

# TimeTubesX

## Interactive Feature Analytics

## Visualization

### Input

#### Data

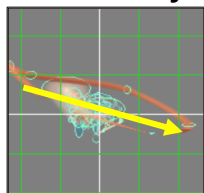
Observatory A  
Observatory B  
Observatory C  
...

#### Visual Data Fusion

### Feature and pattern detection

Automatic feature extraction

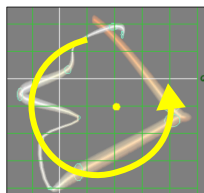
Anomaly



Flare

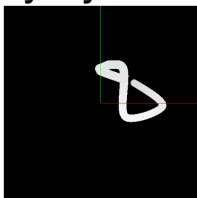


Rotation

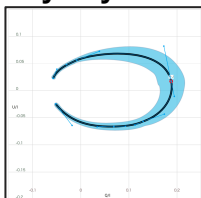


Dynamic visual querying

Query-by-example



Query-by-sketch



### Query matches: overview

Results are sorted by:



Distance



Timestamp



Data

etc.

### Query matches: detailed analysis

Screenshot

Timestamp

Comparative  
line charts

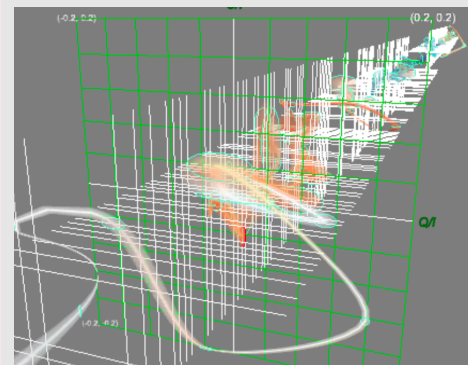
Distance

Rotation angle

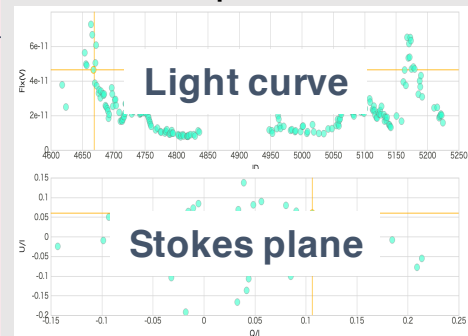
etc.

Fact-guided querying

### TimeTubes view



### Scatterplots view



Knowledge

Astronomer