

Microsoft Windows XP [Verze 6.0.6002]
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C:\Users\Terezka\Documents\Perple_X clear>build

Perple_X version 6.7.0, source updated July 2, 2014.

NO is the default (blank) answer to all Y/N prompts

Enter a name for this project (the name will be used as the
root for all output file names) [default = my_project]:
ab_an_melt

The problem definition file will be named: ab_an_melt.dat

Enter thermodynamic data file name [default = hp02ver.dat]:
hp04ver.dat

Enter the computational option file name [default = perplex_option.dat]:
See: www.perplex.ethz.ch/perplex_options.html

Reading computational options from: perplex_option.dat

The current data base components are:

NA2O MGO AL2O3 SIO2 K2O CAO TIO2 MNO FEO NIO ZRO2 CL2
O2 H2O CO2

Transform them (Y/N)?

y

Enter new component name, < 6 characters, left justified:

ab

Enter old component to be replaced with ab :

NA2O

Enter other components (< 11) in ab 1 per line, <enter> to finish:

AL2O3

SIO2

Enter stoichiometric coefficients of:

NA2O AL2O3 SIO2

in ab (in above order):

0.5 0.5 3

ab = 0.50 NA2O 0.50 AL2O3 3.00 SIO2

Is this correct (Y/N)?

y

The current data base components are:

ab MGO AL2O3 SIO2 K2O CAO TIO2 MNO FEO NIO ZRO2 CL2
O2 H2O CO2

Transform them (Y/N)?

y

Enter new component name, < 6 characters, left justified:

an

Enter old component to be replaced with an :

CAO

Enter other components (< 11) in an 1 per line, <enter> to finish:

AL2O3

SIO2

Enter stoichiometric coefficients of:

CAO AL2O3 SIO2

in an (in above order):

1 1 2

an = 1.00 CAO 1.00 AL2O3 2.00 SIO2

Is this correct (Y/N)?

y

The current data base components are:

ab MGO AL2O3 SIO2 K2O an TIO2 MNO FEO NIO ZRO2 CL2
O2 H2O CO2

Transform them (Y/N)?

n

Calculations with a saturated FLUID (Y/N)?

n

Calculations with saturated components (Y/N)?

n

Use chemical potentials, activities or fugacities as independent variables (Y/N)?

n

Select thermodynamic components from the set:

ab MGO AL2O3 SIO2 K2O an TIO2 MNO FEO NIO ZRO2 CL2
O2 H2O CO2

Enter names, 1 per line, press <enter> to finish:

ab

an

Specify computational mode:

- 1 - Unconstrained minimization
- 2 - Constrained minimization on a 2d grid [default]
- 3 - Constrained minimization on a 1d grid
- 4 - Output pseudocompound data
- 5 - Phase fractionation calculations

Use unconstrained minimization for Schreinemakers projections or phase diagrams

with > 2 independent variables. Use constrained minimization for phase diagrams or phase diagram sections with < 3 independent variables.

2

The data base has P(bar) and T(K) as default independent potentials.

Make one dependent on the other, e.g., as along a geothermal gradient (y/n)?

n

Select x-axis variable:

1 - P(bar)

2 - T(K)

3 - Composition X(C1)* (user defined)

*X(C1) can not be selected as the y-axis variable

3

Select y-axis variable:

1 - P(bar)

2 - T(K)

2

Enter minimum and maximum values, respectively, for: T(K)

1403 1973

Specify sectioning value for: P(bar)

2000

For gridded minimization, grid resolution is determined by the number of levels (grid_levels) and the resolution at the lowest level in the X- and Y-directions (x_nodes and y_nodes) these parameters are currently set for the exploratory and autorefine cycles as follows:

stage	grid_levels	xnodes	ynodes	effective resolution
exploratory	1	40	40	40 x 40 nodes
auto-refine	4	60	60	473 x 473 nodes

To change these options edit or create the file perplex_option.dat

See: www.perplex.ethz.ch/perplex_options.html#grid_parameters

Specify component amounts by weight (Y/N)?

n

The bulk composition of the system will be computed as:

$$C = C0*(1-X(C1)) + C1*X(C1)$$

where X(C1) varies between 0 and 1, and C0 and C1 are the compositions specified next.

To compute bulk compositions as: $C = C0 + C1 * X(C1)$
change the computational option keyword `closed_c_space`.

Enter molar amounts of the components:

ab an

to define the composition C0

1 0

Enter molar amounts of the components:

ab an

to define the composition C1

0 1

Output a print file (Y/N)?

n

Exclude pure and/or endmember phases (Y/N)?

n

Include solution phases (Y/N)?

y

Enter the solution model file name [default = `solution_model.dat`]:

****warning ver025**** 0 endmembers for Opx(HP) The solution will not be considered.
****warning ver025**** 0 endmembers for Bio(TCC) The solution will not be considered.
****warning ver025**** 0 endmembers for TiBio(WPH) The solution will not be considered.
****warning ver025**** 0 endmembers for Opx(HP11) The solution will not be considered.
****warning ver025**** 0 endmembers for CrOpx(HP) The solution will not be considered.
****warning ver025**** 0 endmembers for Si-vapor The solution will not be considered.
****warning ver025**** 0 endmembers for Gt(MPF) The solution will not be considered.
****warning ver025**** 0 endmembers for oAmph(DP) The solution will not be considered.
****warning ver025**** 0 endmembers for Omph(GHP) The solution will not be considered.
****warning ver025**** 0 endmembers for cAmph(DP) The solution will not be considered.
****warning ver025**** 0 endmembers for Chl(HP) The solution will not be considered.
****warning ver025**** 0 endmembers for Chl(LWV) The solution will not be considered.
****warning ver025**** 0 endmembers for O(SG) The solution will not be considered.

****warning ver114**** the following endmembers are missing for melt(HP)

h2oL fo8L fa8L sil8L kspL zr8L q8L

****warning ver025**** 0 endmembers for pMELTS(G) The solution will not be considered.
****warning ver025**** 0 endmembers for mMELTS(G) The solution will not be considered.
****warning ver025**** 0 endmembers for MELTS(GS) The solution will not be considered.
****warning ver025**** 0 endmembers for Ep(HP) The solution will not be considered.
****warning ver025**** 0 endmembers for Pheng(HP) The solution will not be considered.
****warning ver025**** 0 endmembers for Sapp(HP) The solution will not be considered.
****warning ver025**** 0 endmembers for Sapp(KWP) The solution will not be considered.
****warning ver025**** 0 endmembers for Osm(HP) The solution will not be considered.
****warning ver025**** 0 endmembers for GaHcSp The solution will not be considered.

warning ver025 0 endmembers for F The solution will not be considered.
warning ver025 0 endmembers for F(salt) The solution will not be considered.
warning ver025 0 endmembers for T The solution will not be considered.
warning ver025 0 endmembers for Scap The solution will not be considered.
warning ver025 0 endmembers for St(HP) The solution will not be considered.
warning ver025 0 endmembers for Ctd(HP) The solution will not be considered.
warning ver025 0 endmembers for Carp The solution will not be considered.
warning ver025 0 endmembers for hCrd The solution will not be considered.
warning ver025 0 endmembers for Sud(Livi) The solution will not be considered.
warning ver025 0 endmembers for Sud The solution will not be considered.
warning ver025 0 endmembers for Cumm The solution will not be considered.
warning ver025 0 endmembers for Anth The solution will not be considered.
warning ver025 0 endmembers for A The solution will not be considered.
warning ver025 0 endmembers for Gl The solution will not be considered.
warning ver025 0 endmembers for Tr The solution will not be considered.
warning ver025 0 endmembers for GITrTsPg The solution will not be considered.
warning ver025 0 endmembers for Amph(DHP) The solution will not be considered.
warning ver025 0 endmembers for Amph(DPW) The solution will not be considered.

warning ver114 the following endmembers are missing for feldspar
san

warning ver114 the following endmembers are missing for feldspar_B
san

warning ver025 1 endmembers for Kf The solution will not be considered.
warning ver025 1 endmembers for San The solution will not be considered.
warning ver025 1 endmembers for San(TH) The solution will not be considered.
warning ver025 0 endmembers for GCOHF The solution will not be considered.
warning ver025 0 endmembers for MaPa The solution will not be considered.
warning ver025 0 endmembers for Mica(CF) The solution will not be considered.
warning ver025 0 endmembers for Mica(CHA1) The solution will not be considered.
warning ver025 0 endmembers for Mica(CHA) The solution will not be considered.
warning ver025 0 endmembers for Mica+(CHA) The solution will not be considered.
warning ver025 0 endmembers for O(HP) The solution will not be considered.
warning ver025 0 endmembers for Cpx(l) The solution will not be considered.
warning ver025 0 endmembers for Cpx(h) The solution will not be considered.
warning ver025 0 endmembers for Mont The solution will not be considered.
warning ver025 0 endmembers for Do(HP) The solution will not be considered.
warning ver025 0 endmembers for M(HP) The solution will not be considered.
warning ver025 0 endmembers for Do(AE) The solution will not be considered.
warning ver025 0 endmembers for Cc(AE) The solution will not be considered.
warning ver025 0 endmembers for MF The solution will not be considered.
warning ver025 0 endmembers for Sp(JR) The solution will not be considered.
warning ver025 0 endmembers for Sp(GS) The solution will not be considered.
warning ver025 0 endmembers for Sp(HP) The solution will not be considered.
warning ver025 0 endmembers for Mt(W) The solution will not be considered.
warning ver025 0 endmembers for IIHm(A) The solution will not be considered.
warning ver025 0 endmembers for IIGkPy The solution will not be considered.
warning ver025 0 endmembers for MtUI(A) The solution will not be considered.
warning ver025 0 endmembers for Neph(FB) The solution will not be considered.

warning ver025 0 endmembers for GrPyAlSp(B The solution will not be considered.
warning ver025 0 endmembers for Gt(GCT) The solution will not be considered.
warning ver025 0 endmembers for Gt(HP) The solution will not be considered.
warning ver025 0 endmembers for Gt(EWHP) The solution will not be considered.
warning ver025 0 endmembers for Gt(WPH) The solution will not be considered.
warning ver025 0 endmembers for casmelt The solution will not be considered.
warning ver025 0 endmembers for A-phase The solution will not be considered.
warning ver025 0 endmembers for Chum The solution will not be considered.
warning ver025 0 endmembers for Atg(PN) The solution will not be considered.
warning ver025 0 endmembers for B The solution will not be considered.
warning ver025 0 endmembers for P The solution will not be considered.
warning ver025 0 endmembers for Toop-Melt The solution will not be considered.

warning ver114 the following endmembers are missing for OrFsp(C1)
san

warning ver114 the following endmembers are missing for AbFsp(C1)
san

warning ver114 the following endmembers are missing for Pl(I1,HP)
san

warning ver114 the following endmembers are missing for Fsp(C1)
san

warning ver114 the following endmembers are missing for Fsp(DD)
san

warning ver025 0 endmembers for oCcM(HP) The solution will not be considered.
warning ver025 0 endmembers for Tour(V) The solution will not be considered.
warning ver025 0 endmembers for DoDo The solution will not be considered.
warning ver025 0 endmembers for Wus(fab) The solution will not be considered.
warning ver025 0 endmembers for Aki(fab) The solution will not be considered.
warning ver025 0 endmembers for Pv(fab) The solution will not be considered.
warning ver025 0 endmembers for Ppv(og) The solution will not be considered.
warning ver025 0 endmembers for O(stx) The solution will not be considered.
warning ver025 0 endmembers for Wad(stx) The solution will not be considered.
warning ver025 0 endmembers for Ring(stx) The solution will not be considered.
warning ver025 0 endmembers for Sp(stx) The solution will not be considered.
warning ver025 0 endmembers for Gt(stx) The solution will not be considered.
warning ver025 0 endmembers for C2/c(stx) The solution will not be considered.
warning ver025 0 endmembers for Opx(stx) The solution will not be considered.
warning ver025 0 endmembers for Cpx(stx) The solution will not be considered.
warning ver025 0 endmembers for Cpx(stx7) The solution will not be considered.
warning ver025 0 endmembers for o-Amph The solution will not be considered.
warning ver025 0 endmembers for Omph(HP) The solution will not be considered.
warning ver025 0 endmembers for Cpx(HP) The solution will not be considered.
warning ver025 0 endmembers for CrSp The solution will not be considered.
warning ver025 0 endmembers for Eskol(C) The solution will not be considered.
warning ver025 0 endmembers for Ca-Amph(D) The solution will not be considered.
warning ver025 0 endmembers for Na-Amph(D) The solution will not be considered.

warning ver025 0 endmembers for Wus(stx7) The solution will not be considered.
warning ver025 0 endmembers for Aki(stx7) The solution will not be considered.
warning ver025 0 endmembers for Pv(stx7) The solution will not be considered.
warning ver025 0 endmembers for O(stx7) The solution will not be considered.
warning ver025 0 endmembers for Wad(stx7) The solution will not be considered.
warning ver025 0 endmembers for Ring(stx7) The solution will not be considered.
warning ver025 0 endmembers for Sp(stx7) The solution will not be considered.
warning ver025 0 endmembers for Sp(WPC) The solution will not be considered.
warning ver025 0 endmembers for Ilm(WPH) The solution will not be considered.
warning ver025 0 endmembers for Cpx(m) The solution will not be considered.
warning ver025 0 endmembers for Ol(m) The solution will not be considered.
warning ver025 0 endmembers for Sp(stx8) The solution will not be considered.
warning ver025 0 endmembers for O(stx8) The solution will not be considered.
warning ver025 0 endmembers for Wad(stx8) The solution will not be considered.
warning ver025 0 endmembers for Ring(stx8) The solution will not be considered.
warning ver025 0 endmembers for Opx(stx8) The solution will not be considered.
warning ver025 0 endmembers for Cpx(stx8) The solution will not be considered.
warning ver025 0 endmembers for Aki(stx8) The solution will not be considered.
warning ver025 0 endmembers for Gt(stx8) The solution will not be considered.
warning ver025 0 endmembers for Ppv(stx8) The solution will not be considered.
warning ver025 0 endmembers for CF(stx8) The solution will not be considered.
warning ver025 0 endmembers for Pu(M) The solution will not be considered.
warning ver025 0 endmembers for Act(M) The solution will not be considered.
warning ver025 0 endmembers for Stlp(M) The solution will not be considered.
warning ver025 0 endmembers for Mica(M) The solution will not be considered.
warning ver025 0 endmembers for Carp(M) The solution will not be considered.
warning ver025 0 endmembers for Sud(M) The solution will not be considered.
warning ver025 0 endmembers for GTrTsMr The solution will not be considered.
warning ver025 0 endmembers for Carb(M) The solution will not be considered.
warning ver025 0 endmembers for TiBio(HP) The solution will not be considered.
warning ver025 0 endmembers for Mica(SGH) The solution will not be considered.
warning ver025 0 endmembers for Ctd(SGH) The solution will not be considered.
warning ver025 0 endmembers for Carp(SGH) The solution will not be considered.
warning ver025 0 endmembers for Gt(WPPH) The solution will not be considered.
warning ver025 0 endmembers for cAmph(DP2) The solution will not be considered.
warning ver025 0 endmembers for oAmph(DP2) The solution will not be considered.
warning ver025 0 endmembers for Omph(GHP2) The solution will not be considered.
warning ver025 0 endmembers for FeSi(BCC) The solution will not be considered.
warning ver025 0 endmembers for FeSi(fcc) The solution will not be considered.
warning ver025 0 endmembers for oFeSi(bcc) The solution will not be considered.
warning ver025 0 endmembers for FeSi_liq The solution will not be considered.
warning ver025 0 endmembers for ZrRu The solution will not be considered.
warning ver025 0 endmembers for ZrGt(KP) The solution will not be considered.
warning ver025 0 endmembers for odCcMS(EF) The solution will not be considered.
warning ver025 0 endmembers for Si-Fluid The solution will not be considered.
warning ver025 0 endmembers for FeSiC-BCC The solution will not be considered.
warning ver025 0 endmembers for FeSiC-FCC The solution will not be considered.
warning ver025 0 endmembers for Maj The solution will not be considered.
warning ver025 0 endmembers for Wad The solution will not be considered.
warning ver025 0 endmembers for Ring The solution will not be considered.

warning ver025 0 endmembers for Wus The solution will not be considered.
warning ver025 0 endmembers for Aki The solution will not be considered.
warning ver025 0 endmembers for Pv The solution will not be considered.
warning ver025 0 endmembers for FeSiC_liq The solution will not be considered.
warning ver025 0 endmembers for Sapp(TP) The solution will not be considered.
warning ver025 0 endmembers for oCcM(EF) The solution will not be considered.
warning ver025 0 endmembers for LIQ(EF) The solution will not be considered.
warning ver025 0 endmembers for dis(EF) The solution will not be considered.
warning ver025 0 endmembers for Opx(W) The solution will not be considered.
warning ver025 0 endmembers for Chl(W) The solution will not be considered.
warning ver025 0 endmembers for Crd(W) The solution will not be considered.

Select phases from the following list, enter 1 per line, press <enter> to finish

melt(HP) feldspar feldspar_B Pl(h) OrFsp(C1) AbFsp(C1)
Pl(I1,HP) Fsp(C1) Fsp(DD) Pl(stx8)

For details on these models see:www.perplex.ethz.ch/perplex_solution_model_glossary.html
or read the commentary in the solution model file.

melt(HP)
Fsp(C1)

Enter calculation title:

C:\Users\Terezka\Documents\Perple_X clear>