checkCIF/PLATON report

Structure factors have been supplied for datablock(s) sh3407a

THIS REPORT IS FOR GUIDANCE ONLY. IF USED AS PART OF A REVIEW PROCEDURE FOR PUBLICATION, IT SHOULD NOT REPLACE THE EXPERTISE OF AN EXPERIENCED CRYSTALLOGRAPHIC REFEREE.

No syntax errors found. CIF dictionary Interpreting this report

Datablock: sh3407a

```
Bond precision:  C-C = 0.0040 A          Wavelength=0.71073

Cell:            a=11.3853(3)     b=13.1071(3)       c=17.5390(5)
                 alpha=90         beta=96.286(1)     gamma=90
Temperature:     182 K
```

	Calculated	Reported
Volume	2601.58(12)	2601.58(12)
Space group	P 21/c	P 21/c
Hall group	-P 2ybc	-P 2ybc
Moiety formula	C21 H40 Cl2 Ge N4 Si	C21 H40 Cl2 Ge N4 Si
Sum formula	C21 H40 Cl2 Ge N4 Si	C21 H40 Cl2 Ge N4 Si
Mr	520.17	520.15
Dx,g cm-3	1.328	1.328
Z	4	4
Mu (mm-1)	1.444	1.444
F000	1096.0	1096.0
F000’	1098.29	
h,k,lmax	14,16,22	14,16,22
Nref	5751	5747
Tmin,Tmax	0.424,0.525	0.681,0.747
Tmin’	0.392	

```
Correction method= # Reported T Limits: Tmin=0.681 Tmax=0.747
AbsCorr = MULTI-SCAN

Data completeness= 0.999          Theta(max)= 27.103

R(reflections)= 0.0408( 5043)     wR2(reflections)= 0.1112( 5747)

S = 1.075                  Npar= 274
```

The following ALERTS were generated. Each ALERT has the format
test-name_ALERT_alert-type_alert-level.
Click on the hyperlinks for more details of the test.

Alert level B

```
PLAT094_ALERT_2_B Ratio of Maximum / Minimum Residual Density ....       5.22 Report
PLAT971_ALERT_2_B Check Calcd Resid. Dens.  0.93A   From Ge1             3.21 eA-3
```

Alert level C

```
ABSTY02_ALERT_1_C  An _exptl_absorpt_correction_type has been given without
            a literature citation. This should be contained in the
            _exptl_absorpt_process_details field.
            Absorption correction given as multi-scan
DIFMX02_ALERT_1_C  The maximum difference density is > 0.1*ZMAX*0.75
            The relevant atom site should be identified.
PLAT097_ALERT_2_C Large Reported Max.  (Positive) Residual Density       3.15 eA-3
```

Alert level G

```
PLAT003_ALERT_2_G Number of Uiso or Uij Restrained non-H Atoms ...         29 Report
PLAT063_ALERT_4_G Crystal Size Likely too Large for Beam Size ....       0.62 mm
PLAT177_ALERT_4_G The CIF-Embedded .res File Contains DELU Records          1 Report
PLAT860_ALERT_3_G Number of Least-Squares Restraints .............         80 Note
PLAT912_ALERT_4_G Missing # of FCF Reflections Above STh/L=  0.600          4 Note
PLAT978_ALERT_2_G Number C-C Bonds with Positive Residual Density.          7 Info
```

0 **ALERT level A** = Most likely a serious problem - resolve or explain
2 **ALERT level B** = A potentially serious problem, consider carefully
3 **ALERT level C** = Check. Ensure it is not caused by an omission or oversight
6 **ALERT level G** = General information/check it is not something unexpected

2 ALERT type 1 CIF construction/syntax error, inconsistent or missing data
5 ALERT type 2 Indicator that the structure model may be wrong or deficient
1 ALERT type 3 Indicator that the structure quality may be low
3 ALERT type 4 Improvement, methodology, query or suggestion
0 ALERT type 5 Informative message, check

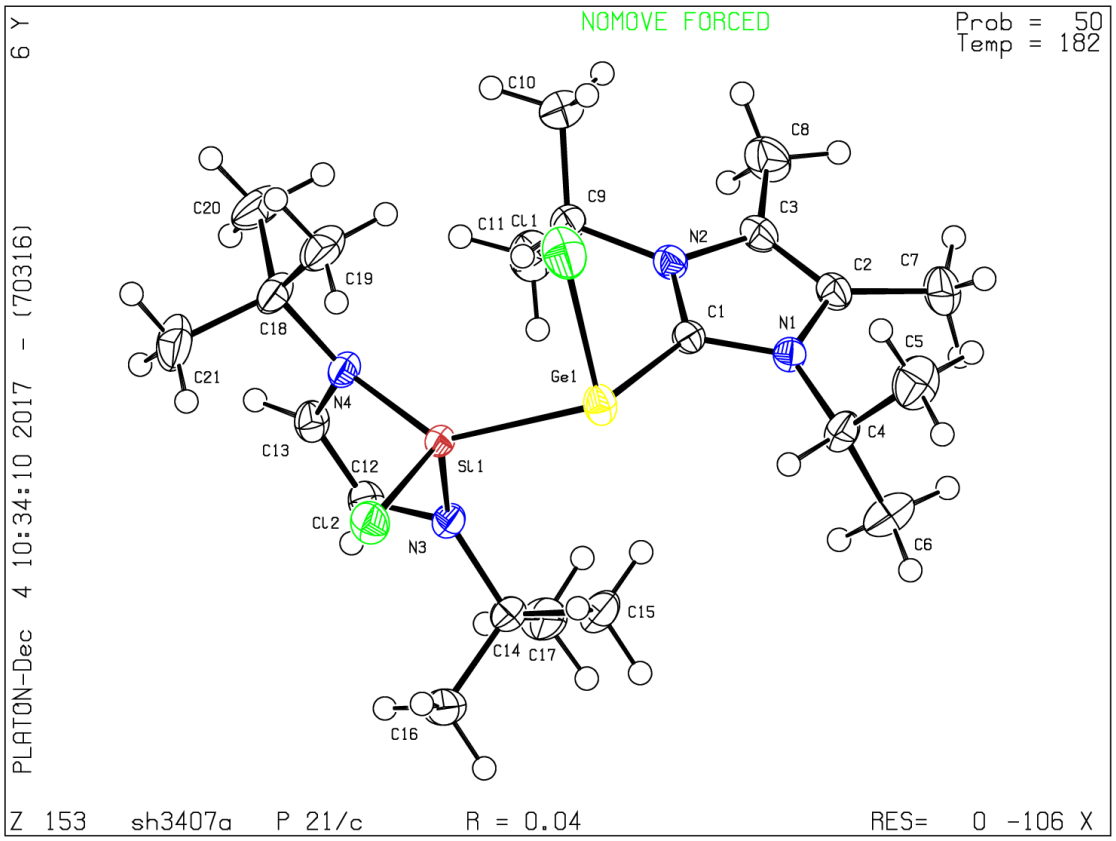
It is advisable to attempt to resolve as many as possible of the alerts in all categories. Often the minor alerts point to easily fixed oversights, errors and omissions in your CIF or refinement strategy, so attention to these fine details can be worthwhile. In order to resolve some of the more serious problems it may be necessary to carry out additional measurements or structure refinements. However, the purpose of your study may justify the reported deviations and the more serious of these should normally be commented upon in the discussion or experimental section of a paper or in the "special_details" fields of the CIF. checkCIF was carefully designed to identify outliers and unusual parameters, but every test has its limitations and alerts that are not important in a particular case may appear. Conversely, the absence of alerts does not guarantee there are no aspects of the results needing attention. It is up to the individual to critically assess their own results and, if necessary, seek expert advice.

Publication of your CIF in IUCr journals

A basic structural check has been run on your CIF. These basic checks will be run on all CIFs submitted for publication in IUCr journals (*Acta Crystallographica*, *Journal of Applied Crystallography*, *Journal of Synchrotron Radiation*); however, if you intend to submit to *Acta Crystallographica Section C* or *E* or *IUCrData*, you should make sure that full publication checks are run on the final version of your CIF prior to submission.

Publication of your CIF in other journals

Please refer to the *Notes for Authors* of the relevant journal for any special instructions relating to CIF submission.

PLATON version of 09/11/2017; check.def file version of 08/11/2017

Datablock sh3407a - ellipsoid plot