Quick Hints for INCITE 2013

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INCITE: Innovative and Novel Computational Impact on Theory and Experiment

INCITE promotes transformational advances in science and technology through large allocations of computer time, supporting resources, and data storage at the Argonne and Oak Ridge Leadership Computing Facilities (LCFs) for computationally intensive, large-scale research projects.

Allocation Programs at the LCFs

	60% INCITE		**30%** ALCC		**10%** Director's Discretionary	
Mission	High-risk, high-payoff science that requires LCF-scale resources*		High-risk, high-payoff science aligned with DOE mission		Strategic LCF goals	
Call	1x/year – (Closes June)		1x/year (Closes February)		Rolling	
Duration	1-3 years, yearly renewal		1 year		3m,6m,1 year	
Typical Size	30 - 40 projects	10M - 100M core-hours/yr.	5 - 10 projects	1M – 75M core-hours/yr.	100s of projects	10K – 1M core-hours
Review Process	Scientific Peer-Review	Computational Readiness	Scientific Peer-Review	Computational Readiness	Strategic impact and feasibility	
Managed By	INCITE management committee (ALCF & OLCF)		DOE Office of Science		LCF management	
Availability	Open to all scientific researchers and organizations *Capability >20% of cores*					

Twofold review process

	New proposal assessment	Renewal assessment
Peer review: INCITE panels (1)	• Scientific and/or technical merit • Appropriateness of proposal method, milestones given • Team qualifications • Reasonableness of requested resources	• Change in scope • Met milestones • On track to meet future milestones • Scientific and/or technical merit
Computational readiness review: LCF centers (2)	• Technical readiness • Appropriateness for requested resources	• Met technical/ computational milestones • On track to meet future milestones
Award Decisions	• INCITE Awards Committee comprised of LCF directors, INCITE program manager, LCF directors of science, sr. management	

Proposal form: Outline

#	
1	Principal investigator and co-principal investigators
2	Project title
3	Research category
4	Project summary (50 words)
5	Computational resources requested
6	Funding sources
7	Other high-performance computing support for this project
8	Project narrative, other materials
	(A) executive summary (1 page)
	(B) project narrative, including computational readiness, job characterization (15 pages)
	(C) personnel justification (1 page)
9	Application packages
10	Proprietary and sensitive information
11	Export control
12	Monitor information

INCITE 2013 – Mira and Intrepid

Up to 3B core-hours available

- Mira is committed to go live for INCITE on October 1, 2013 with 768M core-hours for allocation
- Start date of production INCITE time is likely to happen earlier in CY 2013

- 732M core-hours available on Intrepid

Allocations 100-300M

- Guidance for INCITE 2013
  - Propose science based on a 3B core-hour pool, 100-300M per project
  - 2013 INCITE Allocation scenarios

    | 768M |
    | 2B core-hours |
    | 3B core-hours |

- Intrepid allocations in 10s of millions

2012   **2013**

Q1 2012	Q2 2012		Q4 2013
T&D	Mira Deployment	
T&D Access		
Possible Mira	Early User Access	
	Possible INCITE	**INCITE**
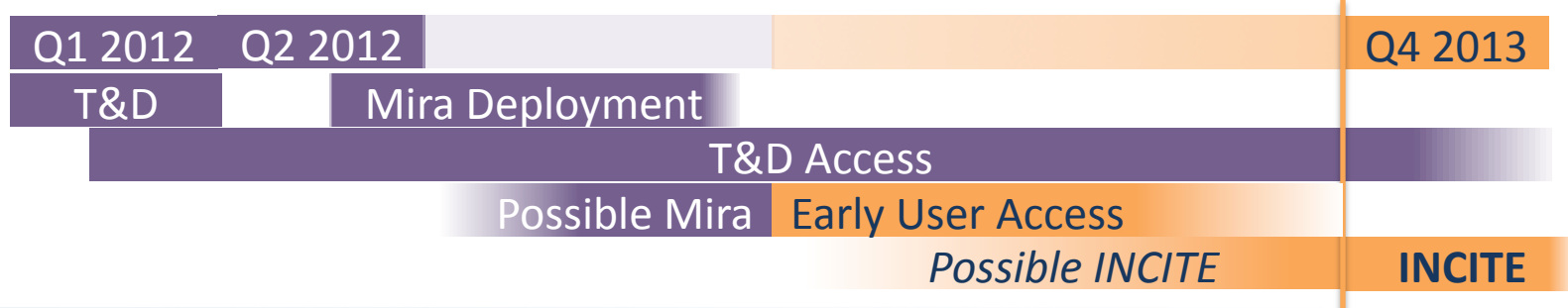
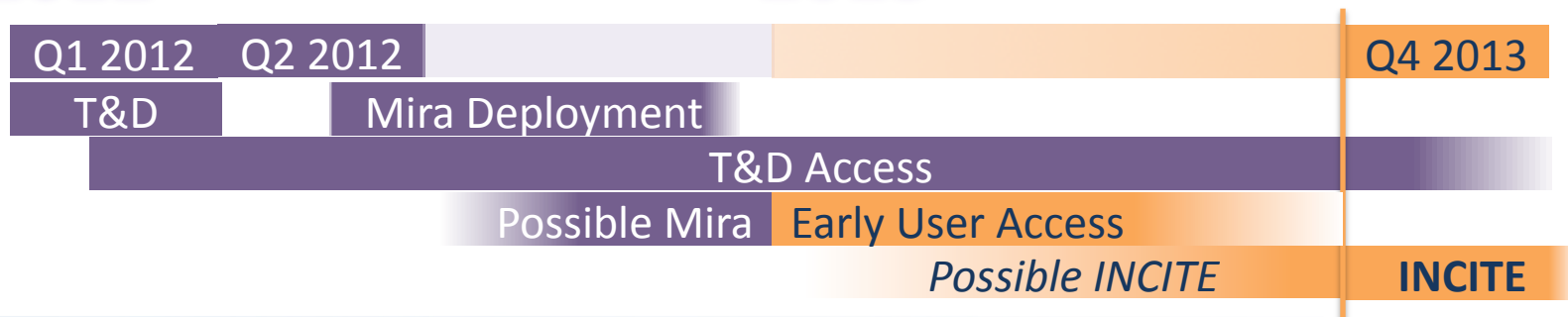# Some Considerations for 2013

Science Case

- Build your science case assuming the allocation pool
- Clearly articulate how you adjust the plan as time is cut
- Make a clear case for intentions on each resource requested
- Readiness required for each resource requested
- Multi-year proposals require a multi-year plan

Computational Readiness

- Mira readiness
  - Scaling on Intrepid
  - Porting to a Q system (vesta)
- Get on the T&D
  - Important for INCITE proposal preparation, especially computational readiness on BG/Q
- Intrepid readiness like normal
  - Show porting, scaling, performance, workflow and development plans

2012 **2013**

Q1 2012	Q2 2012			Q4 2013
T&D		Mira Deployment		
	T&D Access			
	Possible Mira	Early User Access		
		Possible INCITE		INCITE

Questions…

- There is no linear-burn-rate requirement. Campaigns are fine. Communication with ALCF is extremely helpful.

- You can request time on Mira and Intrepid (and Titan).

- Multi-year awards will not be awarded for Intrepid.
  - Do not plan on Intrepid past 2013

- INCITE is not over-allocated. We allocate the hours committed.

- Capability on Mira is 8,192 nodes (131,072 cores).

- *Other questions?*