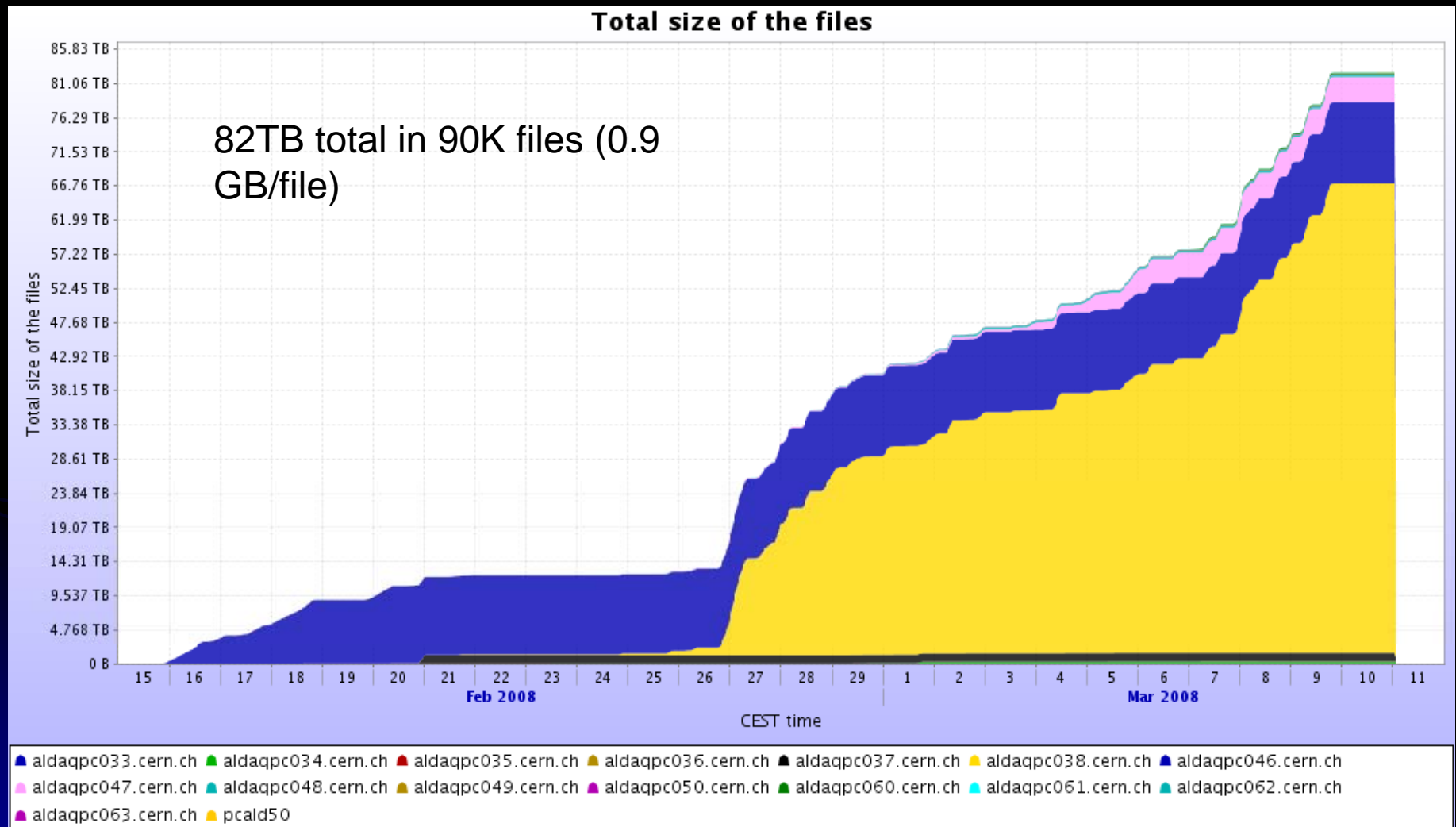




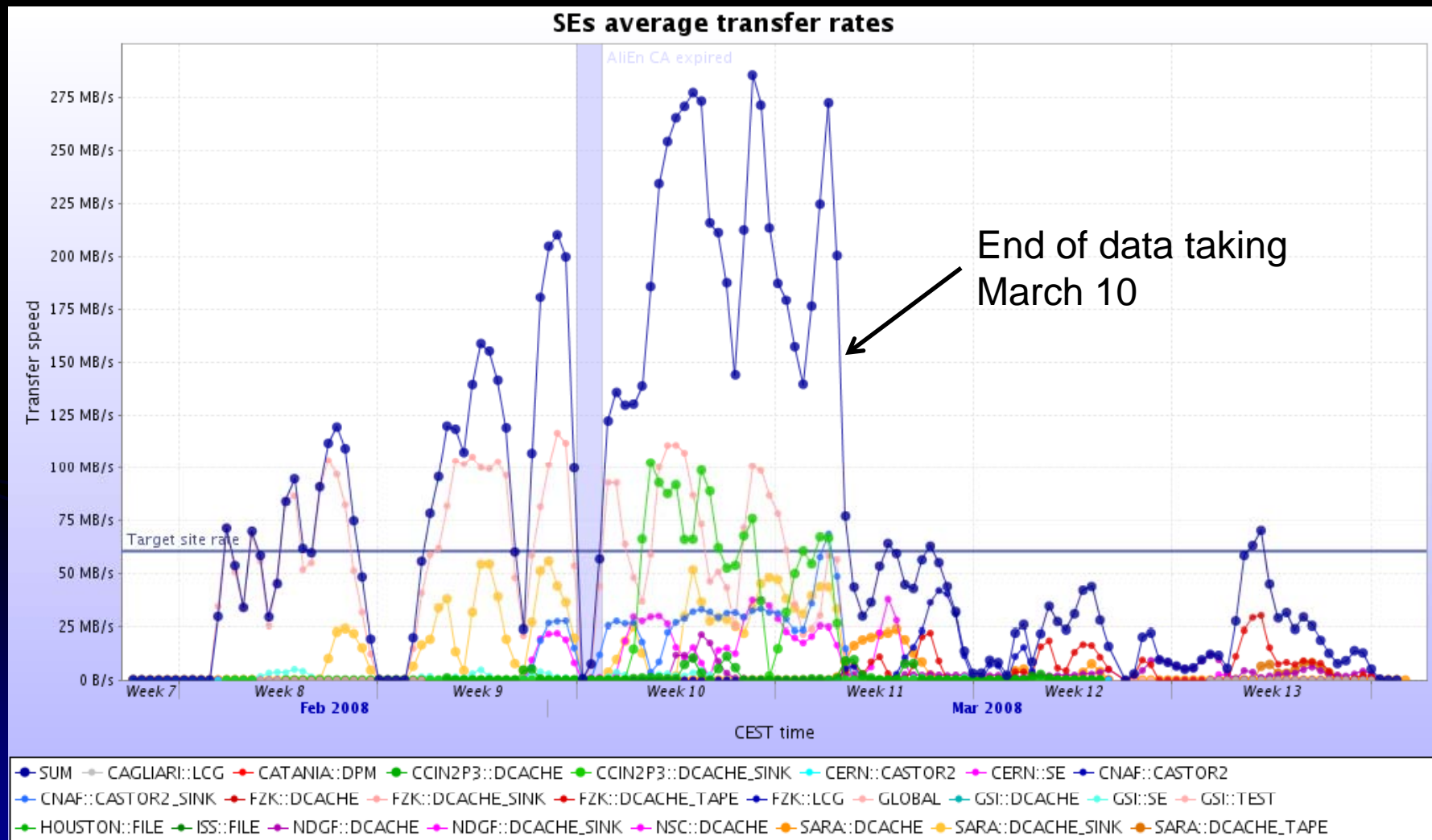
# ALICE update on February and plans for May phase of CCRC'08

Patricia Méndez Lorenzo  
April 1, 2008

# Data volumes - RAW

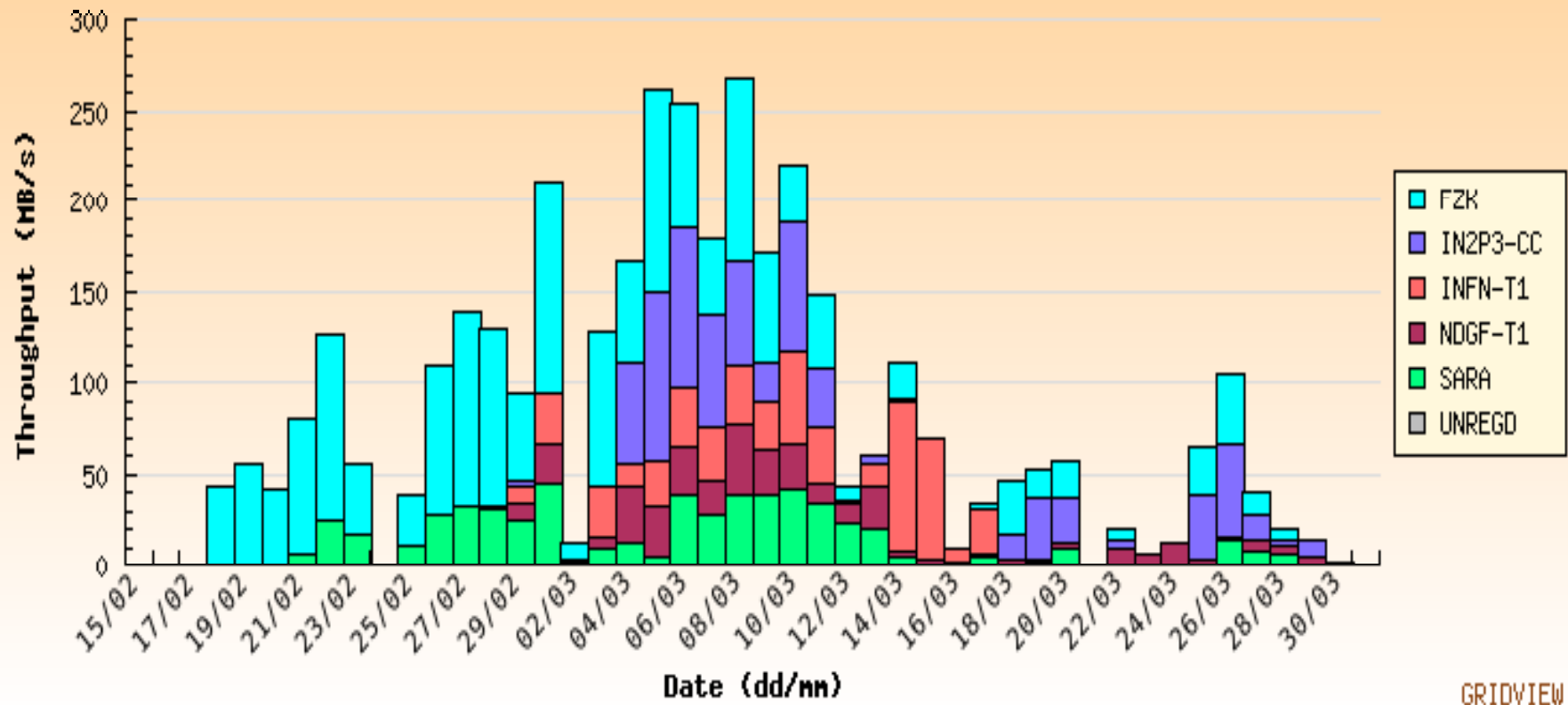


# Replication T0->T1



# Replication T0->T1

Averaged Throughput From 15/02/08 To 31/03/08  
Data Transfer For 'Alice' From All Sites To All Sites



GRIDVIEW

# RAW replication status

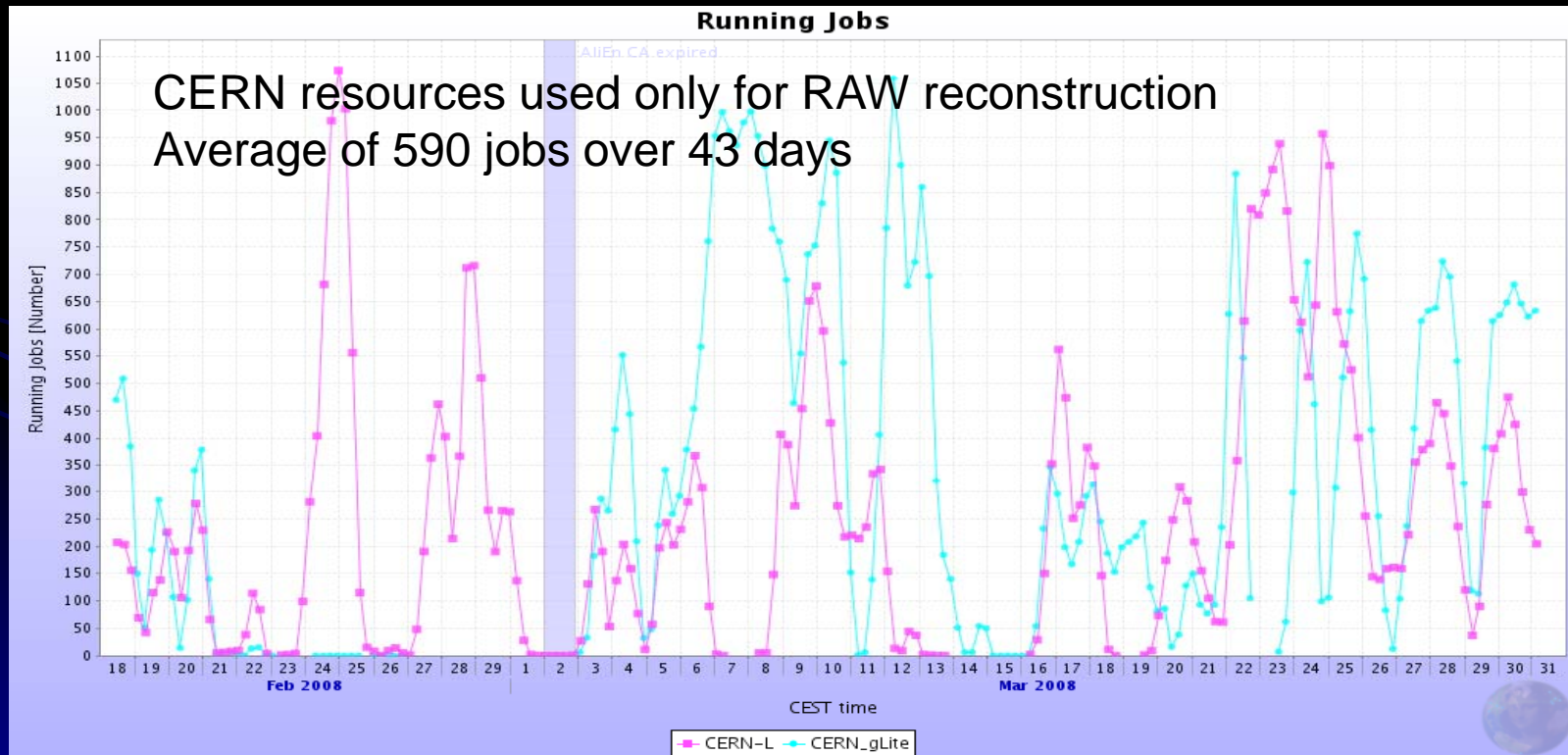
- The target rate of 60MB/sec was achieved, average over 3 weeks was **125MB/sec**
- Period beyond 10 March – leftover files, specific datasets replication to T2s (calibration data)
- 90% of the data was replicated quasi-online
- Simultaneous replication together with ATLAS/CMS and LHCb not a problem
- Short interruptions of transfers (up to one day) is manageable – the data is still ‘hot, on disk’ at the source

# xrootd-enabled storage elements

- **dCache** – stable, new development for support of advanced xrootd features is ongoing
  - CCIN2P3, GridKA, NDGF, NL-T1
- **CASTOR2** – stable (see side 8), most heavily used
  - CERN, CNAF
  - RAL – pending installation
- **dCache and DPM** at T2s (15 active SEs) – stable, used for MC production and user analysis

# RAW data production

- Ongoing – Pass 1 reconstruction@T0
- Special data taking regime – several updates of the reconstruction software



# RAW data production (2)

- Mixed submission – LCG RB and gLite WMS
  - Very good stability of WMS
- Issues – blocked jobs due to data access
  - RAW data (cosmics) contains few tracks, very quick reconstruction (high I/O component)
  - As a consequence – concurrent access to the same storage server by many jobs
  - Problem understood and fixed, deployment to the storage servers soon
  - In addition: improvements needed to ALICE job wrapper to stop the blocked process immediately



## RAW data production (3)

- Pass 2 reconstruction @T1s – pending
  - A repetition of pass 1 reconstruction from 15 April
  - Test of reading from SEs at T1s
- Reconstruction code updates (improved calibration algorithms) will allow to do pass1 @T0 and pass2@T1 simultaneously in May

# File sizes for SEs with MSS back-end

- RAW data – 10GB raw data chunks in May
- ESDs – 1GB (10% of RAW)
- AODs – 100MB (no consolidation) or up to few GBs (with consolidation, per run)
- User files – users are **strongly** discouraged from using SE with MSS back-end
  - Directed to use disk-based SEs, automatic file replication to another disk-based SE
- Implemented size threshold for SE
  - In production at CERN (threshold still low)

# Activities - April

- Storage

- Further deployment of storage at T2s
- Securing additional tape capacity @T1s for May exercise
- The current replicated data is to be kept

- Software

- Migration of all remaining VO-boxes to SLC4/gLite 3.1
- Exclusive submission to WMS
- Depending on their availability
- Migration of ALICE builds (AliEn and application software) to SLC4
- Preparation of 'May 1' release of application software

## Activities – April (2)

- Data taking
  - Preparation for ALICE Commissioning exercise #3 in May – specific emphasis on online detector algorithms (conditions data)
  - Development of ‘fast reconstruction’ mini-framework for RAW QA
    - Running on special DAQ managed online monitoring farm
- Data analysis
  - Continuous support of detector expert data analysis at the T2s and CAF

# Activities – May

- May period of CCRC'08 coincides with ALICE detector commissioning exercise #3
- Main activities
  - RAW data taking and replication to T1s
    - Special emphasis on monitoring of T1 tape performance for simultaneous replication and reconstruction
  - Quasi-online Pass 1 reconstruction at T1 with full complement of calibration/alignment detector algorithms and data QA
  - Pass 2 reconstruction at T1s with second-order conditions data resulting from Pass 1 reco
  - Replication of ESDs to T2 for immediate detector experts analysis
  - Replication of RAW, ESDs and special runs to CAF

## Activities – May (2)

- All activities will be detector-centric, allowing for quick analysis of the RAW data
- Expected substantial improvement in detector calibration, alignment and QA algorithms following the analysis of the data taken in February
- Rate test of T1 SEs for simultaneous replication and reconstruction
- Data rates and volumes – similar to February exercise
  - ~80TB of RAW, 60MB/sec total rate out of CERN
  - No changes foreseen of the T1 SE structure
  - Precise figures per T1 centre are being prepared

# Summary

- For ALICE, the February phase of CCRC'08 exercise was very useful
- It has ensured a good and fast respond of the sites and experts in terms of services and support
- The FDR mode will continue in May together with the CCRC08 challenge phase
  - The 3 phases of the FDR will be in placed during the 3rd commissioning exercise
- Reconstruction at T1 and analysis will be crucial points during this new exercise