

IQ-TREE 1.6.7.1 built Sep 8 2018

Input file name: ogSeqs\_YEAST05874.phy  
Type of analysis: tree reconstruction  
Random seed number: 938420

REFERENCES

To cite IQ-TREE please use:

Lam-Tung Nguyen, Heiko A. Schmidt, Arndt von Haeseler, and Bui Quang Minh (2015) IQ-TREE: A fast and effective stochastic algorithm for estimating maximum likelihood phylogenies. *Mol Biol Evol*, 32:268-274. <https://doi.org/10.1093/molbev/msu300>

SEQUENCE ALIGNMENT

Input data: 126 sequences with 584 amino-acid sites  
Number of constant sites: 137 (= 23.4589% of all sites)  
Number of invariant (constant or ambiguous constant) sites: 137 (= 23.4589% of all sites)  
Number of parsimony informative sites: 379  
Number of distinct site patterns: 539

SUBSTITUTION PROCESS

Model of substitution: WAG  
State frequencies: (model)  
Model of rate heterogeneity: Uniform

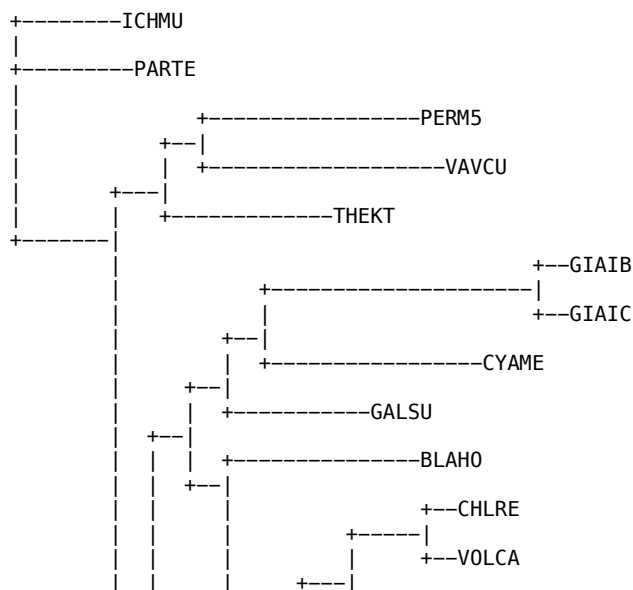
MAXIMUM LIKELIHOOD TREE

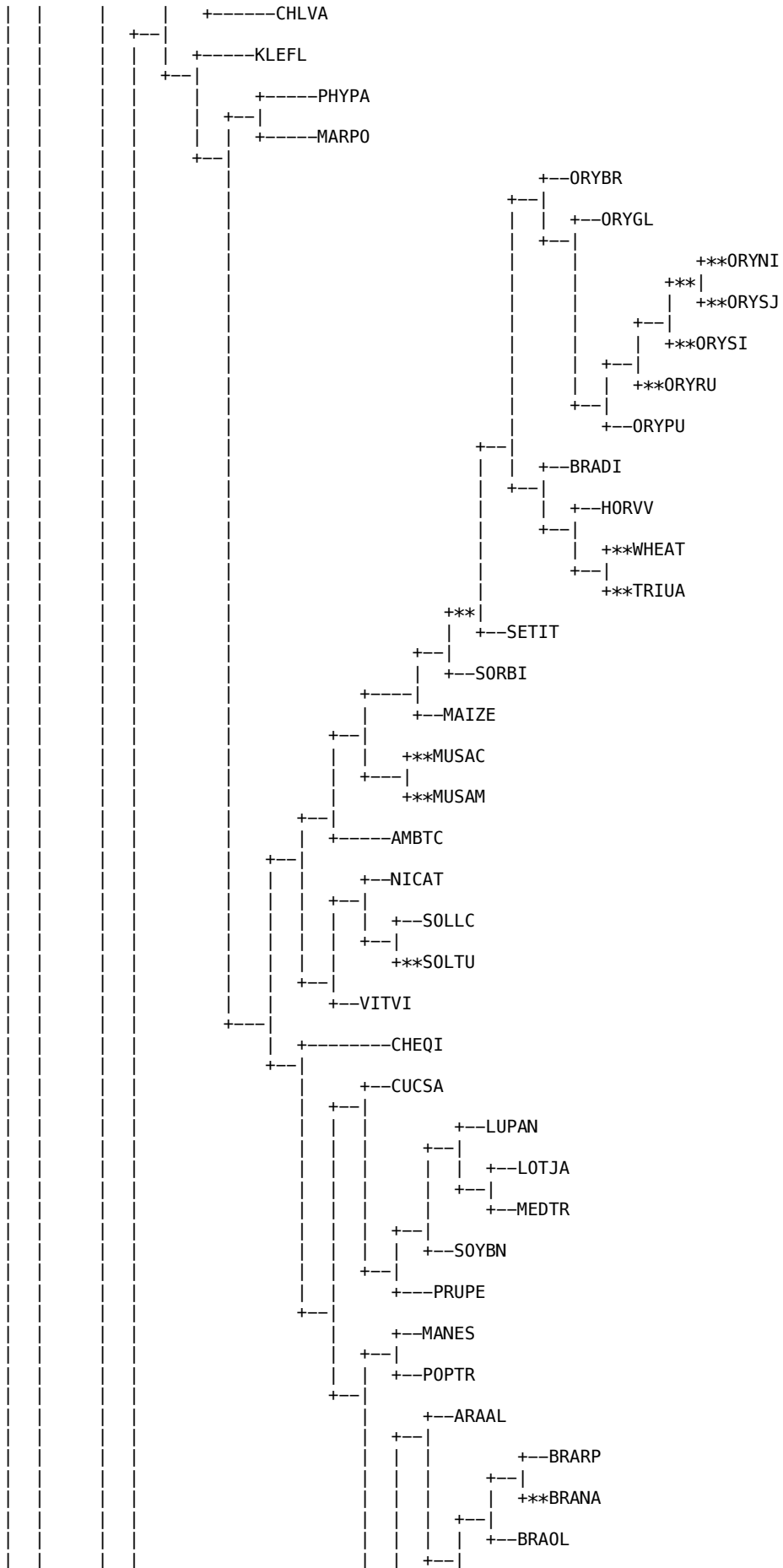
Log-likelihood of the tree: -30690.6412 (s.e. 1155.2967)  
Unconstrained log-likelihood (without tree): -3642.0809  
Number of free parameters (#branches + #model parameters): 249  
Akaike information criterion (AIC) score: 61879.2824  
Corrected Akaike information criterion (AICc) score: 62252.0369  
Bayesian information criterion (BIC) score: 62967.3877

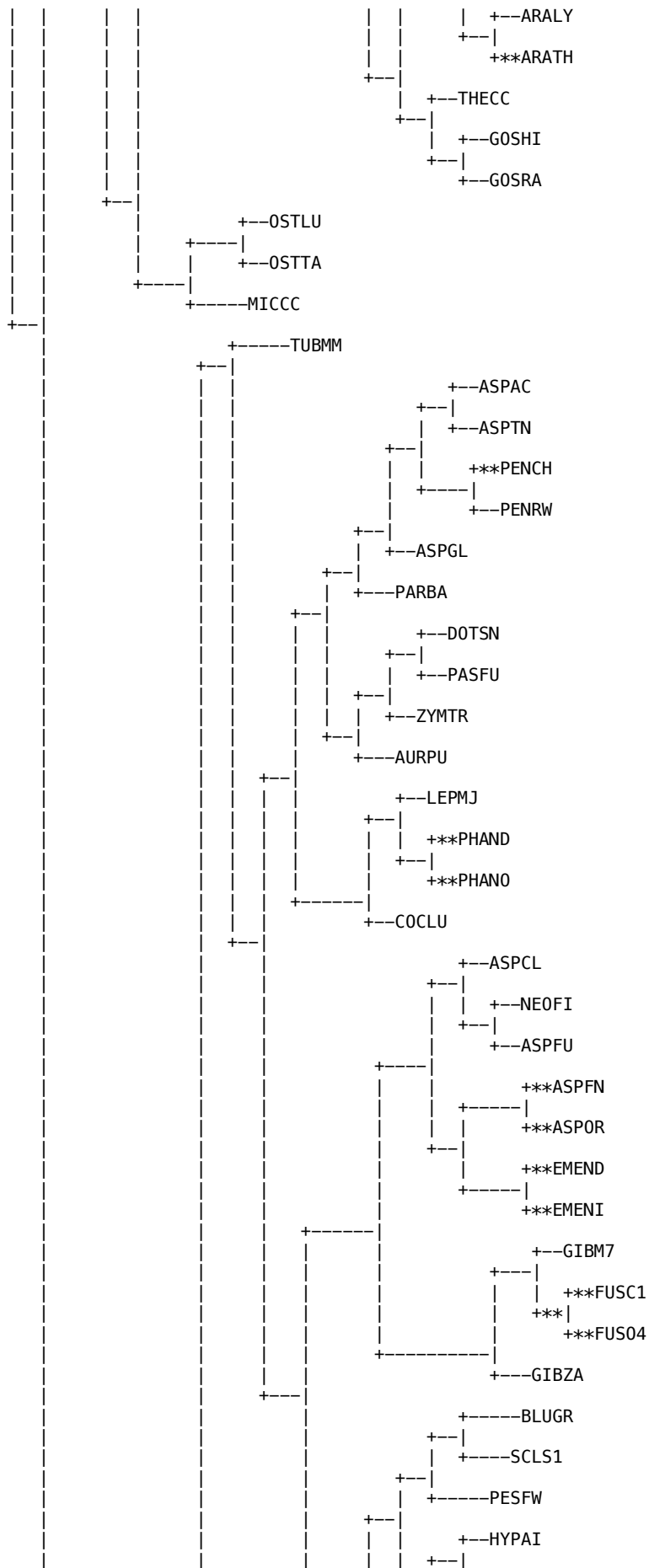
Total tree length (sum of branch lengths): 18.6338  
Sum of internal branch lengths: 8.0846 (43.3866% of tree length)

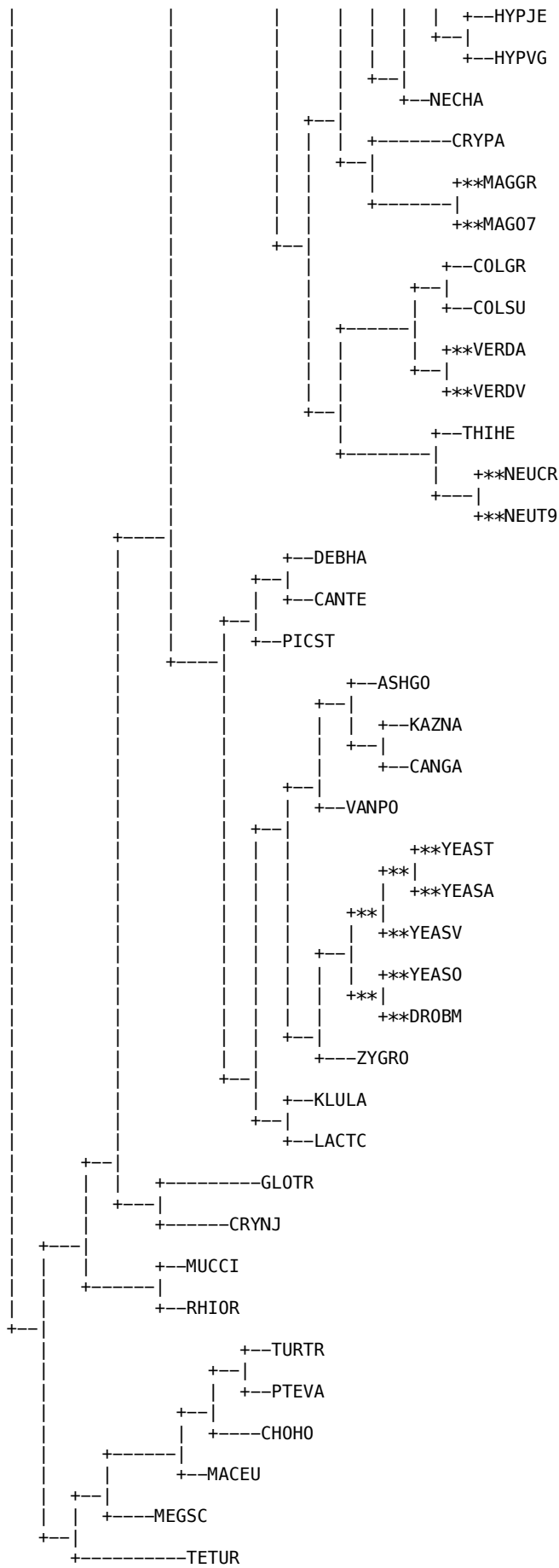
WARNING: 6 near-zero internal branches (<0.0017) should be treated with caution  
Such branches are denoted by '\*\*' in the figure below

NOTE: Tree is UNROOTED although outgroup taxon 'ICHMU' is drawn at root









Tree in newick format:

```
(ICHMU:0.2419268083,PARTE:0.2641558126,(((PERM5:0.4699871751,VAVCU:0.5246486371):
0.0955364231,THEKT:0.3747089095):0.1066125776,((((GIAIB:0.0260535872,GIAIC:0.0631033999):
0.5714227494,CYAME:0.4822953414):0.0781627220,GALSU:0.3342307684):0.0699990814,(BLAHD:
0.4122766527,(((CHLRE:0.0844483694,VOLCA:0.0760495567):0.1702766835,CHLVA:0.1857313958):
0.1177146351,(KLEFL:0.1653766248,(PHYPA:0.1574056113,MARPO:0.1783290164):0.0430087580,
(((((((ORYBR:0.0283967051,(ORYGL:0.0038591157,(((ORYNI:0.0000026727,ORYSJ:0.0000026727):
0.0000026727,ORYSI:0.0000026727):0.0027708825,ORYRU:0.0000023525):0.0033532738,ORYPU:
0.0106198010):0.0017233515):0.0225157538):0.0510096264,(BRADI:0.0267618316,(HORVV:0.0089199840,
(WHEAT:0.0000026727,TRUIA:0.0000026727):0.0109110194):0.0076399567):0.0222229731):
0.0114730553,SETIT:0.0086114991):0.0000023911,SORBI:0.0280377021):0.0059876799,MAIZE:
0.0167769740):0.1451410807,(MUSAC:0.0000026727,MUSAM:0.0000026727):0.1097596489):
0.0667768263,AMBTC:0.1730159674):0.0511957175,((NICAT:0.0329937024,(SOLLC:0.0083563641,SOLTU:
0.0000026747):0.0544199642):0.0899579788,VITVI:0.0610578770):0.0277398657):0.0266615506,(CHEQI:
0.2536945505,(CUCSA:0.0797601495,((LUPAN:0.0645552118,(LOTJA:0.0363817476,MEDTR:
0.0721437042):0.0114361830):0.0171937043,SOYBN:0.0543152099):0.0559063369,PRUPE:0.1232179394):
0.0446382872):0.0522757056,(MANES:0.0379355786,POPTR:0.0786922306):0.0386868507,(ARAAL:
0.0246609881,((BRARP:0.0057725548,BRANA:0.0000026727):0.0111563691,BRAOL:0.0107952917):
0.0203423473,(ARALY:0.0167323910,ARATH:0.0000021221):0.0355764740):0.0066074473):0.0882822840,
(THECC:0.0261892986,(GOSHI:0.0032871592,GOSRA:0.0136493714):0.0326350823):0.0844990143):
0.0327615711):0.0390839772):0.0554484330):0.0299363400):0.1254936664):0.0832344410):
0.0716388037):0.0726037907,((OSTLU:0.0268427828,OSTTA:0.0557671581):0.1487924309,MICCC:
0.1659386673):0.1302048232):0.0684012528):0.0667152655):0.0760378578,(((TUBMM:0.1772282811,
(((((((ASPAC:0.0451313172,ASPTN:0.0666568567):0.0247439656,(PENCH:0.0000026727,PENRW:
0.0025008793):0.1348692855):0.0332423585,ASPLG:0.0632819319):0.0622700686,PARBA:0.1271947071):
0.0789830619,(((DOTSN:0.0342013495,PASFU:0.0346965361):0.0841222089,ZYMTR:0.0440140934):
0.0638496036,AURPU:0.1215790909):0.0954598631):0.0545079445,(LEPMJ:0.0380362196,(PHAND:
0.0000026727,PHANO:0.0000026727):0.0473660262):0.0559786780,COCLU:0.0953342773):0.1814614177):
0.0441035113,(((ASPCL:0.0462493418,(NEOFI:0.0088528494,ASPFU:0.0135695371):0.0489153311):
0.0710437107,(ASPFN:0.0000028421,ASPOR:0.0000023434):0.1790641510,(EMEND:0.0000026727,EMENI:
0.0000026727):0.1743039993):0.0603237138):0.1420088917,((GIBM7:0.0085399147,
(FUSC1:0.0000026727,FUSO4:0.0000026727):0.0000027098):0.1120574865,GIBZA:0.1051209493):
0.3032419078):0.1941750385,(((BLUGR:0.1544169303,SCLS1:0.1435822329):0.0540702478,PESFW:
0.1729244064):0.0270738016,(HYPAT:0.0392826314,(HYPJE:0.0270238300,HYPVG:0.0117341280):
0.0142214204):0.0298278027,NECHA:0.0421144771):0.0641227690):0.0675603389,(CRYPA:0.2133139272,
(MAGGR:0.0000026727,MAG07:0.0000020497):0.2249245604):0.0518695061):0.0432282955,(((COLGR:
0.0158827046,COLSU:0.0198587712):0.0778898850,(VERDA:0.0000026727,VERDV:0.0000026727):
0.0803174658):0.1892591004,(THIHE:0.0856162446,(NEUCR:0.0000026727,NEUT9:0.0000026727):
0.1191789886):0.2402063011):0.0688878444):0.0414177308):0.1221803576):0.0682009981):
0.0776890218,(((DEBHA:0.0590196697,CANTE:0.0859870280):0.0159019713,PICST:0.0502519922):
0.0498371579,(((ASHGO:0.0721584193,(KAZNA:0.0622257198,CANGA:0.0505931595):0.0206435130):
0.0116146731,VANPO:0.0415145641):0.0083016763,(((YEAST:0.0000026727,YEASA:0.0000026727):
0.0000026727,YEASV:0.0000026727):0.0000026727,(YEASO:0.0000026727,DROBM:0.0000026727):
0.0000026727):0.0507036147,ZYGR0:0.1279451263):0.0214607012):0.0162428376,(KLULA:
0.0915352394,LACTC:0.0784772167):0.0162235692):0.0487672763):0.1462327829):0.1468540101,(GLOTR:
0.2750501313,CRYNJ:0.1989025351):0.1274279465):0.0469621613,(MUCCI:0.0483637458,RHIOR:
0.0416006707):0.1901367696):0.1169664789,(((TURTR:0.0337930668,PTEVA:0.0341609926):
0.0128264541,CHOHO:0.1363525920):0.0106427537,MACEU:0.0701424314):0.1804766867,MEGSC:
0.1502336748):0.0446508809,TETUR:0.2851108810):0.0830184036):0.0770779586):0.0583545406):
0.2107221808);
```

TIME STAMP

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Date and time: Fri Oct 26 14:21:41 2018  
Total CPU time used: 288.786 seconds (0h:4m:48s)  
Total wall-clock time used: 107.369 seconds (0h:1m:47s)