

Love Data Week | Nordic Edition  
9<sup>th</sup> February 2026

# Implementing RSpace ELN at NTNU Fluid Mechanics Laboratory

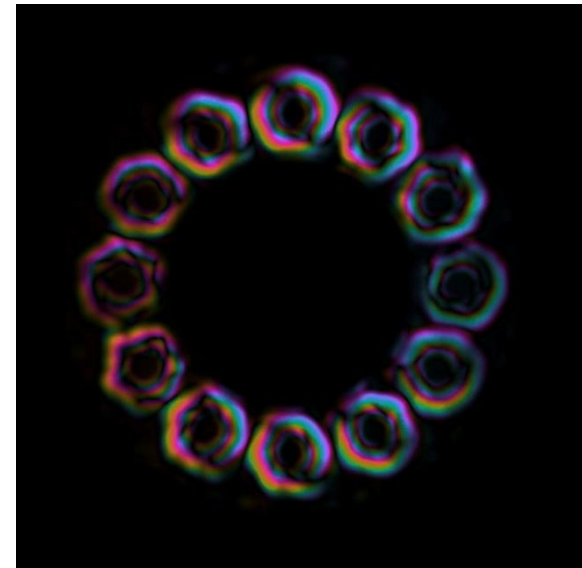
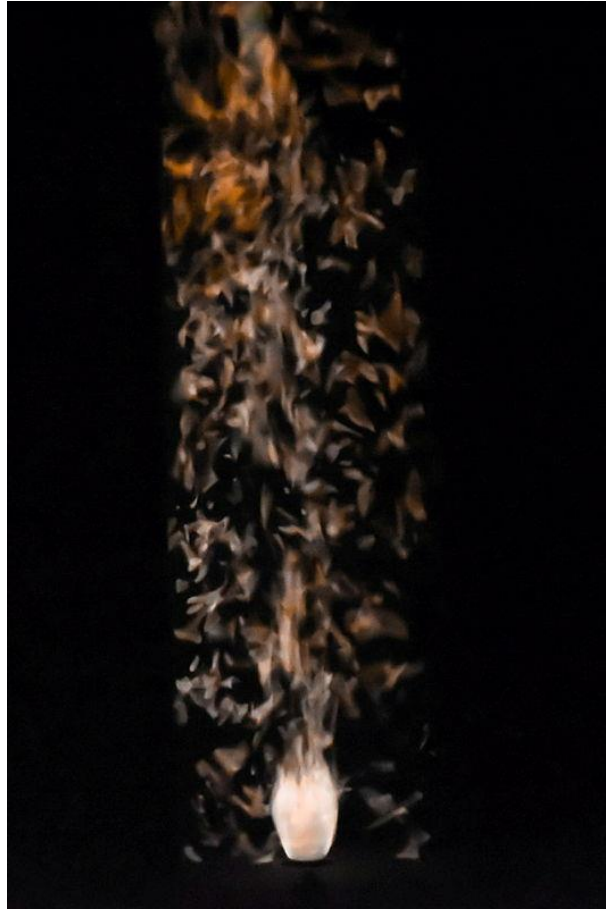
Srikar Yadala V

Researcher | Fluids Lab Coordinator  
Thermo-Fluids Group  
EPT, NTNU

Super-User for ELN  
Research Data Project

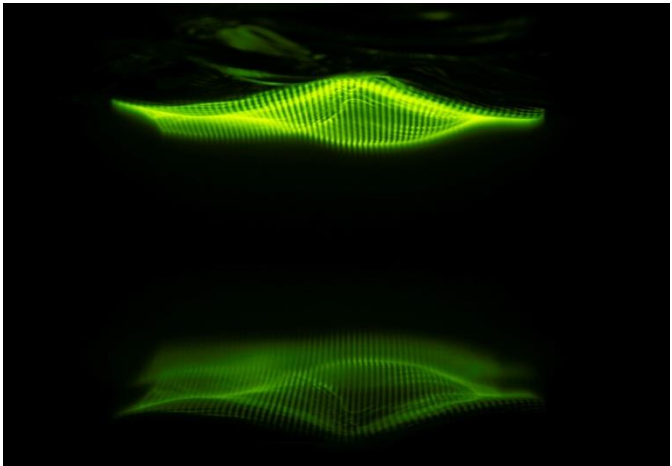
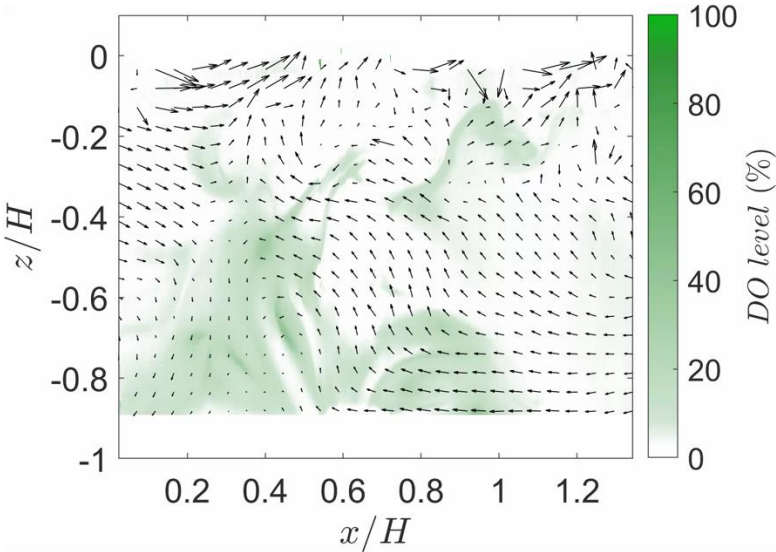
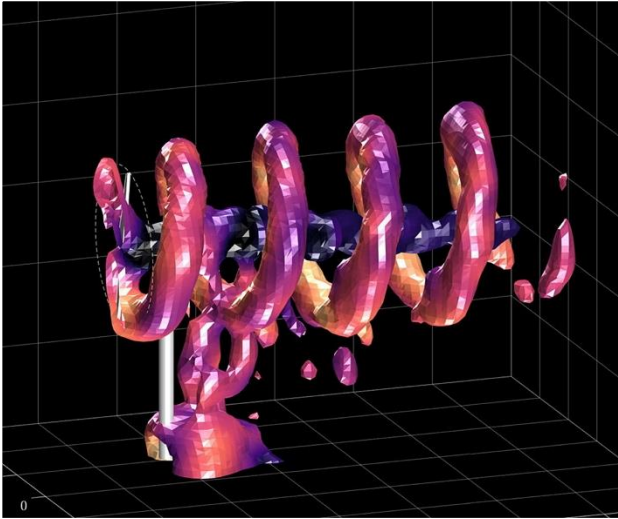
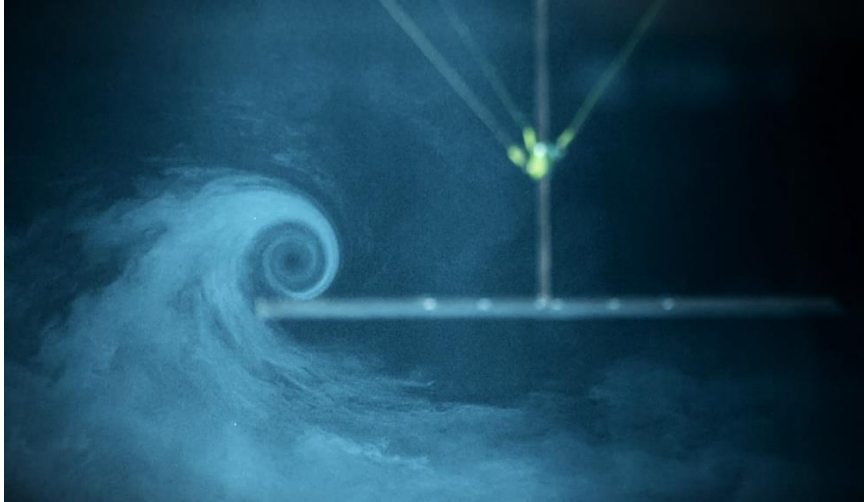
Who are we?

# Thermo-Fluids Research Group



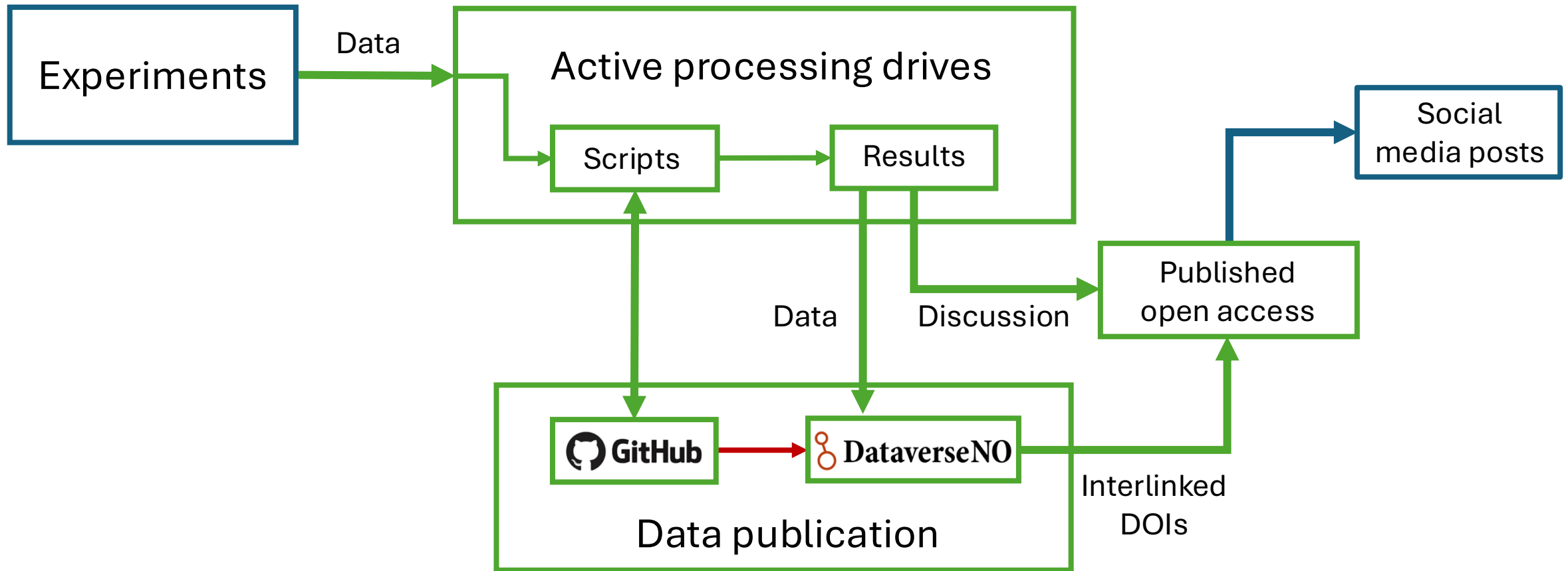
Who are we?

# Thermo-Fluids Research Group

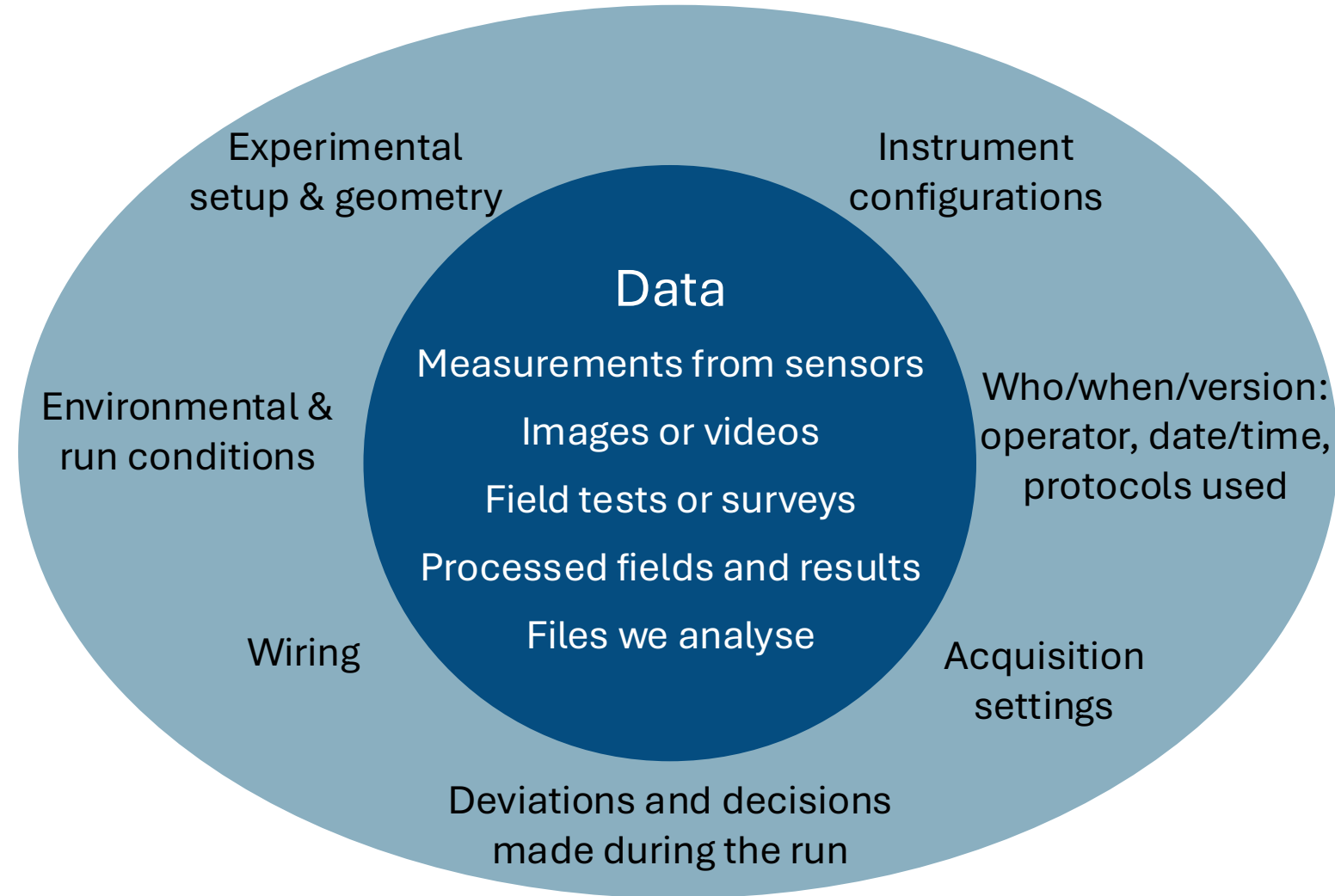


# Our intended FAIR Open Science strategy

Electronic Lab  
Notebook (ELN)  
Missing piece of  
the puzzle



# But let's first ask What is data?



**Metadata** gives necessary context.

Without it, the dataset loses meaning  
— and can't be reproduced.

Most vulnerable to information loss

## Where is the metadata?



# RSpace

## Flexibility & Structure



Type	Name	Labgroup records	Modified	ID	Owner
<input type="checkbox"/>	<a href="#">GLITR_2025-08_WT-TBL-Streaks</a> [redacted]	2025-08-27 19:52	2025-11-10 20:26	FL23618	Srikar Yadala V
<input type="checkbox"/>	<a href="#">GLITR_2025-08_WT-TBL</a> [redacted]	2025-08-07 13:54	2025-11-10 20:25	FL21136	Srikar Yadala V

### Personal workspace

Researchers can choose what to share, when to do so & with whom.

Type	Name	Created	Modified	ID	Owner
<input type="checkbox"/>	<a href="#">EPT - Fluids Lab_SHARED</a>	2025-06-22 13:32	2025-06-22 13:32	FL16291	Group-owned

### Lab-Group workspace

PIs & other project members have oversight

# RSpace


## Flexibility & Structure

”Basic documents” used to take notes.

Name: Untitled document    Tags:    Unique ID: SD33910     Show last modified date

New List of Materials

File   Insert   Format   Table   View   Science Tools   Online Tools



Attachments  
Tap to expand listing.

Files

Home / Shared / LabGroups / EPT - Fluids Lab\_SHARED / Templates & forms / Laser\_info    [Template](#)    [View](#)

Name: Laser\_info    Tags:    Unique ID: SD29684     Show last modified date

**Laser \***

**Location \*** [New List of Materials](#)

**Sheet optics info \*** [New List of Materials](#)

**Operating voltage/Current, etc \***

26A

Attachments

Tap to expand listing.

Files

Forms & Templates help create structure.

# Walking the tightrope of ELN implementation

## Let people take notes as they want

- Promotes adaptability
- Nurtures creativity in workflow
- Enables group/lab's continued evolution

## Necessities for reproducibility

- Noting some metadata is non-negotiable
- Shared structure makes finding information easier

# Structure Fluids Lab group



Type	Name	Created	Modified	ID	Owner
Folder	EPT - Fluids Lab_SHARED	2025-06-22 13:32	2025-06-22 13:32	FL16291	Group-owned

Lab group's structure developed together with researchers in the group.

Type	Name	Created	Modified	ID	Owner
Folder	Templates & forms	2025-11-10 20:27	2025-11-10 20:27	FL30574	Srikar Yadala V
Folder	GLITR	2025-11-10 15:34	2025-11-10 15:34	FL30530	Srikar Yadala V
Folder	WaTurSheD	2025-11-10 15:32	2025-11-10 15:32	FL30529	Srikar Yadala V
Folder	[Redacted]	2025-11-10 12:08	2025-11-10 12:08	FL30472	Petter Resell



Type	Name	Created	Modified	ID	Owner
Folder	WaTurSheD_2025-10 [Redacted]	2025-11-08 23:21	2025-11-10 15:34	FL30461	Amelie Mia Helene Ferran
Folder	WaTurSheD_2025-06 [Redacted]	2025-11-10 14:33	2025-11-10 15:33	FL30518	Olav Romcke

# Structure Necessary metadata

Home / Shared / LabGroups / EPT - Fluids Lab\_SHARED / Templates & forms / Laser\_info Template View

Name: Laser\_info ✎ Tags: ✎ Unique ID: SD29684 i

Show last modified date

**Laser \*** ✎

**Location \*** New List of Materials ✎

**Sheet optics info \*** New List of Materials ✎

**Operating voltage/Current, etc \*** ✎

26A

## Attachments

Tap to expand listing.

Files

CREATE 🔔 ✉ 📍 📅 ☰ 📁 👤 ★ 🔗 📺 📷  🔍 ☰

Home / Shared / LabGroups / EPT - Fluids Lab\_SHARED / Templates & forms

<input type="checkbox"/>	Type	Name	Created	Modified	ID	Owner
<input type="checkbox"/>		<span>i</span> Camera_info <span>T</span> <span>🔗</span>	2025-10-31 15:58	2025-10-31 15:58	SD29685	Srikar Yadala V
<input type="checkbox"/>		<span>i</span> Laser_info <span>T</span> <span>🔗</span>	2025-10-31 15:57	2025-10-31 15:57	SD29684	Srikar Yadala V

Home / Shared / LabGroups / EPT - Fluids Lab\_SHARED / WaTurSheD / WaTurSheD\_2025-10-██████████ / Laser View (read permission only) 🔒

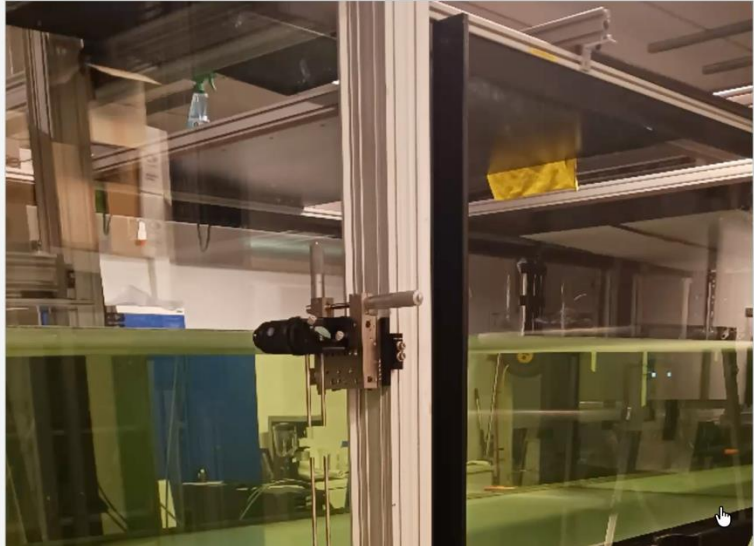
Name: Laser ✎ Tags: ✎ Unique ID: SD29686 i

Show last modified date

**Laser \***

Litron Nano L 200-15 LS-PIV 1 - S/N LM2970

**Location \*** New List of Materials



Ensures certain information  
is certainly recorded

# Flexibility Experiment



# Flexibility Experiment - Setup

CREATE 🔔 ✉ 📍 📅 ☰ 📁 👤 ★ 🔗 📄 📷

Home / GLITR\_2025-08\_WT-TBL [REDACTED]

<input type="checkbox"/>	Type	Name	Created	Modified	ID	Owner
<input type="checkbox"/>	📄	📘 Laser info	2025-08-12 15:06	2026-02-08 14:44	SD21770	Srikar Yadala V
<input type="checkbox"/>	📄	📘 Acquisition_20250808_Copy	2025-08-25 20:25	2025-08-25 20:25	NB23336	Srikar Yadala V
<input type="checkbox"/>	📄	📘 BL plate measurements	2025-08-15 13:43	2025-08-22 18:53	SD22158	Srikar Yadala V
<input type="checkbox"/>	📄	📘 LIF camera	2025-08-12 15:01	2025-08-12 15:26	SD21766	Srikar Yadala V
<input type="checkbox"/>	📄	📘 PIV camera	2025-08-12 14:55	2025-08-12 15:23	SD21763	Srikar Yadala V
<input type="checkbox"/>	📄	📘 HW_20250811	2025-08-11 18:35	2025-08-11 18:35	NB21658	Srikar Yadala V
<input type="checkbox"/>	📄	📘 Acquisition_20250808	2025-08-08 13:56	2025-08-08 13:56	NB21302	Srikar Yadala V
<input type="checkbox"/>	📄	📘 Acquisition_20250807	2025-08-07 13:55	2025-08-07 13:55	NB21137	Srikar Yadala V

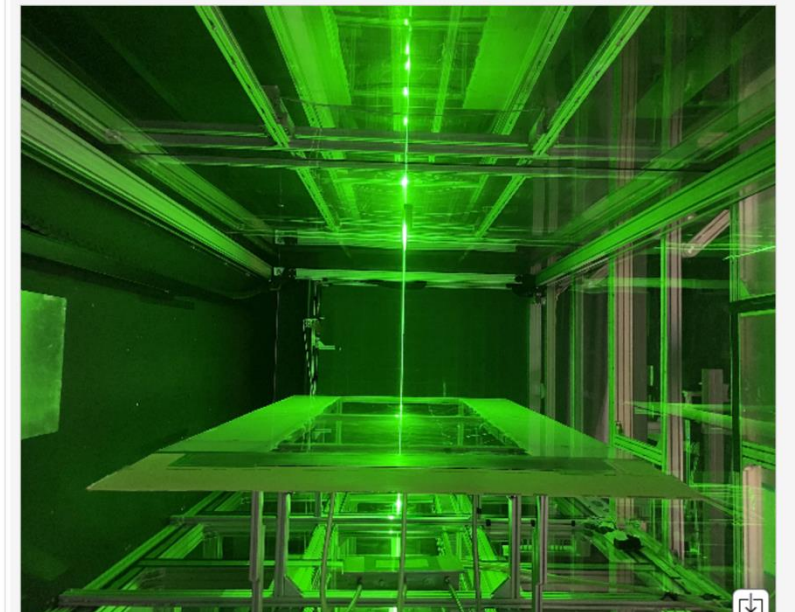
Forms

Lab notebooks

Upper surface of pate from tunnel floor = 65cm  
 Distance from turn-table plate's end and the LE = 58.6cm  
 LE to trip = 30cm  
 LE angle = 3.4deg

Trip height = 2.5mm total  
 Trip plate = 1mm  
 Angle of trip plate = 2.8deg

FOV is at centre of span = 90cm from either ends  
 Trip to start of FOV = 226cm  
 Trip to cross-hair on target (centre of FOV) = 235.1cm



# Flexibility Experiment - Cases

## Proposed workflow

- Project teams generate experiment-specific forms
- Consult with other project members and PIs

**Workflow ensures key run/case information is systematically recorded.**

Name: U12ms\_CaseC\_1

Tags:

**Case/File name**  
U12ms\_CaseC\_1

**Date**  
2025-08-08

**Time**  
10:56

**Velocity (m/s)**  
12.01

**VFD (RPM)**  
575

**Turbulence case**  
C (rand5)

**BL seeder SLPM**  
40.0

**Pitot & Temp measure done?**  
YES!!!!

**Pressure scanner measure done?**  
YES!!!!

**Imaging done and saved?**  
YES!!!!

**Anything to note?**  
Pressure scanner data taken after the rest of the data

# Our intended FAIR Open Science strategy

Electronic Lab Notebook (ELN)  
Missing piece of the puzzle

