G (le i	lo :	l* c	lo : 0	I - 1 0	lve i	lo nu		le ur	0:1/0 11.1	In	lo 1 (b) . 1
Conference Year	Education and Public Outreach	Science Data Pipelines	Information Technology	Science & Analysis	Telescopes & Observatory Operations	Virtual Observatory	S/W Development Methodologies	Sky Surveys	Enabling Technologies	Grid/Parallel Computing	Data Archives	ry/Transient Science
1998	Outreach		Y	Y	Y		Methodologies		Y		Y	Science
1999			Ý	Ý	Ý		Y	Y	Ý		<u> </u>	
2000	Y	Y					Y	Y	Y			
2001		Y	Y	Y		Y			Y			
2002	Y	Y	Y	Y	Υ	Y	Υ	Y	Y			
2003		Y		Y	Y	Y				Y	YY	
2004				Y	Y	Y						
2005		Y	Y		Y	Y		Y	Y	Y	Y	Y
2006		Y	Y				Y			Y		Y
2007				Y		Y				Y	Y	
2008				Y			Y	Y	Y			
2009						Y	Y	Y	Y		Y	
2010	Y			Y	Y	.,	.,			Y		Y
2011				Y	Y	Y	Y			Y		Y
2012	У			Y	Y				Y	Y	Y	Y
2013			L	Y	Y	on the media th	Y	the veen	Y	L		
	Variations on the main themes throughout the years Education Science Data Astrostatistics Data Analysis Observatory The Virtual Scripting Sky Surveys Computation High Archiving(199 Solar Eclip										Color Eclipso	
	Education and Public		and	(1998)	Observatory Planning,	The Virtual Observatory	Scripting Languages	Sky Surveys (1999,	Computation Infrastructure	High	(8)	(2005)
	Outreach(200		Databases	(1990)	Scheduling,	(2001, 2004)		2000,2002)	and Future	Computing(2	(8)	(2003)
	0, 2010)	0)	(1998)		Telescope	(2001, 2004)	(1333)	2000,2002)	Technologies	003)		
	3, 2010)		(1550)		Control	1			(1998)	""	[
[1	(1998)				(1990)			
	Outreach and	Calibration &	Information	Computationa	Queue	Virtual	Software	Optical	Enabling	Parallel &	Large Scale	Solar
	Education(20	Pipeline	Services	I Astrophysics	Scheduling	Observatory	Development	Surveys(2005		Distributed	Data	Neighborhood
	02)	Reduction	(1998)	(1998)	(1999)	Technologies	Methodologies) -,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1999,2000,	Computing(2	Management(and Planetary
	1/	(2001)	()	(,	()	(2002)	and		2001, 2002)	005)	2003)	Astronomy
		<u> </u>	1			`	Technologies			/		(2006)
							(1999, 2000)					(====)
	Web Servisce	Calibration(2	Distributed	Image	Telescope and	Virtual	Software	Footprints &	Tools &	Modern Grid	Surveys &	
	and	002)	Data Systems	Processing	Observatory	Observatory	Applications	Mosaics(2007	Techniques(2		Data	
	Publications	,	and Services	and Data	Operations	Interoperabili	(2000))	005)	Astronomy	Management(Solar
	(2002)		(1999)	Visualization	(2002)	ty(2002)	(ļ′		(2006)	2003)	Astronomy(2
	, ,		<u> </u>	(1998,2007)	` ′	' '				<u> </u>	'	010,2011)
	Visualization	Data	Information	General	Control	Virtual	Software History	Future Large	Web	HEP	Data Quality	
	and Software	Management	Technology	Analysis	Systems(2003	Observatory	(2000)	Projects(2008	Technologies(Computing(2	&	Enabling
	for EPO and	&	(2001)	(1999))	and Archives)	2008)	007)	Fidelity(2005)	Transient
	Public Affairs	Pipelines(200				(2002)						Research
	(2012)	2)										(2012)
	Community	Data	Database	Science &	Instrument	VO	Software	Time Domain	Commonly	Grid & Grid	Data	
	Development	Processing	Systems(200	Analysis	Modeling(200	Resources(20	Development &	Astronomy(2	Available	Virtualization(Archiving &	
	(2012)		2)	(2001)	3)	03)	Testing(2002)	009)	development	2010)	Preservation(Computing
		3)							environments		2007)	for the Solar
									& tools(2009)			System
												(2012)
		Pipelines &	Information	Algorithms(2	Great Space	Surveys,	Architectures for		Astronomy	GPUs in	Reusable	
				002)	Observatories	Archives, &	Large		Apps for	Astronomy	Archive	
		05)	5)		(2004)	VO (2003)	Astronomy		Handheld	and Beyond	Technologies(
							Software		Devices	(2011)	2009)	
							Systems (2006)		(2012)			
		Advances in	Challenges &	Data Analysis	Large	VO in	Quality		User	Cloud	Enabling	
		Imaging and	Solutions for	Software and	Observatory	Transistion	Management in		Interfaces	Computing	Large Catalog	
		Calibration	very large	Algorithms	Challenges(20	(2005)	Astronomical		(2013)	and	Search	
		Algorithms	data(2006)	(2002)	10)		Data				(2012)	
		(2006)	[Management Systems(2006)			(2011)	1	
	1			Image	Planning,	VO Science	Software		Emerging	Extreme-	Enhancing	
			1	Restoration(2	Scheduling,	(2005)	Engineering in		Technologies	scale	Science	
			1	003)	and Operating	(2003)	Astronomy(2008		(2013)	computing -	Return with	
			1	""	Observatories)		(_015)	GPUs/Clouds	Scientific	
			1		(2011)		ľ			(2012)	Archives	
			1		(/					()	(2012)	
			1	Algorithms &	Large Ground	VO Standards	"Most			1	Challenges	
				Classification(Based	and Sevices	dangerous"			1	with Modern	
				2003)	Observatories		process, design			1	Archives	
				1	and Telescope	l. ,	&			1	(2012)	
			1		Arrays (2012)		implementation			1	Ι΄ ΄	
			<u></u>			<u></u> _	errors(2009)			<u></u> _		
				Detection		Web Services	Long Term					
			[Algorithms		and the	Preservation of				1	
			[(2004)		Virtual	Analysis				1	
					Ground Based		Capabilities in			1	1	
					Observatories	2007)	Astronomy			1	1	
					(2004, 2013)	-	Software(2011)					
				Imaging	Space based	Virtual	Software and					
			[Algorithms	observatories	Observatory(Languages				1	
L				(2004)	(2005, 2013)	2009,2011)	(2013)					
				Image							_	
				Processing &						1	1	
			1	Mosaics(2007						1	1	
				D		<u> </u>						

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				Algorithms & Image Processing(20 07)								
				Data Mining(2007)								
				Astronomical Algorithms(2 008)								
				Scientific Computing(2 010)								
				Cross Catalog Matching(201 0)								
				Statistical Data Analysis and Knowledge Discovery(20								
				Advances in Algorithms (2012)								
				Service- oriented Processing and Analysis (2012)								
				Cosmology Challenges now and in the future (2013)								