## https://gitlab.com/ENKI-portal/app-fe-ti-oxide-geotherm

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Project information     Repository     Isues     0	◆ 7 Commits ピ 1 Branch @ 1 Tag D	eotherm @	lease	🖈 Star 1	
CI/CD     Deployments     Monitor	This project demonstrates an App built geothermooxybarometer of Ghiorso an Clauren Lance Local Local Content C	with the ENKI-portal ThermoEngine pac d Evans (2008).	ckage that implements the Fe-Ti oxi	de	
Packages & Registries     Analytics	master v app-fe-ti-oxide-	geotherm	History Find file	🛓 👻 Clone 👻	
U Wiki	Bug fix for notebook relative path Mark Ghiorso authored 1 year ago	hs		8a328559 ြ	
	README				
	Name	Last commit		Last update	
	🚸 .gitignore	Initial version of app		1 year ago	
	AJS_2008_ Ghiorso_Evans.pdf	Added Markdown resources		1 year ago	
≪ Collapse sidebar	CHANGELOG.md	Added Markdown resources		1 year ago	

## 1) Click *launch binder*, and wait up to several minutes.

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Ether: orade compositions in vr%           Mag SiO2         0         Im SiO2         0         P (bars)         200         0           Mag TiO2         4.35         Im TiO2         28.73         T*C Feh         0         0           Mag Fie203         1.94         Itm Ai203         0.35         Itm Ni0         0         0           Mag Fie203         0         Itm Fie203         0         0         T*C FeM         0         3           Mag Fie203         0         Itm Fie203         0         0         T*C FeMg         0         3           Mag Fie203         0.18         Itm Cr203         0         0         T*C FeMg         0         3           Mag Fie20         0.583         Itm ReD         65.98         1         1         0         0         1           Mag Mo0         0.44         Itm Mi0         0.23         0         1         1         1         1         1         1         102         Processing interface composition         2         2         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1		Fe-Ti oxide gu This app implements the F Ghiorso MS and Evans BV Thermodynamics of Rhom American Journal of Scient and is built using the ENK on coesiting Fe-Ti oxides ( Workbook of calculation re Calculated results are: • Fe-Ti exchange term • Log <sub>10</sub> oxygen fugaci • Fe-Mg exchange term • The activity of Tio, r Petrology, 165(1), DO Note: Fe may be input as i	eothermobarom ie-Ti oxide geothermometer and V (2008) bohedral Oxide Solid Solutions ce 308, 957-1039 ThermoEngine thermodynamic Le., magnetite and ilmenite). In suits. Source code may be dow berature from the equilibrium: Fi ty relative to the nickel-nickel metative from the equilibrium: lettive to the nickel-nickel metative to the nickel-nickel metative to the nickel-nickel settive to the nickel-nickel settive to run the equilibrium: lettive to run the equilibrium t	eter and a Revision of amodeling packag modeling packag transport may be entere mioaded from thej eTIO <sub>3</sub> (iim) + Fe <sub>5</sub> (5 oxide buffer fron FeAl <sub>2</sub> O <sub>4</sub> (mag) + 1 he melt coexisting as are adjusted. 77	er of the Fe-TI Two-oxide ge. Temperatures, oxy do n the interface or the app's GitLab report $D_2$ (mag) = Fe <sub>2</sub> TiO <sub>2</sub> (() m the equilibrium: O <sub>2</sub> m the equilibrium: O <sub>2</sub> with the two oxides i the cation-anion ratio.	Geothermometer and Oxyge ugen fugacities, and melt titat supplied as an Excel workbo sitory. mag) + Fe2O <sub>3</sub> (lim) + 4 Fe <sub>2</sub> O <sub>4</sub> (mag) = Fe <sub>2</sub> O <sub>3</sub> ( A <sub>c</sub> (mag) + FeTO <sub>3</sub> (lim) using the method of Ghiorso of the phase is used to comp	an-barometer nia activity are calculated ok. Processing the later w (im) and Gualda (2012, Contri	from compos illi generate a butions to Mil	itional data in Excel			
Mag Si02         0         Im Si02         0         P (bars)         200         0           Mag Ti02         4.35         Im Ti02         28.73         T*C Feh         0         0           Mag Ti02         1.94         Im Ti02         28.73         Im No         0         0           Mag Ti02         1.94         Im A203         0.55         Im No         0		Enter compositions	ometry. s, or download an Exce	l template, or	r upload an Exc	el workbook; Calcula	ate for results	to maintain c	harge			
		Enter compositions	<sup>ometry.</sup> s, or download an Exce	I template, or Enter oxide	r upload an Exc a compositions in w1%	el workbook; Calcula	ate for results	to maintain c	harge			

Download the *Excel input template*; delete columns Y to AY.
 Fill the Excel template with your own data (include Index and Label) and rename the file.

Upload the Excel file that contains your own data.
 Press *Calculate* at the bottom of the screen and wait (up to a few minutes).
 Download the *Excel file results*.
 Examine the results in Excel (Fe-Mg temperatures are less reliable), and save them.

To transform the Fe-Mg temperatures from text format to number format in Excel:

- Type 1 into cell AE2.
- Copy the contents of cell AE2.
- Select all of the Fe-Mg temperature results.
- Paste Special | Multiply | OK