USpekPy Package

Uncertainty estimation on protection quantities for x-rays using SpekPy and Monte Carlo techniques

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Wellcome to USpekPy!

What is USpekPy?

- Python package: Open source and GPLv3-licensed library compatible with Python 3 Go
- Goal: Compute mean radiation protection quantities for a simulated x-ray spectrum with uncertainties using Monte Carlo techniques
- Based on SpekPy: Python package for modelling the x-ray spectra from x-ray tubes Go

Python usage poll

Main features of USpekPy

- Compute mean values of radiation protection quantities of a simulated x-ray spectrum: $\overline{E}$, K_{air} and $\overline{h_K}$
- Compute mean radiation protection quantities of a simulated x-ray spectrum with uncertainties using Monte Carlo techniques: first and second HVL for Al and Cu, $\overline{E}$, K_{air} and $\overline{h_K}$
- Perform batch simulation to compute mean values and uncertainties of radiation protection quantities for several simulated x-ray spectra

USpekPy in a nutshell

Status

Last version:	1.0.2
Release date:	Jun 2024
Maintenance:	Active

Testing

Tests:	Passing
Code coverage:	65%

Requirements

Python:	$\geq$3.8
Dependencies:	spekpy
	pandas
	openpyxl

Links

Source code:	GitHub	Go
Documentation:	README @GitHub	Go
Contribute:	Issues @GitHub	Go

Authors

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Organization:	LMRI-Met @GitHub Go

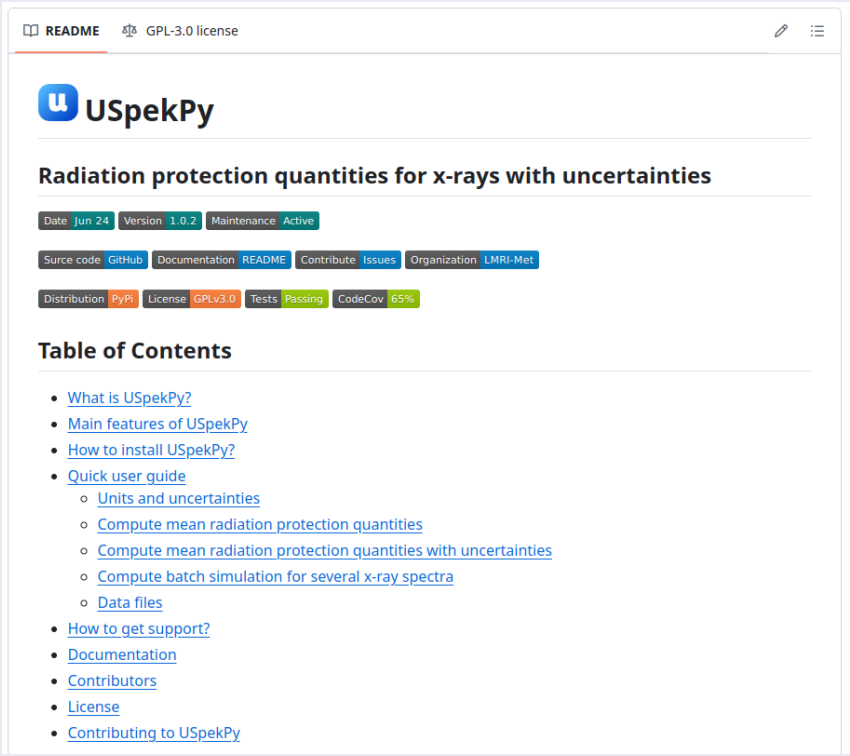
Distribution

Distribution:	PyPI	Go
License:	GNU GPL v3.0	Go

How to get support?

Package documentation

Check the documentation of USpekPy at GitHub ▶ Go


README GPL-3.0 license

USpekPy

Radiation protection quantities for x-rays with uncertainties

Date Jun 24 | Version 1.0.2 | Maintenance Active

Surce code GitHub | Documentation README | Contribute Issues | Organization LMRI-Met

Distribution PyPi | License GPLv3.0 | Tests Passing | CodeCov 65%

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Contact developers

Contact the developers of USpekPy via email:

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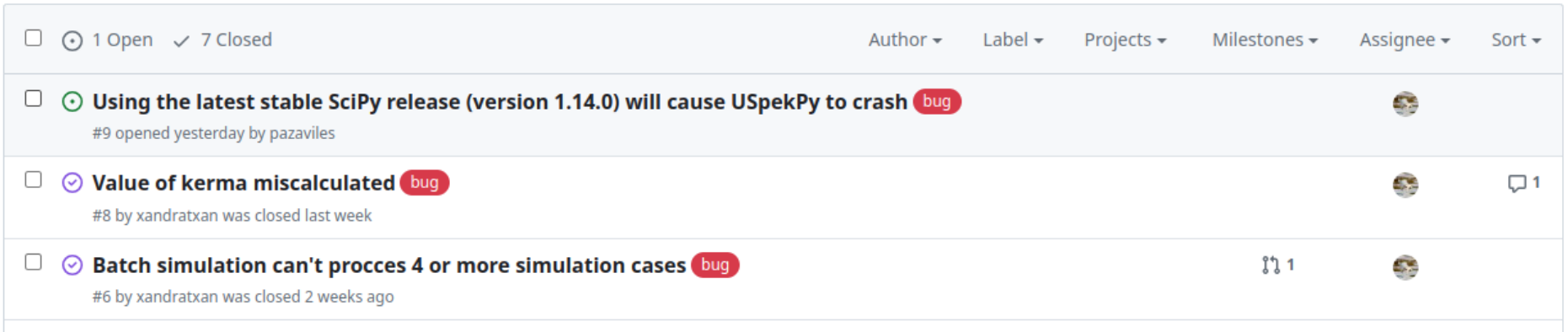
How to contribute to USpekPy?

What may be a contribution?

- Bug reports & fixes
- Documentation improvements
- Feature enhancements

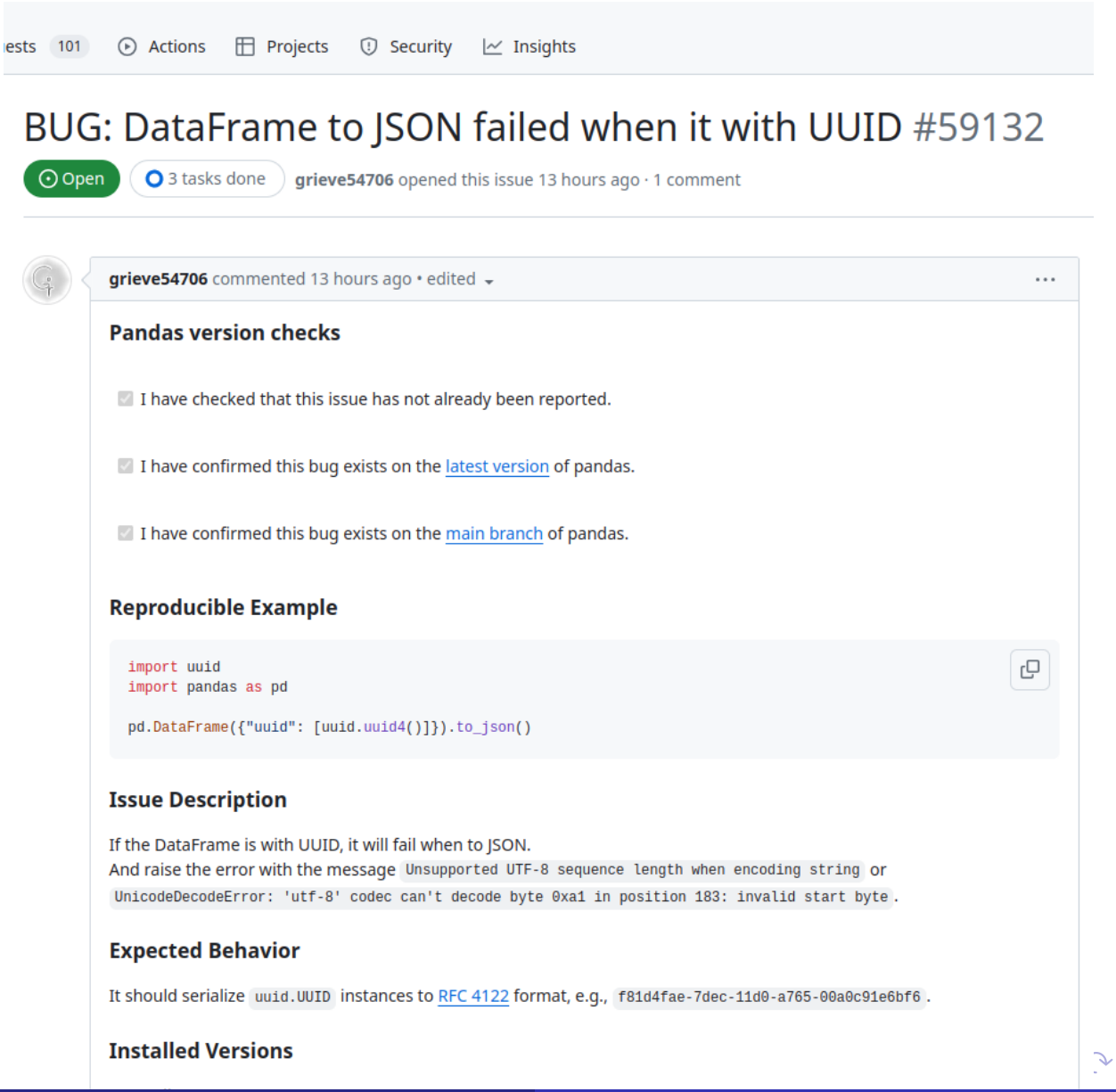
How to deliver a contribution?

- Issues page at GitHub (Recommended) ▸ Go
- Contact the developers via email



What to include in a contribution?

- Title
- Description
- Steps to reproduce
- Minimal, reproducible example
- Environment
- Error messages and logs
- Potential fix



ests 101 Actions Projects Security Insights

BUG: DataFrame to JSON failed when it with UUID #59132

Open | 3 tasks done | **grieve54706** opened this issue 13 hours ago · 1 comment

grieve54706 commented 13 hours ago • edited

Pandas version checks

- [x] I have checked that this issue has not already been reported.
- [x] I have confirmed this bug exists on the latest version of pandas.
- [x] I have confirmed this bug exists on the main branch of pandas.

Reproducible Example

```
import uuid
import pandas as pd

pd.DataFrame({"uuid": [uuid.uuid4()]}).to_json()
```

Issue Description

If the DataFrame is with UUID, it will fail when to JSON.
And raise the error with the message `Unsupported UTF-8 sequence length when encoding string` or `UnicodeDecodeError: 'utf-8' codec can't decode byte 0xa1 in position 183: invalid start byte`.

Expected Behavior

It should serialize `uuid.UUID` instances to RFC 4122 format, e.g., `f81d4fae-7dec-11d0-a765-00a0c91e6bf6`.

Installed Versions

How does USpekPy package work?

How to use USpekPy package?

Conclusion

Improvements on the horizon

- Bug: Fix SciPy dependency bug
- New feature: Add the contribution to the uncertainty of the variation of the mono-energetic air kerma-to-dose conversion coefficients
- Documentation: Improve package documentation (GitHub Wiki, GitHub Pages)
- Testing: Improve test code coverage

Let us know what you think

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▸ Satisfaction survey

Contribute to USpekPy package!

This sofware is for you. We want to make it fit better your necesities. Let us know if you find any issue or if you would like to have any new feature in future versions.

▸ USpekPy Issues page

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