



ESA - MOST Dragon 2 Programme

**2011 DRAGON 2 SYMPOSIUM**

中国科技部-欧洲空间局合作“龙计划”二期

“龙计划”二期2011年学术研讨会

# **Project Summary**

## **5317 Urbanization**

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- Object-based rule-based approach was developed for classification of multisensor SAR data in urban areas
- Supervised and Unsupervised methods were investigated for urban change detection using multitemporal SAR & optical data
- Fusion of ENVISAT ASAR and Chinese EO data were evaluated for urban land cover mapping
- Multiple Chinese EO data were evaluated for urban land cover mapping using multiple classifiers
- Spatial-temporal patterns of urbanization in the Greater Shanghai Area was analysed

- SAR data coverage for large areas are difficult to acquired due to conflicts
  - Recommendation: possibility to give priority to areas with lack of coverage
  
- Optical data coverage for large areas is also difficult to collect due to cloud cover
  - Recommendation: possibility to give easier access to all Chinese EO data including Beijing-1

- **2** papers in the Dragon 2 Midterm Symposium Proceedings
  
- **2** papers on peer-reviewed journals
  - Computers, Environment and Urban Systems, 2011
  - IEEE Journal on Selected Topics in Applications of Earth Observation and Remote Sensing, 2011
  
- **9** Papers in international conferences
  - JURSE 2011 Special Session (5)
  - ESA Living Planet 2010 (2)
  - ISPRS Technical Commission VII Symposium -100 Years ISPRS Advancing Remote Sensing Science (1)
  - 2011 IEEE Geoscience and Remote Sensing Symposium (1)
  
- **One Special Session** at the 2011 Joint Urban Remote Sensing Event in Munich, May 2011.

- Refine the methods developed for urban cover mapping & change detection
- Integrate the methods and results from partners
  - Urban extents from UNIPV, segmentation from KTH, classification from BNU and CUMT
- Apply the methods to the the widest possible coverage we have (according to SAR and optical data acquisitions) for JingJinJi, Yangtze River Delta and Pearl River Delta
- Perform a more detailed environmental impact assessment
- Plan for Dragon 3 Urbanization