

# **ATLAS GPU Training**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

# CUDA Programming Day 1

*Tuesday 31 October 2023 15:00 (3 hours)*

**Presenter:** BENTZ, Jonathan (NVIDIA)

Contribution ID: 2

Type: **not specified**

## CUDA Programming Day 2

*Wednesday 1 November 2023 15:00 (3 hours)*

**Presenter:** BENTZ, Jonathan (NVIDIA)

Contribution ID: 3

Type: **not specified**

# Python Programming for GPUs

*Thursday 2 November 2023 15:00 (3 hours)*

## Schedule

- **0:00** (30 min) Introduce the Python tools; see `lecture-slides.ipynb`
- **0:30** (20 min) Compute the Z mass in CUDA with Numba
- **0:50** (20 min) Introduce tree-reduction
- **1:10** (20 min) Students work on Project 1: parallel histogram filling
- **1:30** (5 min) *break*
- **1:35** (20 min) Review Project 1 solutions (*don't peek until you've tried it!*)
- **1:55** (20 min) Introduce random seeding of parallel algorithms
- **2:15** (20 min) Students work on Project 2: compute area by random sampling
- **2:35** (5 min) *break*
- **2:40** (20 min) Review Project 2 solutions (*don't peek until you've tried it!*)
- **3:00** *end*