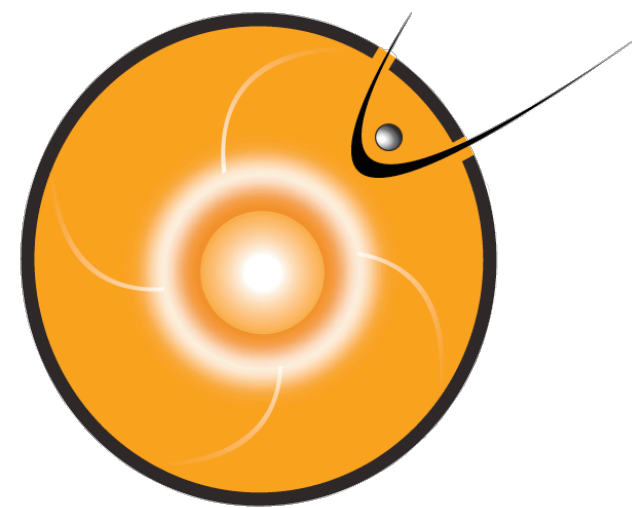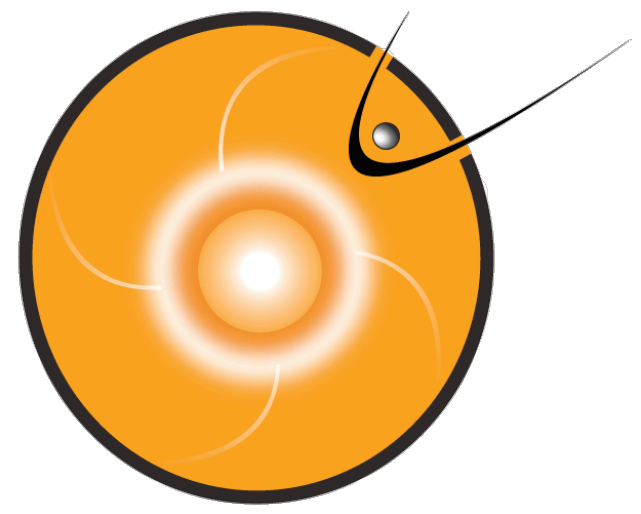# New Visualization and Analysis Tools for Magnetospheric, Heliospheric, and Solar Models

Presented by: David Hyon Berrios
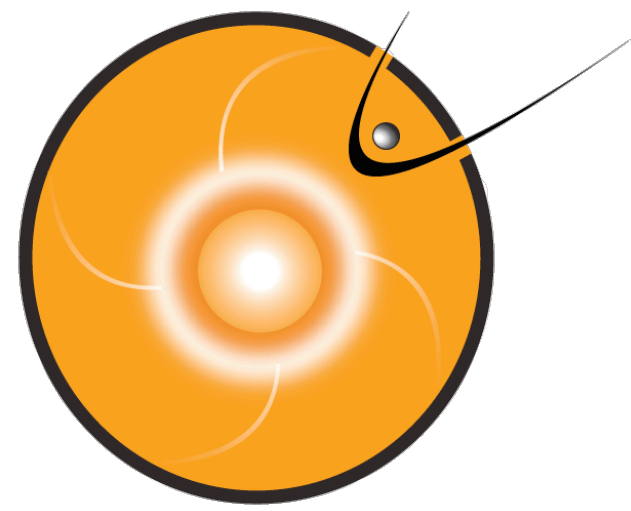
Community Coordinated Modeling Center
NASA Goddard Space Flight Center

Overview

- Introduction

- Kameleon library

- Space Weather Explorer

- Data streaming service

- Future

- Summary

Introduction

http://ccmc.gsfc.nasa.gov

Introduction•Kameleon•Space Weather Explorer•Data Streaming•Future•Summary

Software suite that consists of two parts

1. Conversion software

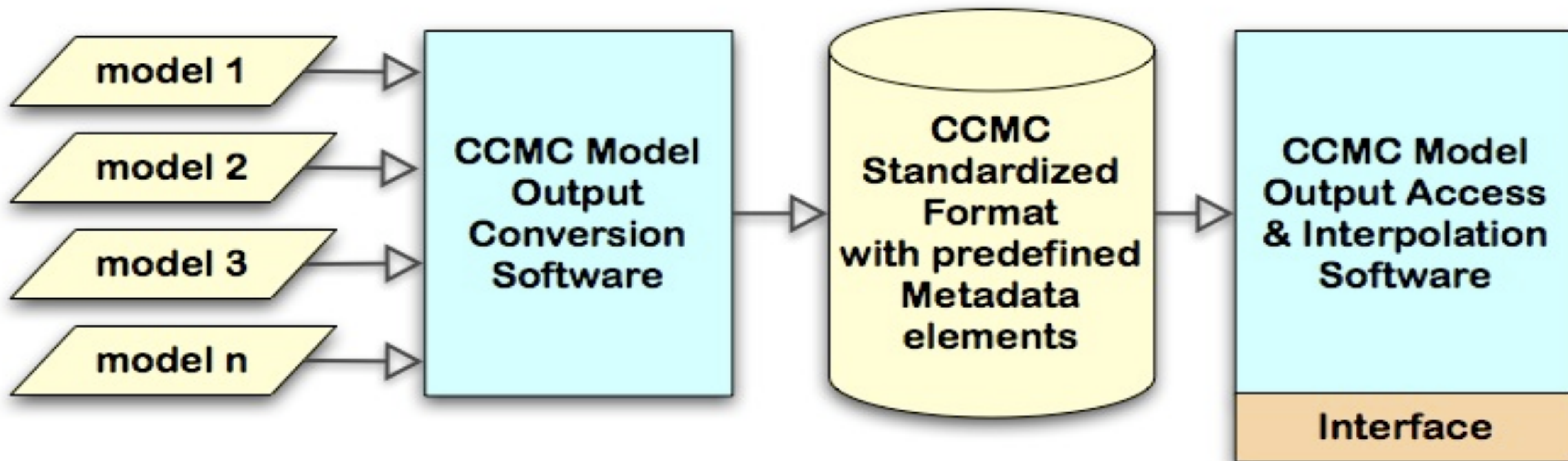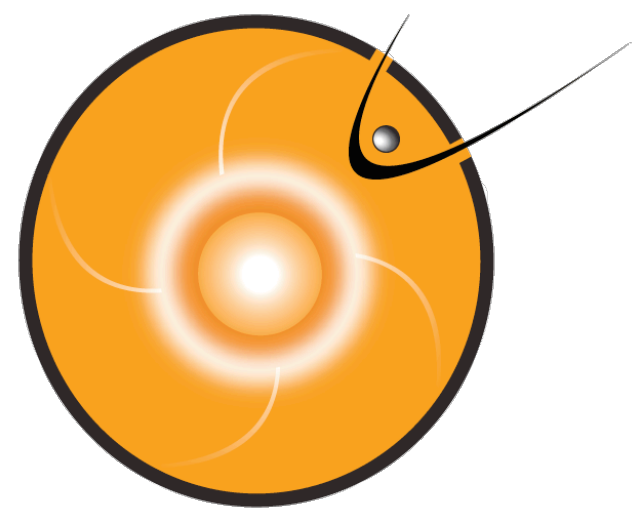2. **Access and interpolation software**
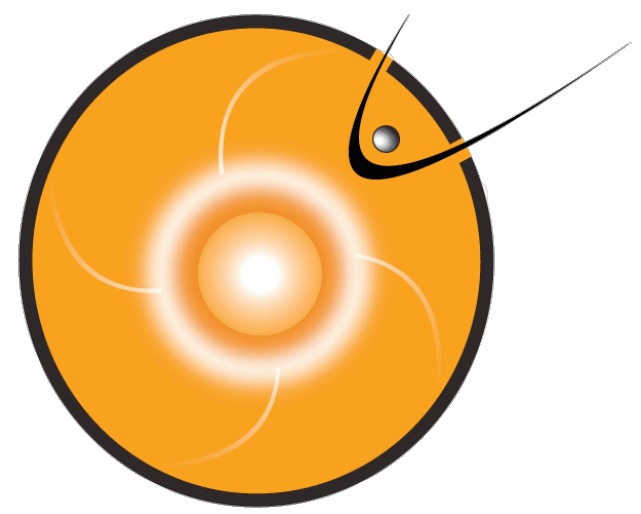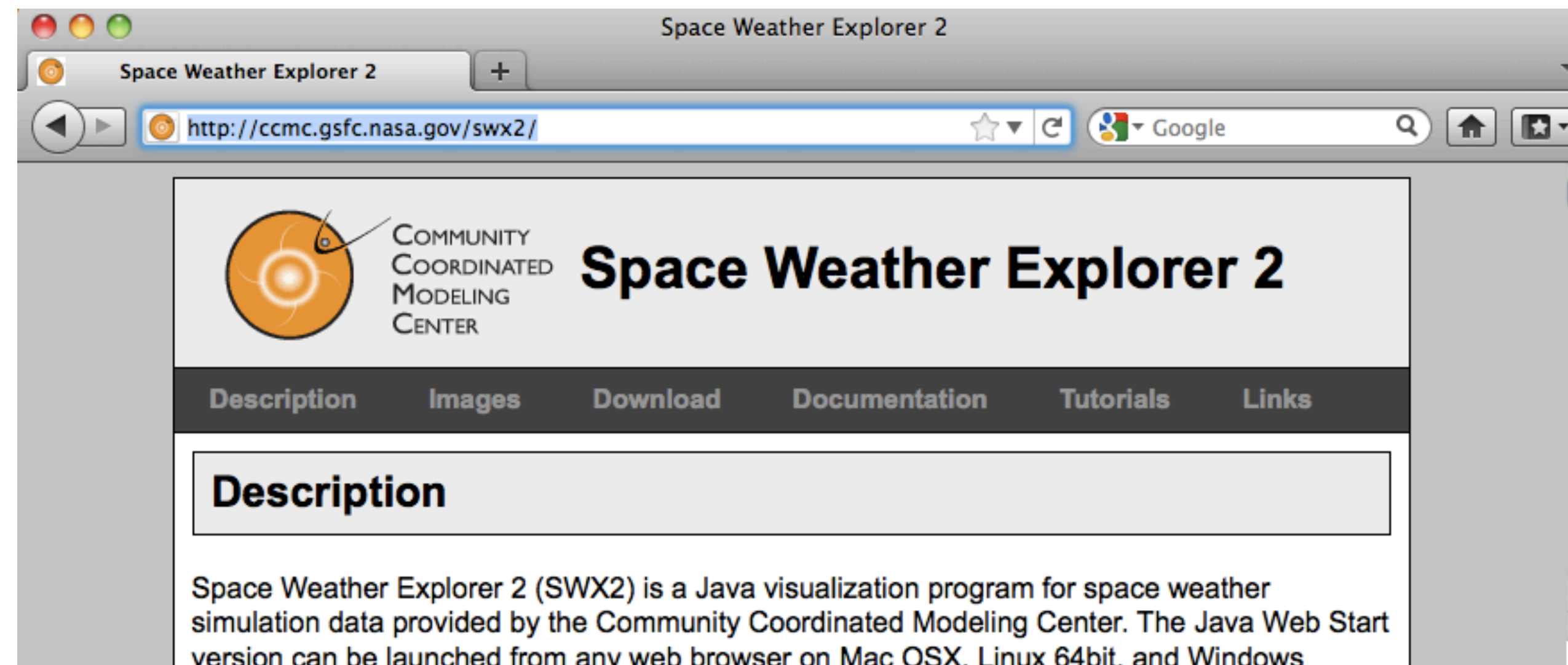
Kameleon Library

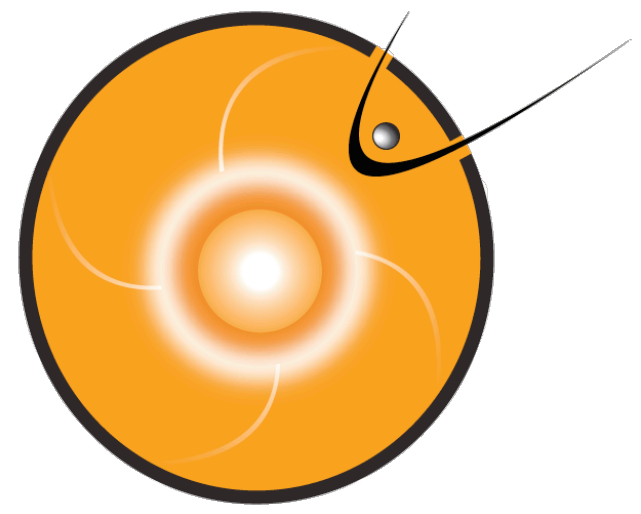Data access and interpolation library provides a single common interface for all supported models.

Space Weather Explorer 2

- Java-based 3D visualization program

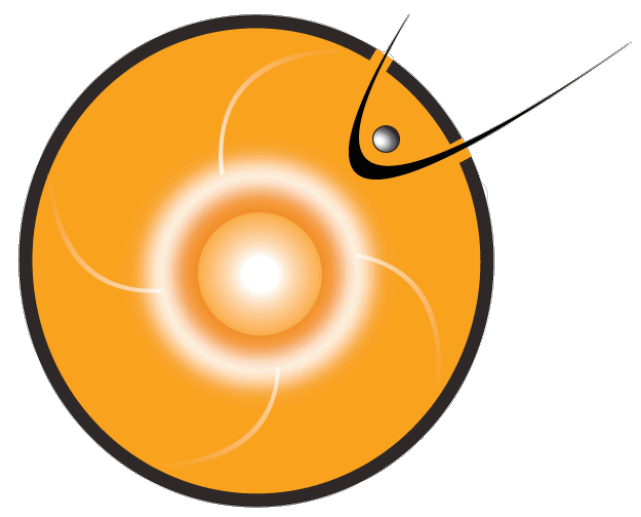- Supports multiple models

- Requires no installation!

Introduction●Kameleon●Space Weather Explorer●Data Streaming●Future●Summary
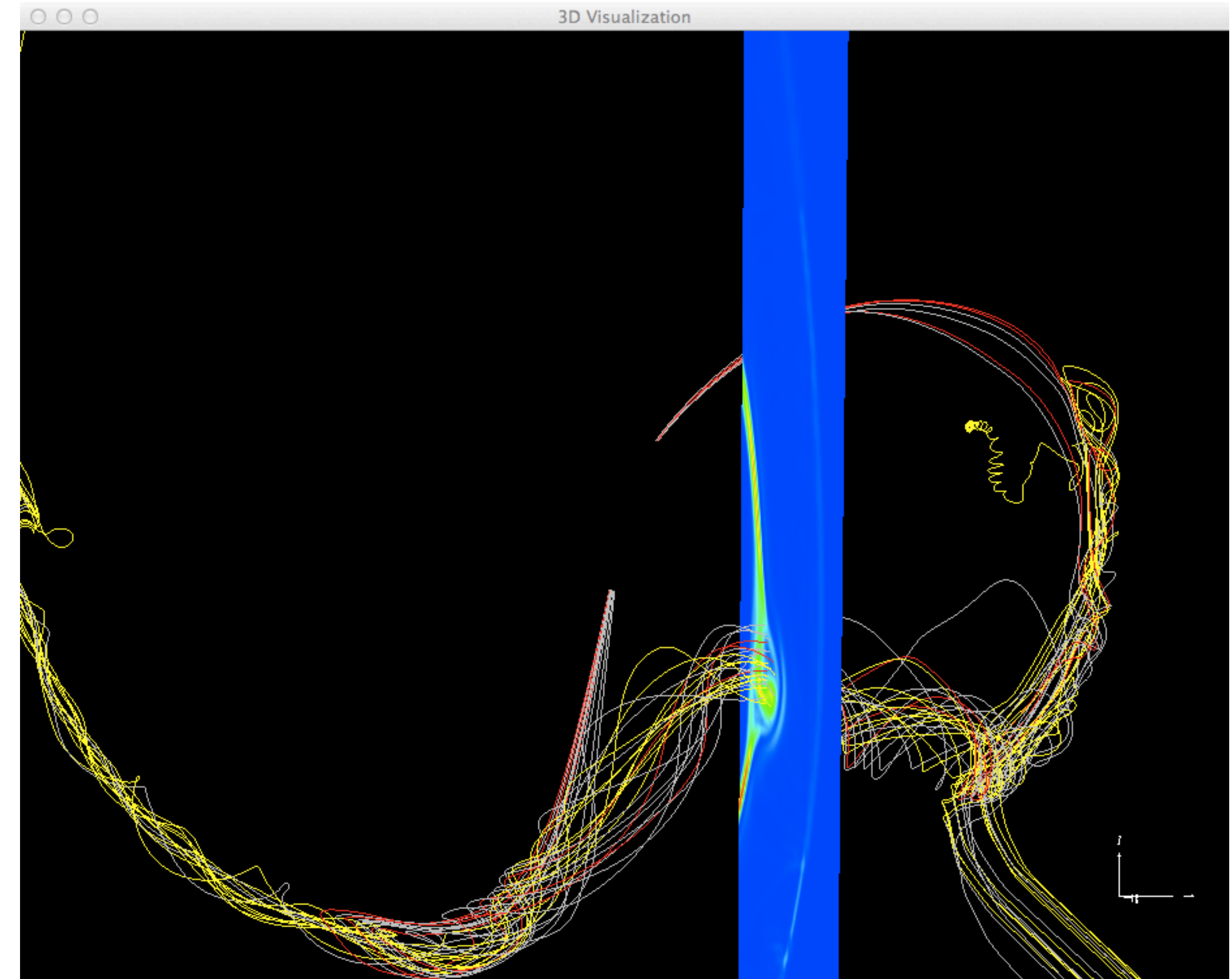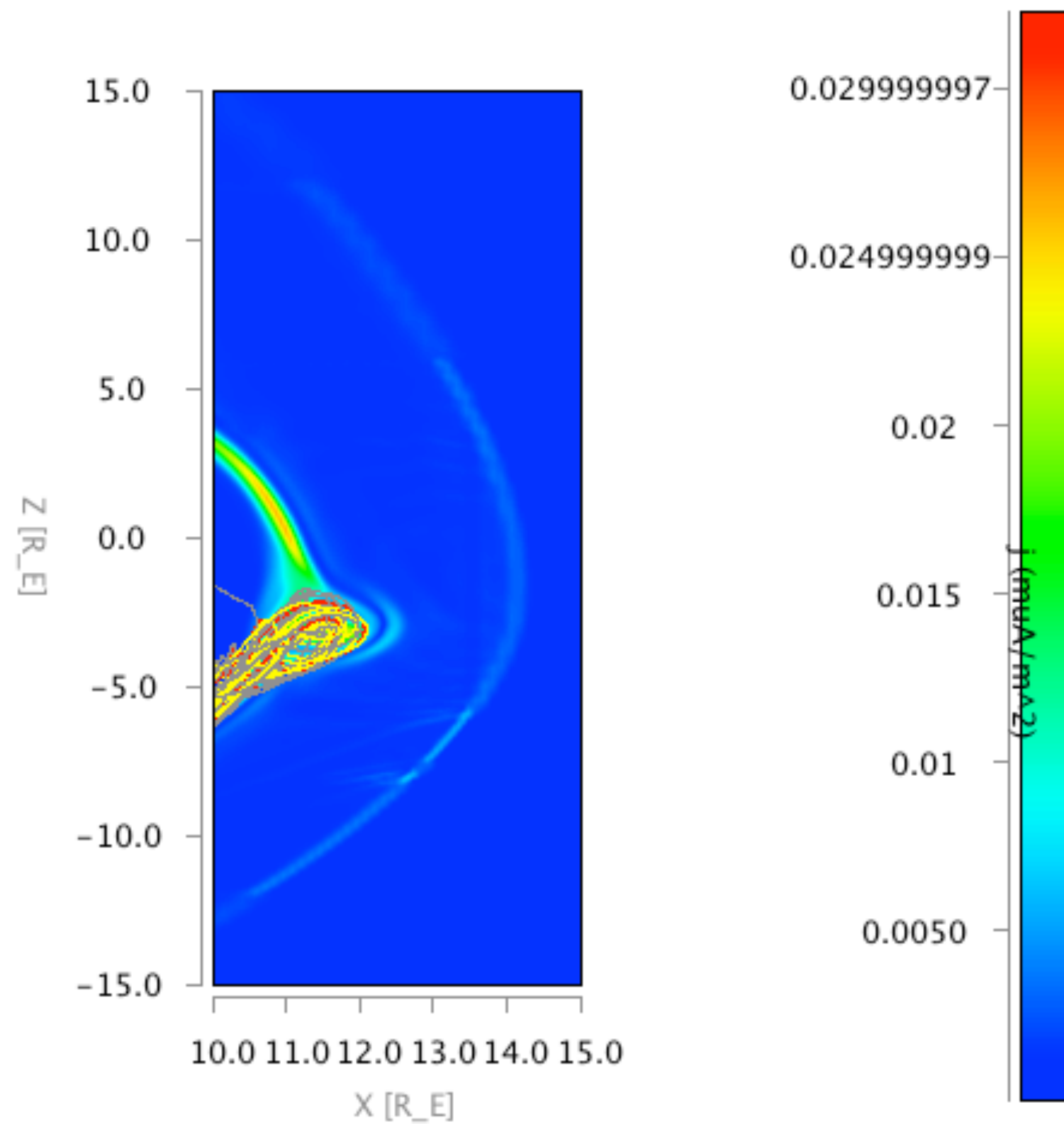
Space Weather Explorer 2

- 2D and 3D visualizations

- Support for multiple models

- Multiple ways of initiating fieldline calculations: clicking, importing

- Export saved state, images, seed position information

- Interactive and simple to use!

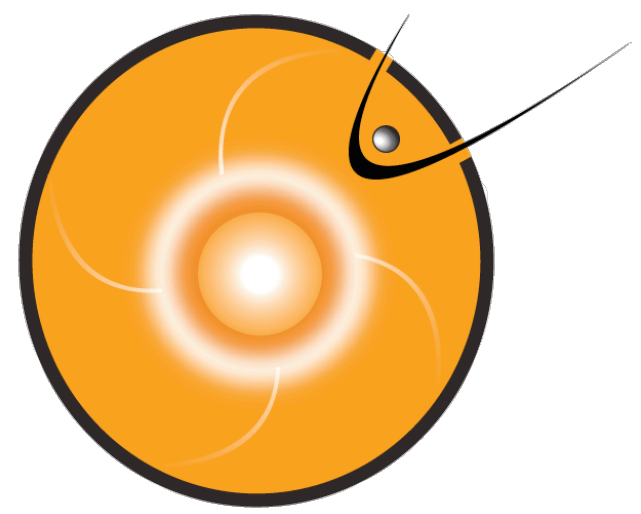Introduction●Kameleon●Space Weather Explorer●Data Streaming●Future●Summary

Space Weather Explorer 2

- 2D and 3D visualizations

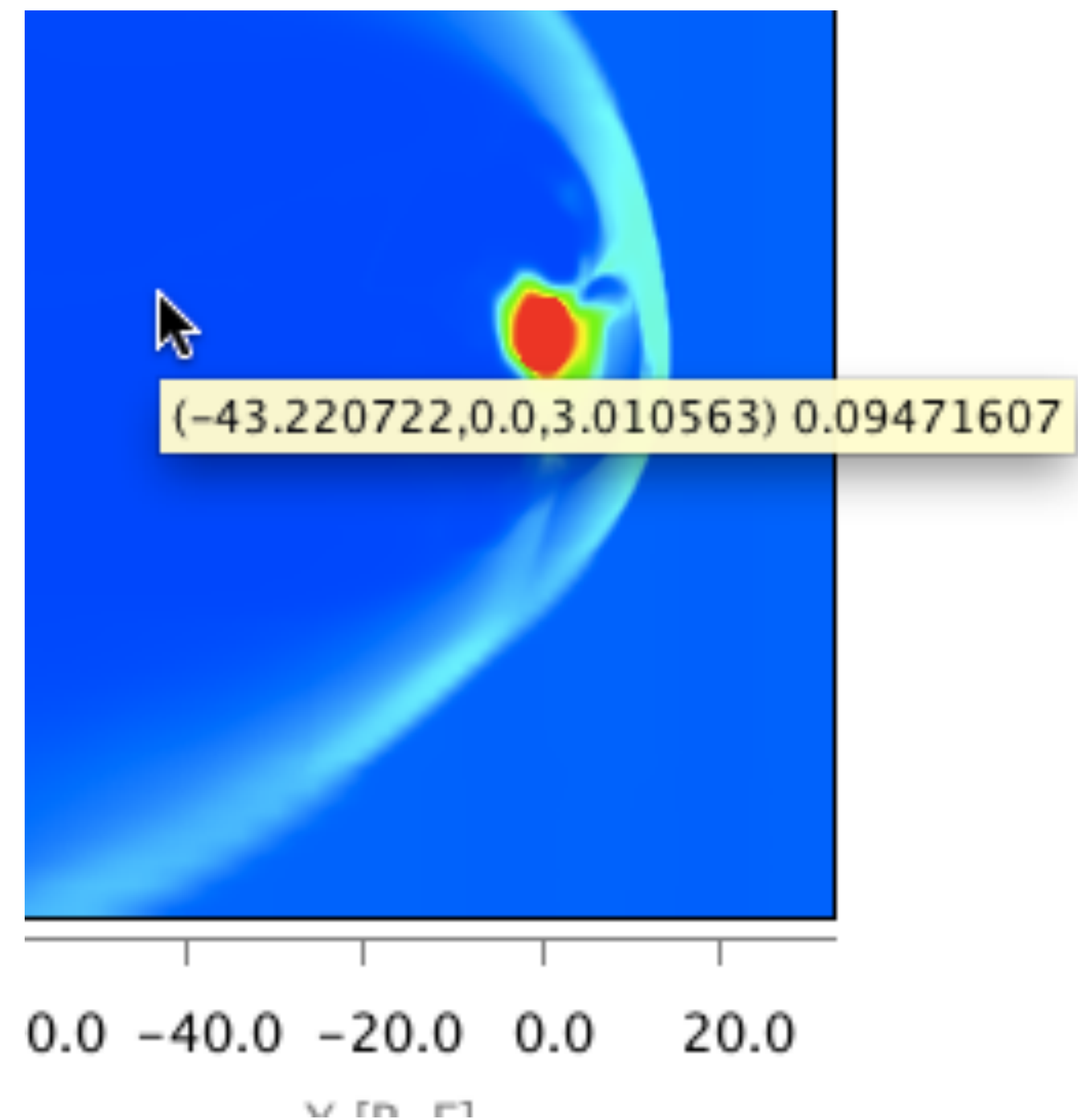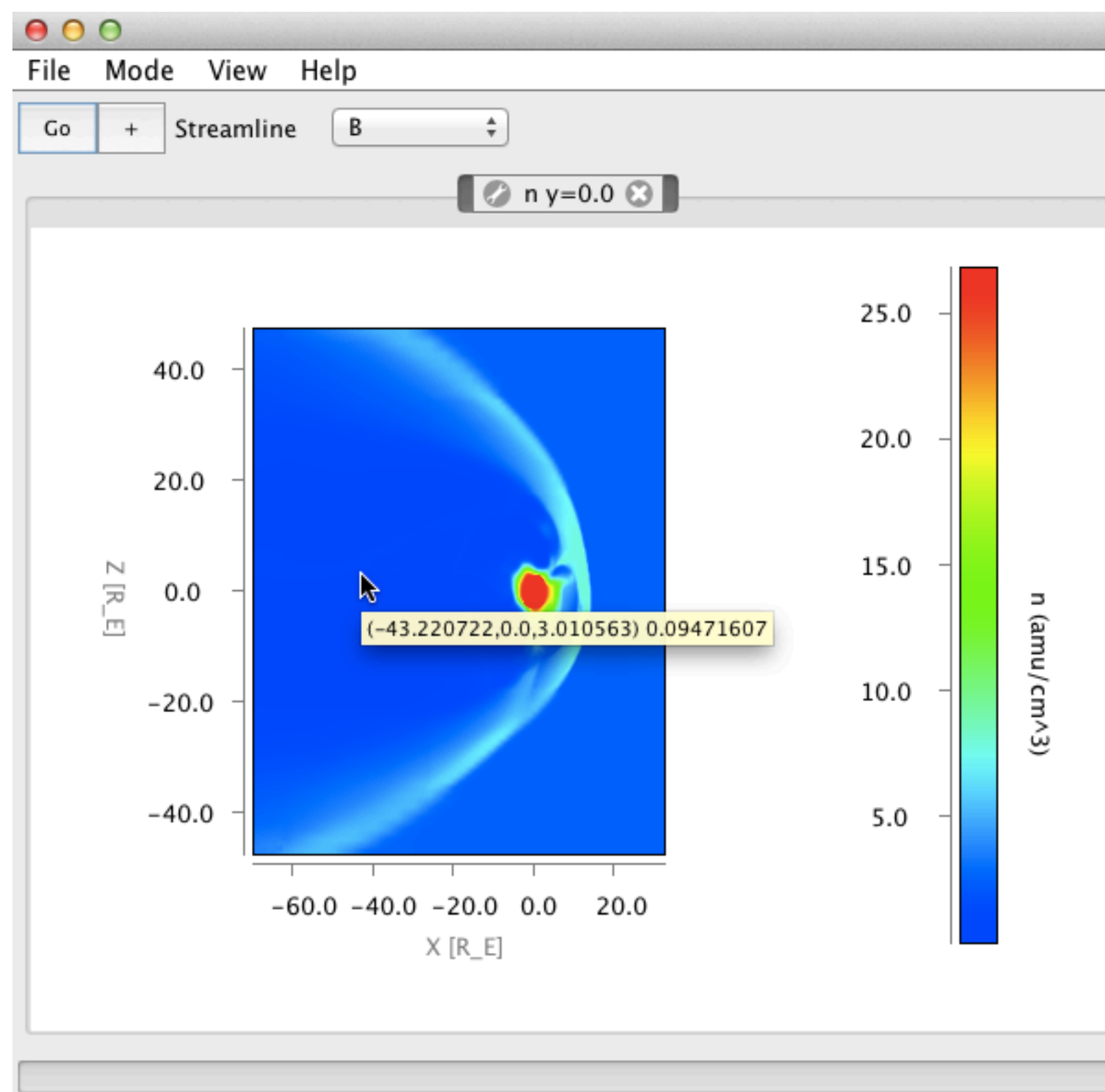Friday, January 20, 12

Space Weather Explorer 2

- Intuitive interaction
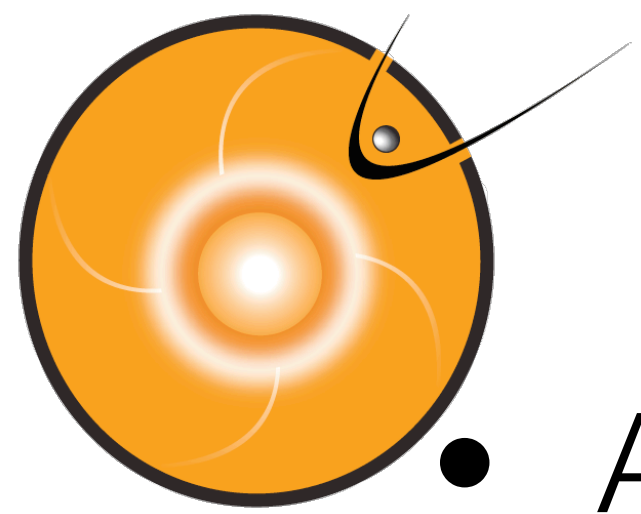
Data Streaming

- API to request interpolated data, visualization structures, and images

- Request encoded in URL to webserver

- Data processed on server using Kameleon

- Data sent to client in JSON or image format

JSON or Image

Request
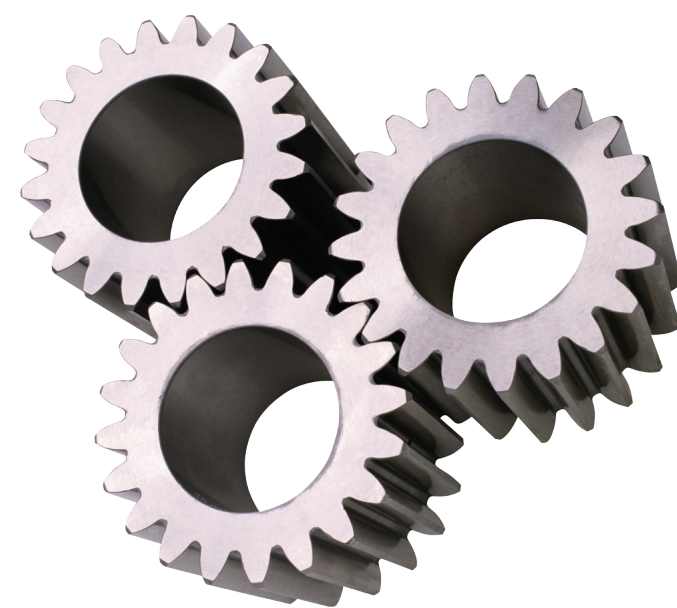
CCMC

Web-based visualizations

- WebGL and data streaming service

- Collaborative visualizations

Introduction●Kameleon●Space Weather Explorer●Data Streaming●Future●Summary

Summary

- Kameleon - http://ccmc.gsfc.nasa.gov
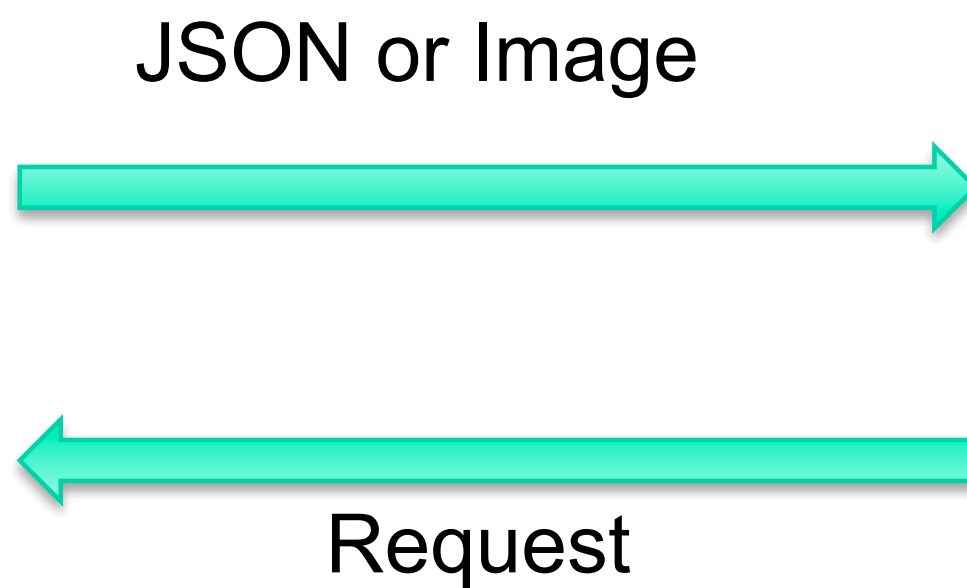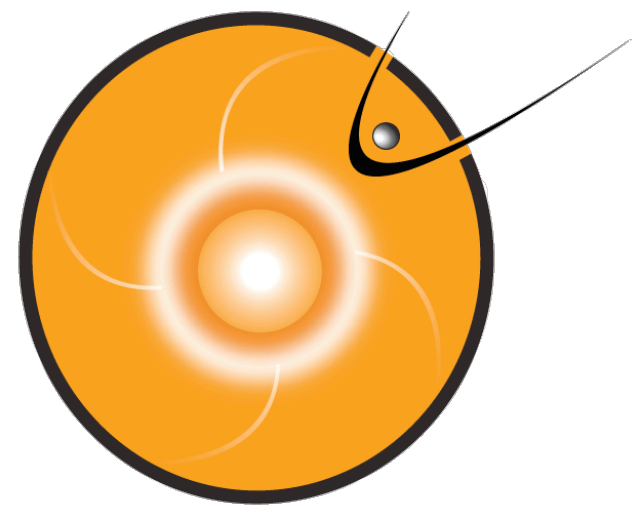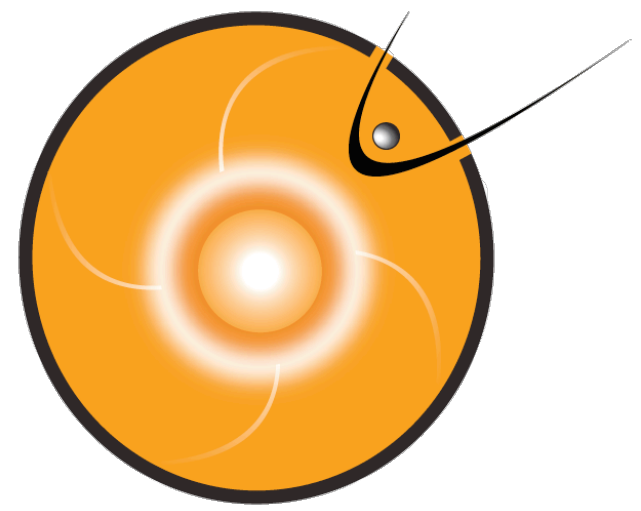
- Space Weather Explorer 2 - http://ccmc.gsfc.nasa.gov/swx2

- WebGL and HTML5 version of Space Weather Explorer - soon!

- Collaborative tools