	0.4988600020000006
0.3280400040000017	0.9162600040000015	0.4985499980000013
0.5769799950000021	0.9162099959999992	0.4960699980000028
0.8273500199999972	0.9158999919999999	0.4973199960000015
0.1618199939999982	0.0834499970000024	0.5769199730000025
0.1612699929999977	0.0828299969999975	0.4205099939999996
0.4125100079999981	0.0839300009999988	0.5762199759999973
0.4106099899999975	0.0826399999999978	0.4200499949999993
0.6613600250000005	0.0825499970000010	0.5750100019999991
0.6627500060000031	0.0847299989999968	0.4190799889999964
0.9107300040000015	0.0823199969999990	0.5759900210000026
0.9132999779999977	0.0840099979999991	0.4199300109999980
0.1652500029999971	0.3353700039999978	0.5759599800000004
0.1661400050000026	0.3354699909999965	0.4211899940000022
0.4137400090000014	0.3360500040000005	0.5758100150000018
0.4087899920000027	0.3335100110000013	0.4196499880000032
0.6609200239999993	0.3335199950000032	0.5751600270000026
0.6629400249999976	0.3332000079999986	0.4192900059999970
0.9128000139999983	0.3336200119999972	0.5762299900000016
0.9147700070000013	0.3351599869999973	0.4204500020000025
0.1657000040000014	0.5844900009999989	0.5768700240000015
0.1665000019999994	0.5862200259999995	0.4218200150000014
0.4106999930000015	0.5829600100000008	0.4191600079999985
0.6514499780000023	0.5803200009999969	0.5742700099999993
0.6640499829999982	0.5823600290000002	0.4165799920000025
0.9105399849999998	0.5831199880000000	0.5766199830000005
0.9134399889999969	0.5844799879999982	0.4207699890000000
0.1620299969999976	0.8339300159999965	0.5773100259999993
0.1611900030000015	0.8328700069999968	0.4208199979999988
0.4138599930000025	0.8331900239999966	0.5762599709999989
0.4086399970000016	0.8299199940000007	0.4200299979999967
0.6539199950000025	0.8279399870000006	0.5733199720000002
0.6635800000000032	0.8363500239999979	0.4163799880000026
0.9096800089999988	0.8325899840000019	0.5762400030000023
0.9116700289999997	0.8327000139999967	0.4202400149999973
0.4686285730389707	0.5957209616981500	0.6100822654776357
0.4121605875215322	0.4823568718538621	0.6724158267320768
0.3739422568808003	0.4181273418407611	0.7183024136874551
0.3559217237694603	0.6614678226537638	0.7112472511703992
0.4355256526514972	0.6865191370968650	0.6651725320945543

IM

X	Y	Z
0.0788960557287050	0.1684633305099693	0.4986169251631464
0.3274046434435171	0.1676693282275088	0.4972616833483098
0.5778040426253169	0.1678088219406899	0.4969697035578782
0.8285843393641739	0.1678879164856923	0.4979285048286284
0.0815786548354943	0.4197359743331381	0.4987299681273218
0.3332458826165117	0.4227652865031893	0.4977157849109941
0.5763810588847849	0.4173907582445524	0.4954917645512454
0.8287271192797916	0.4182387096421850	0.4984516123671730
0.0793452859275760	0.6681953488963889	0.5000295867193697
0.3331521357112108	0.6676506426171673	0.4993601288712154
0.5780278570883123	0.6661893325749773	0.4909309899726853
0.8256826772067939	0.6671318570045740	0.4989234416831798
0.0769944681996739	0.9171717272653007	0.4989856212710044
0.3270853896202834	0.9177061376748931	0.4977035821043546
0.5755646118027224	0.9170157245417628	0.4958017540678525
0.8264158853931739	0.9162438438857755	0.4976451243557607
0.1620149998338270	0.0850691828523119	0.5766044493457533
0.1595548252688172	0.0832143999363179	0.4202625753434238
0.4116188547960081	0.0851784127710091	0.5754725159537469
0.4103236471419395	0.0837927955840130	0.4191045678217699
0.6601459593976887	0.0833531519143998	0.5747791707158304
0.6625166368157407	0.0857183590326560	0.4189258829851991
0.9103626910592095	0.0833609877682775	0.5761037106694192
0.9124194738848049	0.0845112559745440	0.4202717717141280
0.1669745415158043	0.3386219873377788	0.5756122155261615
0.1649267629218879	0.3361029481386061	0.4205884660179743
0.4129788795536060	0.3362033194840985	0.5741729211091999
0.4085443039666630	0.3343865233960082	0.4184400016790631
0.6597142388323214	0.3344933735940712	0.5748502082080245
0.6632044883386871	0.3346930223953643	0.4190373266277520
0.9128347145660345	0.3347977666546292	0.5763246425566003
0.9141111275852154	0.3361715594532794	0.4206394272659567
0.1674029121458569	0.5850939109129051	0.5774597999314202
0.1658228712133213	0.5875378964248680	0.4218245723767489
0.4102392858446497	0.5843160483246970	0.4181401795955100
0.6480278998579326	0.5808996528257998	0.5750842123209570
0.6645005636915786	0.5839246636357031	0.4163915521709866
0.9100794279722210	0.5840497129194635	0.5771504722978777
0.9130647201962601	0.5859525428804181	0.4215636566526147
0.1621068356730356	0.8354506277052511	0.5772903584698922
0.1593458533045552	0.8329118471867444	0.4207827487454639
0.4120805786271521	0.8355130199370235	0.5753624886243540

0.4080603474247141	0.8313541121988431	0.4194206488350670
0.6518476215222133	0.8272462468696463	0.5733628817965727
0.6627361595711433	0.8370894627485886	0.4163465004190192
0.9092598281835352	0.8338851060318490	0.5768378358619922
0.9104784828892732	0.8331443209436887	0.4206859201120309
0.4845667131372948	0.6315238174363643	0.6095926666784445
0.3858302848198095	0.5170225760103555	0.6792637490194572
0.3410596526062751	0.4099542406846440	0.6927192449775617
0.3850161737023459	0.5979343378403372	0.7223728143633156
0.4673373914105342	0.7086820278476698	0.6793916543106007

TS2

X	Y	Z
0.0795795852682062	0.1691475675745195	0.4977636283952548
0.3284718362721577	0.1686743255077658	0.4969902802228744
0.5786410317258586	0.1685963374362700	0.4967539481657396
0.8293478545014779	0.1686793277338197	0.4973579826268235
0.0820363563256876	0.4203029155806703	0.4979603680759012
0.3329444831811088	0.4222041108230314	0.4961769967472164
0.5773694855345468	0.4185552350910058	0.4951748648191553
0.8295208764464306	0.4190872529393274	0.4979701291788955
0.0803077825040788	0.6689303399934801	0.4994992534572091
0.3338069749403019	0.6677185116521969	0.4989001799893912
0.5792965370859946	0.6674807129069364	0.4908322448637818
0.8269377137851421	0.6680797909871359	0.4983772422672387
0.0782009958120469	0.9180512680239303	0.4984891360234229
0.3282125523954776	0.9182671417052930	0.4976045991317476
0.5767955411438592	0.9176921202425987	0.4956222700892354
0.8276632294513034	0.9174225095731926	0.4970046082811663
0.1627511287147670	0.0860005478551642	0.5760206954734741
0.1609201905065021	0.0840521668540219	0.4197583719949307
0.4125359777927571	0.0860135859606288	0.5752692506837107
0.4111795216568126	0.0843442821690701	0.4189802531774233
0.6612152807827627	0.0841763739577104	0.5744687428237256
0.6629711187971096	0.0862573254239223	0.4186132471603727
0.9114842326743400	0.0843943802506288	0.5754553474296600
0.9130389970860974	0.0853573986031790	0.4195190522499672
0.1674555894992266	0.3390731638919320	0.5747162663244367
0.1644307412206487	0.3362768513535173	0.4193130043128121
0.4136838042104998	0.3382618554602175	0.5739325190656857
0.4099419892474216	0.3346199975393489	0.4176817522351825
0.6606745664093197	0.3355434250289520	0.5745007290476991
0.6638107985659190	0.3354377086622691	0.4187532185097495
0.9136273344325474	0.3355732471085418	0.5757180134624491

0.9144330238079661	0.3368438191387426	0.4199970479907051
0.1678553056205061	0.5854654854889532	0.5768370404769669
0.1667260275065559	0.5882802743451947	0.4212204363830522
0.4114620254226153	0.5851651322552271	0.4175307590906740
0.6500241408278099	0.5822499362760922	0.5747283586743208
0.6654449978142267	0.5850360359521005	0.4161156009148285
0.9111612028849193	0.5849423130963842	0.5766501195894236
0.9140515668702349	0.5867509249733587	0.4210023573903285
0.1629741389855610	0.8360747866272646	0.5769291706911233
0.1608125772124324	0.8338636106330809	0.4204377340632205
0.4131266021163072	0.8353837736639562	0.5751370617498281
0.4090476099521183	0.8318665887908097	0.4192790685037195
0.6542401125985293	0.8288652511891428	0.5729439892414021
0.6636962446636900	0.8380175191172938	0.4159638883692338
0.9104164097354613	0.8349234312324825	0.5762352832438040
0.9117908434155950	0.8341045788924575	0.4201211265222539
0.4696634039384910	0.6193343351448266	0.6067768944739573
0.3795509143325323	0.5045412912704379	0.6836649772471982
0.3545801892681117	0.4009227867719001	0.6959661579209213
0.3610198778609853	0.5758746198689380	0.7232222446469873
0.4357377958865868	0.6918214710528940	0.6673771615895417

FS1

X	Y	Z
0.0823137034262155	0.1718845158327356	0.4943504413236883
0.3327406075867301	0.1726943146287826	0.4959046677211296
0.5819889881280260	0.1717463994185912	0.4958909265971889
0.8324019150507023	0.1718449727263283	0.4950758938196155
0.0838671622864666	0.4225706805708123	0.4948819678702105
0.3317388854395002	0.4199594081023968	0.4900218440921106
0.5813231921335849	0.4232131424768066	0.4939072658908125
0.8326959051129790	0.4224814261278957	0.4960441964257789
0.0841577688100926	0.6718703043818487	0.4973779204085806
0.3364263318566742	0.6679899877923042	0.4970603844620936
0.5843712570767111	0.6726462342347871	0.4904372644281798
0.8319578600985474	0.6718715269174013	0.4961924446034861
0.0830271062615507	0.9215694310584477	0.4965031950330840
0.3327212034962714	0.9205111578269036	0.4972086672413379
0.5817192585084082	0.9203977030459495	0.4949043341747582
0.8326526056838276	0.9221371723228600	0.4944425439827768
0.1656956442385094	0.0897260078665777	0.5736856799843635
0.1663816514572569	0.0874032345248266	0.4177415586009651
0.4162044697797427	0.0893542787191164	0.5744561896035687
0.4146030197163099	0.0865502285093031	0.4184829946000507

0.6654925663230508	0.0874692621309380	0.5732270312552965
0.6647890467225958	0.0884131909889748	0.4173627038610586
0.9159703991348533	0.0885279501800510	0.5728618944706071
0.9155170898912656	0.0887419691177279	0.4165081743933356
0.1693797814329283	0.3408778701085492	0.5711324695175345
0.1624466544156866	0.3369724642131784	0.4142111574921477
0.4165035028380860	0.3464959993646863	0.5729709108916397
0.4155327303704713	0.3355538941127030	0.4146487544596646
0.6645158767172999	0.3397436307684711	0.5731028124064049
0.6662360394748402	0.3384164537299008	0.4176167860377480
0.9167978138985841	0.3386751689241834	0.5732914970858297
0.9157206086989534	0.3395328578806116	0.4174275308896915
0.1696648795191208	0.5869517837931292	0.5743460026591677
0.1703386526794921	0.5912497860264964	0.4188038924082527
0.4163529837344957	0.5885614679773562	0.4150930770713321
0.6580091047073134	0.5876510700772464	0.5733049440877749
0.6692227343048363	0.5894815252176833	0.4150117958902117
0.9154883025357020	0.5885127138040598	0.5746487087556046
0.9179989535661359	0.5899444533451182	0.4187571603412004
0.1664433522356587	0.8385714223153212	0.5754844195760541
0.1666794728439490	0.8376706644184402	0.4190576753342538
0.4173106960729361	0.8348667885716942	0.5742353542517400
0.4129966600617337	0.8339164951586713	0.4187127471783258
0.6638100769037877	0.8353412684671382	0.5712684190207045
0.6675365850338839	0.8417297445921170	0.4144334401700963
0.9150427359431718	0.8390767320350220	0.5738250727710478
0.9170402855208701	0.8379456106875193	0.4178619521631635
0.4390405216750259	0.5658550040801890	0.5872104028272497
0.3167740153921771	0.4614360298809057	0.7641560940757659
0.3294126770178060	0.3885250334474336	0.7341465434171918
0.3030308421172091	0.5318610400002818	0.7956632255146616
0.3982557400679911	0.6176985904995276	0.6513368958614755

TER mechanisms:

IS1

X	Y	Z
0.0846041114024064	0.1692624473097534	0.4935452571198098
0.3354094147013065	0.1720503981748264	0.4971477652032254
0.5847475120210948	0.1708717860846023	0.4967557926560872
0.8351099667459546	0.1707310227473572	0.4947611902083191
0.0858334554260429	0.4207061659502239	0.4954750362223083
0.3358889991654591	0.4218249804951744	0.4932569128919556
0.5837106372346946	0.4222917292202513	0.4955222938692743
0.8350822550091767	0.4211950539685298	0.4965717146243158

0.0866243794743005	0.6705166063591601	0.4980962902688734
0.3394728848212665	0.6664530607183731	0.4989527093140428
0.5843022584958352	0.6702226365226155	0.4929428600207214
0.8342462997853708	0.6707143172208865	0.4967207778362723
0.0861707970474183	0.9199651678543932	0.4966612543331889
0.3355703425402842	0.9191107253278992	0.4984130197652615
0.5851162084758896	0.9198812920323333	0.4954383276692681
0.8366914650599611	0.9213975236542326	0.4934305369659128
0.1674220732245492	0.0878909421054835	0.5738774348481355
0.1706204930070732	0.0858773838815333	0.4178081569283293
0.4189959430752304	0.0883916900999645	0.5754428677234464
0.4169769188426219	0.0854924380024395	0.4197633099109176
0.6692687242530501	0.0870606293577130	0.5736206602550252
0.6667238578023542	0.0874107394061999	0.4176313310167011
0.9188221467459582	0.0870831676334294	0.5721408850007762
0.9182068716286391	0.0879275697949683	0.4154190523999897
0.1680459923597568	0.3352406080897767	0.5706259128875686
0.1680804646735759	0.3373591906318881	0.4156373616181332
0.4193374245920027	0.3469698186901873	0.5748220268764997
0.4176355872517711	0.3361858374545363	0.4169528786979106
0.6676536998300611	0.3386859946538890	0.5741246636331737
0.6679971544386285	0.3377159495845603	0.4185995692944472
0.9185885392020338	0.3365564809588570	0.5735789039064209
0.9185768611744416	0.3390651407817922	0.4175124927616353
0.1710896073090974	0.5845193445061597	0.5752005829316218
0.1737845811161121	0.5902986500313655	0.4199749805533037
0.4184039441814472	0.5872989840833720	0.4171424399681448
0.6601950586993289	0.5870337070961364	0.5743413448640710
0.6697880351223301	0.5882249457347786	0.4167100202168074
0.9175630268729744	0.5870834292655175	0.5751745282636318
0.9203140016149779	0.5887736922306421	0.4194039612784106
0.1686975736587562	0.8370343420545674	0.5761602665318498
0.1703399121576280	0.8360102803993463	0.4197367366069839
0.4216253600467137	0.8338182356134070	0.5755548652751763
0.4155404419868838	0.8319667237084315	0.4200721484612476
0.6704817416337320	0.8377475521103519	0.5704397060872510
0.6687359649457504	0.8380162248302366	0.4154312590976211
0.9180673685685917	0.8385313832400840	0.5737061819706383
0.9204795672630715	0.8358382175372185	0.4176303755088628
0.4413177311257672	0.5651243785767179	0.6034917138363740
0.3235843534679643	0.5028827478359428	0.6634897908497438
0.5151714960140155	0.6760003364117535	0.6665173999925654
0.2586317745669459	0.4749807244098433	0.7093428990636398
0.5515568192765444	0.7378937113264060	0.7135658927974957

0.3431157080726964	0.5225198045954169	0.8642066306813828
0.4475822777904633	0.5700940576344770	0.8416969904352273

TS1

X	Y	Z
0.0752517970834816	0.1634606774562570	0.4957671604284996
0.3243532030541090	0.1637705710319466	0.4959019186658224
0.5744019426095122	0.1630096376216272	0.4948900764544248
0.8250243387140515	0.1630017241470938	0.4949818120016828
0.0779120511658178	0.4148463068723984	0.4946033343191800
0.3281730265980798	0.4178790381002244	0.4948703283273019
0.5721950763054622	0.4121853243911602	0.4934057318432607
0.8250583443206239	0.4137741836621771	0.4948155870067978
0.0753693530220544	0.6638082467528008	0.4955610746321994
0.3283487343792900	0.6622088560571910	0.4951172441128548
0.5723064410990375	0.6617676242187542	0.4913491393513496
0.8226244902078932	0.6630429525825008	0.4960810506855537
0.0743145332434593	0.9130827563058190	0.4962452720422021
0.3242467002937274	0.9125375245146542	0.4959815912877303
0.5720585996035439	0.9116070260287827	0.4935310997421140
0.8225016579474485	0.9112236330178547	0.4959451012646027
0.1579753217511666	0.0802194583575400	0.5743664326843998
0.1579151445671911	0.0796360192478360	0.4179580573591437
0.4085494786978714	0.0802934112824403	0.5738713625678926
0.4067322063697177	0.0793216667095464	0.4176822571189404
0.6574637630158122	0.0787996611636430	0.5723495764141049
0.6582247334673568	0.0803896607387955	0.4164069538248824
0.9070122591277610	0.0791844268671014	0.5737165713187125
0.9083605481077727	0.0788103112145606	0.4177046839091644
0.1621255865576430	0.3332823737522048	0.5722877622717988
0.1614984946192521	0.3304415768271056	0.4170434606495731
0.4089354323061372	0.3342102345054911	0.5729407351135976
0.4049971633865965	0.3294519587919851	0.4163125003572432
0.6574381850193234	0.3303908632582377	0.5721898987900573
0.6581162778213780	0.3291832024989034	0.4162256175241907
0.9098110856754857	0.3309091512288589	0.5725729928815397
0.9095848885738462	0.3305794541548081	0.4170216285226686
0.1615441919122631	0.5807832856074953	0.5720503350327277
0.1619770580735036	0.5830188703900134	0.4171373473465607
0.4076933015065407	0.5797227380464847	0.4156877126485554
0.6454004115886391	0.5745579722358443	0.5723645735301375
0.6589470138469125	0.5800884886986211	0.4151581189556168
0.9073927136024408	0.5795577241319663	0.5735752949676254
0.9084542596226867	0.5815464566620960	0.4176622436971086

0.1577904359261665	0.8293666172950793	0.5744028859565873
0.1580046698883635	0.8303941533473136	0.4178498296774080
0.4088567084575843	0.8269299473503509	0.5732064115436231
0.4049039664046460	0.8272468433242465	0.4165421940462934
0.6452884172352213	0.8222686080570938	0.5721227346336164
0.6582977679309536	0.8297486681795546	0.4151645181193472
0.9068483062815886	0.8293384103159197	0.5742992412673402
0.9075288703035085	0.8296146790599508	0.4181199786720028
0.5050743078101405	0.6300477730477496	0.6200075564943717
0.3694471957314635	0.5620766387150330	0.6658734875129878
0.6066677854841526	0.6831067842654416	0.6961345629449663
0.2678945582375281	0.5089058877796699	0.6831287311976885
0.7152910580437912	0.7328989045048545	0.6986512165382338
0.4370272390943062	0.6157356760731874	0.7767077960264929
0.5543674691328822	0.6682523354555014	0.7709482178058397

IM

X	Y	Z
0.0725146415406280	0.1621372064024183	0.4959784926230266
0.3212561597121885	0.1620645339081065	0.4958236981770715
0.5711186577819295	0.1609014711166633	0.4942736845490279
0.8217169333725132	0.1608282095379326	0.4949813591356236
0.0748474440516568	0.4130442023915989	0.4941712250172048
0.3255394328844146	0.4165319389543887	0.4936760213103839
0.5693206655921055	0.4106022415205831	0.4922284737629039
0.8220145554616638	0.4117841720518587	0.4940697110599625
0.0723598496695239	0.6616013362246387	0.4946654913107920
0.3245812935518467	0.6595782321503432	0.4935223413190754
0.5704317363128905	0.6590412274223323	0.4898614259174017
0.8213393844209321	0.6617724858357794	0.4945800597074759
0.0713362654069317	0.9114184971733467	0.4960086150764056
0.3210129803788297	0.9105516413021719	0.4953919215816078
0.5684410141439799	0.9089771684731766	0.4934477150842501
0.8201365422008732	0.9091449353354367	0.4961307034826253
0.1552627114975853	0.0784620609242703	0.5744179811504672
0.1545474962601493	0.0780538066967614	0.4179849213157686
0.4056601844083905	0.0782390588284759	0.5734479860130357
0.4031541460815777	0.0774696158790947	0.4172229054912533
0.6536137732582349	0.0765310078452763	0.5720752462890805
0.6552310931561656	0.0779125997273753	0.4162304265514499
0.9043994020546973	0.0776590313944878	0.5738355182136337
0.9052994084882523	0.0766825039014558	0.4180280521658333
0.1608065512885251	0.3336979263782262	0.5723416162499797
0.1578463904768779	0.3281744348033465	0.4166117923721432

0.4068248264956814	0.3341849204958471	0.5726522333386511
0.4013743553210557	0.3270555935421967	0.4157878049660198
0.6540544778452172	0.3285443944221721	0.5712878182783064
0.6552225968537789	0.3271169224831854	0.4154950375428987
0.9066587391498491	0.3293062186450633	0.5721807798466318
0.9062691896465698	0.3279043614863739	0.4165307745066676
0.1593007159976802	0.5789326538568496	0.5715369497721074
0.1580042990233492	0.5801981668736895	0.4159426306675451
0.4054255114600596	0.5780217377170892	0.4144537036193249
0.6483642696490185	0.5737912777294913	0.5706657006993978
0.6566772096205213	0.5781861514078600	0.4137637474336305
0.9047749984534043	0.5776519750190989	0.5726084121618860
0.9058245372165209	0.5789295510841277	0.4162752380722213
0.1548517818471755	0.8272394923667485	0.5738032093816660
0.1546773469279790	0.8288039849046492	0.4173411119442000
0.4044801015219594	0.8235253957882085	0.5724879519861137
0.4020273135904501	0.8256089023503739	0.4159126299923994
0.6426085432291323	0.8190499061954446	0.5715027907488659
0.6562846172993609	0.8288589773252817	0.4149818321108368
0.9044239016176027	0.8268536386041657	0.5740580945260688
0.9049735119926176	0.8289702443082319	0.4175281545115697
0.5182363758656280	0.6278265753596574	0.6197169084895334
0.4000988389760898	0.6008728594247035	0.6851353438691568
0.6204545736226872	0.6842845773419211	0.6968641971464512
0.2902337922318404	0.5403537801521044	0.6772465099039494
0.7289268131139579	0.7195220838947923	0.6990692707728822
0.4378272628484717	0.6441104297637738	0.7492160161360144
0.5702808811289802	0.6982937052773399	0.7551876646474966

TS2

X	Y	Z
0.0721600422081679	0.1618608837592177	0.4957825242091615
0.3211272804949488	0.1621184109425542	0.4957790397307064
0.5710458110556473	0.1609190630852240	0.4942150545801382
0.8216593506785657	0.1608486230037016	0.4949031384085529
0.0745550910431163	0.4129260158850911	0.4939630041298101
0.3250069265240469	0.4162588462506847	0.4933845247609553
0.5691428098851503	0.4106442445814764	0.4924112368532576
0.8218748393549120	0.4117880996122309	0.4939139955901694
0.0720608613442693	0.6616792162996035	0.4944476050983368
0.3242654733012316	0.6596388345241522	0.4930501207887942
0.5692386086852466	0.6591322037623399	0.4896739287589824
0.8211027912208095	0.6617391680990820	0.4946105521025430
0.0713776631778344	0.9114978117805776	0.4957993042982735

0.3209884359965756	0.9104834506557467	0.4953781421542444
0.5685788812542825	0.9086259954175731	0.4934901735084906
0.8203682531652987	0.9095082580484544	0.4959873421622376
0.1550840847234696	0.0784329543449616	0.5743100820466367
0.1545862481803653	0.0781561536591582	0.4178579683631653
0.4056091880921358	0.0783036852331023	0.5733583929658863
0.4030500795420195	0.0775065420375753	0.4172174079755919
0.6535135439651611	0.0764496065363076	0.5720026782130319
0.6550493168977168	0.0777360872561133	0.4162469023578907
0.9043951391889707	0.0778358736839166	0.5738349005948749
0.9051769357140387	0.0768132617523918	0.4178305762848850
0.1600093474856053	0.3329711623465386	0.5720081236494750
0.1574983524418201	0.3279682680941605	0.4163997202859448
0.4064154006547653	0.3341629524960936	0.5725244737946724
0.4011713869307485	0.3270212194238979	0.4157379317416243
0.6540931414442781	0.3285503314729041	0.5712582904097800
0.6549919816713938	0.3271494570899236	0.4154319449115462
0.9065546848827636	0.3293907787246724	0.5720569926326107
0.9060421656684241	0.3278357809245449	0.4163860014574538
0.1589471183953322	0.5790030939881348	0.5712016918947285
0.1574992801604580	0.5800810959171230	0.4156723370183144
0.4047285446591929	0.5777159332483848	0.4140717186131865
0.6473023934307207	0.5745806836661060	0.5704723348914129
0.6562399843378870	0.5781854995882938	0.4139152367540859
0.9046328437300346	0.5776029495027899	0.5724864353218422
0.9055702117921881	0.5789758140226198	0.4161610630883387
0.1546866564564056	0.8272051399826381	0.5736764174049682
0.1548187986748317	0.8290102576818228	0.4171847798878260
0.4044779488513370	0.8230243713081861	0.5724614169412376
0.4019200132358804	0.8256808489607791	0.4157737151253044
0.6441893689972459	0.8196551309731319	0.5714551422901479
0.6562382139799112	0.8287973146207576	0.4149620031673180
0.9045391737143333	0.8269379908168659	0.5737443971633525
0.9049010237640758	0.8289303635774345	0.4174118892858373
0.5261582636476796	0.6366131411552779	0.6228435979274736
0.4093618043650713	0.6046631733853689	0.6910155429468328
0.6333388712468855	0.6948974730772992	0.7002858607738567
0.3052592894445422	0.5369753497384759	0.6693519205186549
0.7419046262859490	0.7246431471957435	0.6953816021158329
0.4319607217684334	0.6442655147397901	0.7519009947227202
0.5964578133640226	0.7130828856267498	0.7581548461857143

FS

X

Y

Z

0.0722220489636331	0.1607433490372293	0.4966642487640897
0.3218907648395578	0.1606464751682063	0.4966090290986964
0.5715474306047328	0.1598138435331488	0.4966328561752195
0.8217626339335192	0.1598993125184378	0.4968004651925096
0.0734752066635422	0.4109187354397921	0.4959367805895545
0.3236834066156961	0.4112421945216733	0.4927228787596381
0.5707664367517400	0.4098875003264281	0.4950415831126699
0.8219537874134855	0.4103710217233481	0.4968640738012681
0.0720836131675834	0.6602113413734413	0.4969964121591203
0.3237024896657550	0.6597743422814425	0.4939911384313836
0.5693065044041565	0.6584093586240333	0.4918830391552079
0.8205285131020924	0.6595998422313184	0.4968672125059265
0.0715738901973680	0.9100725000302093	0.4973160559964910
0.3217441484799767	0.9094829941495648	0.4969788047525210
0.5706358805384577	0.9089406614962188	0.4953996614860575
0.8205109433529429	0.9093846858642503	0.4966410432473864
0.1555961138715667	0.0776968306685359	0.5750128965025681
0.1546243014197518	0.0762644556200701	0.4189711076059892
0.4052637725198769	0.0770870977036807	0.5749180424520917
0.4043705742496560	0.0759928305443092	0.4188256491743753
0.6543852530130057	0.0754578849899013	0.5743433001737861
0.6552873694755306	0.0772067514022281	0.4182568952872806
0.9050779666044572	0.0766843760726169	0.5749250515727651
0.9050267232975125	0.0764646510787890	0.4188656611042717
0.1612443848590922	0.3319532540249374	0.5732653783868147
0.1541231224902587	0.3257700931215240	0.4166837512320538
0.4054689209888610	0.3320754605855395	0.5734106121556363
0.4047301415133450	0.3249614954761493	0.4161141448451022
0.6543594023977520	0.3272784616605188	0.5742471023772553
0.6557153920101447	0.3260518846180505	0.4182453309816787
0.9064675616524257	0.3274568235280499	0.5745674662656344
0.9051472733672232	0.3267360517539079	0.4187943049389515
0.1598729020595881	0.5772922630806845	0.5735751747160055
0.1547409640266883	0.5772755375155749	0.4174518965985961
0.4044114914552622	0.5766981923031745	0.4148670127288959
0.6475128437990302	0.5752479942014969	0.5729737967189019
0.6566839946031253	0.5763791923578151	0.4161260027040193
0.9048240618716479	0.5769721484943857	0.5751231911252599
0.9052801553662075	0.5772207571243190	0.4190652028207850
0.1554073177923745	0.8267586876210379	0.5752902138122538
0.1549074622504229	0.8268555400793040	0.4191958549998902
0.4054700206219943	0.8220195741356583	0.5738618355898664
0.4040400335417419	0.8268811125457913	0.4169910642736019
0.6479925350654276	0.8203341564124570	0.5728264871926991

0.6562430853763644	0.8284091253710012	0.4161479162262810
0.9041304044951349	0.8265947053883671	0.5750017692140553
0.9048174862327492	0.8265114006535588	0.4191680653323925
0.4155608467042108	0.5778373233174730	0.5820384218450693
0.3229959212174459	0.6269546878773845	0.7138203914232257
0.7075367589713938	0.6955120495407194	0.7350934250938416
0.3589224210166111	0.5701461247081747	0.6841377814997809
0.7999340106198629	0.6951447711188881	0.7331755330450774
0.2878369018721804	0.6819207236831415	0.7441231565747146
0.6149425016157999	0.6960074783020392	0.7373838101808140