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[>= 1.4] TweakScale - Under Lisias' Management - 2.4.3.3 - 2019-0814



# [>= 1.4] TweakScale - Under Lisias' Management - 2.4.3.3 -2019-0814

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By Lisias, October 16, 2018 in Add-on Releases

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Report post

### Lisias

Boldly crashing what no Kerbal has crashed before!

••••



Members **◆ 2,239** 

2,313 posts
Location: Universe! Virgo!
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SolarSystem! Earth! America!
SouthAmerica! Brazil!
SãoPaulo! Capital! Home!
LivingRoom! MyChair

Posted November 2, 2018

On 11/2/2018 at 5:22 PM, linuxgurugamer said:

I'll bet that they changed something in the API, from a simple variable to a get/set. This happened before as well.

That explains why sometimes merely recompiling the thing agains the new KSP libraries solves the problem!

+

**Quote Edit** 

Unholy interactions between modules is what Krakens

✓ feed on... – **Lisias** 

## linuxgurugamer

The light at the end of the tunnel may be an oncoming

Posted November 2, 2018

Report post



On 11/2/2018 at 5:42 PM, Lisias said:





dragon

Members

12,824

16,172 posts

Location: At SpaceTux

Industries HO

That explains why sometimes merely recompiling the thing agains the new KSP libraries solves the problem!

Yes.

This happened with at least one of my mods, Kronol vessel viewer, and a recompile fixed the problem.



Quote



I stream on Twitch on Sunday evenings:

https://www.twitch.tv/linuxgurugamer

Read this BEFORE asking for

<u>support</u>: <a href="http://forum.kerbalspaceprogram.com/index.php?">http://forum.kerbalspaceprogram.com/index.php?</a>
/topic/83212-how-to-get-support-read-first/









### Lisias

Boldly crashing what no Kerbal has crashed before!





Members **2,239** 2,313 posts

Location: Universe! Virgo!
Milkway! OrionArm!
SolarSystem! Earth! America!
SouthAmerica! Brazil!
SãoPaulo! Capital! Home!
LivingRoom! MyChair

Posted November 2, 2018

Report post



On 11/2/2018 at 5:43 PM, linuxgurugamer said:



Yes.

This happened with at least one of my mods, Kronol vessel viewer, and a recompile fixed the problem.

I did recompiled HulcamVDS (and the whole shebang on that test bed) for 1.4.3, and still got that NRE Exception from inside PartModule.Load, so I didn't bothered to try the stunt again on 1.4.5.

Well, I already had set up the circus (as we say around here). It will cost me nothing doing it again.



Quote Edit

Unholy interactions between modules is what Krakens

✓ feed on... – **Lisias** 

### Lisias

Boldly crashing what no Kerbal has crashed before!

0000



Members **2**,239 2,313 posts Location: Universe! Virgo! Milkway! OrionArm! SolarSystem! Earth! America! SouthAmerica! Brazil!

SãoPaulo! Capital! Home!

LivingRoom! MyChair

Posted November 2, 2018 (edited)

#### On 11/2/2018 at 5:43 PM, linuxgurugamer said:



This happened with at least one of my mods, Kronol vessel viewer, and a recompile fixed the problem.

Unfortunately, this is different. I fire up a KSP 1.5.1 (with MH) with TweakScale and "my" HullCameraVDS (instrumented to flood my log with messages), both recompiled against the KSP 1.5.1 libraries, and the misbehaviour persists.

The good news is that <part>.prefab.Modules is not null anymore (Squad acted on that, for sure), but the PartModule Exception is still happening.

#### Reveal hidden contents

The following is the same DLL, still compiled against 1.4.5, but running on 1.4.3:



#### Reveal hidden contents

And, finally, the very same DLL running on 1.4.1:



#### Reveal hidden contents

The commit where the I added that messages is <u>here</u>.

AND THE 1.4.1 running the DLL compiled agains 1.4.5 behave exactly as the other!! That was a surprise!. So I decided t recompile the whole shebang again, but agains the 1.4.1 libraries, and got **THE EXACT SAME RESULTS.** 

I'm baffled, as 1.4.1 was running flawless this afternoon. 🙀 But I have a theory, in this afternoon, the TweakScale running was the "Release" one, and now I'm running a DLL recompiled in Debug mode, with an awful amount of extra **logging.** This appears to corroborate my thesis of a race condition, as the extra logging is hugely delaying the processing - but I need to cross check this, by recompiling everything in Release mode. 🙀

TL;DR: Recompiling everything to 1.4.5 didn't solved the problem for any KSP version, the behaviour is consistent. Whatever the bug is, it was not solved on the most recent 1.4 series. And it **does not** involve a recompiling to solve it.

Worst, It not only breaks the offending code (as the feature is not installed!), but injects undesired colateral effects on the rest of the mods.

IMHO, the best line of action is decommissioning this code on HullCameraVDS, as it doesn't do what it intended (the kerbals don't get the EVACamera!) and breaks some KSP versions. At least, while we don't find a way to make the thing work as it should. Module Manager cannot be used instead?

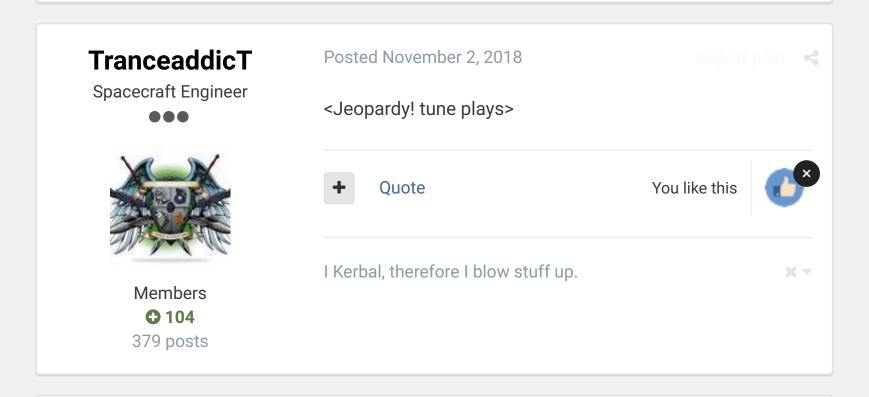
#### **Edited November 2, 2018 by Lisias**

FINALLY!

+ Quote Edit

Unholy interactions between modules is what Krakens

✓ feed on... – **Lisias** 



### Lisias

Boldly crashing what no Kerbal has crashed before!



Posted November 2, 2018 (edited)

Report post



I did something that I should had done before: listing the modules **before** the instrumentation. Got this:



Members **2**,239

2,313 posts

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### Reveal hidden contents

So... The action it is not harmless. It is injecting a unnamed (perhaps null?) module on the part's module list.

- POST - EDIT -

**Exactly!!!** I update my repo with the last edit for the log.

[LOG 20:04:03.649]

HullcamVDS::InstrumentKerbals:

kerbalEVAfemale.partPrefab.Modules is

not null

[LOG 20:04:03.649]

HullcamVDS::InstrumentKerbals:

kerbalEVAfemale.partPrefab.Modules

has 11 modules.

[LOG 20:04:03.649]

HullcamVDS::InstrumentKerbals:

kerbalEVAfemale.partPrefab.Modules

has the module KerbalEVA.

[LOG 20:04:03.649]

HullcamVDS::InstrumentKerbals:

kerbalEVAfemale.partPrefab.Modules

has the module

ModuleScienceExperiment.

ITOC 20.04.02 6401

We **really need** to find the root cause of this problem. It is injecting modules with a NULL on the name!

**Edited November 2, 2018 by Lisias** MOAR INFO.



Quote Edit

Posted November 2, 2018

Unholy interactions between modules is what Krakens

▼ feed on... - Lisias





Members

• 104
379 posts

#### On 11/2/2018 at 8:51 PM, Lisias said:

I did something that I should had done before: listing the modules **before** the instrumentation. Got this:

#### Reveal hidden contents

So... The action **it is not harmless**. It is injecting a unnamed (perhaps null?) module on the part's module list.

- POST - EDIT -

**Exactly!!!** I update my repo with the last edit for the log.

[LOG 20:04:03.649]

HullcamVDS::InstrumentKerbals:

kerbalEVAfemale.partPrefab.Module

s is not null

[LOG 20:04:03.649]

HullcamVDS::InstrumentKerbals:

kerbalEVAfemale.partPrefab.Module

s has 11 modules.

[LOG 20:04:03.649]

HullcamVDS::InstrumentKerbals:

kerbalEVAfemale.partPrefab.Module

s has the module KerbalEVA.

[LOG 20:04:03.649]

HullcamVDS::InstrumentKerbals:

kerbalEVAfemale.partPrefab.Module

s has the module

ModuleScienceExperiment.

ITOC 20.04.02 6401

We **really need** to find the root cause of this problem. It is injecting modules with a NULL on the name!

Do you think you might be able to see that module in a post ModuleManager dump?





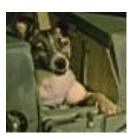
I Kerbal, therefore I blow stuff up.

 $\times$ 

#### Lisias

Boldly crashing what no Kerbal has crashed before!

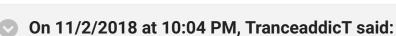




Members **Q** 2,239

2,313 posts Location: Universe! Virgo! Milkway! OrionArm! SolarSystem! Earth! America! SouthAmerica! Brazil! SãoPaulo! Capital! Home! LivingRoom! MyChair

Posted November 2, 2018



Do you think you might be able to see that module in a post ModuleManager dump?

I don't think so. This is being done after MM does its magic.

Both Tweakscale and HullcamVDS starts the offended/offending code when the main menu starts, way after MM applied its last patch.

(obviously, I need to confirm on the code, just in case - it was a tough day...)



Quote

Edit

Unholy interactions between modules is what Krakens

▼ feed on... - Lisias

### **TranceaddicT**

Spacecraft Engineer





Members **O** 104 379 posts

Posted November 2, 2018



On 11/2/2018 at 10:22 PM, Lisias said:



(obviously, I need to confirm on the code, just in case - it was a tough day...)

I think it's been quiet productive.



Quote



### Lisias

Boldly crashing what no Kerbal has crashed before!



Members **2**,239 2,313 posts

Location: Universe! Virgo! Milkway! OrionArm! SolarSystem! Earth! America! SouthAmerica! Brazil! SãoPaulo! Capital! Home! LivingRoom! MyChair

Posted November 2, 2018

Report post



On 11/2/2018 at 10:25 PM, TranceaddicT said:



I think it's been quiet productive.

My boss doesn't agrees with you! 🥵





Ouote

Edit

TranceaddicT likes this

Unholy interactions between modules is what Krakens

▼ feed on... – **Lisias** 

### linuxgurugamer

The light at the end of the tunnel may be an oncoming dragon



Members **O** 12,824 16,172 posts Location: At SpaceTux Industries HQ

Posted November 2, 2018

Report post





On 11/2/2018 at 8:06 PM, Lisias said:



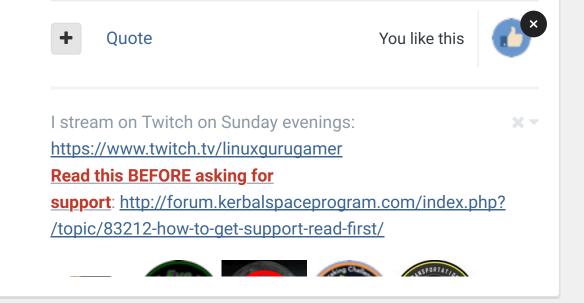
IMHO, the best line of action is decommissioning this code on HullCameraVDS, as it doesn't do what it intended (the kerbals don't get the EVACamera!) and breaks some KSP versions. At least, while we don't find a way to make the thing work as it should. Module Manager cannot be used instead?

Actually, it does work, I just tested it.

But, it doesn't really need to be done at runtime, so I'm removing that code and adding a MM script to do what it is doing

Just released it, get the right one from here:

https://github.com/linuxgurugamer/HullcamVDSContinued /releases/tag/0.1.9.8



### linuxgurugamer

The light at the end of the tunnel may be an oncoming dragon





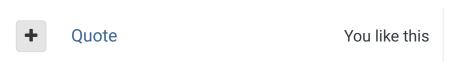
Members **1**2,824 16,172 posts Location: At SpaceTux Industries HQ

Posted November 2, 2018 (edited)

### @Lisias

I just found the same code in the EVA Parachutes & Ejector Seat mod, I'm doing the same fix now

**Edited November 2, 2018 by linuxgurugamer** 



I stream on Twitch on Sunday evenings:

https://www.twitch.tv/linuxgurugamer

Read this BEFORE asking for

support: http://forum.kerbalspaceprogram.com/index.php? /topic/83212-how-to-get-support-read-first/









### Lisias

Boldly crashing what no Kerbal has crashed before!





Members **2**,239 2,313 posts Location: Universe! Virgo!

Milkway! OrionArm!

Posted November 3, 2018

Report post



 $\times$ 

On 11/2/2018 at 11:26 PM, linuxgurugamer said:

Actually, it does work, I just tested it.

This information makes me yet more worried about the issue...

If the thing is working, the module is being attached correctly. So why by Kraken's sake a NRE is blowing up in PartModule.Load?

SolarSystem! Earth! America! SouthAmerica! Brazil! SãoPaulo! Capital! Home! LivingRoom! MyChair

Concurrency appears to be the source of the problem, as moving the task to MM (that effectively owns the process at the loading time) will prevent the misbehaviour.

Quote Edit

Unholy interactions between modules is what Krakens× ▼ feed on... – **Lisias** 

### linuxgurugamer

The light at the end of the tunnel may be an oncoming dragon



Members **1**2,824 16,172 posts Location: At SpaceTux Industries HO

Posted November 3, 2018



On 11/3/2018 at 5:17 AM, Lisias said:

This information makes me yet more worried about the issue...

If the thing is working, the module is being attached correctly. So why by Kraken's sake a NRE is blowing up in PartModule.Load? 🔯

Concurrency appears to be the source of the problem, as moving the task to MM (that effectively owns the process at the loading time) will prevent the misbehaviour.

I released the fix last night, try it and see if it was solved



Quote



 $\times$ 

I stream on Twitch on Sunday evenings:

https://www.twitch.tv/linuxgurugamer

Read this BEFORE asking for

<u>support</u>: <a href="http://forum.kerbalspaceprogram.com/index.php?">http://forum.kerbalspaceprogram.com/index.php?</a> /topic/83212-how-to-get-support-read-first/









## Lisias

Boldly crashing what no Kerbal has crashed before!

00000

Posted November 3, 2018 (edited)

Report post





On 11/3/2018 at 12:09 PM, linuxgurugamer said:



Members **2,239** 

2,313 posts

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SolarSystem! Earth! America!
SouthAmerica! Brazil!
SãoPaulo! Capital! Home!
LivingRoom! MyChair

I released the fix last night, try it and see if it was solved

Yes, it is. No more kerbalEVA's related exceptions. [on TweakScale]

This issue is fixed, but the problem is not. This is a workaround - it's good enough for TweakScale, HullcamVDS, EVA Parachutes & Ejector Seat. What's is... Good enough.

But since we don't know what caused it, we are still prone to it later (mainly, TweakScale, as I'm the the last guy on this chain!). Some more investigation is on the way, but is very good to know there's a good, working, workaround available while we don't find the root cause.

#### **Edited November 3, 2018 by Lisias**

hit "Save" too soon



Quote Edit

Unholy interactions between modules is what Krakens

✓ feed on... – **Lisias** 

### linuxgurugamer

The light at the end of the tunnel may be an oncoming dragon





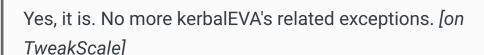
Members
12,824
16,172 posts
Location: At SpaceTux
Industries HO

Posted November 3, 2018

Report post



#### On 11/3/2018 at 12:42 PM, Lisias said:



This issue is fixed, but the problem is not. This is a workaround - it's good enough for TweakScale, HullcamVDS, EVA Parachutes & Ejector Seat. What's is... Good enough.

But since we don't know what caused it, we are still prone to it later (mainly, TweakScale, as I'm the the last guy on this chain!). Some more investigation is on the way, but is very good to know there's a good, working, workaround available while we don't find the root cause.

change the code, so that instead of running at the main menu, run at the space center screen. That will hopefully avoid any other race conditions



Ouote



 $\times$ 

I stream on Twitch on Sunday evenings:

https://www.twitch.tv/linuxgurugamer

Read this BEFORE asking for

support: http://forum.kerbalspaceprogram.com/index.php? /topic/83212-how-to-get-support-read-first/









#### Lisias

Boldly crashing what no Kerbal has crashed before!





Members **2**,239 2,313 posts

Location: Universe! Virgo! Milkway! OrionArm! SolarSystem! Earth! America! SouthAmerica! Brazil! SãoPaulo! Capital! Home! LivingRoom! MyChair

Posted November 3, 2018



On 11/3/2018 at 6:10 PM, linuxgurugamer said:



change the code, so that instead of running at the main menu, run at the space center screen. That will hopefully avoid any other race conditions

Until someone else does the same. 🧟



well... The best quick'n'dirty solution is to go ModuleManager. If the add-on already uses it, it's the best possible solution.

About the ones that doesn't, or can't (by needing to change things on runtime), something else must be cooked.



Ouote Edit

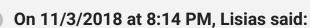
Unholy interactions between modules is what Krakens

▼ feed on... - Lisias

### linuxgurugamer

The light at the end of the tunnel may be an oncoming Posted November 3, 2018



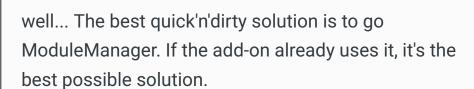




dragon

Members **1**2,824 16,172 posts Location: At SpaceTux Industries HO

Until someone else does the same. 🚱



About the ones that doesn't, or can't (by needing to change things on runtime), something else must be cooked.

Doing it the MM way also reduces the code size a little bit, since you don't need to have code which is adding modules at runtime



#### **Ouote**



××

I stream on Twitch on Sunday evenings:

https://www.twitch.tv/linuxgurugamer

Read this BEFORE asking for

support: http://forum.kerbalspaceprogram.com/index.php? /topic/83212-how-to-get-support-read-first/











### **Mathrilord**

Master of th. !TANK EMPTY! Crap...





Members **Q** 27 84 posts Location: Drown on Laythe

Posted November 5, 2018 (edited)

Report post

That's weird, tweakscale doesn't load at all in version 1.5.1 for me. Didn't play since 1.4.4 so maybe i'm doing something wrong. Is there any mod/addon(?) incompatible with tweakscale that could prevent it from working?

Ooooo shiny stuff! That's doing the stockalike parts a bit harder to make.

Edit: actually MM wasn't loading... what the... Now everything is working but still doesn't know what happened.

Edited November 5, 2018 by Mathrilord





#### (BAF POW)Public Overhaul Workshop MyKerbalX **MyKSPImgurAlbum**

#### Lisias

Boldly crashing what no Kerbal has crashed before!

00000



Members **2**,239

2,313 posts Location: Universe! Virgo! Milkway! OrionArm! SolarSystem! Earth! America! SouthAmerica! Brazil! SãoPaulo! Capital! Home! LivingRoom! MyChair

Posted November 8, 2018



#### On 11/5/2018 at 5:59 AM, Mathrilord said:

Edit: actually MM wasn't loading... what the...

Now everything is working but still doesn't know what happened.

Glad it worked out, but also curious about the issue.

Did you used the embedded ModuleManager.dll? Did you overwrote your previous one?

What happened or was done when things started to work finally?



Edit Quote

Unholy interactions between modules is what Krakens\*\* • feed on... – **Lisias** 

### **Mathrilord**

Master of th. !TANK\_EMPTY! Crap...





Members **Q** 27

84 posts Location: Drown on Laythe Posted November 9, 2018 (edited)



#### On 11/8/2018 at 11:36 PM, Lisias said:



Did you used the embedded ModuleManager.dll? Did you overwrote your previous one?

What happened or was done when things started to work finally?

Nothing. Two try doesn't work, the next one was good. I didn't change anything. Sadly(or not) log have been

overwrite and I've not been able to reproduce the bug without actually removing ModuleManager.

By the way while I was looking at the log I saw that:

OG 13:18:07.401] ValidateKspMinMax, KspVersionMin:

1.4.4, KspVersionMax: 1.4.8

**or[LOG 13:18:07.410]** KSP-AVC -> Identical remote version found: Using remote version information only.

or

[LOG99

Is that normal????

and lol (KAX)

[ERR 13:19:44.850] TweakScale::PrefabDryCostWriter:

negative dryCost: part=size2Fuselage,

DryCost=-3.814697E-05

**Edited November 9, 2018 by Mathrilord** 



Quote



(BAF POW)Public Overhaul Workshop MyKerbalX

MyKSPImgurAlbum

 $\times$   $\neg$ 

### Lisias

Boldly crashing what no Kerbal has crashed before!





Members **◆ 2,239** 2,313 posts

Location: Universe! Virgo!
Milkway! OrionArm!
SolarSystem! Earth! America!
SouthAmerica! Brazil!
SãoPaulo! Capital! Home!

Posted November 9, 2018 (edited)

Report nost



On 11/9/2018 at 3:37 AM, Mathrilord said:

Nothing. Two try doesn't work, the next one was good. I didn't change anything. Sadly(or not) log have been overwrite and I've not been able to reproduce the bug without actually removing ModuleManager.

Probably the Memory Manager cache. The (standard) <u>MM</u> save some files on the same directory the ModuleManager.dll to save some loading time, all of them starting with "modulemanager<someting>". We call them "cache". Sometimes, <u>MM</u> fails to detect that the cache is invalid, and use it nevertheless - what can cause many

LivingRoom! MyChair

different problems. Deleting the cache fix the issue.

My guess is that, somehow, <u>MM</u> detected the situation on the second failure and deleted the cache itself on the third.



#### On 11/9/2018 at 3:37 AM, Mathrilord said:



OG 13:18:07.401] ValidateKspMinMax, KspVersionMin: 1.4.4, KspVersionMax: 1.4.8 or[LOG 13:18:07.410] KSP-AVC -> Identical remote version found: Using remote version information only.

Yes, this is normal. It's just KSP-AVC logging up what it's doing, so if something gets wrong later, we can track down if the add-on version if the adequate one.



#### On 11/9/2018 at 3:37 AM, Mathrilord said:



and lol (KAX)

[ERR 13:19:44.850]

TweakScale::PrefabDryCostWriter: negative dryCost: part=size2Fuselage, DryCost=-3.814697E-05

Np, this is not normal. And it's good that you reported it. I use KAX too, but "mine" doesn't renders these errors - it's B9 parts the victims on my installation.

Long history made short: it's not something that TweakScale neither KAX (or B9) is doing wrong. It's something that no one is doing right. Technically, it's a "race condition", when more than one code wants to mangle the same thing on the computer. It's like many cars trying to run on crossroad disregarding the others - sooner or later, a collision will happen.

In our case, obviously, there're no real collisions. But someone was instrumenting KAX (perhaps KAX itself, but can be any other add-on) at the same time TwekScale was. My current guess is that TweakScale gets a ConfigNode for the part that was recently recreated, but not yet repopulated - and then it gets a Zero on a field in which

we expect the mass (as the other guy didn't filled the values yet).

#### **Edited November 9, 2018 by Lisias**

tyops as usulla...



Quote Edit

Unholy interactions between modules is what Krakens**×** ▼ feed on... — **Lisias** 

### **Mathrilord**

Master of th. !TANK\_EMPTY! Crap...





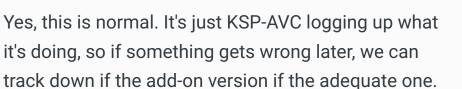
Members
27
84 posts
Location: Drown on Laythe

Posted November 9, 2018





#### On 11/9/2018 at 11:11 AM, Lisias said:



Actually I was asking if it's normal that some line of the log start with with missing bracket ([) and non sensible letter or number. It's a bit like if there was a computer error that mix binary or hexadecimal or something. I want know because on my other computer(this one is new) I had one of the four ram array that was broken/desynchronized returning wrong value and it was slowly corrupting all my computer.

For KAX bug, I've been exploiting it secretly for the challenge Kerbal Express Airlines because who can say no to free parts!



Quote



(BAF POW)Public Overhaul Workshop MyKerbalX
MyKSPImgurAlbum



### Lisias

Boldly crashing what no Kerbal has crashed before!

Posted November 9, 2018

Report post



On 11/9/2018 at 4:55 PM, Mathrilord said:



Members

**2**,239 2,313 posts Location: Universe! Virgo! Milkway! OrionArm! SolarSystem! Earth! America! SouthAmerica! Brazil! SãoPaulo! Capital! Home! LivingRoom! MyChair

Actually I was asking if it's normal that some line of the log start with with missing bracket ([) and non sensible letter or number. It's a bit like if there was a computer error that mix binary or hexadecimal or something. I want know because on my other computer(this one is new) I had one of the four ram array that was broken/desynchronized returning wrong value and it was slowly corrupting all my computer.

Oh... That... 🚳

No, it's not and this is the first time I saw something like that on KSP. This usually happens when two or more threads try to write on the same buffer at the same time (another treading problem), but can be something else.

Corrupted RAM usually adds a lot of unintelligible garbage on data streams, but it can happen that the bad RAM could mess the threading arbitrator's data too. But... I'm wild guessing.

Add a bunch of heavy mods to a copy of your installment and see what happens. Abusing the free RAM usually make something blows early when you have some bad RAM on the system.



Quote Edit

Unholy interactions between modules is what Krakens

▼ feed on... – **Lisias** 

### Le-chimiste

Newbie



Members **Q** 3

2 posts

Posted November 10, 2018 (edited)

Report post

Hi, i am new here.

In the past we can tweak all the core parts and now only some of them, why?



Thank's for this good mod.

an article about twekscale

**Edited November 10, 2018 by Le-chimiste** 

Quote



**PREV** 10 **NEXT** >> Page 5 of 33 ▼



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✓ Mark site read [>= 1.4] TweakScale - Under Lisias' Management - 2.4.3.3 - 2019-0814

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