

QGIS Application - Bug report #20386

Program crashes in idle phase

2018-11-06 04:06 PM - N. L.

<div>Status:Closed</div> <div>Priority:High</div> <div>Assignee:</div> <div>Category:Build/Install</div> <div>Affected QGIS version:3.4.1</div> <div>Operating System:Win10</div> <div>Pull Request or Patch supplied:No</div> <div>Crashes QGIS or corrupts data:Yes</div>	<div>Regression?:Yes</div> <div>Easy fix?:No</div> <div>Resolution:duplicate</div> <div>Copied to github as #:28206</div>
<div>Description</div> <div>User Feedback</div> <div>Program crashes in idle phase.</div> <div>Report Details</div> <div>Crash ID: 46bdfc53c9e65ba01bf6e65f60a8fdcad5a2dd77</div> <div>Stack Trace<div><div>QgsWinNative::initializeMainWindow :</div><div>QAbstractEventDispatcher::filterNativeEvent :</div><div>CallWindowProcW :</div><div>CallWindowProcW :</div><div>GetMenuState :</div><div>KiUserCallbackDispatcher :</div><div>NtUserPeekMessage :</div><div>PeekMessageW :</div><div>PeekMessageW :</div><div>QEventDispatcherWin32::processEvents :</div><div>qt_plugin_query_metadata :</div><div>QEventLoop::exec :</div><div>QCoreApplication::exec :</div><div>main :</div><div>BaseThreadInitThunk :</div><div>RtlUserThreadStart :</div></div></div> <div>QGIS Info<div>QGIS Version: 3.4.1-Madeira</div><div>QGIS code revision: commit:383851c597</div><div>Compiled against Qt: 5.11.2</div><div>Running against Qt: 5.11.2</div><div>Compiled against GDAL: 2.3.2</div><div>Running against GDAL: 2.3.2</div></div> <div>System Info<div>CPU Type: x86_64</div><div>Kernel Type: winnt</div><div>Kernel Version: 10.0.17134</div></div>	
<div>Related issues:</div> <div><div>Related to QGIS Application - Bug report # 20412: Distance matrix</div><div>Closed2018-11-08</div><div>Related to QGIS Application - Bug report # 20400: crash ID :46bdfc53c9e65ba01...</div><div>Closed2018-11-08</div><div>Related to QGIS Application - Bug report # 20399: frequent Crash / QGIS 3.4.1...</div><div>Closed2018-11-07</div><div>Related to QGIS Application - Bug report # 20364: Crash QGIS 3.4.1</div><div>Closed2018-11-05</div></div>	

Related to QGIS Application - Bug report # 20374: QGIS 3.4.1 Crash on eject s...	Closed	2018-11-06
Related to QGIS Application - Bug report # 20355: Crashed when nothing happens	Closed	2018-11-04
Related to QGIS Application - Bug report # 20488: qgis desktop keeps crashing...	Closed	2018-11-14
Related to QGIS Application - Bug report # 20495: crash when insert or eject...	Closed	2018-11-15
Related to QGIS Application - Bug report # 20500: Change style for polygon	Closed	2018-11-15
Related to QGIS Application - Bug report # 20513: QGIS crash when insert a US...	Closed	2018-11-16
Related to QGIS Application - Bug report # 20504: Qgis Crashes after Being Op...	Closed	2018-11-15
Related to QGIS Application - Bug report # 20534: qgis crashed	Closed	2018-11-17
Related to QGIS Application - Bug report # 20543: v. 3.4.1 Crash on plugging ...	Closed	2018-11-19
Duplicated by QGIS Application - Bug report # 20492: QGIS crashes on connecti...	Closed	2018-11-14
Duplicated by QGIS Application - Bug report # 20554: QGIS crashed	Closed	2018-11-19
Duplicated by QGIS Application - Bug report # 20584: QGIS 3.4 Crashes on File...	Closed	2018-11-21
Duplicated by QGIS Application - Bug report # 20590: Crash after running	Closed	2018-11-22
Duplicated by QGIS Application - Bug report # 20599: QGIS 3.4.1 regularly cra...	Closed	2018-11-22
Duplicated by QGIS Application - Bug report # 20602: Applicazione in backgoun...	Closed	2018-11-23
Duplicated by QGIS Application - Bug report # 20634: QGIS 3.4.1 crashes when ...	Closed	2018-11-26
Duplicated by QGIS Application - Bug report # 20641: QGIS Crashed	Closed	2018-11-27
Duplicated by QGIS Application - Bug report # 20649: QGIS Crash	Closed	2018-11-27
Duplicated by QGIS Application - Bug report # 20684: Zamkniecie QGIS Desktop ...	Closed	2018-11-30
Duplicated by QGIS Application - Bug report # 20905: crash when flash or exte...	Closed	2019-01-02
Duplicated by QGIS Application - Bug report # 20860: QGIS crashing possibly d...	Closed	2018-12-20
Duplicated by QGIS Application - Bug report # 20827: QGIS3.4.1 crashes after ...	Closed	2018-12-17
Duplicated by QGIS Application - Bug report # 20820: QGIS 3.4 crashed when us...	Closed	2018-12-16
Duplicated by QGIS Application - Bug report # 20755: QGis Madeira crashes eve...	Closed	2018-12-07
Duplicated by QGIS Application - Bug report # 20918: Using go2streetview	Closed	2019-01-04
Duplicated by QGIS Application - Bug report # 20962: Crash instantly after open	Closed	2019-01-10
Duplicated by QGIS Application - Bug report # 20473: QGIS crash	Closed	2018-11-13
Duplicated by QGIS Application - Bug report # 20466: Qgis crash	Closed	2018-11-12

Associated revisions

Revision df9307b9 - 2018-11-09 10:30 PM - Nyal Dawson

Further protection in windows event message handling

Refs #20386

Revision 2b4dc925 - 2018-11-10 07:16 AM - Nyal Dawson

Further protection in windows event message handling

Refs #20386

(cherry picked from commit df9307b9aa34b849f86d2ce435f2ae986b70549b)

History

#1 - 2018-11-06 08:53 PM - Saber Razmjooei

- Status changed from Open to Feedback

Could you provide step-by-step to reproduce the issue?

#2 - 2018-11-07 12:08 PM - Giovanni Manghi

- Category changed from Processing/Core to Build/Install
- Priority changed from Normal to High

#3 - 2018-11-07 01:29 PM - N. L.

- File Loading.PNG added
- Assignee set to Saber Razmjooei

The problem seems to be related to the project file. The project file is loaded up to 98% and then stays at this value. After about 15 minutes the above crash occurs. How can I find out where the error is in the project file?

#4 - 2018-11-07 02:36 PM - Giovanni Manghi

- Assignee deleted (Saber Razmjooei)

#5 - 2018-11-07 02:37 PM - Giovanni Manghi

N. L. wrote:

| *The problem seems to be related to the project file.*

what does contain your project (datasources, layouts, etc.?)?

#6 - 2018-11-07 03:01 PM - N. L.

I rebuilt the project step by step and the bug was probably due to oversized csv attribute tables anchored in the project. If I leave them out now, Qgis seems to run stable.

#7 - 2018-11-07 03:38 PM - Giovanni Manghi

N. L. wrote:

| *I rebuilt the project step by step and the bug was probably due to oversized csv attribute tables anchored in the project. If I leave them out now, Qgis seems to run stable.*

tell us more: the csv was joined to what other datasource? how many columns has the CSV that causes the crash when joined? Does it crash if you add the CSV without joining it?

#8 - 2018-11-07 03:57 PM - N. L.

I tried to link the CSV to a shape file. The CSV file has more than 36000 lines and 226 MB.

The crash happens without making the layer with the linked CSV file visible. The loading of the project cannot be completed. In version 3.3 this error did not appear yet.

#9 - 2018-11-08 05:41 PM - Martin Dobias

- Related to Bug report #20412: Distance matrix added

#10 - 2018-11-08 05:43 PM - Martin Dobias

Seems related to #20412 - same backtrace. Probably there is a bug in the new code for handling of native events on Windows to catch USB drive insertion/removal.

#11 - 2018-11-09 12:18 AM - Martin Dobias

- Related to Bug report #20400: crash ID :46bdfc53c9e65ba01bf6e65f60a8fdcad5a2dd77 added

#12 - 2018-11-09 12:20 AM - Martin Dobias

- Related to Bug report #20399: frequent Crash / QGIS 3.4.1 on W10 - no evident reason added

#13 - 2018-11-09 12:22 AM - Martin Dobias

- Related to Bug report #20364: Crash QGIS 3.4.1 added

#14 - 2018-11-09 12:24 AM - Martin Dobias

- Related to Bug report #20374: QGIS 3.4.1 Crash on eject sd card added

#15 - 2018-11-09 12:30 AM - Martin Dobias

- Related to Bug report #20355: Crashed when nothing happens added

#16 - 2018-11-09 10:39 AM - Stephen Knox

I get a similar, but not entirely the same stack trace:

Crash ID: 6138756c706cb33aebe0925fbe4e95b5b12f5787

Stack Trace

QgsWinNativeEventFilter::nativeEventFilter qgswinnative.cpp:182
QAbstractEventDispatcher::filterNativeEvent :
CallWindowProcW :
CallWindowProcW :
GetLastInputInfo :
KiUserCallbackDispatcher :
NtUserPeekMessage :
PeekMessageW :
QEventDispatcherWin32::processEvents :
qt_plugin_query_metadata :
QEventLoop::exec :
QCoreApplication::exec :
main main.cpp:1505
WinMain mainwin.cpp:170
__srt_common_main_seh exe_common.inl:253
BaseThreadInitThunk :
RtlUserThreadStart :

QGIS Info

QGIS Version: 3.4.1-Madeira
QGIS code revision: cdf878d4b5
Compiled against Qt: 5.11.2
Running against Qt: 5.11.2
Compiled against GDAL: 2.3.2

Running against GDAL: 2.3.2

System Info

CPU Type: x86_64

Kernel Type: winnt

Kernel Version: 10.0.14393

The line it points to is

```
182: unsigned long deviceType = reinterpret_cast<DEV_BROADCAST_HDR*>( lParam )->dbch_devicetype;
183: if ( deviceType == DBT_DEVTYP_VOLUME )
```

I had an outlandish theory that because I often get messages relating to Audio in DebugView around the crash,

such as

```
[10772] CxHDAudioDeviceControl::SetLEDStatusToDriver() + isPlaybackEndpoint = 1, ledStatus = 1
```

that it was something bizarre relating to an error somewhere caused by the difference between the concept of volume as a disk volume, as is meant in the QGIS message reading I think, and Sound Volume, but that seems somewhat far fetched.

The other thing that jumps out is

```
[9936] shell\lock\abovetlock\shellcomponent\lockscreenapppositioner.cpp(256)\AboveLockAppHost.dll!00007FFDFC96323A: (caller:
00007FFE2D4784A3) ReturnHr(75) tid(232c) 8000FFFF Catastrophic failure
```

but it's hard to figure out exactly where things are going wrong from the traces.

#17 - 2018-11-09 10:48 AM - Nyall Dawson

Stephen - are you using a custom build? I'd love to put some debugging code in here, but unfortunately(?) I haven't been able to trigger this crash myself.

#18 - 2018-11-09 11:00 AM - Stephen Knox

I think I can now reproduce it. I have a machine with a Thunderbolt connector and when that is plugged in or out to connect external monitors, mice, keyboard and network connections I get a crash. Happy to start a new bug thread in case these are not related, but I strongly suspect they are.

This is the DebugView output immediately preceeding the crash:

```
[9936] avcore\npsm\localprovider\baseprovider\lib\baseprovider.cpp(604)\NPSMDesktopProvider.dll!00007FFDD972140: (caller:
00007FFDD9726E5) ReturnHr(2607) tid(232c) 80070490 Element not found.
[33204] ..\..\src\gui\qgsmapcanvas.cpp(1344) : (QgsMapCanvas::keyPressEvent) [14770ms] Ignoring key: 16777251
[9936] avcore\npsm\localprovider\baseprovider\lib\baseprovider.cpp(604)\NPSMDesktopProvider.dll!00007FFDD972140: (caller:
00007FFDD9726E5) ReturnHr(2608) tid(232c) 80070490 Element not found.
[9936] shell\lib\bindctx.cpp(128)\explorerframe.dll!00007FFDFC4A4280: (caller: 00007FFDFC4CA68B) ReturnHr(4458) tid(3624) 80070057 The
parameter is incorrect.
[9936] shell\lib\bindctx.cpp(128)\explorerframe.dll!00007FFDFC4A4280: (caller: 00007FFDFC4CA68B) ReturnHr(4459) tid(5418) 80070057 The
parameter is incorrect.
[9936] shell\lib\bindctx.cpp(128)\explorerframe.dll!00007FFDFC4A4280: (caller: 00007FFDFC4CA68B) ReturnHr(4460) tid(54dc) 80070057 The
parameter is incorrect.
[9936] shell\lib\bindctx.cpp(128)\explorerframe.dll!00007FFDFC4A4280: (caller: 00007FFDFC4CA68B) ReturnHr(4461) tid(7ff8) 80070057 The
parameter is incorrect.
```

```

[10772] *****
[10772] Types supported for 22
[10772] *****
[10772] Types supported for 25
[10772] DeviceIoControl failed with error 87: The parameter is incorrect.
[10772] DeviceIoControl failed with error 87: The parameter is incorrect.
[9936] onecoreuap\base\diagnosis\platform\notifications\platform\database\databasehelpers.cpp(143)\wpncore.dll!00007FFE100D1459: (caller:
00007FFE100D21AF) ReturnHr(274) tid(6448) 80070490 Element not found.
[10772] CCxHDAudioHDMI::get_MasterVolume
[10772] CCxHDAudioHDMI::get_MasterVolume: Created ()
[10772] CCxHDAudioHDMI::get_MasterVolume(): Before SetEndPointInfo()
[10772] CCxHDAudioHDMI::get_MasterVolume(): After SetEndPointInfo()
[10772] CCxHDAudioHDMI::get_MasterVolume(): Before QI<ICxHDMMasterVolumeControl>
[10772] CCxHDAudioHDMI::get_MasterVolume(): After QI<ICxHDMMasterVolumeControl>
[10772] CCHDAudioSPDIF::Final QI<ICxHDMMasterVolumeControl>
[10772] CCxHDAudioHDMI::get_MasterVolume
[10772] CCxHDAudioHDMI::get_MasterVolume: Created ()
[9936] shell\lib\bindctx.cpp(128)\explorerframe.dll!00007FFDFC4A4280: (caller: 00007FFDFC4CA68B) ReturnHr(4462) tid(5418) 80070057 The
parameter is incorrect.
[10772] CCxHDAudioHDMI::get_MasterVolume(): Before SetEndPointInfo()
[10772] CCxHDAudioHDMI::get_MasterVolume(): After SetEndPointInfo()
[10772] CCxHDAudioHDMI::get_MasterVolume(): Before QI<ICxHDMMasterVolumeControl>
[10772] CCxHDAudioHDMI::get_MasterVolume(): After QI<ICxHDMMasterVolumeControl>
[10772] CCHDAudioSPDIF::Final QI<ICxHDMMasterVolumeControl>
[9936] shell\lib\bindctx.cpp(128)\explorerframe.dll!00007FFDFC4A4280: (caller: 00007FFDFC4CA68B) ReturnHr(4463) tid(7ff8) 80070057 The
parameter is incorrect.
[9936] shell\lib\bindctx.cpp(128)\explorerframe.dll!00007FFDFC4A4280: (caller: 00007FFDFC4CA68B) ReturnHr(4464) tid(54dc) 80070057 The
parameter is incorrect.
[9936] shell\lib\bindctx.cpp(128)\explorerframe.dll!00007FFDFC4A4280: (caller: 00007FFDFC4CA68B) ReturnHr(4465) tid(3624) 80070057 The
parameter is incorrect.
[9936] avcore\npsm\localprovider\baseprovider\lib\baseprovider.cpp(604)\NPSMDesktopProvider.dll!00007FFDD972140: (caller:
00007FFDD9726E5) ReturnHr(2609) tid(232c) 80070490 Element not found.
[33204] ..\..\src\app\qgscrashhandler.cpp(34) : (QgsCrashHandler::handle) [6696ms] CRASH!!!

```

#19 - 2018-11-09 11:07 AM - Stephen Knox

P.S., I am using qgis-rel-dev-g7.4.2.bat from OSGeo4W (i.e with debugging symbols) as I don't have a build system on Windows.

#20 - 2018-11-09 11:13 AM - Stephen Knox

My apologies, it is not a Lightning connector, it is a Thunderbolt connector.

#21 - 2018-11-09 11:35 AM - Giovanni Manghi

- Status changed from Feedback to Open
- Subject changed from Program crashes in idle phase. to Program crashes in idle phase
- Regression? changed from No to Yes

#22 - 2018-11-09 10:31 PM - Nyall Dawson

- Status changed from Open to Feedback

Please test with the next round of QGIS 3.6 nightlies (not 3.4 - it hasn't been backported yet). I've added some extra safety checks which (fingers crossed!) might prevent this.

#23 - 2018-11-11 11:22 PM - Fabien WI

I have a Thunderbolt USB type-C port on my laptop.

I just tried an ejection of a USB drive connected to this port and QGIS crashed right away.

(same crash ID: Crash ID: 46bdfc53c9e65ba01bf6e65f60a8fdcad5a2dd77).

Same behaviour when I connect a USB drive.

Interestingly, crash may happen when nothing particular is done.

(QGIS crashed with this ID while I was away from computer..)

I assume that that there is some Windows 10 check in background.. (?)

#24 - 2018-11-12 12:56 PM - Markus -

Nyall Dawson wrote:

Please test with the next round of QGIS 3.6 nightlies (not 3.4 - it hasn't been backported yet). I've added some extra safety checks which (fingers crossed!) might prevent this.

Did you mean 3.5? I tried installing using OSGeo4W, but it only lists 3.5 as far as I can see.

#25 - 2018-11-12 01:27 PM - Giovanni Manghi

Did you mean 3.5?

yes

#26 - 2018-11-13 11:00 AM - Markus -

I installed the dev version (it says QGIS eab40d0e4c in the title bar), still crashes in idle phase for me. I'm still able to force a crash by connecting to network shares. Like Stephen I'm also using a docking station with thunderbolt, I don't get any crashes however when I disconnect/connect the docking station (running QGIS 3.4.x).

#27 - 2018-11-13 12:26 PM - Nyall Dawson

That build is too old -- it's missing the latest related fix

#28 - 2018-11-13 02:40 PM - Stephen Knox

Yeah, think there is a build problem with the nightlies ATM. So will have to wait to fully test.

#29 - 2018-11-14 08:35 AM - Markus -

I installed the dev version again using OSGeo4W, I now get revision eab40d0e4c (don't know if this is the latest one?). Unfortunately still crashes for me.

#30 - 2018-11-14 06:09 PM - Giovanni Manghi

Markus - wrote:

I installed the dev version again using OSGeo4W, I now get revision eab40d0e4c (don't know if this is the latest one?). Unfortunately still crashes for me.

is still the same as #20386-26

#31 - 2018-11-14 06:48 PM - Jürgen Fischer

- Related to Bug report #20466: Qgis crash added

#32 - 2018-11-14 06:48 PM - Jürgen Fischer

- Related to Bug report #20488: qgis desktop keeps crashing in both 3.4 and 3.4.1 added

#33 - 2018-11-14 06:49 PM - Jürgen Fischer

- Related to Bug report #20473: QGIS crash added

#34 - 2018-11-15 08:59 AM - Markus -

Giovanni Manghi wrote:

Markus - wrote:

I installed the dev version again using OSGeo4W, I now get revision eab40d0e4c (don't know if this is the latest one?). Unfortunately still crashes for me.

is still the same as #20386-26

Ah yes, sorry about that.

#35 - 2018-11-15 02:53 PM - Stephen Knox

Looks promising so far with d4cf6a - no crash when removing the thunderbolt cable, and no crash in idle phase yet

#36 - 2018-11-15 03:45 PM - Markus -

I'm running revision 7cce9b3eb9 and have not been able to force a crash by adding/removing network shares. No crash in idle yet either, though I've just been running it for an hour, but looks promising. Will this be backported to 3.4.2, 3.4.3 or 3.4.4? Thanks for the fast handling of the issue, great work.

#37 - 2018-11-15 05:26 PM - Jürgen Fischer

- Duplicated by Bug report #20492: QGIS crashes on connecting a USB drive added

#38 - 2018-11-15 05:26 PM - Jürgen Fischer

- Related to Bug report #20495: crash when insert or eject usb storage added

#39 - 2018-11-16 08:28 AM - Jürgen Fischer

- Related to Bug report #20500: Change style for polygon added

#40 - 2018-11-16 08:29 AM - Jürgen Fischer

- Related to Bug report #20513: QGIS crash when insert a USB disk added

#41 - 2018-11-16 08:32 AM - Jürgen Fischer

Markus - wrote:

I'm running revision 7cce9b3eb9 and have not been able to force a crash by adding/removing network shares. No crash in idle yet either, though I've just been running it for an hour, but looks promising. Will this be backported to 3.4.2, 3.4.3 or 3.4.4? Thanks for the fast handling of the issue, great work.

It is backported to the release-3_4 branch and will appear in the 3.4.2 point release.

#42 - 2018-11-16 08:33 AM - Jürgen Fischer

- Related to Bug report #20504: Qgis Crashes after Being Open for Some Time added

#43 - 2018-11-17 10:16 PM - Jürgen Fischer

- Related to Bug report #20534: qgis crashed added

#44 - 2018-11-19 09:04 AM - Jürgen Fischer

- Related to Bug report #20543: v. 3.4.1 Crash on plugging in my GPS unit added

#45 - 2018-11-19 10:30 AM - Giovanni Manghi

- Resolution set to fixed/implemented

- Status changed from Feedback to Closed

#46 - 2018-11-21 04:41 PM - Jürgen Fischer

- Duplicated by Bug report #20554: QGIS crashed added

#47 - 2018-11-22 10:59 AM - Jürgen Fischer

- Duplicated by Bug report #20584: QGIS 3.4 Crashes on File Drive Change added

#48 - 2018-11-22 12:11 PM - Jürgen Fischer

- Duplicated by Bug report #20590: Crash after running added

#49 - 2018-11-23 12:30 AM - Jürgen Fischer

- Duplicated by Bug report #20599: QGIS 3.4.1 regularly crashing on Idle! added

#50 - 2018-11-23 11:45 AM - Jürgen Fischer

- Duplicated by Bug report #20602: Applicazione in background e disconnessione chiavetta added

#51 - 2018-11-27 09:51 AM - Jürgen Fischer

- Duplicated by Bug report #20634: QGIS 3.4.1 crashes when idle added

#52 - 2018-11-27 06:05 PM - Jürgen Fischer

- Duplicated by Bug report #20641: QGIS Crashed added

#53 - 2018-11-28 08:57 PM - Jürgen Fischer

- Duplicated by Bug report #20649: QGIS Crash added

#54 - 2018-12-03 04:58 PM - Jürgen Fischer

- Duplicated by Bug report #20684: Zamknięcie QGIS Desktop przy odpięciu zewnętrznego źródła danych added

#55 - 2019-01-02 01:12 PM - Jürgen Fischer

- Duplicated by Bug report #20905: crash when flash or external drive is inserted added

#56 - 2019-01-02 01:12 PM - Jürgen Fischer

- Duplicated by Bug report #20860: QGIS crashing possibly during drives refresh added

#57 - 2019-01-02 01:13 PM - Jürgen Fischer

- Duplicated by Bug report #20827: QGIS3.4.1 crashes after short period inactivity added

#58 - 2019-01-02 01:13 PM - Jürgen Fischer

- Duplicated by Bug report #20820: QGIS 3.4 crashed when using ArcGIS MapServer and FeatureServer added

#59 - 2019-01-02 01:13 PM - Jürgen Fischer

- Duplicated by Bug report #20755: QGis Madeira crashes every time a USB Device (memory stick, harddisk) is plugged in or out added

#60 - 2019-01-06 03:11 PM - Jürgen Fischer

- Duplicated by Bug report #20918: Using go2streetview added

#61 - 2019-01-06 03:11 PM - Jürgen Fischer

- Resolution changed from fixed/implemented to duplicate

#62 - 2019-01-10 01:41 PM - Jürgen Fischer

- Duplicated by Bug report #20962: Crash instantly after open added

#63 - 2019-01-15 12:02 PM - Jürgen Fischer

- Related to deleted (Bug report #20473: QGIS crash)

#64 - 2019-01-15 12:02 PM - Jürgen Fischer

- Duplicated by Bug report #20473: QGIS crash added

#65 - 2019-01-15 12:03 PM - Jürgen Fischer

- Related to deleted (Bug report #20466: Qgis crash)

#66 - 2019-01-15 12:03 PM - Jürgen Fischer

- Duplicated by Bug report #20466: Qgis crash added

Files

Loading.PNG	19.9 KB	2018-11-07	N. L.
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