

# STIX team meeting in Prague April 11-13, 2023 @ Villa Lanna

<https://www.vila-lanna.cz/en>, Draft agenda Version 4 from March 27, 2023

## Tuesday April 11 (update on STIX & presentations by PhD students)

### STIX update I 09:00-10:30

- Welcome
- STIX update (Säm Krucker)
- STIX imaging (Paolo Massa/Anna Volpara/Andrea Battaglia)
  - STIX imaging methodology: state-of-the-art and algorithms under construction
  - improvements in preparation
  - New methods (multi-clean, electron maps, imaging spectroscopy)
  - first applications

### Coffee break 10:30-11:00

### STIX update II & HXI talk 11:00-12:30

- Caliste-SO detectors performance in flight (Olivier Limousin)
- 11:30 am: HXI/ASOS (Yang Su, online, linked in through the 4<sup>th</sup> ASO-S meeting)

### Lunch at Villa Lanna 12:30-13:30

### Presentations by PhD candidates I 13:30-15:00

#### Introductions without presentation

- Natalia Bajnokova (University of Glasgow)
- Hanya Pan (University of Graz)
- Francesco Vitali (IRSOL)

#### With science presentations

- David Paipa (LESIA): Diagnostics of energetic particles in solar flares using STIX and RPW: Preliminary results on November 2020 events
- Minghui ZHANG (LESIA): Energetic electrons in the solar corona for the long duration event of 9 May 2021 as diagnosed from X-ray and radio observations
- Hannah Collier (FHNW/ETH) SOL2022-03-30 X1.4 GOES Class Flare: Localising the source of quasi periodic pulsations in the Hard X-ray and microwave emissions with STIX onboard Solar Orbiter and EOVS.

### Coffee break 15:00-15:30

**Presentations by PhD candidates II****15:30-17:30**

- Karol Kułaga (University of Wrocław): Elementary flare profile fit to X-ray light curves registered by STIX
- Anna Volpara (Genova): Inhomogeneity and variability of the spectral index in flaring sources observed by STIX.
- Stefan Purkhart (Graz): Multi-point study of the energy release and transport in the 2022 March 28, M4-flare using STIX, EUV, and AIA during the first Solar Orbiter nominal mission perihelion
- Andrea Battaglia (FHNW/ETH): The very early phase of solar flares with Solar Orbiter/STIX

**Splinter slot 1****17:30-18:00**

- As needed

## Wednesday April 12 (Invited talks and science contributions)

### Invited contributions & STIX update 09:00-10:30

- Directivity/Polarization simulations (Natasha Jeffrey, Northumbria University)
- Software update
  - SSWIDL (Ewan Dickson)
  - Python (Shane Maloney)
- DRM from geant4 (Hualin Xiao)
- Data center update (Hualin Xiao)

### Coffee break 10:30-11:00

### Science contributions I 11:00-12:30

- Sophie Musset (ESA): Eruptive event energetics: discussion on ongoing flare studies
- Alexander Warmuth (AIP): Joint observations of interplanetary electron events with STIX and EPD
- Shane Malone (DIAS): STIX X-ray Spectra and associated Type-III Radio Burst Velocities

### Lunch at Villa Lanna 12:30-13:30

### Science contributions II 13:30-15:00

- Antoine Strugarek (CEA): Modelling realistic flaring active regions with 3D MHD and particles in the era of Solar Orbiter/STIX
- Sacha Brun (CEA): Tracking the persistent AR complex over Spring/Summer 2022 and its flaring activity as seen by STIX
- Sylwester Kołomański (University of Wrocław): DEM2STIX – from EUV data to STIX images

### Coffee break 15:00-15:30

### Science contributions III 15:30-17:00

- Jana Kašparová (ASU): STIX HXR sources of the Apr 2, 2022 eruptive flare
- Oleksiy Dudnik (SRC): Observations of a solar flare on May 9, 2021, and its manifestation in the Solar Orbiter data with STIX, EPD, Mag, SWA, and ground-based radio telescopes
- Nicole Vilmer (LESIA): Energetic electrons in the solar corona for the long duration event of 9 May 2021 as diagnosed from X-ray and radio observations.

### Invited talk 17:00-17:30

- Dale Gary: EOVS and STIX (online)

## Thursday April 13 (Science contributions and future work plan)

### Science contribution IV 09:00-10:30

- Janus Sylwester (SRC): Can the STIX channel flux ratios be used to determine flare iron abundances?
- Marek Stęślicki (CBK): Elementary flare profiles fitted to the STIX QL light curves
- Laura Hayes (ESA): Solar flare soft X-ray oscillations

### Coffee break 10:30-11:00

### Science contribution V 11:00-12:30

- Michalina Litwicka (SRC Wrocław): Statistical analysis of compact flares observed by STIX
- Tomek Mrozek (SRC): Hard X-ray production in a failed filament eruptions observed by STIX
- Katarzyna Mikuła (SRC): The energy-altitude relation in solar flare footpoints observed by STIX

### Lunch at Villa Lanna 12:30-13:30

### Discussions on collaborations 13:30-15:00

- Collaboration with other instruments
- Collaborations with theorists
- Potential new observation campaigns
- Do we need additional working groups?
- What new data analysis tools are needed/desirable?
- Discussion on format of future STIX team meetings
- Discussion on format of weekly STIX calls

### Coffee break 15:00-15:30

### Goals for 2023 15:30-17:00

- Work plan for 2023 and discussions on potential collaborations
- Prepare for 3<sup>rd</sup> anniversary of STIX switch-on

Dinner at Kolkovna Olympia <https://www.kolkovna.cz/en/kolkovna-olympia-12> at 19:00