ISTP Metadata Tools

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Workshop for Collaborative and Open-Source Science Data Systems - 2

ISTP Metadata Tools

Recent Updates

- Renamed the new ISTP metadata editor to… “ISTP Metadata Editor”
- Moved the backend of the metadata editor to the cloud (including the validation tools!)
- Now supports reading CDF and SKT files, and saving to CDF, netCDF, SKT, JSON and SPASE XML files
- Many improvements to the user interface and functionality
- Validation tools available now, public beta (or alpha) release of the full tool coming soon!

ISTP Metadata Tools

Command-line validation

- Install the Java SKTEditor; see the following for installation instructions:

  https://spdf.gsfc.nasa.gov/skteditor/CmdLineCdfCheckers.html

- Once the SKTEditor and CDF libraries are installed, you can run the validation check with:

```
java -cp spdfjavaClasses.jar:$CDF_LIB/cdfjava.jar \
    gsfc.spdf.istp.tools.CDFCheck filename.cdf
```

ISTP Metadata Tools

Command-line validation

- You can also run the validation without installing the CDF tools, e.g., with curl:

```
curl -X POST -F "file=@mms1_fgm_srvy_l2_00000000_v01.cdf" \
-k https://skteditor.heliophysics.net/cgi-bin/checkcdf.cgi
```

ISTP Metadata Tools

Command-line validation

```
bash-3.2$ curl -X POST -F "file=@mms1_fgm_srvy_l2_00000000_v01.cdf" \
> -k https://skteditor.heliophysics.net/cgi-bin/checkcdf.cgi
Check for mms1_fgm_srvy_l2_00000000_v01.cdf
Checking 1 file(s).
Checking mms1_fgm_srvy_l2_00000000_v01.cdf...0 0
CDF File Version: 3.8.0
File Last Leap Second: 2015-07-01
Majority: Column
mms1_fgm_srvy_l2_00000000_v01.cdf:  Global attribute issues:
        Logical_file_id should be 'mms1_fgm_srvy_l2_00000000_v '.  It is ' '.
        TEXT has no entries.
        Logical_file_id has no entries.
mms1_fgm_srvy_l2_00000000_v01.cdf:  FAILED variable checks. Errors:
Variable mms1_fgm_b_gse_srvy_l2_clean:
        DEPEND_1 attribute is missing.
        unrecognized virtual variable FUNCTION 'apply_esa_qflag'

 FAILED variable checks. Errors:
Variable mms1_fgm_b_gse_srvy_l2:
        DEPEND_1 attribute is missing.

 FAILED variable checks. Errors:
Variable mms1_fgm_b_gsm_srvy_l2_clean:
        DEPEND_1 attribute is missing.
        unrecognized virtual variable FUNCTION 'apply_esa_qflag'

 FAILED variable checks. Errors:
Variable mms1_fgm_b_gsm_srvy_l2:
        DEPEND_1 attribute is missing.

 FAILED variable checks. Errors:
Variable mms1_fgm_b_dmpa_srvy_l2_clean:
        DEPEND_1 attribute is missing.
        unrecognized virtual variable FUNCTION 'apply_esa_qflag'
```

ISTP Metadata Tools

Command-line validation

- You can also run the validation without installing the CDF tools, e.g., in Python:

```
import requests

file = "mms1_fgm_srvy_l2_00000000_v01.cdf"

with open(file, 'rb') as cdf_to_upload:

    response = requests.post("https://skteditor.heliophysics.net/cgi-bin/checkcdf.cgi", files={"file": (file, cdf_to_upload)})

print(response.content.decode('utf-8'))
```

ISTP Metadata Tools

Command-line validation

```
>>> import requests
>>> file = "mms1_fgm_srvy_l2_00000000_v01.cdf"
>>> with open(file, 'rb') as cdf_to_upload:
...     response = requests.post("https://skteditor.heliophysics.net/cgi-bin/checkcdf.cgi", files={"file": (file, cdf_to_upload)})
...
>>> print(response.content.decode('utf-8'))
Check for mms1_fgm_srvy_l2_00000000_v01.cdf
Checking 1 file(s).
Checking mms1_fgm_srvy_l2_00000000_v01.cdf...0 0
CDF File Version: 3.8.0
File Last Leap Second: 2015-07-01
Majority: Column
mms1_fgm_srvy_l2_00000000_v01.cdf:  Global attribute issues:
        Logical_file_id should be 'mms1_fgm_srvy_l2_00000000_v '.  It is ' '.
        TEXT has no entries.
        Logical_file_id has no entries.
mms1_fgm_srvy_l2_00000000_v01.cdf:  FAILED variable checks. Errors:
Variable mms1_fgm_b_gse_srvy_l2_clean:
        DEPEND_1 attribute is missing.
        unrecognized virtual variable FUNCTION 'apply_esa_qflag'

 FAILED variable checks. Errors:
Variable mms1_fgm_b_gse_srvy_l2:
        DEPEND_1 attribute is missing.

 FAILED variable checks. Errors:
Variable mms1_fgm_b_gsm_srvy_l2_clean:
        DEPEND_1 attribute is missing.
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 FAILED variable checks. Errors:
Variable mms1_fgm_b_dmpa_srvy_l2_clean:
        DEPEND_1 attribute is missing.
        unrecognized virtual variable FUNCTION 'apply_esa_qflag'
```
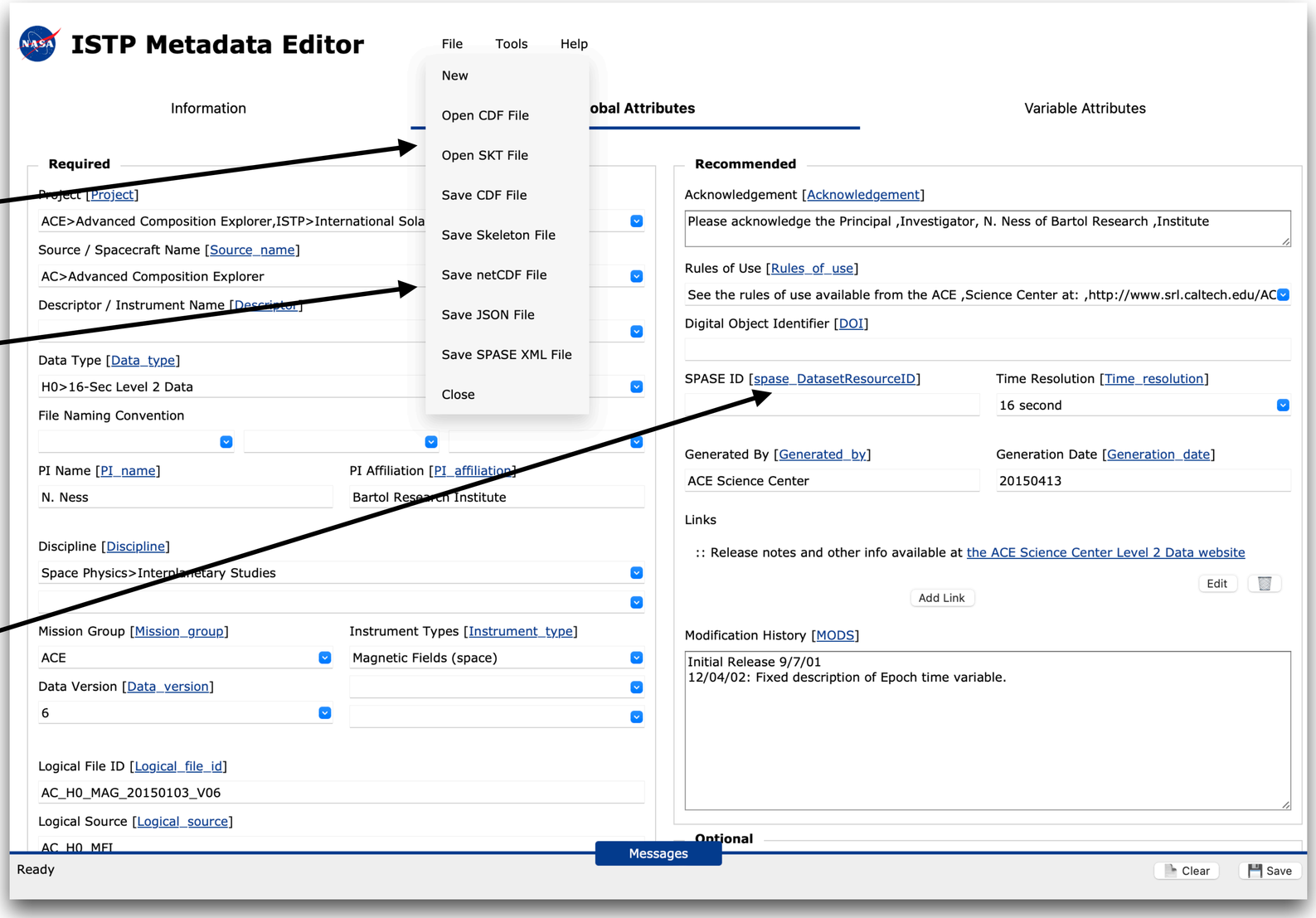

ISTP Metadata Tools

Web-based GUI

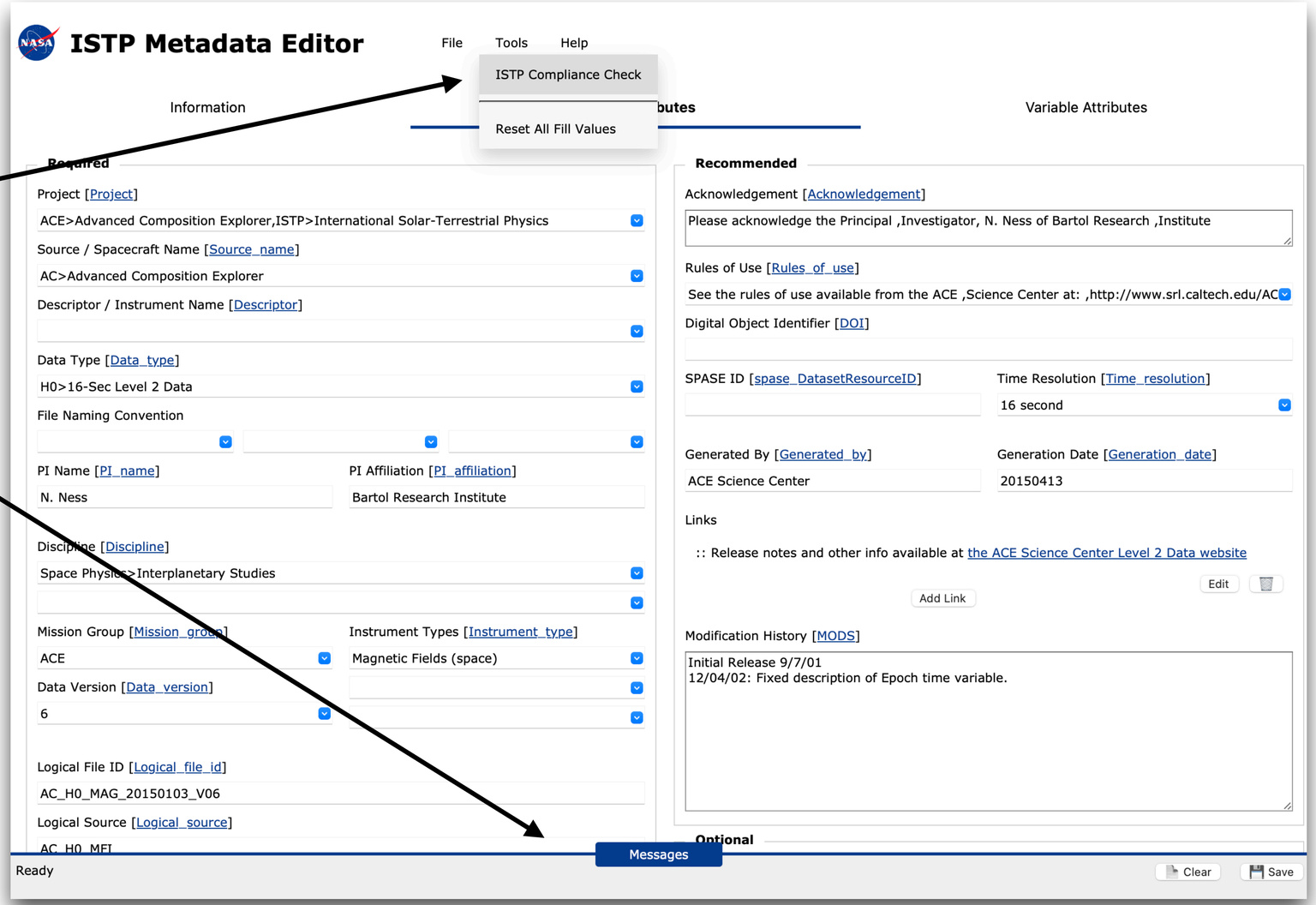
- Supports opening CDF, SKT files (opening netCDF still under development)
- Supports saving CDF, SKT, netCDF, JSON and SPASE XML files
- Includes numerous UI improvements over the previous SKTEditor, e.g., we have the actual attribute names next to the attribute, with links to our documentation



ISTP Metadata Tools

Web-based GUI

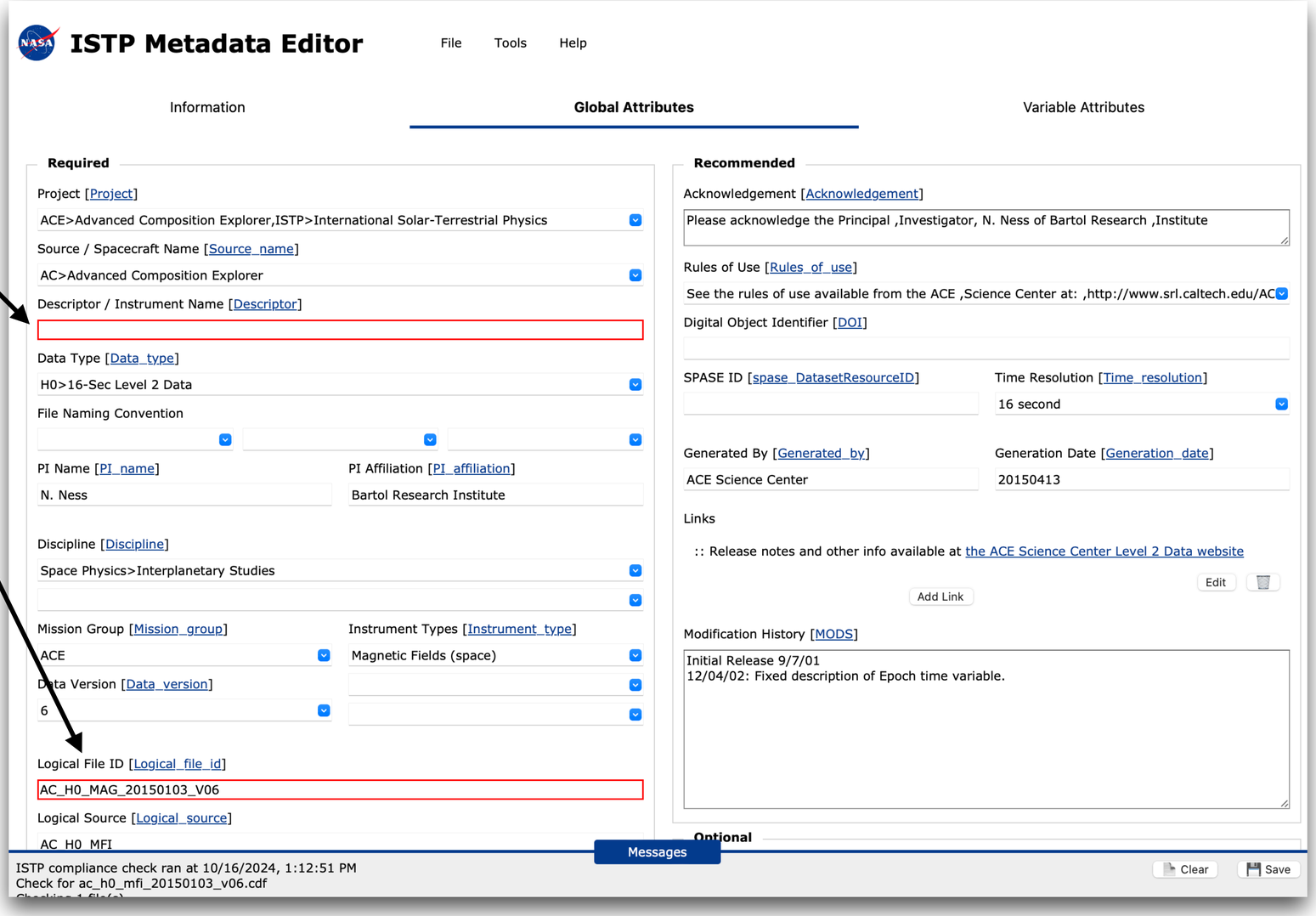
- Supports running the ISTP compliance check on the full file via the Tools menu
- Compliance output is sent to the (resizable) messages window at the bottom of the screen



ISTP Metadata Tools

Web-based GUI

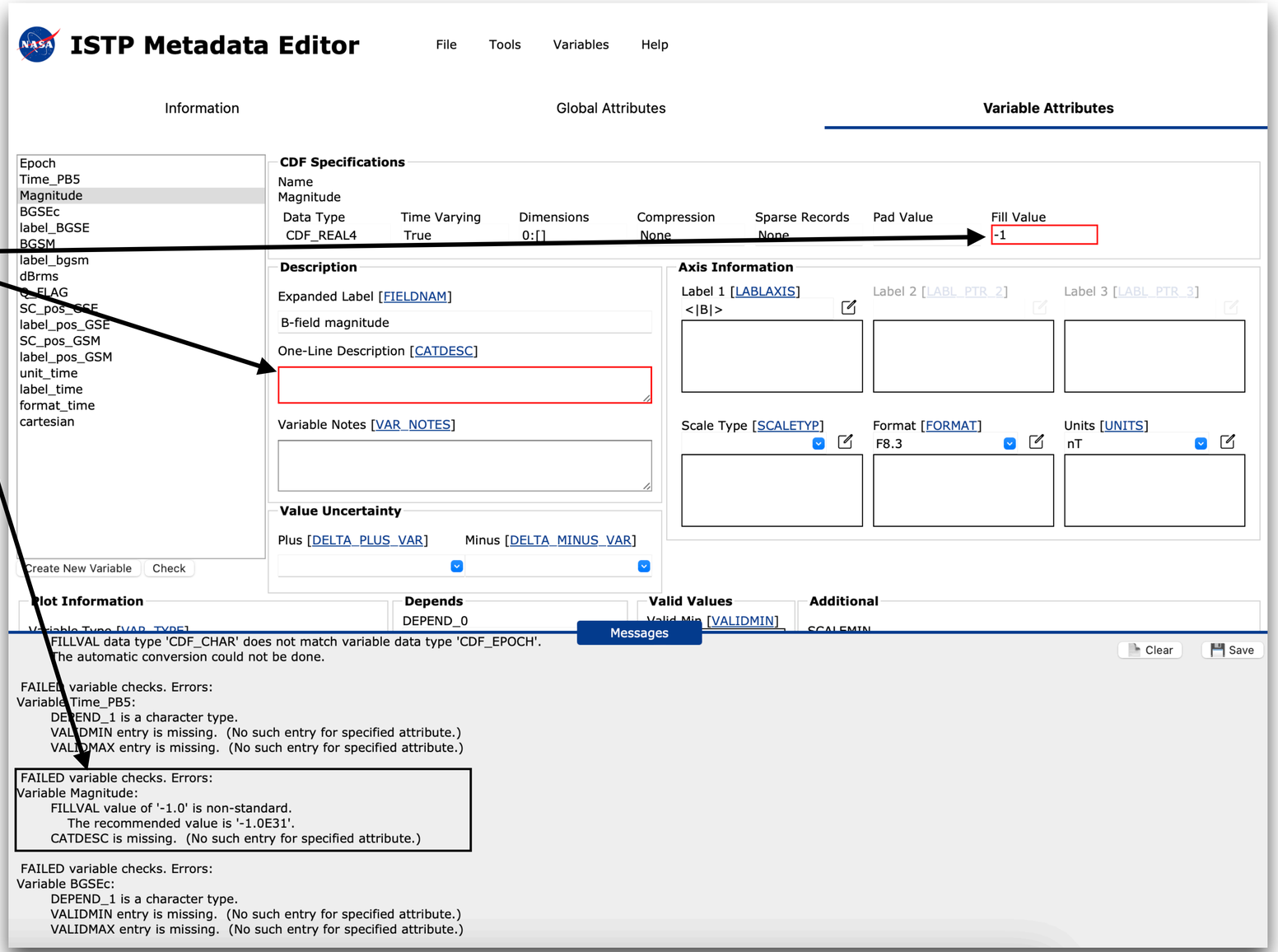
- Also flags the input boxes (red outline) when there's an issue found



ISTP Metadata Tools

Web-based GUI

- Like with global attributes, ISTP issues with variable attributes are flagged with a red outline (after the compliance check is ran)

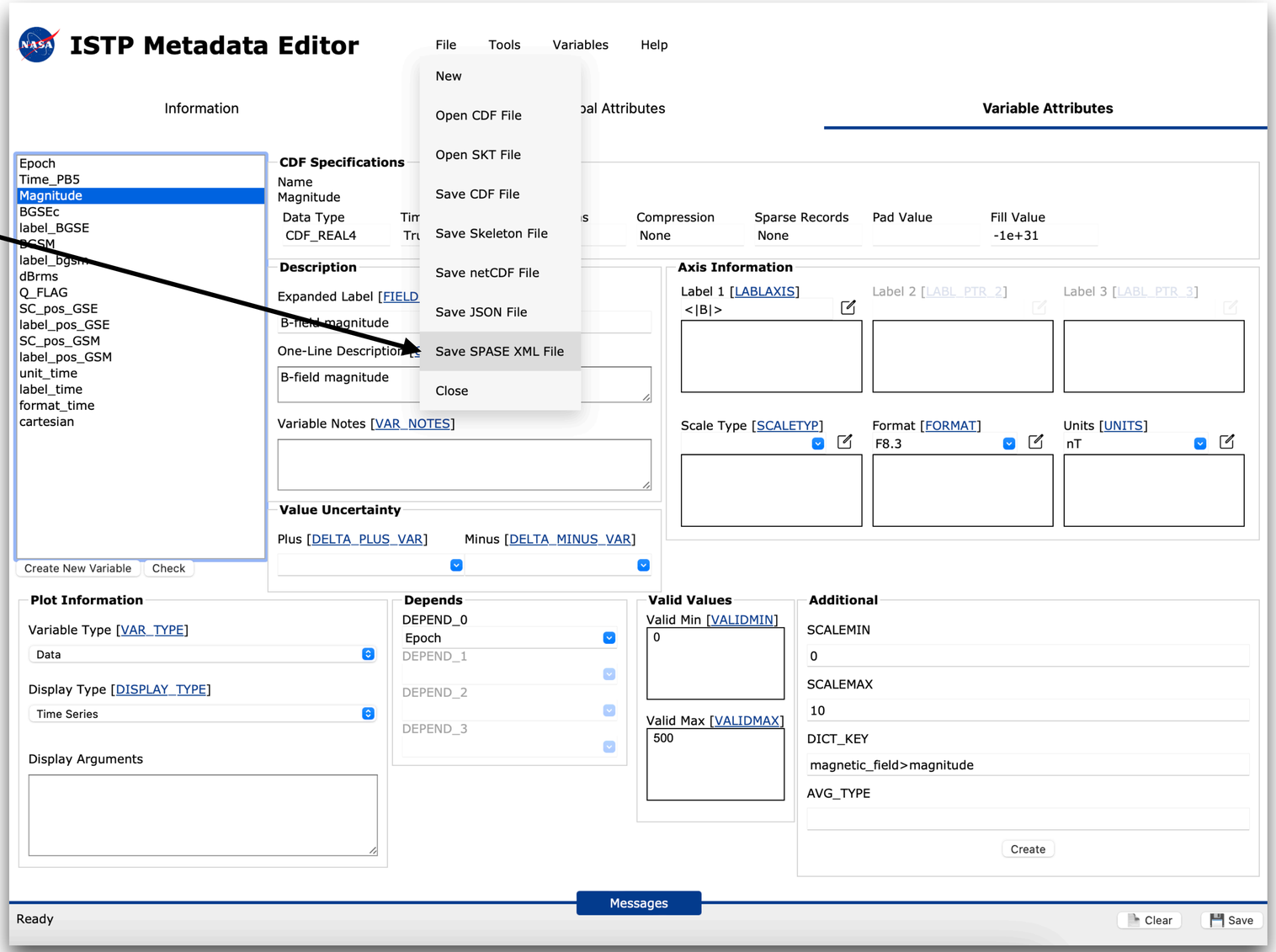


ISTP Metadata Tools

Web-based GUI

- To save the SPASE XML file, select the “Save SPASE XML File” item in the “File” menu
- Note:
  - Our goal here isn’t to create a full SPASE editor
  - But a lot of ISTP metadata also exists in SPASE, so we can help creating the initial file
  - This file can then be imported into the current SPASE editor:

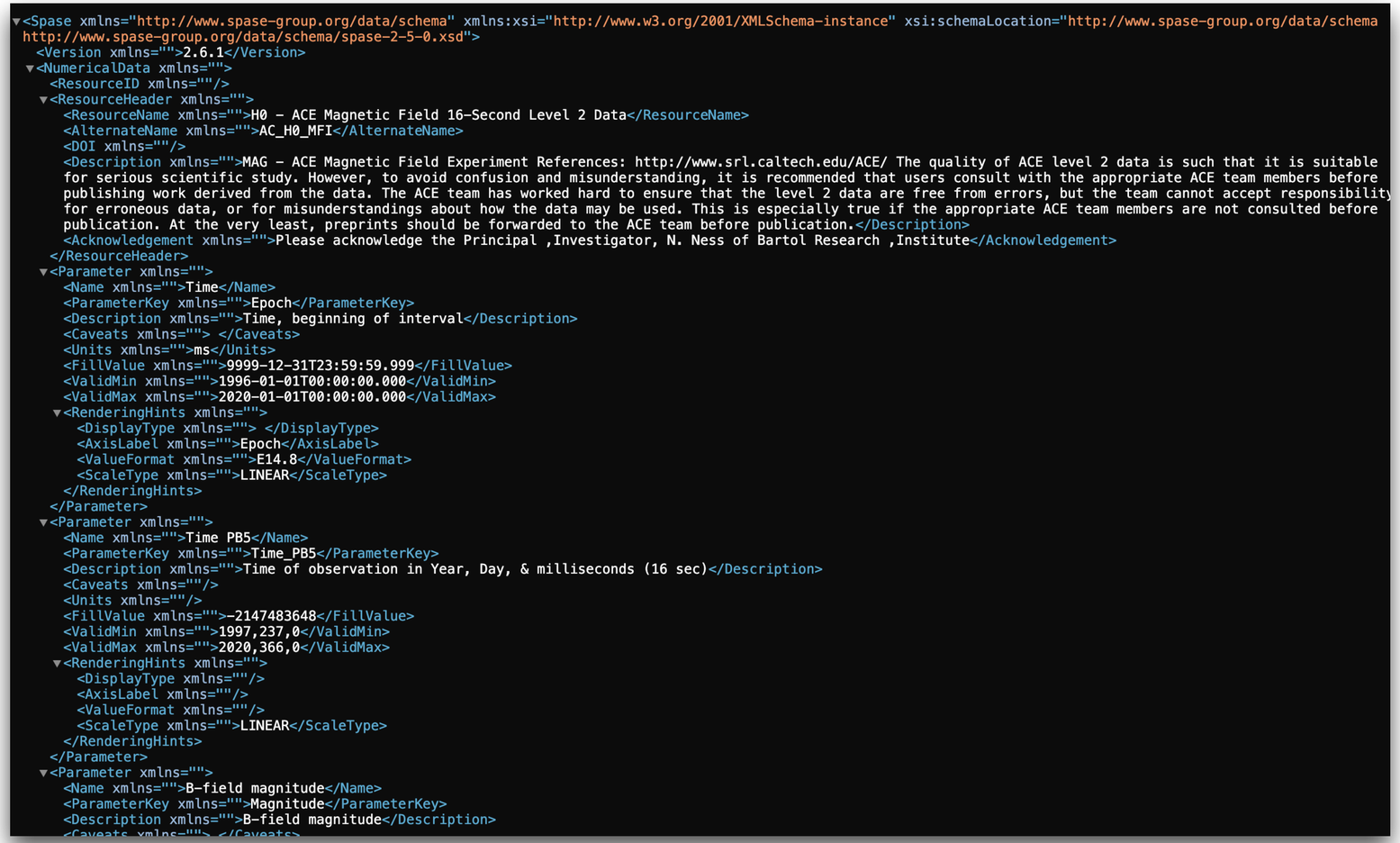
http://spase-editor.heliocloud.org



ISTP Metadata Tools

Web-based GUI

- Warning:
  - Not complete!
  - A lot more to do!



Thank you!

Contact us at:

NASA-SPDF-Support@nasa.onmicrosoft.com