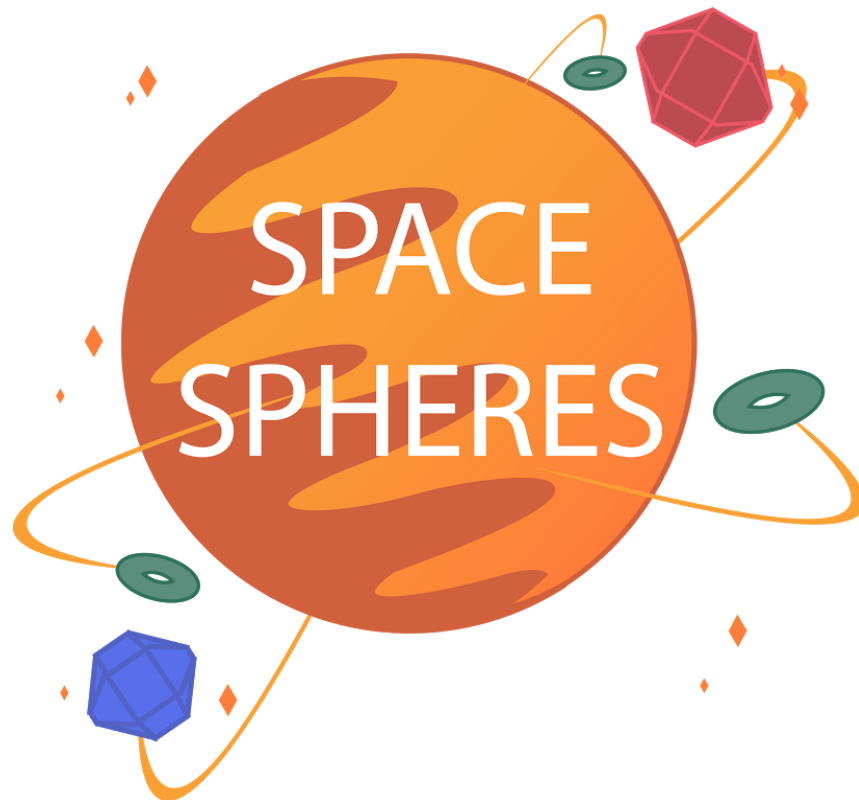


ZERO ROBOTICS

HS TOURNAMENT 2016

Game Manual

Ver. 1.2.0



SPACE-S (Satellite Positioning and Constructing Entities -

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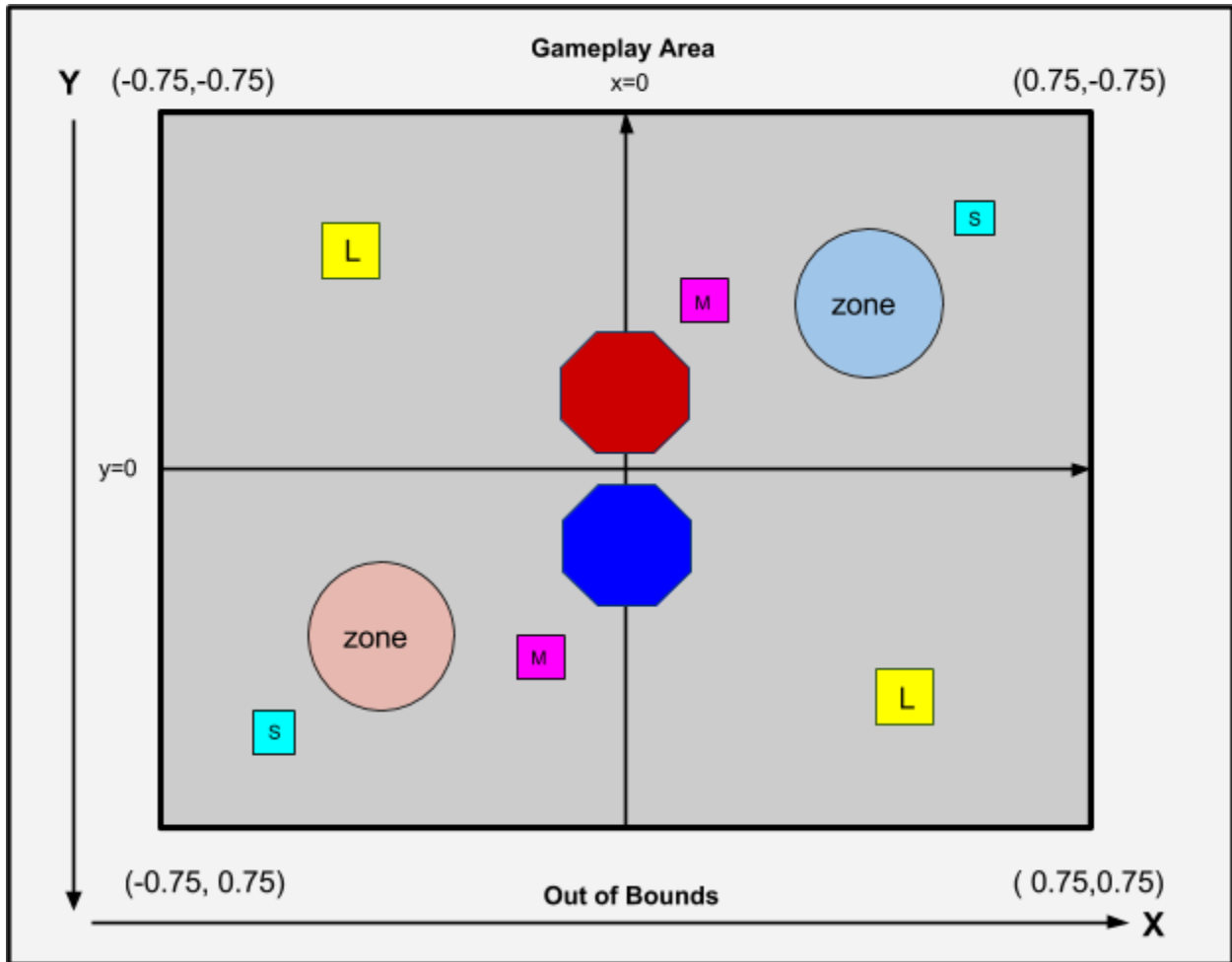
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30I co g'Qxgtxlgy '''

Hki wtg'3<I co g'Qxgtxlgy '*y kj 'czgu'eqttgevgf 'epf 'z.{'eqqtf lpcvgu'eqttgevgf +'

"



S: Small, M: Medium, L: Large

Diagram not to scale

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O cvej gu'qh'URCEG/URJ GTGU'y kn'dg'r rc{ gf "dgw ggp'y q"URJ GTGU."eqpvtqmgf "d{ 'r tqi tco u'y tkwgp"d{ "

wy q'ugr ctvg'vgco u0Gcej 'vgco 'y kn'eqo r gvg'vq'j cxg'vj g'o quv'r qlpw'y j gp'vj g'tqwpf "ko g'ku'wr 0Gcej "

tqwpf 'rcuu'3: 2'ugeqpf u0Rqkpw'o c{ "dg'i gpgtcvgf "d{ "eqmgevp'i 'vj g'kgo u'*tgr t gugpvkpi 'vj g'ucvgnkg"

r lgegu-'ur tgef 'cetquu'vj g'r rc{ kpi 'hgrf "epf 'f tqr r kpi 'vj go 'qhh'lpukf g'qpgau'cuugo dn{ 'l qpg.'tgr t gugpvkpi 'vj g'

kf gcnr rceg'vq'eqput we'c'ucvgnkg0"

30B"Qxgtxkgy "qh'I co g'Hgcwtgu"

Vj ku'i co g'hgcwtgu"Ucvgnkg'Rqukkqpkpi "U{ uvgo "URU+kgo u."Cuugo dnf \ qpgu."cpf "Ucvgnkg'Rkgeg'Kgo u0'

30B"Ucvgnkg'Rqukkqpkpi "U{ uvgo "URU+kgo u"

Cv'vj g'uctv'qh'vj g'i co g.'vj gtg'ctg'vj tgg"Ucvgnkg'Rqukkqpkpi "U{ uvgo "URU+kgo u'i kxgp"q"gej 'URJ GTG0' Vgco u'pggf "q'r meg'vj gug'vj tgg"URU+kgo u'ht"cr ctv'q'hqto "c"v'kcp i ng="vj g'ctgc"qh'vj g"URU/v'kcp i wcvgf " tgi kqp'ku'wugf "q'ecre wcvg'vj g'f kco gvg't'qh'c'v'gco au'cuugo dnf | qpg0Vj g'i tgcvg't'vj g'ctgc'ku.'vj g'o qtg" r tgekugf "vj g{ 'y knidg'kphqto gf "qh'vj g'hqecv'kqp"qh'vj gk"URCEG/U0'cuugo dnf | qpg0Tgcf "o qtg'cdqww'vj gug" | qpgu'kp"ugev'kqp"30B00"

30B0"Cuugo dnf \ qpgu"

Vj g'cuugo dnf | qpg'ku'c'ur j gtlecni'qecv'kqp'y j kej "f qgu'pqv'kpvgt'htg'y kj "gzkukpi "ucvgnkg"qtdku."cu'ej qugp" tcpf qo n' "htqo "c'ur gekle'tcpi g'qh'eqqtf kpcv'g0'ku'cdqww'vj g'uk' g'qh'qpg"URCEG/U.'y kj "c'f kco gvg't'qh' 204'o gvgtu0Qpeg'cm'vj tgg"URU+kgo u'ctg'r megf . "vj g'r n{ gt'y knidg'cdng'q'wug'vj g'hwpev'kqp"ã~-->Á &ã↑æÈ&æ\X~^æÇã->~ã\Á~^æØ^ã~YHÿD "q'igctp'vj g'guko cvgf | qpg.'vj cv'ku'c'ur j gtlecni| qpg'y kj kp" c'egt v'kq'tcf kku'qh'gttqt'htqo 'vj g'v'wg'egpvg't'qh'vj gk"cuugo dnf | qpg0Vj g'tcf kku'qh'gttqt'qh'vj g'guko cvgf " | qpg'y knidg'ecre wcvg' "cu'kpxgtugf "r tqr qt v'kpcn'q'vj g'ctgc"qh'vj g'v'kcp i ng'hqto gf "d{ 'vj g"URU0'

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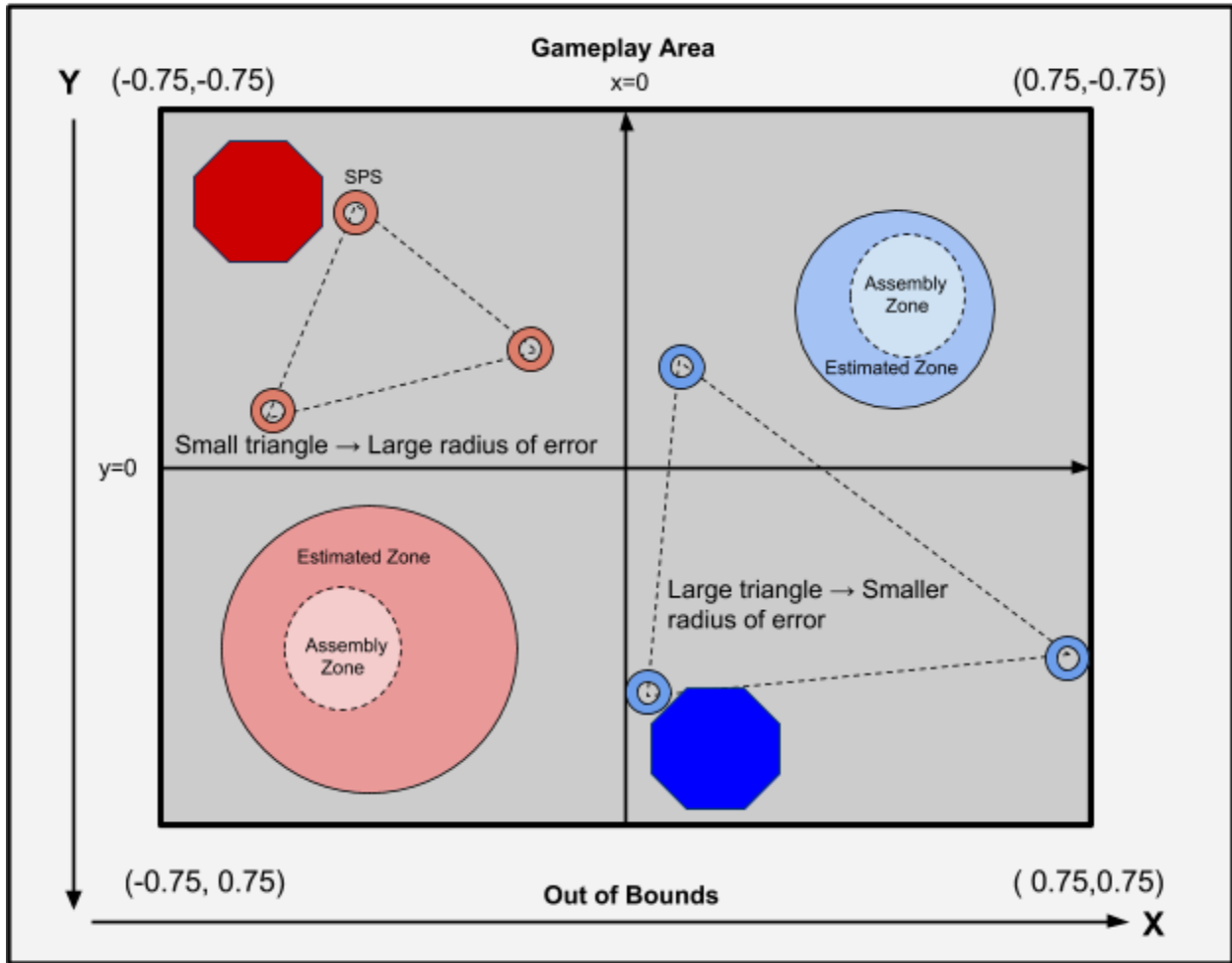


Diagram not to scale

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3006 "Nqecv'kpu'qh'Kgo u'cpf 'URCEG/U"

Vj g'nqecv'kpu'qh'ucvgmkv'kgo u.'cpf 'vj g'qr r qpgp'URCEG/U'ctg'tgxgcnf 'v'vj g'v'gco u0Vgco u'gpvt'vj g'

SPACE-SPHERES; Ua Y'A Ubi U''

ur gekhgf 'kgo 'F au'f guetkdgf 'kp'ugevqp'3065+'cpf 'wug'vj g'hwpevqp" { ~->äÁ&æ\Ø\æ↑Q~´ Çà->~á\ Á
*~bYÿÊÄ↔^ \Á↔\æ↑ØEDÁ "q'i gv'vj g'hwpevqp'qh'vj g'kgo 0C"URCEG/U'ecp'o qxg'cp{y j gtg'qp'vj g'o cr"
cpf "j cxg'hzgf 'kp'kcnr qukvqp" f guetkdgf 'kp'ugevqp'3067+0'

3080'F qemkpi "

Vq'r lenlwr "c'ucvgnksg'r kgeg."c"URCEG/U'pbggf u'vq"cr r tqcej "vj g'kgo ."unqy "f qy p'vq'dgnqy "Ø3o lu."dg"
r qlp'kpi "cv'vj g'kgo "cpf "ecmkpi "vj g'f qemkpi "hwpevqp'0Vj g'URCEG/U'pbggf u'vq"uvqr 'kp'hwpevqp'qh'vj g'kgo "cv'c"
egt'vlp'f kwcp'eg'vq'r lenlwr "cpf "vj g'kgo "y km'dg'tgrcugf "cv'vj g'uco g'f kwcp'eg'cy c{ "f guetkdgf 'kp'ugevqp"
3060+0

304'I co g'Nc{qww'

Vj g' gtq'Tqdq'leu'J ki j "Uej qqn'Vqwt'pco gpv'4238'y km'dg'eqpf wexgf 'kp'uko wv'vqp'0Vj g'i co g'ku'r r { gf 'kp"
cp'ctgc'ecmgf "vj g'hwpevqp" \ qpg'0K'r r { gtu'hwexg'vj g'hwpevqp" \ qpg. "vj g' "y km'dg'eqpuk'gtgf "qww'qh"
dqwpf u'0Vj g'hwpevqp'qh'vj g'URJ GTGU'ku'o gcuwtgf 'hwqo "vj g'egp'vt'qh'vj g'ucvgnksg'0'

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Vcdrg'3-<hwpevqp" \ qpg'F ko gpuk'qpu"

	2D	3D	Alliance
Z"jo _"]207"z- 207_ "]207"z- 207_ "]207"z- 207_ "
["jo _"]207"z- 207_ "]207"z- 207_ "]207"z- 207_ "
\ jo _"	207"]207"z- 207_ "]207"z- 207_ "

"

C"URCEG/U'y km'dg'r gpcrk gf "c'r qt'vqp'qh'ku'hwgn'cmqecvqp'hw'g'xgt { 'ugeqpf 'kv't go ckpu'qww'qh'vj gug"
dqwpf u'0"

"

"

"

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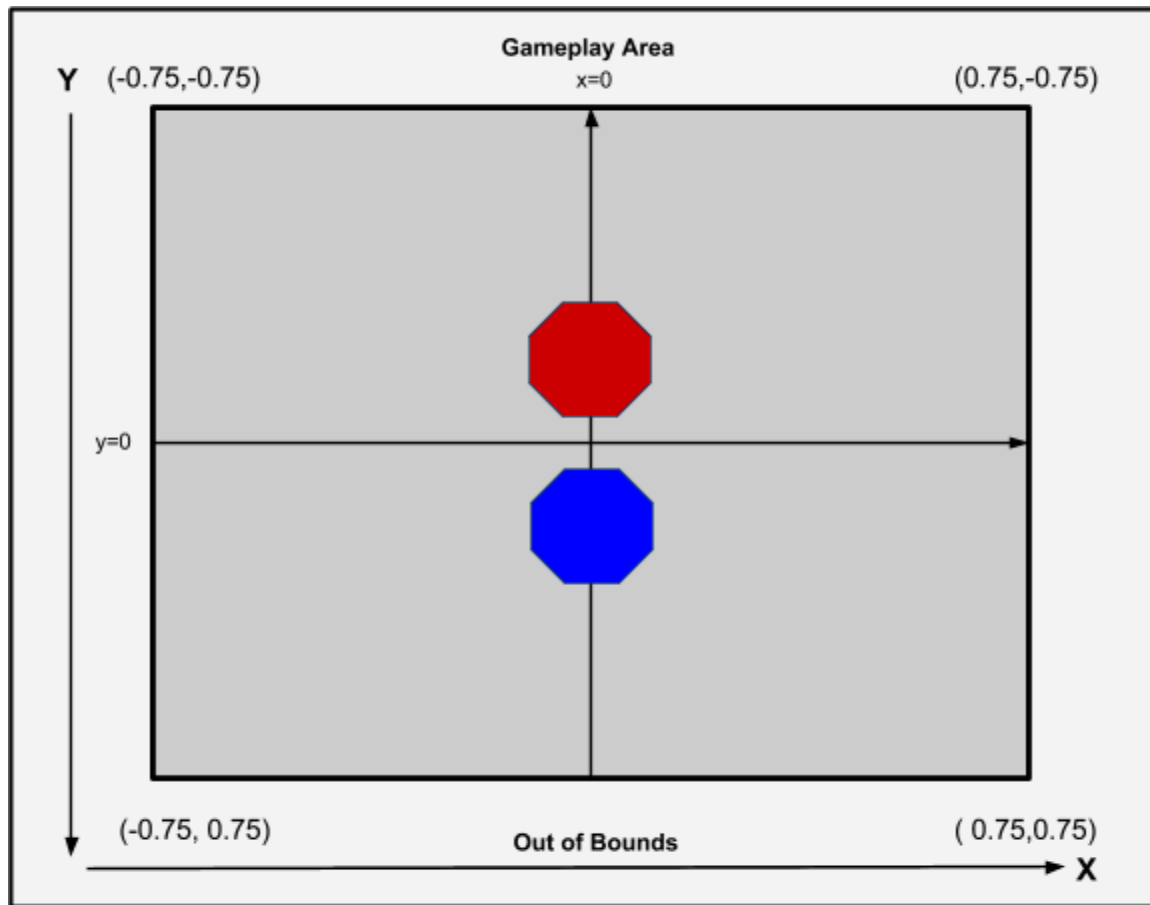


Diagram not to scale

4F "Rj cug"

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5F "Rj cug"

Htqo 'y g"5F "r j cug"qpy ctf u.'y g'\ "f ko gpukpp'ku'qr gpg'f 'wr 'hqt'o q'xgo g'p'v'cpf 'ugxgtc'n'p'gy 'o gej c'pleu'y kn' dg'k'p'x'q'f wegf 0'

"

"

"

SPACE-SPHERES; Ua Y'A Ubi U"

hqcvi gVQj gtUeqtg*+ "	Tgwtpu"qr r qpgpvau"ueqtg"
hqcvi gHwgnT go clpki *+ "	Tgwtpu'tgo clpki 'hwgn'
kpvi gEwttgpWlo g*+ "	Tgwtpu'vj g'wlo g'lp'vj g'i co g"
xqkf 'ugpf O guuci g*wpuki pgf 'ej ct' lpr wo ui -+ "	Ugpf u'inputMsg vq'qyj gt'ucvgnkg"
wpuki pgf 'ej ct'tgeglxgO guuci g*+ "	Tgwtpu'vj g'o quvtgegpv'o guuci g'ugpv'd{ 'qyj gt'ucvgnkg"
lpvi gP wo URUJ grf *+ "	Tgwtpu'vj g'pwo dgt'qh'URUu'wknfj grf 'd{ 'yj g'ur j gtg"
dqqrni gv qpg*hwcvl qpgkphq]6_+ "	Kf'cmir u'j cxg'dggp'r rcegf . 'tgwtpu'twg'cpf 'uqt gu'c' qpg" guko cvkp'lp' qpgkphq0Qvj gty kug'tgwtpu'hcng0Ecp'qprf 'dg' ecnrf 'qpeg'r gt'ugeqpf 0'
dqqrnj cuKgo DggpRlengf Wr *lpv'kgo KF + "	Tgwtpu'twg'h'kgo KF 'j cu'dggp'r lengf 'wr 'cv'uo g'r qlpv0Tgwtpu' hcng'qyj gty kug0'

3050'hwgn'

Gcej 'r r{ gt'ku'cuuki pgf 'c'xkt wcn'hwgn'cmqecvqp'qh'82'ugeqpf u. 'y j lej 'ku'vj g'vqcn'lwao 'qh'hwgn'wugf 'lp' ugeqpf u'qh'lpf kxkf wcn'vj twngt 'h'k'kpi 0Qpeg'vj g'cmqecvqp'ku'equpuwo gf. 'yj g'ucvgnkg'y knipqv'dg'cdrg'vq" tgr qpf 'vq'URJ GTGU'eqpvtqnl'eqo o cpf u0K'y knih'k'vj twngtu'qprf 'vq'cxqkf 'rgcx'kpi 'yj g'k'p'vgt'cevkqp' \ qpg" qt'eqm'k'kpi 'y kj 'yj g'qyj gt'ucvgnkg0Cp{ 'cevkqp'vj cv'tgs wkt gu'h'k'kpi 'yj g'vj twngtu'uwej 'cu'tqcv'kpi . "

ceegr'gtcv'kpi "qt"o qxkpi "equpuwo gu'hwgn0'

Vcdrg'5-<hwgn'cmqecvqp"

	2D	3D	Alliance
hwgn'cmqecvqp"]u_ "	82u'	VDC"	VDC"

3055'k'p'vgt/ucvgnkg'Ego o wplecvkpu"

Vj g'ucvgnkgu'j cxg'vj g'cdk'k'v' 'vq'eqo o wplecv'g'y kj 'gcej 'qyj gt'wukpi 'dlpct{ 'o guuci gu0Vj g'CRK'h'wpe'v'kpu' ugp'f O guuci g'cpf 'tgeglxgO guuci g'o c{ 'dg'wugf 'vq'ugpf 'f'cv'dgy ggp'vj g'ucvgnkgu0Vj g'dcpf y kf vj " cxck'cdrg'vq'vj g'ucvgnkgu'ku'cu'hqmqy u-<*cf f kpi 'hwpe'v'k'p' hqt'eqqr gtcv'kqp+ "

Vcdrg'6-<k'p'vgt/ucvgnkg'eqo o wplecvkpu'dcpf y kf vj "

	2D	3D	Alliance
O guuci g'uk' g"	Wpuki pgf 'ej ct"	VDC"	VDC"

3056'Eqf g'Uk' g"

C'URJ GTGU'ucvgnkg'ecp'h'k'c'h'ko k'gf 'co qwpv'qh'eqf g'lp'ku'o go qt{ 0Gcej 'r tq'lgev'j cu'c'ur gek'h'e'eqf g'uk' g" cmqecvqp0'Y j gp" { qw'eqo r krg" { qwt'r tq'lgev'y kj "c"eqf g'uk' g" guko cvg. "yj g'eqo r krgt'y kn'r tqxkf g'vj g" r gtegp'vci g'qh'vj g'eqf g'uk' g'cmqecvqp'vj cv' { qwt'r tq'lgev'ku'wukpi 0Hqto cn'eqo r g'v'k'k'p'uwdo ku'k'p'u'tgs wkt'g" vj cv' { qwt'eqf g'uk' g'dg'322' "qt'rguu'qh'vj g'vqcn'cmqecvqp0"

SPACE-SPHERES; Ua Y'A Ubi U''

3057 "KkklcnRqukkqp"

Vj g'Dnwg'Ur j gtg'uctw'cv'vj g'Z.[.\ 'qh']202.'2087.'202_0Vj g'Tgf 'Ur j gtg'uctw'cv'vj g'Z.[.\ 'qh']202." /2087.'202_0"

Vj g'ucvgnkg'tcf kw'ku'2083o . 'dw'ucvgnkg'r qukkqp'tgrvkg'vq'i co g'hgcwt gu'ku'f gvgt o kpgf 'd{ 'vj g'ujecvkkp" qh'vj g'egpvgt'qh'vj g'ucvgnkg0'

Vcdrg'7<"KkklcnRqukkqp"

	2D	3D	Alliance
Tgf "	"	"	"
Z"jo _"	202"	VDC"	VDC"
["jo _"	/2087"	VDC"	VDC"
\ jo _"	202"	VDC"	VDC"
Dnwg"	"	"	"
Z"jo _"	202"	VDC"	VDC"
["jo _"	2087"	VDC"	VDC"
\ jo _"	202"	VDC"	VDC"

"

"

3058 "Rrc { gt "KF "

Wgtu'y knkf gpvkh{ 'vj go ugrkgu'cu'or rc { gtKF "? '3o'cpf "qr r qpgpw'cu'or rc { gtKF "? '4o'hqt'cmf co gu.'y j gj gt" qt'pqv'vj g{ "ctg'vj g'tgf "URJ GTGU"qt'vj g'dnwg"qpg'tgur gevkgm{0'

3059 "P qkug'"

K'ku'lo r qtvcpv'vq'pqv'vj cv'cmj qwi j 'vj g'y q'eqo r gvktu'lp'c'o cvej 'y kn'cnj c{ u'dg'r gthqto kpi 'vj g'uco g" ej cmgpi g'cpf 'j cxg'kf gpv'ecn'ucvgnkgu.'vj g'y q'ucvgnkgu'o c{ 'dg'chgevgf 'd{ 'tcpf qo 'r gtwt'dcvkqpu'lp" f khtgtpv'y c{ u.'tguv'kpi 'lp'uo cm'qt'gxgp'rci g'xctk'vqpu'lp'ueqtg0Vj ku'ku'hmm{ 'kpv'gf gf "cu'r ctv'qh'vj g" ej cmgpi g'cpf 'tghgeu'wpegt'vkv'gu'lp'vj g'ucvgnkg'f { pco ke'cpf 'ugpukpi 'o qf gnu0Vj g'dgu'r gthqto kpi " uqrv'kqpu'y kn'dg'vj qug'vj cv'r tqxg'vq'dg'tqdw'vq'vj gug'xctk'vqpu'cpf 'c'y kf g'xctk'v{ 'qh'qdlgevr'ctco gvgtu0'

"

"

SPACE-SPHERES; Ua Y'A Ubi U"

306'I co gr n{ "

kp"qtf gt"q"dg'xlevqtqwu"qxgt"y'g"qr r qukpi "vgco . "gcej "ucvgnkg"lj qwf "r mceg'y'gk'ty'gg"URU'kgo u."f qem' ucvgnkg'kgo u"q'r mceg'kp'y'gk'" qpgu."cm'y j kg'o cpci kpi 'y'gk'hwgn'y'gk'vko g."cpf 'y'gk'qecvqp"qp'y'g" i co gr n{ "ctgc0"

306B"Ucvgnkg'Rqukkqkpi "U{ uvgo "

Vj gtg'ctg'5"URU'kgo u'j grf "d{ "gcej "URCEG/U'cv'y'g'uvctv'qh'cm'y'g'i co gu0Vj g"URCEG/U'vgco u'o wuw' r mceg'y'go "q'v'kcp' wcv'g'y'gk'" qpgau'egpvt0URU' qpg'qecv'kpi 'y' qtmu'qpn' "chgt'cm'5"URU'u'j' cxg'dggp" f gr nq' gf "wukpi 'y'g'xqkf "f tqr URU'wpev'kq0URU'ecre'wcv'g'c'tcf kwu'qh'gttqt'kpxgtugn' 'r tqr qt'v'kpcn'q'y'g' ctgc'qh'y'g'v'kcp' wct"URU'kgo u'cpf "f kur n{ u'y'g' qpg'y' kj 'y' ku'tcf kwu'qh'gttqt0W' qp'f tqr r kpi "{ qwt'kpcn' URU' qw'y knit'gegk'g'r qkpw'gs wcn'q'0B'f'gttqt'tcf kwu'+

Vcdng'8<"Cee'grt'kpi "Tcv'u'y' kj "URU'kgo u"

No SPS	1 SPS	2 SPS	3 SPS
cee"	: l; , cee"	, cee"	: B3, cee"

30604"F qenkpi ""

F wtkpi 'y'g'4F'i co g."q'f qem'y' kj "cp'kgo "c"URCEG/U'o wuw'cr r tqcej "cp'kgo ."pqv'dg'o qxkpi " hcvgt'y' cp'03o lu."dg'r qk'v'kpi "cv'y'g'kgo "y' kj "c"v'q'ngt'cpeg'qh'2047'tcf kcpu"Vj g'cpi ng'dgy'ggp" y'g'ucvgnkg'u'kcp' "xgevqt'cpf "y'g'xgevqt'dgy'ggp'y'g'egpvt'qh'y'g'ucvgnkg'cpf "y'g'egpvt'qh'cp{ " hceg'qh'y'g'kgo "ku'y' kj kp"2047'tcf kcpu". "dg'y' kj kp" c'ur gek'kf "f kucpeg'qh'cp'kgo "cpf "ecm'y'g" â~→Áä~´ ←∅\æ↑ÇD'hwpev'kq0"

Vcdng'9<"Kgo "Rlemw' "F kucpegu'no gvtu'htqo "egpvt'qh'kgo +"

Item Type	2D	3D	Alliance
Small	[.124 : .146]	TBA	TBA
Medium	[.138 : 160]	TBA	TBA
Large	[.151 : .173]	TBA	TBA

SPACE-SPHERES; Ua Y'A Ubi U''

Hki wtg'6<F qenlpi "Ucvgmkg'Kgo u*y kj 'czgu'eqttgevgf 'cpf 'z.{'eqqtf kpcvgu'eqttgevgf -"

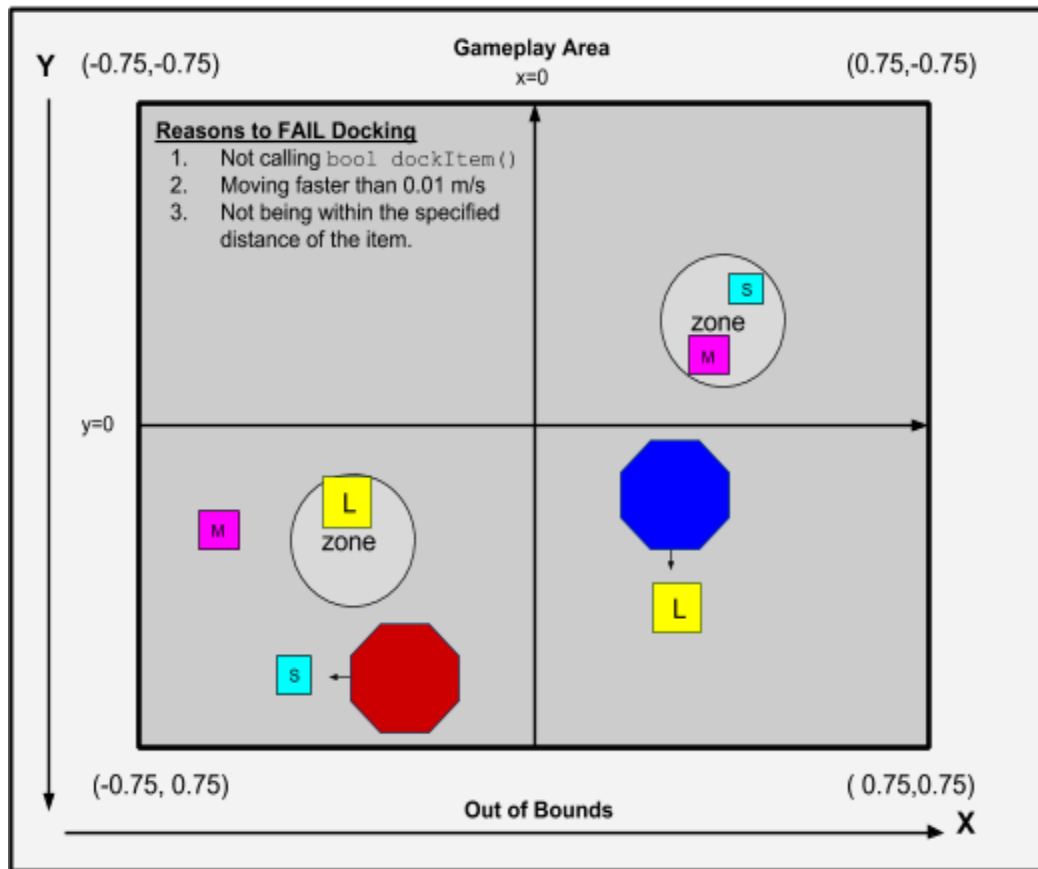


Diagram not to scale

3065'Kgo u"

Vj gtg'ctg'ukz "Ucvgmkg'kgo u*qh'y tgg'uk gu+uecwgtgf 'ctqwpf 'yj g'lpvgtcevkqp'l qpg0Ccej 'j cu'c'wpls wg" pwo gtke'kf gpwhtgt'htqo '2'v'P/3.'y j gtg'P 'ku'y g'pwo dgt'qh'kgo u0k'vj g'4F 'xgtukqp'vj gtg'ctg'ukz "vqcn' kgo u*2/7-0"

Vcdrg': <"Kgo "K u'cpf "Nqecvkqp"

Item Number	Item Type	Location (X, Y)
0	Large	(.23, .23)
1	Large	(-.23, -.23)
2	Medium	(.36, -.36)
3	Medium	(-.36, .36)
4	Small	(-.50, .50)
5	Small	(.50, -.50)

SPACE-SPHERES; Ua Y'A Ubi U''

"

Vj g'ucvgnkg'kgo u'eqo g'y kj 'yj tgg'uk gu'qh'y j lej 'yj gtg'ctg'wy q'gcej 0Vj g'Uo cmi'kgo 'j cu' "uk' g'cpf "o cuu' qh'URJ GTGU0K'eqmgevff 'lp'y g' qpg.'k/i kxgu'20Br u'r gt'ugeqpf "cpf 'k/c'URCEG/U'ecttkgu'k.'k'ecp" ceegrntcv'cv: 1: "tcvg0Vj g'O gf kwo 'kgo 'j cu' "uk' g'cpf "o cuu'qh'URJ GTGU0Y j gp'lp'y g' qpg'k/i kxgu' 2087'r u'r gt'ugeqpf "cpf 'c'URCEG/U'y kj 'yj g'o gf kwo 'kgo 'ecp'ceegrntcv'cv" "tcvg0Hkpcmf 'yj g'rti g'kgo " j cu' "uk' g'cpf "o cuu'qh'URJ GTGU0K'i kxgu'204'r u'r gt'ugeqpf "cpf "o cngu'c'URCEG/U'ceegrntcv'cv: B3" tcvg0"

Vcdrg"; <Uk' g'cpf "O cuu'qh'kgo u'eqo r ctgf "q"c'URJ GTGU"

	2D	3D	Alliance
Ncti g'Ucvgmk'kgo "	51 "	VDC"	VDC"
O gf kwo 'Ucvgmk'kgo '"	316 "	VDC"	VDC"
Uo cmi'Ucvgmk'kgo "	31 "	VDC"	VDC"

"

Vcdrg"32<Ceegrntcvkqp'Tcvgu'ht'URCEG/U'y kj 'f khtgp'kgo u'

	2D	3D	Alliance
Ncti g'Ucvgmk'kgo "	: B3 "	VDC"	VDC"
O gf kwo 'Ucvgmk'kgo '"	617 "	VDC"	VDC"
Uo cmi'Ucvgmk'kgo "	: 1 "	VDC"	VDC"

"

Ecm'y g'i co g'hpvckp'lpv'j cu'kgo *kp'kgo akf +'q'f gvgto kpg'y j gvj gt'y g'kgo 'ku'j gnf 'd{ "pqdqf { *2+" {qw*3+"qt"}{qw"qr r qpgpv*4+0'

Vj g'f kci tco 'dgm'y 'uj qy u'j qy 'yj g'kgo u'ctg'r mæg'f 'u{o o g'kcm'f . 'cv'y g'uco g'f kucpeg'htqo 'yj g' f kci qpcif'

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Hki wtg'7<F kci qpcnU{o o gt{ '*y kj "cz gu'eqttgevgf"cpf "z.{ 'eqqtf kpcvgu'eqttgevgf +"

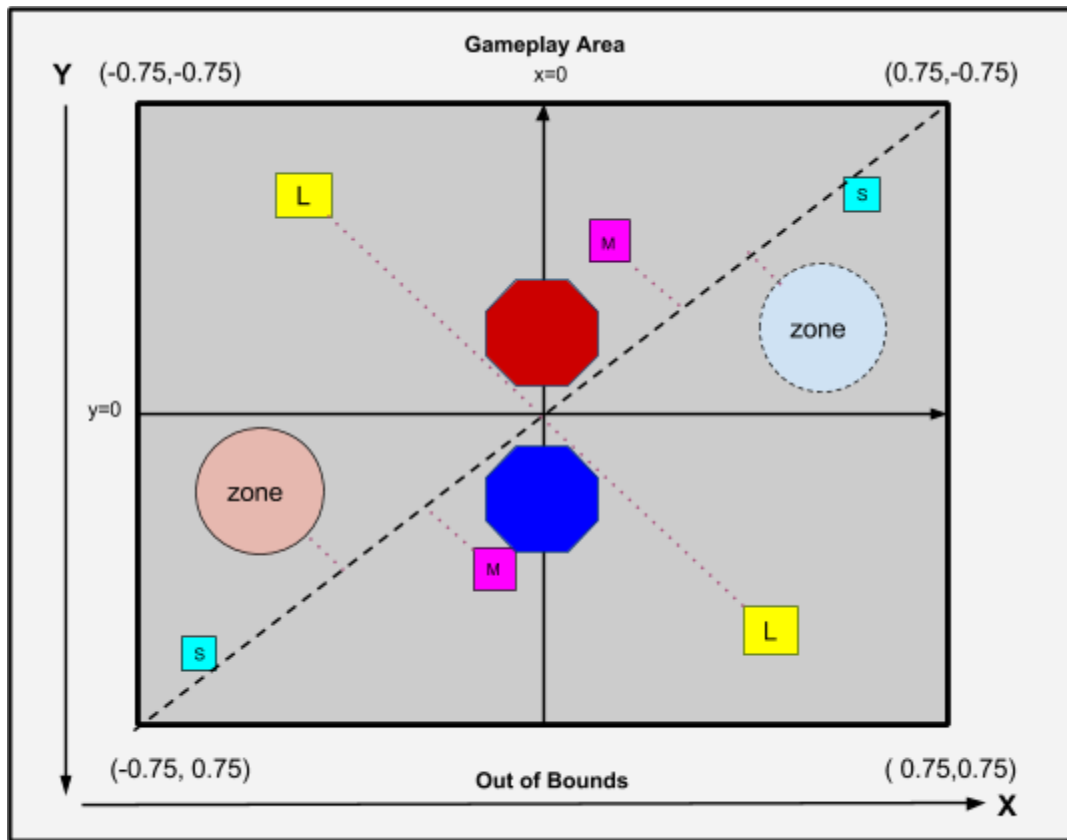


Diagram not to scale

3060"Ueqtkpi "Uwo o ct {"

[qwt'ueqtg'ku'rcti gn{dcugf"qp'yj g'kgo u"{qw'j cxg'kp}{qwt'Cuugo dn{ \ qpg0kgo u'ctg'y qtjy 'f khtgpv'r qkp'v' xcmgu'f gr gpf kpi "qp'yj gk'uk' gu0"

Vj g'ueqtiki "ecrewe'kqp'ku'cu'iqmty u<"

Vcdng"33<Rqkp'Xcmgu"

	2D	3D	Alliance
Uo cm'kgo "jr vuhge_"	208"	VDC"	VDC"
O gf kwo "kgo "jr vuhge_"	2087"	VDC"	VDC"
Ncti g'kgo "jr vuhge_"	204"	VDC"	VDC"
Ftqr r kpi "hpcn'URU'kgo "	08'gttqt'tcf kwi'itqo "URU+"		

3060"Gpf "qhi' co g"

Vj g'i co g'gpf u'chgt"3: 2'ugeqpf u0Y j kej gxgt'vgo 'j cu'o qtg'r qkp'u'y kpu0k'v'j g'wprkmg' "ecug'qhi'c'kg." y j qxgt'ku'emugt'v'v'j g'egpvt ktki kp'qhi'v'j g'r r{ kpi 'hgr "cvi co g'gpf 'y kpu0"

40Vqwtppo gpv''

C\ gtq'Tqdq\ku'vqwtppo gpv'eqpuku'qh'ugxgtcn'r j cugu'ecngf 'eqo r gvkqpu0Vj g'hqmqy kpi 'vcdng'rkua'yj g' ng{ 'f gcf rkgu'hqt 'y g'4238'vqwtppo gpv'ugcuqp<

Vcdng'34<'Vqwtppo gpv'Mg{ 'F cygu'

Date (2016)	Event
Sept 10 (Sat)	Kick-off webcast
Sept 30 (Fri)	2D Simulation Competition Deadline (end of practice)
Oct 28 (Fri)	3D Simulation Competition Deadline
Nov 5 (Sat)	Alliance Formation Event
Dec 2 (Fri)	Semifinal Simulation Competition Deadline
Dec 18 (Sun)	ISS Code Due
Jan 2017- Date TBD	ISS Final Competition

"

Vj g'tcpnkpi u'lp'gcej 'eqo r gvkqpp'ctg'f gvgto kpgf 'd{ 'c'Ngcf gtdqctf . 'f guetkdgf 'dngry 0Vj g'4F 'Uko wrcvqp" Eqo r gvkqpp'ku'pqr'cp'grko kpcvqp'tqwpf =cm quv'gxgt{ qpg'y j q'uwdo ku'eqf g'y j lej 'cej kxgu'c'pqp| gtq" ueqtg'ci ckpuv'c'odrcpnö'r r{ gt'yr r{ gt'y kj 'pq'eqf g-'v'yj g'4F 'Uko wrcvqp'Eqo r gvkqpp'cf xcpegu'v'yj g'5F " Eqo r gvkqpp0

40B'Vj g'Ngcf gtdqctf "

40B'Kpvtqf wevqp''

Vj g\ gtq'Tqdq\ku'Ngcf gtdqctf 'j cu'cf cr vgf 'qxtg'yj g' gctu.'cpf 'ku'pqy 'dcugf 'qp'yj g'Y j qng'J kvqt { " Tcvkpi '*Y J T'+u{ugco 0Vj g'Y J T'cr r tqcej 'tcenu'tcvkpi u'yj tqwi j qw'gcej 'r j cug'qh'yj g'eqo r gvkqpp'kp" qtf gt'v'k'cpnr r{ gtu'qp'yj g'ngcf gtdqctf 0Tcvkpi 'ku'ecrwev'f 'dcugf 'qp'yj g'r tqdcdkkr\ 'qh'f' qw'v'gco " dgcvkpi 'cpqj gt'v'gco 'f wtkpi 'c'o cvej '*r tqdcdkkr\ 'qh'y kpu'cpf 'mqugu+0Ueqtgu'htqo 'kpf kxf wcn'ö cvej gu'ctg" pqv'hevqtf 'kp'v'yj g'ecrwev'kpp0Ugg'yj g'öEcrwev'kpi 'Tcvkpi uö'ugev'kpp'dngry 'hqt 'f gvcknu0

Vj g'Ngcf gtdqctf 'ecrwev'gu'tcvkpi u'f ck\ 'htqo 'y g'dgi kppkpi 'qh'c'eqo r gvkqpp'wpv'v'yj g'uwdo ku'kqpp" f gcf rkgp0Cm'ö cvej gu'f wtkpi 'yj g'eqo r gvkqpp'r gtlqf 'eqwpv'v'yj ctf 'yj g'tcvkpi 'lp'yj g'eqo r gvkqpp0Cv'yj g' gpf 'qh'gcej 'eqo r gvkqpp'r j cug.'yj g'hkpcn'wcpf kpi u'qp'yj g'Ngcf gtdqctf 'y knif gvgto kpg'y j lej 'v'gco u' cf xcpeg'v'yj g'pgz'v'r j cug0

40B'Rrc{ kpi 'O cvej gu''

Gcej 'f c{ . 'cv'43<7; <7; 'WE. '*gzegr v'qp'eqo r gvkqpp'f gcf rkgu'yj j gtg'r quv'f 'ko gu'cr r n' +{ qwt'ö quv' tgegpv'f 'u'wdo kv'f 'eqf g'ku'eqm'gevgf 'd{ 'cp'cwqo cv'f 'u{ugco 'cpf 'r r{ g'f 'ci ckpuv'qj gt'v'gco u'uwdo ku'kqpu." cu'f guetkdgf 'lp'yj g'ugev'kpp'v'krgf 'öUc'p'f ctf 'r r{ ö'dngry 0Vj g'öUc'p'f ctf 'Rrc{ ö'e{ erg'ku'tgr gcvgf 'c'v'wcn'qh' h'xg'*7+'ko gu'wukpi 'yj g'v'gco 'r mego gpv'htqo 'yj g'r t'g'x'k'w'u'e{ erg'cu'yj g'uwct'v'kpi 'r q'k'p'v'ht'v'yj g'pgz'v'e{ erg0



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T guwmu'ctg'r quvgf "qp"vj g'y gduks'chgt'cmh'xg'*7+'e{ engu'j cxg'dggp"eqo r rvgvf 0Y j kg'vj g'f ckn' " eqo r g'xk'qp'ku'qpi q'kpi "vj g'rgcf gtdqctf 'y kn'pq'vdg'xkukdrg'cpf "erlenkpi "qp"vj g'Ngcf gtdqctf 'y kn'tgwtp"vj g" o guuci g<õT guwmu'y kn'ldg'r quvgf "qpeg"vj g'f ckn' "rgcf gtdqctf 'twp'ku'eqo r rvgvõ00 wnk'rg'õU'c'p'f'c'f' 'r' r'c' { 'õ' e{ engu'ctg'eqo r rvgvf "hqt"vj g'hqmy kpi 't'gcuqpu<3+'Vq'ugwrg'qt "eqpxgti g't guwmu'f ckn' 0*Vj ku'gpw'g'u'c" o qtg'ceew'cv'g't'gh'ev'k'p'q'h't'cp'm'hqt'v'gco u'gpv'gt'kpi "c"eqo r g'xk'qp'rgcf gtdqctf 'hqt"vj g'h'ktuv'k'o g0'4+'Vq" r tqx'kf'g'o qtg'o cvej "f'c'v'hqt"v'gco u'cv'vj g'v'qr "cpf "dqwqo "qh"vj g'rgcf gtdqctf "ukpeg"vj gug'v'gco u'r' r'c' { 'hgy'gt" o cvej gu'qx'g't'cm'f'

4085"U'c'p'f'c'f' 'r' r'c' { "

"Cu'c'f'gh'c'w'n' { qw'y kn'r' r'c' { 'vj'g'; 'v'gco u'cd'qx'g' { qw'c'p'f' 'vj'g'; 'v'gco u'dgm'y " { qw'0'k'i'vj' g't'g'c't'g'rg'u'v'j' c'p'; " v'gco u'cd'qx'g' { qw' { qw'y kn'r' r'c' { 'cm'v'gco u'cd'qx'g' { qw'r' m'u'v'j' g'; 'dgm'y " { qw'0'k'i'vj' g't'g'c't'g'rg'u'v'j' c'p'; 'v'gco u' dgm'y " { qw' { qw'y kn'r' r'c' { 'cm'v'j' g'v'gco u'dgm'y " { qw'c'p'f' 'vj'g'; 'v'gco u'cd'qx'g' { qw'0'v'gco u'c't'g't'c'p'f' q'o n' " cu'ki' p'g'f' 'cu'D'm'g'qt'T'g'f' "URJ'GT'G'f'w'k'p'i'g'cej' 'o' cvej' 0'

4086"K'p'k'c'n'w'd'o' k'u'k'p' 't'w'rg'"

"Y'j'gp" { qw't'v'gco 'h'ktuv'w'd'o' ku'eq'f'g'v'q'vj'g'eqo r g'xk'qp' { qw'y kn'r' r'c' { 'o' cvej' gu'ci'c'k'p'u'v'j'g'd'q'w'q'o' 's'w'c't'v'g't' qh'vj'g'v'gco u'c'it'g'c'f' { 'qp"vj'g'rgcf gtdqctf 0'Q'p"vj'g'h'ktuv'f'c' { 'y'k'j' 'u'w'd'o' k'u'k'p'u' 'vj'q'u'g'v'gco u'y' kn'r' r'c' { 'cu'r'gt" õU'c'p'f'c'f' 'R' r'c' { 'õ'0'

4087"N'c'u'v'f'c' { 'q'h'vj'g'eqo r g'xk'qp'"

"Q'p"vj'g'rc'u'v'f'c' { 'q'h'vj'g'eqo r g'xk'qp' 'vj'g'rgcf gtdqctf 'y' kn'ldg't'w'p'o' wnk'rg'v'k'o' gu'v'q'eq'p'x'g'ti'g'l'w'c'd'k'k'g'vj'g' t'g'u'w'u'<v'q'ec're'w'c'v'g'g'p'w' { 'r'q'u'k'k'p'q'h'v'gco u'w'd'o' k'k'p'i' 'hqt"vj'g'h'ktuv'k'o' g'c'p'f' 'v'q'cu'g'u'u'h'k'p'c'n'r'c'eg'o' g'p'v'q'h' c'm'v'gco u'0'

4088"E'c're'w'c'v'k'p'i' 'T'c'v'k'p'i' u'"

C'v'gco ð'u'c'p'f'k'p'i' 'k'p'c'eqo r g'xk'qp'ku'f'g'v'g't'o' k'p'g'f' 'd' { 'c'x'c'n'w'g'ec'n'g'f' 't'c'v'k'p'i' 0'V'j'g'Ng'c'f'g't'd'q'c't'f' 't'c'c'm'u'c'm' o' cvej' gu'c'v'gco 'j'cu'r' r'c' { g'f' 'c'i'c'k'p'u'v'q'v'j'g't' r' r'c' { g't'u'k'p'vj'g'eq'w't'ug'q'h'vj'g'eqo r g'xk'qp'c'p'f' 'e't'g'c'v'g'u'c' 't'c'v'k'p'i' " d'c'ug'f' 'qp"vj'g'q'w'eq'o' gu'0'

[qw't'c'v'k'p'i' 'ku'vj'g'h'c'v'q't' 'T2'k'p'vj'g'g's'w'c'v'k'p' 'hqt"vj'g'r' t'q'd'c'd'k'k'v' { 'q'h' { qw'v'gco "d'g'c'v'k'p'i' 'c'p'q'v'j'g't' r'c' { g't'q'h' t'c'v'k'p'i' 'T3'k'p'c'v'k'p'i'ng'o' cvej' 0'

Probability(W) = e^{R0} / (e^{R0} + e^{R1})"

Vj'g'x'c't'k'd'rg' 'T2'ku'eqo r w'g'f' 'w'k'p'i' 'c'p'c'n'i'q't'k'j' o' 'd'c'ug'f' 'q'p'D'c' { g'u'k'p'k'p'h'g't'p'eg'0'V'j'g'r' t'q'd'c'd'k'k'v' { 'q'h'c' 't'c'p'm'it' i'k'x'g'p'c' 'u'g't'k'g'u'q'h'i' c'o' g'q'w'eq'o' gu'I' 'ku'vj'g'p'c'>

P(r|G) = P(G|r)P(r) / P(G)""

ku'vj'g'r' t'k'q't'f' k'u't'k'd'w'k'p'q'h't'c'v'k'p'i' u' 'y'j'k'ej' 'ku'c'u'w'o' g'f' 'v'q'x'c't' { 'k'p'c' 't'c'p'f' q'o' 'y' c'm'it' t'q'eg'u'v'y' k'j' 'c' 'u'c'p'f' c't'f' " f'g'x'k'c'v'k'p'q'x'g't'g'cej' 'f'c' { 'q'h'vj'g'eqo r g'xk'qp'q'h'208' 'ej'q'ug'p'c'h'g't'v'g'u'v'k'p'i' 'hqt'w'c'd'k'k'v' { 'q'h'vj'g'd'q'c't'f' 0'V'j'k'u' c'm'y' u'c'm'it' t'g'x'k'q'u'w't'c'v'k'p'i' u'v'q'ej'c'p'i'g' 'cu'k'o' r'k'g'f' 'd' { 'vj'g'p'c'o' g'Y'j'q'rg'J' k'u'q't' { 'T'c'v'k'p'i' 0'k'p'q't'k'p'i' 'R*I' '+' d'g'c'w'ug'k'k'u'c'p'q't'o' c'k'k'p'i' 'eq'p'u'c'p'v'y' k'j' 'p'q'g'h'g'ev'q'h'vj'g'h'k'p'c'n't'c'v'k'p'i' 't' 'c'p'f' 'k'p'eq't'r'q't'c'v'k'p'i' 'vj'g' 'u'c'p'f' c't'f' " f'g'x'k'c'v'k'p'q'h't'c'v'k'p'i' u' 'j'c'x'k'p'i' 'g'cej' 'f'c' { 'q'h'vj'g'eqo r g'xk'qp't'g'r' t'g'ug'p'v'k'p'i' 'm'c'>

405'5F "Uko wævqp'Eqo r gvklqp"

Cm'WUC."T wuukp."cpf "C wutcrkp"vgo u'y cv'eqo r rvg'c"xcrkf "tgi kmtcvkp"cpf "uwo k'eqf g'y cv'cej kxgu'c" pqp| gtq'æqtg'y j gp'eqo r gv'f "ci ckpuv'c'õdrcpnir r { gtõ"*c'r r { gt'y kj "pq'eqf g+d{ 'y g'4F 'r tceveg" eqo r gvklqp'f gcf rkp'g'ctg'gri kdr'q'r ctv'ekr cvg'lp'y g'5F "uko wævqp'eqo r gvklqp0J qy gxgt."qpn' 'y g'47" j ki j guv'æqt'kpi "vgo u'itqo "gcej "GUC"o go dgt'ucv'g'y kn'eqpv'p'wg'lpv'q'y g'5F 'r j cug0'

Y j gp'y g'5F "eqo r gvklqp'u'ctw'y g'i co g'y kn'dg'w'r f cv'f 'y kj "pgy "ej cm'pi gu'cpf 'y g'eqttgur qpf kpi " VDC"xcm'gu'y kn'dg'c'ppqw'pegf 0'

406'Cmkpeg'Hqto cvkqp'Gxgpv'

Vj g'qr "t'cpngf ": 6"vgo u'qp'y g'rgcf gtdqctf "cv'y g'gp' "qh'5F "uko wævqp'r r { 'y kn'hqto "4: "cmkpegu'qh' y tgg'*5+"vgo u'gcej 0'Vj g'4: "cmkpegu'y kn'y qtn'eqqr gtcv'xgn' "v'eqo r rvg'y g'ugo k'kpcn'cpf . 'k'p'qv' g'ko kpcv'f . 'y g'h'kpcn0'vgo u't'cpngf "dgn'y "t'cpn: 6'y kn'dg'lp'xkgf "v'r ctv'ekr cvg'lp'y g'Xktwcn'Hkpcn0'Ugg" Uge'v'qp'40 'h'q'f g'v'knu'cdqw'y g'Xktwcn'Hkpcn0'

Vj g't'cpn'kpi "qh'y g'v'go u'y kn'dg'f g'v'go k'p'gf "d{ 'y g't'cpn'kpi u'cv'y g'eq'ug'qh'y g'5F "rgcf gtdqctf 0'

Ch'gt'y g'5F "rgcf gtdqctf "t'cpn'kpi u'ctg'c'ppqw'pegf ."cf x'c'p'kpi "vgo u'y kn'j c'x'g'y t'gg'f c{ u'v'eq'p'v'c'v'g'cej " q'y gt'v'f k'ue'w'u'y g'k' "cmkpeg'r t'gh'gt'g'pegu0'CP{ "vgo u'y cv'f q'p'qv'y k'uj "v'eq'p'v'p'wg'lp'y g'V'q'w't'p'co g'p'v'y kn' j c'x'g'y g'qr r q't'w'p'k'v' "v'eg'f g'y g'k' "r q'uk'k'qp'v'y g'p'g'z'v't'cpngf "vgo 0'

Vj g'Cmkpeg'Hqto cvkqp'Gxgpv'y kn'v'cng'r r'æg'q'p'P q'x'go dgt'7'y 0'Vj g'cmkpeg'hqto cvkqp'gxgpv'qt'õ'f t'ch'f c{ õ'ku'cp'q'p'rk'p'g'x'gp'v'f w't'kpi 'y j k'ej "vgo u'y kn'h'q'm'y 'y g'cmkpeg'ug'rg'v'qp'r t'q'eg'u'f g'uet'k'd'g'f "dgn'y "v' k'p'x'kg'q'y gt'v'go u'lp'v'q'cmkpeg'cpf k't'c'ee'gr v'y g'k' "r r'æg'y k'j k'p'cp'cmkpeg0'CV'rg'cu'v'q'p'g't'gr t'g'ug'p'v'c'v'x'g' h'qo "g'cej "vgo "o w'u'v'r ctv'ekr cvg'lp'y g'q'p'rk'p'g'õ'f t'ch'f c{ õ'g'x'gp'v'h'q't'y g'v'go "v'eq'p'v'p'wg'lp'y g'cmkpeg" r j c'ug'0'CF f k'k'q'p'cn'f g'v'knu'cdqw'y g'q'p'rk'p'g'õ'f t'ch'f c{ õ'c'p'f 'j q'y "v'q'r ctv'ekr cvg'y kn'dg'r t'q'x'k'f g'f "k'p'c'f x'c'peg" qh'y g'g'x'gp'v'0'

F'wg'v'q'y g'r'cti g'p'wo dgt'qh'v'go u'lp'x'q'x'kg'f . 'y g'f t'ch'y kn'dg'ur r'k'v'lp'v'q'y q'r ct'w'cu'uj q'y p'lp'y g'dgn'y " h'ki w'g'0'CM'v'go u't'cpngf 'y kj "q'f f "p'wo dgtu'y kn'r ctv'ekr cvg'lp'F t'ch'r ctv'3'cpf "cm'v'go u't'cpngf 'y kj "g'x'gp" p'wo dgtu'y kn'r ctv'ekr cvg'lp'F t'ch'r ctv'40'G'cej "f t'ch'y kn'k'p'cn'f g'64'v'go u'0'

SPACE-SPHERES; Ua Y'A Ubi U''

Hki wtg'8<F kxkukqp"qh'Vgco u'hqt"vj g'F tchm'

Draft part 1 teams with odd numbered rankings			Draft part 2 teams with even numbered rankings		
1	29	57	2	30	58
3	31	59	4	32	60
5	33	61	6	34	62
7	35	63	8	36	64
9	37	65	10	38	66
11	39	67	12	40	68
13	41	69	14	42	70
15	43	71	16	44	72
17	45	73	18	46	74
19	47	75	20	48	76
21	49	77	22	50	78
23	51	79	24	52	80
25	53	81	26	54	82
27	55	83	28	56	84

Note: The times of the draft parts are To Be Announced

Vj g'cmkpeg"ugrgevkqp'r tqeguuy knlhqmy "c'ugtr gpvkg'r cvgtp"knwutcvgf "kp"vj g'Hki wtg'dgmy <-
 ðVj g'j ki j guv'cpngf "vgco "ugrgeu'vj gk'r ctvpgt'htqo "cp{ "gzegr v'vj g'vqr "8"tcpngf "vgco u'kp"vj gk'f tchm'
 ðVj g'pgzv'j ki j guv'cpngf "vgco "ugrgeu'vj gk'r ctvpgt'htqo "cp{ "qh'vj g'tgo cklpi "vgco u'gzegr v'vj g'vqr "8"
 tcpngf "vgco u'kp"vj gk'f tchm'

ð36'r cktu'ctg'etgcvgf "kp"vj ku'o cpggt"

ðC"dtgcm'cngu'r mreg'hqt"vj g'pgy 'r cktu'vq'f kueuu'vj gk'ugrgevkqp'hqt"vj g'5tf "cmkpeg"vgco "

ðVj g'ðmy guv'cpngf 'r ckt'vj gp'ugrgeu'vj gk'5tf "vgco 'htqo "vj g'tgo cklpi "36"vgco u"

ðVj g'ð4pf "hgy guv'cpnir ckt'o cng'vj g'pgzv'ugrgevkqp"

ðEqp'vkwg'wp'kicm'36"cmkpegu'ctg'hqto gf 0

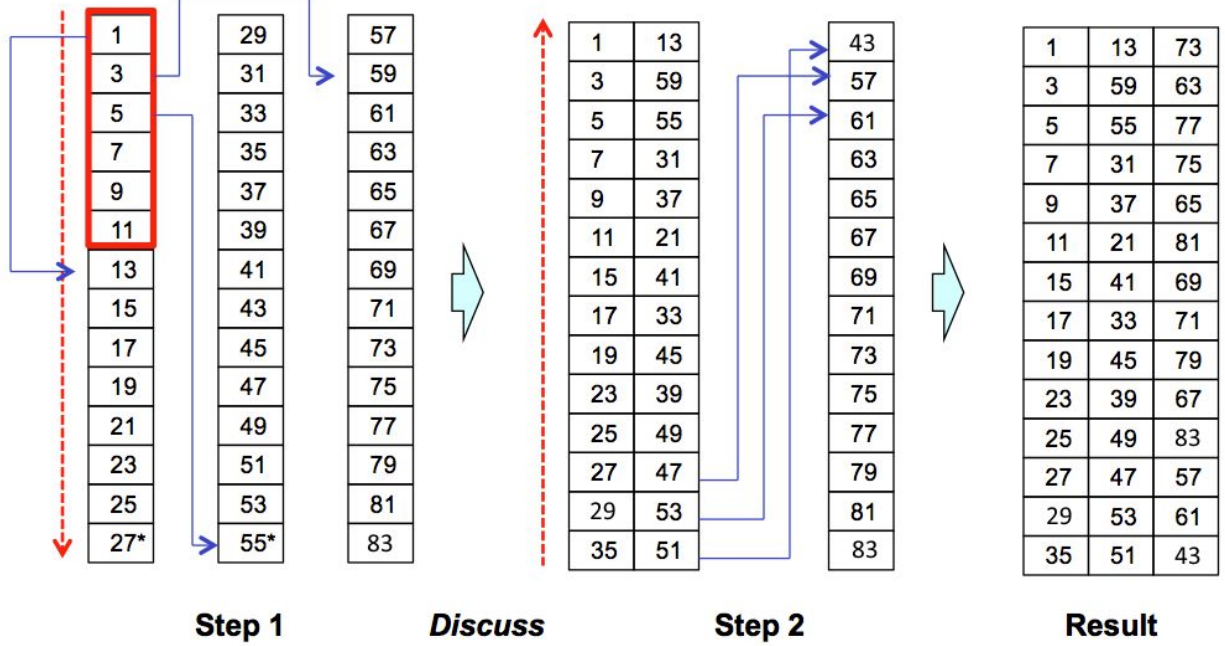
ðVj ku'r tqegu'ku'f wr ðecvfg "kp"dqy 'f tch'gxgpw'vq'gpf 'y kj 'c'vqcn'qh'4: "cmkpegu"

Rule: No more than 2 of the teams in an alliance can be from the same continent.

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SPACE-SPHERES; Ua Y'A Ubi U"

Hki wtg'9<Cnkcpeg'Etgcvkqp'Rtqeguuf go qputcvgf 'hqt'vgco u'y kj 'qf f 'pwo dgt'tcpnkpi u"



* Vj g'gzco r ng'uj qy p'cdqyg'ku'cr r tqzko cvg0'

40'Y kf 'Ectf u'Gzr nckpgf /'T gugt xgf "

*Vj ku'ugevkqp'ku'P IC'hqt'vj g\ gtq'Tqdqkcu'J ki j 'Uej qqr'Vqwt pco gpv'4238+

48'Ugo hkpnc'Uko wrvkqp'Ego r gvkkqp"

Vj g'4: "cnkcpegu'etgcvgf 'f wt lpi 'y g'cnkcpeg'Hqto cvkqp'Gxgpv'y knir ct vkr cvg'lp'vj g'ugo hkpnc'uko wrvkqp' eqo r gvkkqp0'

Y j gp'vj g'ugo hkpnc'eqo r gvkkqp'uvctw.'vj g'i co g'y knidg'wr f cvgf 'y kj 'pgy 'ej cmgpi gu'cpf 'vj g' eqttgur qpf kpi "VDC'xcnwguy knidg'cppqwpgef 0Vj gug'pgy 'ej cmgpi gu'ct g'kpvgpf gf "vq'dg'uwduxcp'kcn' gpqwi j "vq'tgs vktg'r ct vkr cvkqp'qh'cm'cnkcpeg'vgco u'lp'r tgr ct lpi 'eqo r gvkkqp'uwdo kuukqpu0'

49'KU'Hkpnc'Eqo r gvkkqp"

Vj g'qr "36'cnkcpegu'qp'vj g'ngcf gtdqctf "cv'vj g'gpf "qh'ugo hkpnc'r n{ 'y knicf xcpeg'vq'vj g'KU'Hkpncu' Eqo r gvkkqp0Cnkcpegu'tcpngf 'dngy 'tcpni'36'y knidg'lp'xkgf "vq'r ct vkr cvg'lp'vj g'Xk'wcn'Hkpncu'Ugg" Ugevkqp'40 'hqt'f gvcku'cdqw'vj g'Xk'wcn'Hkpncu'0'

Vj g'KU'Hkpncu'y kn'vng'r nceg'cdqctf 'vj g'kpvgtpcvkqpnc'Ur ceg'Ucvkqp'y kj 'rxg'vcpuo kuukqp'vq'O K'V' Vgco u'y knidg'lp'xkgf "vq'rxg'dtqcf ecuv'gxgpw'cv'O K'WU+ 'cp'GUC'ngcvkqp'GW+ 'cpf "cv'Wp'kxgtuk' "qh' U{f pgf '*Cwutcrk-0'

SPACE-SPHERES'; Ua Y'A Ubi U''

4003"Qxgtxkgy "cpf "Qdlgevkgu"

Twpkpi "c'rkxg'eqo r gvkqpy" kj "tqdvu'kp'ur ceg'r tguwpw'c'pwo dgt'qh'tgcn'y qtrf "ej cmgpi gu'y cv'hevqt" kpv'y g'twgu'qh'y g'eqo r gvkqpy0Co qpi "o cp{ 'kgo u.'y g'ucvgnkgy'wug'dcwtg { 'r cemu'cpf 'EQ'4'vcpm'y cv' ecp'dg'gzj cwvufg 'kp'y g'o kf f'rg'qh'c'o cvej . 'cpf 'y g'eqo r gvkqpy"o wuv'kx'kp'y g'cmqecvfg 'ko g'0Vj ku'ugevkgp" guvdrkij gu'ugxgtcn' w'k'g'k'p'g'y g' gtq"tqdv'ku'v'gco 'k'p'v'p'f'u'v'q'f'q'm'y 'f'w'k'p'i 'y g'eqo r gvkqpy0M'ggr 'kp" o kpf 'y cv'cu'kp'cp{ 't'gh't'ggf 'eqo r gvkqpy.'cf f'k'k'p'c'n't'g'c'n'ko g'l'w'f' i o gpw'o c { 'dg't'gs w'k'g'f'0R'g'cug't'gur gev' y g'ug'f'gekukpu'cpf 'eqpukf gt'y go 'h'k'p'c'i'o'

Cdqxg'cm'y g'h'k'p'c'n'eqo r gvkqpy'ku'c'f go qpwtcvkqpy'qh'cm'y g'j' ctf 'y qtm'v'gco u'j' cxg'r w'h'q'ty ctf 'v'q'o cng'k'v' v'q'y g'KUUVj g' \ T'uv'ch'u'j' k'j' guv'r tkqt'k'f 'y k'n'd'g'o c'n'k'p'i 'uwt'g'gxgt { 'c'n'k'p'eg'j' cu'c'ej c'peg'v'q't'w'p'q'p'y g' uc'v'gn'k'g'u'0K'ku'c'm'q'g'z'r gev'f 'y cv'y g'eqo r gvkqpy' k'n'j' cxg'ug'x'g't'c'n'N'quu'q'h'U'k'i p'c'n'f'N'QU'f'r g't'k'q'f' u'y j' g't'g' y g'rkx'g'h'ggf 'y k'n'd'g'w'p'c'x'k'r'd'g'0Y' g'y k'n'c'w'g'o r 'v'q'o c'ng' 'uwt'g'c'm'v'gco u'i g'v'q'ugg'c'rkx'g'o cvej 'qh'y g'k' " r'c { g't.'d'w'h'k'p'k'ij k'p'i 'y g'eqo r gvkqpy' k'n'v'c'ng'r tkqt'k'f' 0'

Vq'uwo o ctk' g.'ko g'r tkqt'k'f 'y k'n'd'g'c'm'q'ec'v'f 'v'q'<

3+Twpkpi 'cm'uwdo k'uk'q'pu'cdqctf 'y g'KU'c'v'rg'cu'v'q'peg"

4+E'qo r r'g'v'k'p'i 'y g'v'q'w't'p'c'o g'p'v'd't'c'eng'v'

5+Twpkpi 'cm'uwdo k'uk'q'pu'f'w'k'p'i 'rkx'g'x'k'f' g'q'

Y g'j' q'r g'v'q'eqo r r'g'v'g'y g'v'q'w't'p'c'o g'p'v'w'k'p'i "q'p'n'f' t'g'u'w'u'ht'q'o "o cvej gu't'w'p'cdqctf 'y g'KU.'d'w'uk'w'c'v'k'p'u" o c { 'c't'k'ug'y cv'y k'n'ih'q't'eg'w'u'v'q't'g'n'f' "q'p'q'y g't"o g'cu'w't'g'u'w'ej "cu'uko w'c'v'f' "o cvej gu'

4004"E'qo r gvkqpy"H'q'to cv'

Vj g'c'm'k'p'eg'u'y k'n'd'g'f' k'k'f' g'f 'k'p'v'4"eq'p'ht'g'p'eg'u'h'q't' 'y g'KU'eqo r gvkqpy0C'm'v'gco u't'c'p'ng'f 'y k'j' "q'f' f" p'wo d'g't'u'y k'n'r' c't'v'k'r' c'v'g'k'p'Eq'p'ht'g'p'eg' "C="c'm'v'gco u't'c'p'ng'f 'y k'j' "g'x'g'p'p'wo d'g't'u'y k'n'r' c't'v'k'r' c'v'g'k'p'Eq'p'ht'g'p'eg'D."cu'uj' q'y p'k'p'y k'u'h'k'i w't'g'o'

H'k'i w't'g': <F k'k'k'q'p'q'h'V'gco u'd'g'y g'g'p'Eq'p'ht'g'p'eg'u"

Conference A Alliance ranks	Conference B Alliance ranks
1,3,5,7,9,11,13	2,4,6,8,10,12,14

G'cej 'eq'p'ht'g'p'eg'y k'n'k'p'c'n'f' g'q'p'g'od { g'o'v'gco "c'm'k'p'eg'u't'c'p'ng'f' %0"cpf %4"cw'q'o c'v'k'c'm'f' "c'f' x'c'p'eg'v'q'y g" eq'p'ht'g'p'eg'ug'o k'h'k'p'c'n'f'cpf "4'd't'c'eng'v'q'h'5"cm'k'p'eg'u"g'cej 0G'cej "d't'c'eng'v'y k'n'r' r'c { "5"o c'vej gu'k'p't'q'w'p'f/t'q'd'k'p" u'v'f'rg'<c'm'k'p'eg' "C"xu0D."D"xu0E."cpf "E"xu0C0'

Ch'gt 'y g't'q'w'p'f/t'q'd'k'p'u'c't'g'eqo r r'g'v'g.'y g't'g'y k'n'd'g'c'y k'p'p'g't'q'h'g'cej "d't'c'eng'v'y'q'y p'cu'DT3."DT4'k'p'y g' KU'Eqo r gvkqpy'D't'c'eng'v'h'k'i w't'g'o'Vj g'h'q'm'y k'p'i 't'w'g'u'f' g'v't'o k'p'g'y g'y k'p'p'g't'<

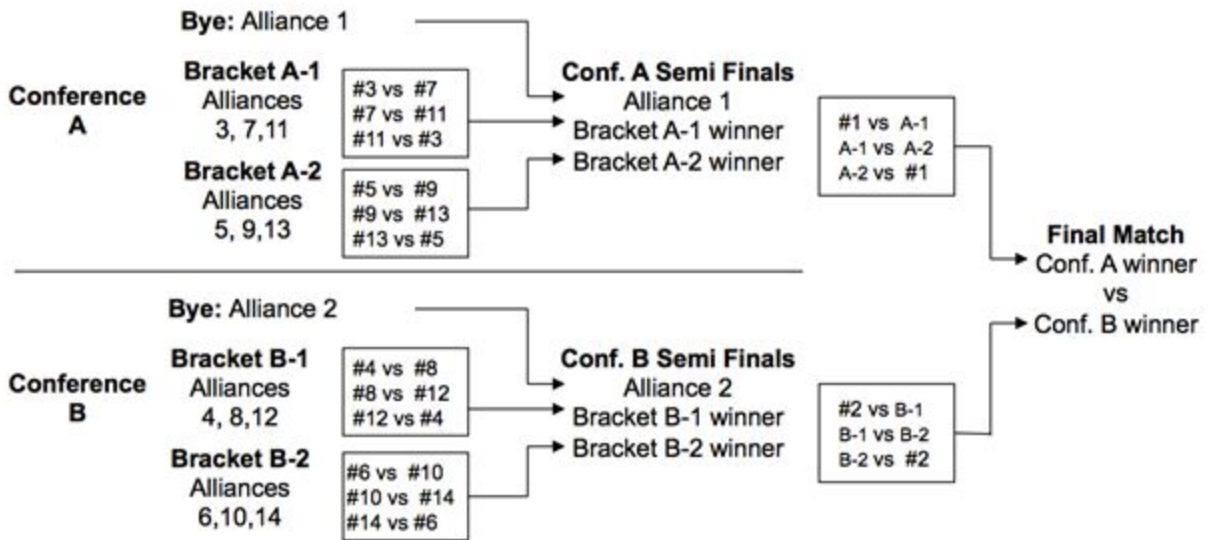
30Vj g'c'm'k'p'eg'y k'j' 'y g'o qu'v'y k'p'u'c'f' x'c'p'eg'u'40K'i'c'm'k'p'eg'u'c't'g'v'k'f' 'h'q't'y k'p'u.'y g'c'm'k'p'eg'y k'j' 'y g'j' k'j' g'v'v' v'q'c'n'ue'q't'g'c'f' x'c'p'eg'u'50K'i'ue'q't'g'u'c't'g'v'k'f'.'uko w'c'v'k'q'p't'g'u'w'u'y k'n'd'g'w'ug'f'v'q'd't'g'c'm'y g'v'k'g'Vj g'ug'o k'h'k'p'c'i' o c'vej 'd'g'y g'g'p'y g'v'q'r "4'd't'c'eng'v'y k'p'p'g't'u'c'p'f' 'y g'od { g'o'v'gco 'y k'n'c'm'q'd'g'r' r'c { g'f' 'k'p't'q'w'p'f/t'q'd'k'p'u'v'f'rg'0Vj g' y k'p'p'g't'q'h'y k'u'o c'vej 'k'u'f' g'v't'o k'p'g'f' 'k'p'y g'g'c'o g'y c { 'cu'y g'd't'c'eng'v'y k'p'p'g't'u'<

30Vj g'v'q'r "4"cm'k'p'eg'u'y k'j' 'y g'o qu'v'y k'p'u'k'p'y g'k't'd't'c'eng'v'c'f' x'c'p'eg'40K'i'y g't'g'k'u'c'v'k'g'h'q't'y k'p'u.'y g' c'm'k'p'eg'u'y k'j' 'y g'j' k'j' g'v'v'v'q'c'n'ue'q't'g'k'p'y g'k't'd't'c'eng'v'c'f' x'c'p'eg'50K'i'ue'q't'g'u'c't'g'v'k'f'.'uko w'c'v'k'q'p't'g'u'w'u'y k'n'

SPACE-SPHERES'; Ua Y'A Ubi U''

dg'wugf "vq'dtgcml'j g'vg'Vj g'y kppki "cnkpege'htqo "gcej "eqphgtgpeg'y knr r { "c'ukpi ng'o cvej "vq'f gvgto kpg" vj g' gtq'Tqdqv'keu'KUUEj co r kq0Vj g'mukpi "cnkpege'y kn'dg'cy ctf gf "4pf'r ræg0'

Hki wtg"; "<KUUEqo r gvkkq'Dtcengv"



Definition: Successful Match

- Both satellites move correctly to initial positions
- Both satellites have normal motion throughout the test
- Both satellites return a valid score
- Neither satellite expends its CO₂ tank during a test run

Definition: Simulated Match

In advance of the competition, the ZR Team will run a simulated round robin competition between all participating teams. The results from matches in this competition will be used in place of ISS tests if necessary (see below.) The results of a simulated match will only be announced if they are used in the live competition.

400'Ueqtkpi 'O cvej gu"

Ueqtgu'lp"vj g'ueqtkpi 'o cvej gu'y kn'dg'f gvgto kpgf "ceeqtf kpi "vq'vj gug'twgu-<

Case 1: 'Uweeguuhwi'O cvej . "Dqj "Ucvgnksgu'T gwt p" Wpks wg"Ueqtg" *g 0352. "373+"

ÉVj g'ueqtkpi y kn'dg'tgeqtf gf "cu'vj g'q'hekn'ueqtk'ht'vj g'o cvej 0'

Case 2: "Gkj gt "Ucvgnksgu'T gwt pu'cp" kpxcrkf "Ueqtg" *g 0352. "477+"

ÉK'vj g'htuv'twp'qh'c'o cvej "ku'pqv'uweeguuhwn'vj g'o cvej 'y kn'dg'tgtwp. "vko g'r gto kvkpi 0'

ÉK'vj g'ugeqpf 'twp'qh'c'o cvej "ku'pqv'uweeguuhwn'vj g'tguwmu'htqo "c'uko wævgf'o cvej 'y kn'dg'wugf 0'

40 "Xkt wcnHkpcnu'Uko wrvklqp'Ego r gvklqp"

Cm'vgco u'r ctvlekr cvkpi 'kp'yj g'5F 'eqo r gvklqp'yj cvf q'pqv'cf xcpeg'vq'yj g'Ugo kHkpcnleqo r gvklqp "Cnkcpeg" Rj cug+'cpf "cm'vgco u'r ctvlekr cvkpi 'kp'yj g'Ugo kHkpcnEqo r gvklqp'yj cvf q'pqv'cf xcpeg'vq'KUUHkpcnu'y km'dg" kpxkxgf "vq'r ctvlekr cvg'kp'yj g'Xkt wcnHkpcnu0'

Vj g'Xkt wcnHkpcnu'i co g'y km'dg'kf gpvlecn'vq'yj g'Ugo kHkpcnleqo r gvklqp "Cnkcpeg" Rj cug+'i co g0Vgco u' r ctvlekr cvkpi 'kp'yj g'Xkt wcnHkpcnu'y kn'uwo k'vq'c'Xkt wcnHkpcnu'Ngcf gtdqctf 0'

Vgco u'o c { 'ej qqug'vq'r ctvlekr cvg'kp'yj g'Xkt wcnHkpcnu'cu'lpf kxkf wcn'vgco u'qt'cu'cnkcpegu0Vgco u'yj cvf kf " pqv'r ctvlekr cvg'kp'yj g'qtki kpcn'cnkcpeg'htqo cvkqp'gxp'v'ctg'y graqo g'vq'etgcvg'cnkcpegu 'k'h'f gukt gf 0' J qy gxgt. "qpeg'c'vgco knkcpeg'uwdo ku'eqf g'vq'yj g'Xkt wcnHkpcnu'Ngcf gtdqctf 'vj g'vgco knkcpeg' eqo r quklqp"ecppqv'dg'ej cpi gf 0'

Qpeg'yj g'Xkt wcnHkpcnu'Ngcf gtdqctf "emugu. 'vj g'vqr 't'cpngf "4'vgco ulcnkcpegu'y km'cf xcpeg'vq'yj g' Ej co r kqpuj k 'O cvej 'qh'yj g'Xkt wcnHkpcnu0'Vko g'r gto kvkpi . 'vj g'hkpcn'Ej co r kqpuj k 'O cvej 'qh'yj g' Xkt wcnHkpcnu'eqo r gvklqp'yj km'dg'eqo r gvxf 'cdqctf 'KUU'f wtkpi 'vj g'KUUHkpcnu0'

50Ugcuqp "T wngu"

50B "Vqwt pco gpv' T wngu"

Cm'r ctvlekr cpw'lp'yj g' \ gtq "T qdqv'keu" J ki j "Uej qqn'Vqwt pco gpv'4238'o wuv'cdf g'd { 'vj gug'vqwt pco gpv' t wngu' "

"Vj g' \ gtq "T qdqv'keu'vgco "O K" T Cwt qtc l' KNE + ecp' wug l' gr tqf weg l' r wdrkj 'cp { 'uwdo kwgf "eqf g0'

'kp'yj g'gxp'v'qh'c' "eqpvt'cf levkqp" dgw ggp'yj g'lpv'gpv'qh'yj g'i co g'cpf 'vj g'dgj cxkqt'qh'yj g'i co g. "O K" y km'entkh { 'vj g'tw'g'cpf 'ej cpi g'yj g'o cpwcn'qt'eqf g'ceeqtf kpi n' "vq'nggr 'vj g'lpv'gpv0'

"Vgco u'ctg'g'zr gevxf 'vq'tgr qt v'cm'dwi u'cu'uq'qp'cu'yj g' { 'ctg'hqwpf 0'

"C" ödwi ö'ku'f gh'p'gf "cu'c'eqpvt'cf levkqp" dgw ggp'yj g'lpv'gpv'qh'yj g'i co g'cpf "dgj cxkqt'qh'yj g'i co g0'

"Vj g'lpv'gpv'qh'yj g'i co g'uj cm'lxg'gtkf g'yj g'dgj cxkqt'qh'cp { 'dwi u'wr 'vq'eqf g'htggg 0'

"Vgco u'uj qwf 'tgr qt v'dwi u'yj tqwi j 'vj g'qpr'kg'uw r qt v'vqnu0\ T't'gugtxgu'yj g'tki j v'vq'r quv'cp { 'dwi " tgr qt w'vq'yj g'r wdrke'htqwo u'"K'p'geguuct { . \ T'y km'y qtn'y kj 'vj g'uwdo kvkpi 'vgco "vq'g'puwt'g'yj cv'pq'vgco " utcvgi kgu'ctg't'gxcngf +0'

"Eqf g'cpf "o cpwcn'htggg g'y km'dg'kp'gh'ge'v5'f c { u'dgh'qtg'yj g'uwdo ku'kqp'f gcf r'kg'qh'c'eqo r gvklqp0'

"Y kj kp'yj g'eqf g'htggg g'r g'kqf 'vj g'eqf g'uj cm'lxg'gtkf g'cm'lvj g't'o cvgt'kcu. 'kpen'f kpi 'vj g'o cpwcn'cpf " kp'gpv0'

"Vj g'tg'y km'dg'pq'dwi 'hzgu'f wtkpi 'vj g'eqf g'htggg g'r g'kqf 0Cm'dwi 'hzgu'o wuv'cng'r r'ceg'dgh'qtg'yj g' eqf g'htggg g'qt'ch'gt'yj g'eqo r gvklqp0'

"I co g'ej cm'gpi g'cf f'kl'qpu'cpf "cppq'w'pego gpv'qh'VDC'xcn'w'gu'lp'yj g'i co g'o cpwcn'o c { 'dg'dcu'gf "qp" ngu'qpu'ng'ct'pgf 'htqo "gct'ngt'r ctw'qh'yj g'vqwt pco gpv0'

504 "Gj keu'Eqf g"

æVj g\ T'vgco 'y kn'y qtnif kni gpvñ 'wr qp'tgr qtv'qh'cp{ 'wpgyj kecn'ukwcvkqp.'qp'c'ecug'd{ 'ecug'dcuku0

æVgco u'ctg'utqpi n{ "gpeqwtci gf 'vq'tgr qtv'dwi u'cu'uqpp'cu'yj g{ 'ctg'hqwpf =lpvgrpvkqpcn'cdwug'qh'cp" wptgr qtv'gf "dwi "o c{ "dg"eqpukf gtgf 'cu'wpgyj kecn'dgj cxkqt0

æVgco u'uj cml'pqv'lpvgrpvkqpcn{ "o cpl' wrcv'vj g'ueqt'kpi "o gjv qf u'vq'ej cpi g'tcprkpi u0

æVgco u'uj cml'pqv'cwgo r v'q'i clp'ceeguu'vq'tgunt'evgf \ T'kphqto cvkqp0

æY g'gpeqwtci g'yj g'wug'qh'r wdrl'e'hqtwo u'cprf "cmqy 'yj g'wug'qh'r tkxcvg'o gjv qf u'hqt'eqo o wplecvkqp0

æXwi ct'qt'qhh'gukxg'ncpi wci g.'j ctcuuo gpv'qh'qyj gt'wugtu.'cprf 'lpvgrpvkqpcn'cppq{ cpegu'ctg'pqv'r gto kwgf " qp'yj g\ gtq'Tqdqv'keu'y gdukv0

æEqf g'uwdo kwgf 'vq'c'eqo r gvkvkqp'o wuv'dg'y tkwgp'qprn{ 'd{ 'uwf gpvu0

æRrc{ gtu'o c{ "pqv'ceeguu'yj g'ko r ngo gpvcv'kqp'kpuv'peg'qh'yj g'i co g'qt'o qf kh{ "cp{ "xctkcdngu'qh'yj g'qdlgev0 k'p'r ct'kwrcr.'yj g'cr k'cprf 'i co g'qdlgevu'uj qwrp 'pqv'dg'f wr r'ecv'gf "qt'o qf kh'gf "k'p'cp{ 'ecr cekv{ 0

æUko wrcv'kqp'tgs wguu'o c{ "qprn{ "dg'f qpg'o cprwcm{ 'xlc'yj g'y gdukv'kpvgt'heg.'CRKecmu'hqt'uko wrcv'kqp'ctg" pqv'cmqy gf "gxgp'kh'f qcdng+0

SPACE-SPHERES; Ua Y'A Ubi U''

60Tgxkukqp"J kuvqt { "

"

Tgxkukqp"P wo dgt"	F cvg"	Ej cpi gu'O cf g"
300"	32"Ugr v04238"	Tgrgcug"Xgtukqp"
300"	33"Ugr v04238"	Eqttgevkqpu"vq'hkz<hki wtg"cz gu.'kgo "pwo dgtu."cpf 'hmpexkqp"J cu" kgo *40'
300"	36"Ugr v04238"	Eqttgevkqpu"vq'hkz<kgo "y gli j w'cpf "ceegrtcvkqpu."cpf 'hki wtgu" z.{"eqqtf lpcvgu'0'
"	"	"

" "



NORTHROP GRUMMAN



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