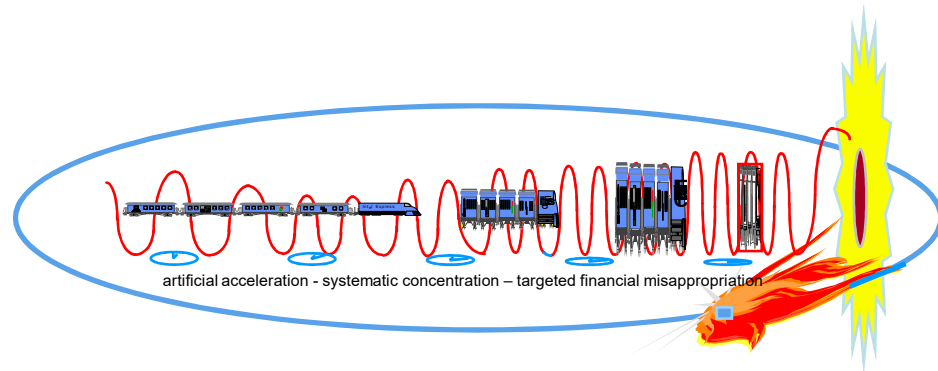


NOW all XSL v Epyc/TR and **AMD Cost**
plus Refined XSL 26/28C Cost Consideration ↓

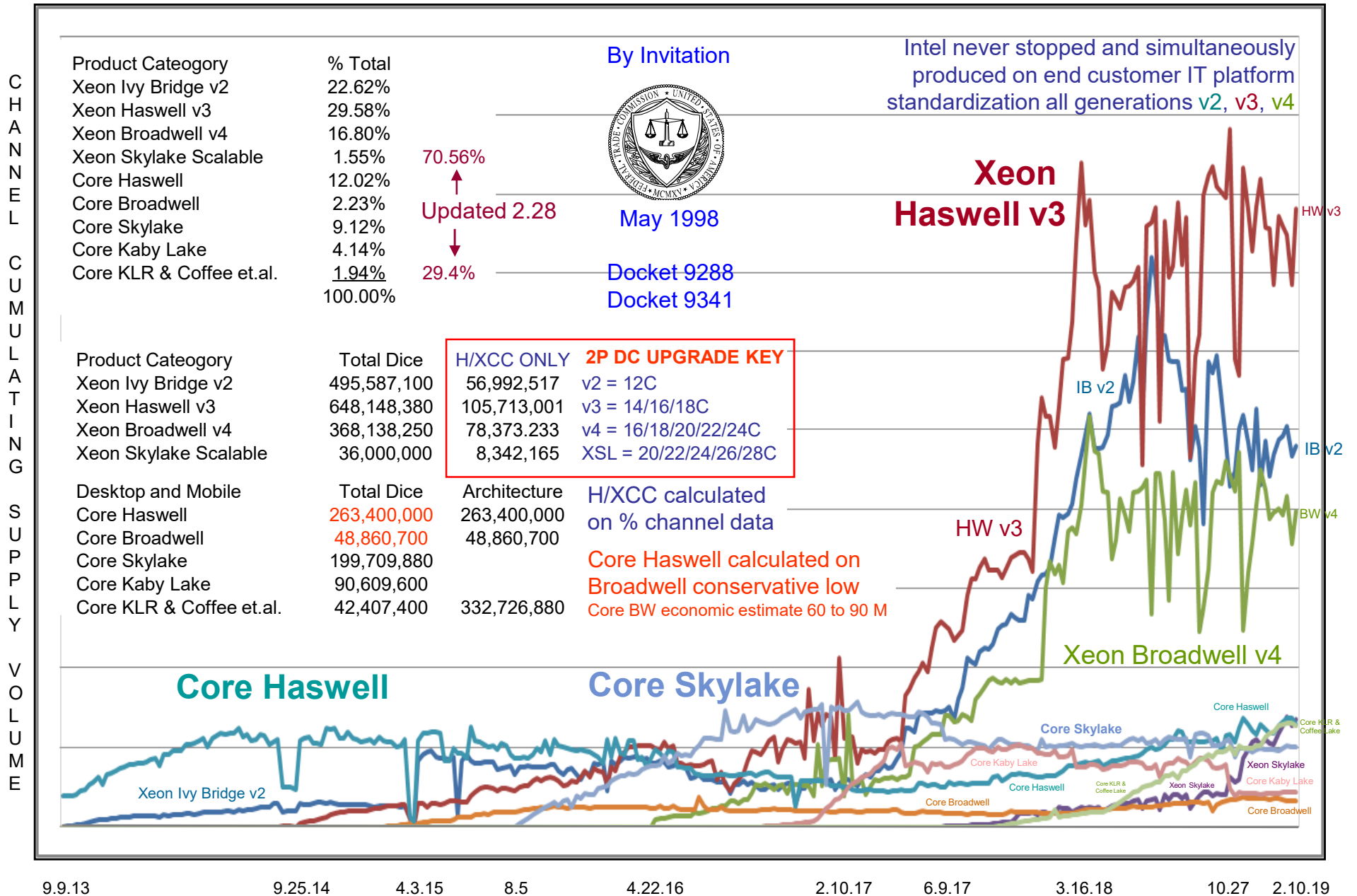


Intel Xeon v2 / v3 / v4 volume by architecture generation
with by Cores and Grade SKU volume on channel data

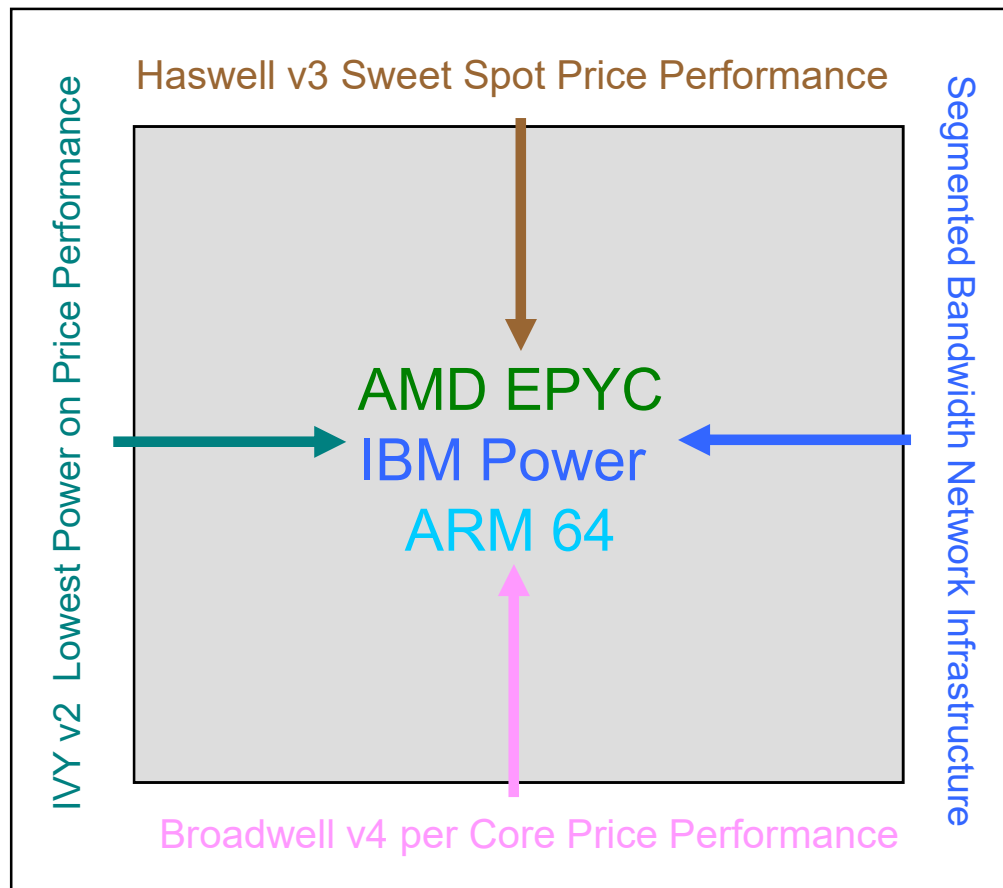
- Xeon Supply v Core Supply
- Xeon Supply Revenue Value
- DCG Unreported Revenue
- Xeon by Cores Volume
- Haswell v3 Full Run Defined
- Haswell v3 on Broadwell v4
- Broadwell v4 on Skylake
- Completes Haswell by Grades Analysis
- Now with Xeon D
- Broadwell E7/E5 v4 Complete
- Ivy Bridge v2 Complete
- Begins Xeon Sky lake
- Xeon Sky lake Complete
- Thread Ripper v Extremes
- AMD Commercial Cost : Price

It's a wrap

Camp Marketing Consultancy – Intel Core and Xeon at 282 Weeks of Supply



Four fronts of Intel Xeon competitive address



Economic assessment shows 532,312,557 units of Xeon v2, v3, v4 production Price < Average Marginal Cost at 85% off \$1K that is \$30,849,246,619 industry competitive financial theft; Q3 2013 through current

See slides 5, 6, 7, 20, 53, 72, 126, 127

Camp Marketing Consultancy

Management is the heart of an institution; and the institution, whether a business or a public service, is in turn an organ of society, existing to make specific contributions and follow specific social, industrial, enterprise and governance functions. Management, therefore, is defined and understood in terms of its performance dimensions and of the demands of performance on it. The tasks of management are the reasons for its existence, the determinants of its works, and the grounds of its authority and legitimacy.

- Peter Drucker, Management Tasks, Responsibilities, Practices 1973

Camp Marketing Consultancy – Xeon Revenue Value at Full Line Average Weighed Price

Summary non-accounted / nor reported DCG Xeon revenue, *updated at v4*;
Confirms FTC 2013 Intel Corporate and Stockholder theft assessment for further discovery.

Full SUMMARY at Slide 130

495,587,100 units Ivy Bridge E7/E5/EE 1K AWP \$1287.32 = \$637,977,075,678
at 50% long run discount = \$318,988,538,838

648,148,380 units Haswell E7/E5/EE 1K AWP \$2091.80 = \$1,355,797,638,644
at 60% discount = \$542,319,055,457

368,138,250 units Broadwell E7/E5/EE 1K AWP \$1396.65 = \$509,970,336,862
at 70% discount = \$152,991,101,058

5 year DCG 1K revenue = \$2,503,745,051,184

5 year DCG gross revenue at 60% discount = \$1,001,498,020,473

5 year DCG 1K revenue = \$2,503,745,051,184

5 years gross revenue at current 85% discount = **\$375,561,757,677**

DCG
Annual Unreported
\$54,932,351,535*

5 year Intel reported DCG Revenue = **\$100,900,000,000** or 96% off 1K \$2.503 T
In other words Xeon is bundled into a Core sales package for next to nothing?

5 year non reported non accounted range **\$274,661,757,677** to \$900,598,020,473

*\$54.932 B annual is greater but intuitively proximate Supply Signal Cipher annual revenue discrepancy 2010 through 2016.

Camp Marketing Consultancy – Summary of Enterprise, Stockholder & Industry Financial Harms

Intel Enterprise and Stockholder harm; 2013 to date;

5 year DCG 1K revenue = \$2,503,745,051,184

5 year DCG gross revenue at 60% discount = **\$1,001,498,020,473**

5 year DCG 1K revenue = \$2,503,745,051,184

5 years gross revenue at current 85% discount = **\$375,561,757,677**

5 year Intel reported DCG Revenue = **\$100,900,000,000** or 96% off 1K \$2.503 T

5 year non reported non accounted range **\$274,661,757,677** to \$900,598,020,473

DCG per YEAR
Annual Unreported
\$54,932,351,535*

Competitor Enterprise and Industry financial harm on Xeon processors supplied at Price < Cost

Xeon v2/v3/v4 + XSL Processors P < C = \$30,858,095,444

Ivy Bridge Generation –

29% of full run volume, 144,010,887 units < AMC \$138 = \$8,555,813,552 industry financial harm.

Haswell Generation –

35% of full run volume, 228,511,435 units < AMC \$129 = \$14,312,073,548 industry financial harm

Broadwell Generation –

44% of full run volume, 159,790,235 units < AMC \$160 = \$7,981,359,518 industry financial harm

Skylake Generation –

0.27% of full run volume, 116,756 units < AMC \$143 = \$8,848,826 industry financial harm

Camp Marketing Consultancy – Summary of Enterprise, Stockholder & Industry Financial Harms

Intel Enterprise and Stockholder harm; 2007 through 2013

Annual Revenue Discrepancy calculated 2007 through supply signal cipher end.

Year	Revenue on Supply Statement & Product Split	Intel Annual Revenue Statement	
2015	\$58,845,389,744	\$55,355,000,000	Supply signal ends requiring new method of revenue verification; on volume discount.
2014	\$54,464,656,324	\$55,870,000,000	
2013	\$74,071,256,544	\$52,708,000,000	Production value theft escalates here.
2012	\$98,365,455,032	\$53,341,000,000	
2011	\$104,346,365,564	\$53,999,000,000	
2010	\$48,564,553,236	\$45,623,000,000	Non reported non accounted existed well before 2008 a core focus of EUCC v Intel 37.990.
2009	\$35,373,428,991	\$35,100,000,000	
2008	\$37,772,888,907	\$37,600,000,000	
2007	\$38,640,439,822	\$38,300,000,000	
	\$550,444,434,163	\$427,896,000,000	
	\$122,548,434,163		
	Unaccounted / non reported 2007 through 2015		

Analyst estimates Intel \$1K price non reported non accounted over 30 years ~ \$3.7 trillion.
Validates the down fall of unregulated monopoly free for all; theft in a financial chaos.

Camp Marketing Consultancy – Xeon Production Theft – Types of Money Laundering

United States Code Section 1956(a) defines three types of criminal conduct: domestic money laundering transactions (§ 1956(a)(1)); international money laundering transactions (§ 1956(a)(2)); and undercover "sting" money laundering transactions (§ 1956(a)(3)).

To be criminally culpable under 18 U.S.C. § 1956(a)(1), a defendant must conduct or attempt to conduct a financial transaction, **knowing that the property involved in the financial transaction represents the proceeds of some unlawful activity**, with one of the four specific intents discussed below, and the property must *in fact* be derived from a specified unlawful activity.

The actual source of the funds must be one of the specified forms of criminal activity identified by the statute, in 18 U.S.C. § 1956(c)(7), or those incorporated by reference from the RICO statute (18 U.S.C. § 1961(1)). Section 1956(c)(7)(B) includes in the list of specified unlawful activity certain offenses against a *foreign* nation. Thus, **proceeds of certain crimes committed in another country may constitute proceeds of a specified unlawful activity for purposes of the money laundering statutes.**

To prove a violation of § 1956(a)(1), the prosecutor must prove, either by direct or circumstantial evidence, that the defendant knew that the property involved was the proceeds of any felony under State, Federal or foreign law. *The prosecutor need not show that the defendant knew the specific crime from which the proceeds were derived;* the prosecutor must prove only that the defendant knew that the property was illegally derived in some way. See § 1956(c)(1).

The prosecutor must also prove that the defendant initiated or concluded, or participated in initiating or concluding, a financial transaction. A "transaction" is defined in § 1956(c)(3) **as a purchase, sale, loan, pledge, gift, transfer, delivery, other disposition**, and with respect to a financial institution, a deposit, withdrawal, transfer between accounts, loan, exchange of currency, extension of credit, purchase or sale safe-deposit box, or any other payment, transfer or delivery by, through or to a financial institution.

Camp Marketing Consultancy – Xeon Production Value Theft – Types of Money Laundering

The transportation, transmission or transfer must cross the border -- either originating or terminating in the United States. That term includes all means of transporting funds or monetary instruments, including wire or electronic funds transfers, and the transfer of currency, checks, money orders, bearer securities **and negotiable instruments (processing components)**.

Section 1956(a)(3) relates to undercover operations where the financial transaction involves property represented to be proceeds of specified unlawful activity. The proceeds in § 1956(a)(3) cases are not actually derived from a real crime; they are undercover funds supplied by the Government. The representation must be made by or authorized by a Federal officer with authority to investigate or prosecute money laundering violations. The representation may also be made by another at the direction of or approval of a Federal officer. It should be noted that the specific intent provisions in § 1956(a)(3) are slightly different from those in § 1956(a)(1). **First, the intent to violate the tax laws is not included in this subsection. Second, subsections 1956(a)(3)(B) and (C) require that the transaction be conducted with the intent to conceal or disguise the nature, location, source, ownership or control of the property or to avoid a transaction reporting requirement, respectively, in contrast to subsections 1956(a)(1)(B)(i) and (ii), which only require that defendant know that the transaction is designed, in whole or in part, to accomplish one of those ends.**

Violations of § 1956 have a maximum potential twenty year prison sentence and a \$500,000 fine or twice the amount involved in the transaction, whichever is greater. The general sentencing provisions in 18 U.S.C. §§ 3551-3571 should also be consulted. There is also a civil penalty provision in § 1956(b) which may be pursued as a civil cause of action. Under this provision, persons who engage in violations of subsections 1956(a)(1), (a)(2) or (a)(3) are liable to the United States for a civil penalty of not more than the greater of \$10,000 or the value of the funds involved in the transaction. Copies of pleadings in § 1956(b) actions are available from the Section **Prosecutions under 18 U.S.C. § 1957 arise when the defendant knowingly conducts a monetary transaction in criminally derived property in an amount greater than**

Camp Marketing Consultancy – Xeon Production Value Theft – Types of Money Laundering

\$10,000, which is in fact proceeds of a specified unlawful activity. Section 1957(f)(1) defines a monetary transaction as a "deposit, withdrawal, **transfer, or exchange, in or affecting interstate or foreign commerce**, of funds. by, through, or to a financial institution (as defined in section 1956 of this title), including any transaction that would be a financial transaction under section 1956(c)(4)(B)" Section 1957 carries a maximum penalty of ten years in prison and maximum fine of \$250,000 or twice the value of the transaction. There is no civil penalty provision.

The most significant difference from § 1956 prosecutions is the intent requirement. Under § 1957, the four intents have been replaced with a \$10,000 threshold amount for each non-aggregated transaction and the requirement that a financial institution be involved in the transaction. **Although the prosecutor need not prove any intent to promote, conceal or avoid the reporting requirements, it still must be shown that the defendant knew the property was derived from some criminal activity and that the funds were in fact derived from a specified unlawful activity.**

There is extraterritorial jurisdiction for violations of § 1956 if: (1) the transaction or series of related transactions exceeds \$10,000; and (2) the laundering is by a United States citizen, or, if by a foreign national, the conduct occurs in part in the United States. See § 1956(f). There is extraterritorial jurisdiction for violations of § 1957 if the defendant is a United States person. See § 1957(d).

Sections 1956 and 1957 include "attempts" as well as completed offenses. Conspiracies are indictable under 18 U.S.C. § 1956(h). It should be noted that, in October 1992, Congress added § 1956(g), which provides a separate offense for money laundering conspiracy. Since Congress inadvertently added two sections designated as § 1956(g), the conspiracy provision was redesignated § 1956(h) in September 1994. The conspiracy provision in § 1956(h) is modeled after the conspiracy provision in 21 U.S.C. § 846. Thus, it should not be necessary to plead overt acts in the indictment. However, the Section recommends that overt acts be included in the indictment if practicable.

United States Department of Justice, 2101. Resource Manual, Money Laundering Overview, www.justice.gov

Camp Marketing Consultancy – Intel Xeon E7/E5/SL by Core Count at 282 Weeks

CHANNEL CUMULATING SUPPLY VOLUME

By Invitation

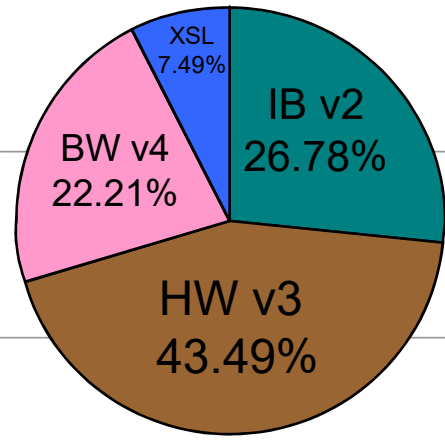


May 1998

Docket 9288

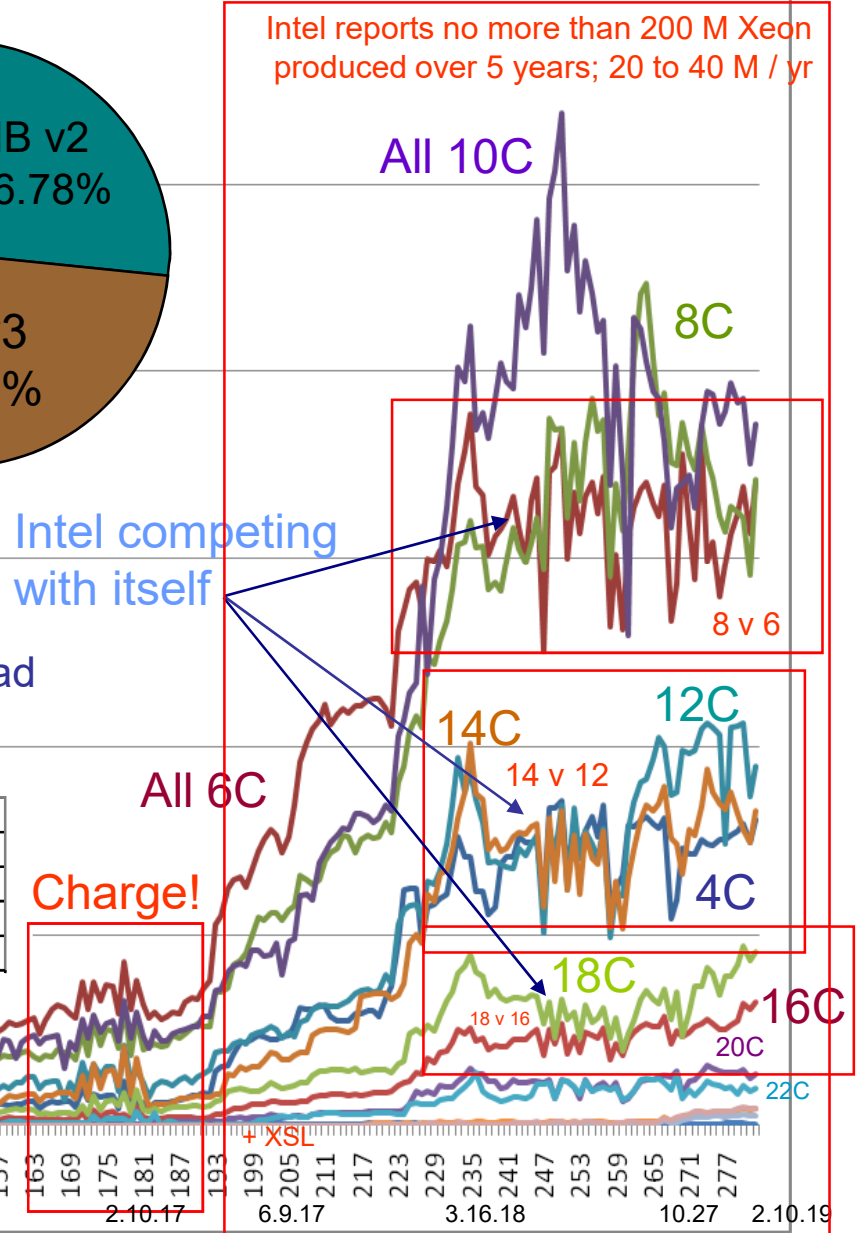
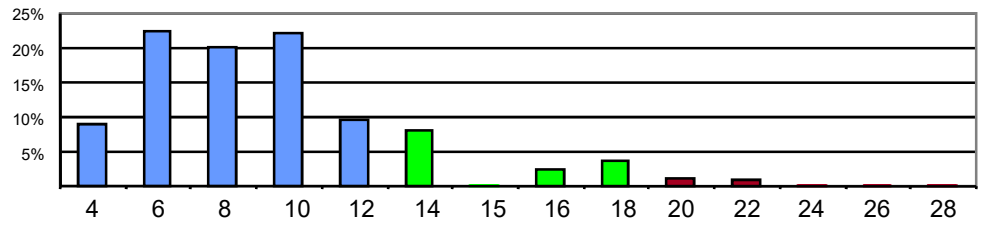
Docket 9341

Core Count	% Total
4C	8.97%
6C	22.48%
8C	20.07%
10C	22.10%
12C	9.55%
14C	8.08%
15C	0.13%
16C	2.47%
18C	3.70%
20C	1.15%
22C	0.94%
24C	0.14%
26C	0.08%
28C	0.13%
	100.00%



Intel reports no more than 200 M Xeon produced over 5 years; 20 to 40 M / yr

To counter enthusiast Xeon repurpose AMD and Intel move to consumer LCC and MCC that is ahead of most applications unless you write your own.



Camp Marketing Consultancy – Brief Opening of October 28 by Elliott Jaques

During the years of World War II there has been a widespread development and usage of novel social methods. Establishing techniques of personnel and leadership selection, social and anthropological surveys, propaganda studies and psychological warfare, the creation of transitional communities to facilitate readjustment of repatriates are some examples of what has been done. The list is long and the immensity of the job inspiring. In this common task teams of psychologists, sociologists, anthropologists, psychiatrists, social workers, economists, management, clergy and social scientists, government service, technicians and engineers have learned to work together with program administrators and executives to get the job done.

The civil community, harassed by difficulties of geopolitical industrial, the ideological, the genocides, reconstruction, political and economic wars is now looking for help, and certain sections of the community have begun to turn to a novel management science for assistance. The challenge of this demand is great. It forces on established sciences a necessity for developing new methods of society approach, within community, enabling creative expression and release of spontaneous adjustment mechanisms with a consequent growth. Proper collaboration within community then can help to straighten out its difficulties, in turn, makes possible a healthy evolution of the industrial social order and enterprise political institution within community for society good in progress.

The problem of collaboration however is complex. On the one hand community is somewhat uncertain about the little known or new science. This shows, for example, as a confusion in what change agency and change management does. Attitudes of submission to the omnipotence of mighty science occur on one hand, and feelings of anxiety occur on the other. It is understandable that anxiety and apprehension arise in any social setting which finds itself experimenting to cope with a particularly novel problem. And reasonably enough resent intrusion by particular forms of novel reference or unique knowledge called in to help. On the other hand there is a complex of attitudes

Camp Marketing Consultancy – Xeon in Channel by Cores and Grade SKUs Inventory

Full Run v2 / v3 / v4

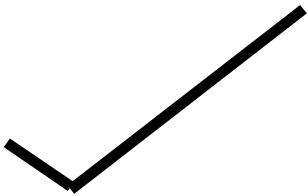
E7 88/48
E5 4600
E5 2600
E5 1600



Goal; Inventory Sales Clearing
Objective; Product Sales Administration
Strategy; Inventory Financial Risk Management
Tactic; Coordinated Planning
Deliverable; Unlock Financial Values

Within Year v2 / v3 / v4

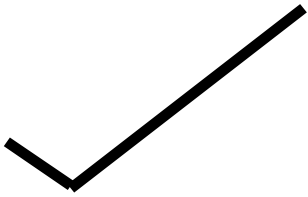
E7 88/48
E5 4600
E5 2600
E5 1600



Current v2/ v3 /v4 / Sky Lake Scalable

Platinum, Gold, Silver, Bronze, W & E Series (Next in Series)

E7 88/48
E5 4600
E5 2600
E5 1600



Xeon by Architecture Grade SKUs holdings

Xeon by Architecture in Relation AMD Epyc/TR – Scalable M, F, T, Performance / w

Camp Marketing Consultancy

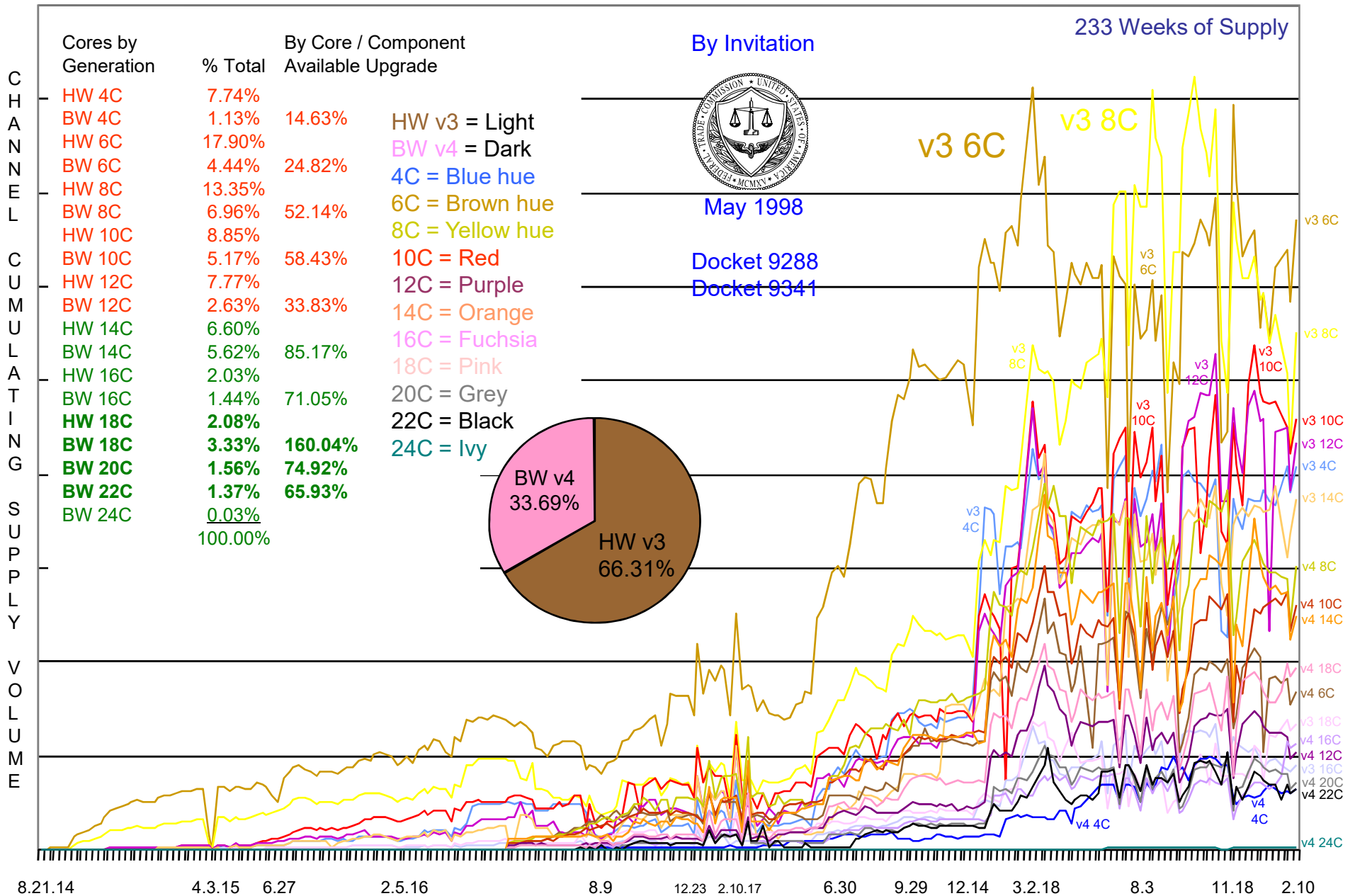
among scientists, generally, just as in individual therapy ambivalence tends to be directed against the therapist. This process, known as transference, is utilized in psychoanalysis as the basis for social therapy. It is our belief that it can be similarly applied in a collaborative management science for change agency, social regulation and collaborative decision making.

Social treatment is made possible by the transference of positive feelings toward the management scientist through collaborative compliment for system progress. These feelings reflect a desire for change and improvement interpreted as such. On the other hand, negative transference, or the transference to management science and change agent may result in hostility and resentment. Arising from anxieties about how change agency may occur. Or out of inter person and inter group frictions in the corporate political or any social situation reflected in resistances against going through with collaboration for group learning and a coordinated plan achieved.

The handling of these resistances is crucial. They show in many small and insignificant ways as pointed out by Wilson, a concealed hostility, from apparent innocent questions, the continuous testing out of the good intentions and the quashing of effort. Change can only be accomplished as rapidly as resistances are overcome and removed requiring rational support in this endeavor.

Lewin has pointed out that evolving participation in group decisions frequently overcome individual resistances very rapidly. On the other hand direct interpretation of the resistances, in terms of negative transference behavior towards change agency has probably been more deeply rooted. Where lasting effect properly worked out demonstrate across group both expertise and a legitimate science in progress. Take for example the expert with unique knowledge reference entering a group for purpose of additive and modifying practice. Such an individual is sometimes seen as a threat to the security, and an usurper of the roles of certain of group members. The result is the coming into

Camp Marketing Consultancy – Channel Xeon E7 / E5 v3 / v4 by Cores Inventory



Camp Marketing Consultancy

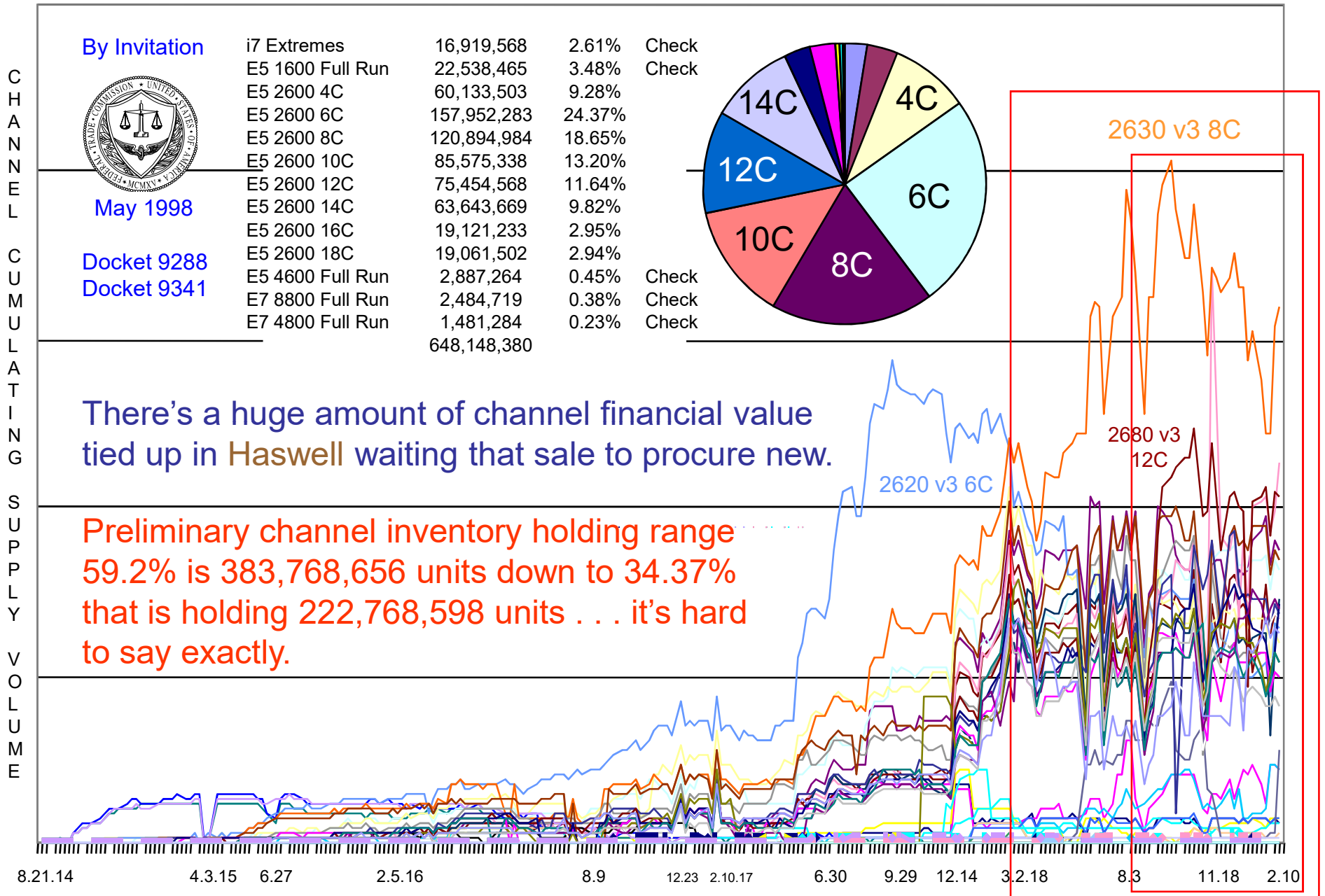
play of various defense mechanisms, which are largely unconscious in operation, yet may at times be conscious, destructive and self serving. Having as their aim the manipulation of the intruder in order to render them harmless. Crude refusals to cooperate for greater good is rarer than might be expected and these manipulations usually take subtle forms. They range from side tracking, moving into absorption, into relatively unimportant details while the essentials of traditional methods remain as before and perhaps masked or forgotten. Or by misrepresentation and disarming by enthusiasm to lure in, dulling the critical perception on efforts that negate, or to undermine, or to disqualify the additive components of management science and change agency as critical contributors.

It is also not uncommon for some member of the group to become dependent thus to absorb the bulk of time and energy in dealing with what is really a personal problem. It is important to interpret these unconscious mechanisms within the group. And to resolve purely conscious moves that they be recognized as a common restriction to expertise that represent resistance to change, and as group tensions are played out detrimental to the group, the community, and too collaborative progress.

If this transference is successfully exposed, it should allow the group to proceed through considering changes required among the current roles in the new situation. Opportunity for such interpretation usually crops up in a group or individual discussion, or through audit, or in socio dramatic or other training session. The timing and dosage of interpretations are a matter of clinical interpretation and management judgment, and present one of the greatest challenges of treatment. It is for this reason the institution sets a high value on engineering industrial management and social science training.

Such training is the best guarantee that the technique of utilizing the transference situation in group dynamics will never be taken lightly, ensuring management science maintains a continuous concern about working through tensions, aroused by presence, in the field of collaborative change, dialogue, legitimate governance in enterprise for operational excellence.

Camp Marketing Consultancy – Channel Xeon E7 / E5 v3 and EE by Grade SKU



Camp Marketing Consultancy – Channel Xeon E7 / E5 v3 and EE by Grade SKU

CATEGORY GRADE SKU	SKU % Total	Full Run Volume	CATEGORY GRADE SKU	SKU % Total	Full Run Volume
E5 1603 4C 2.8	0.51%	3,317,429	E5 2648L 12C 1.8	0.01%	648,148,380
E5 1607 4C 3.1	0.80%	5,201,952	E5 2650L 12C 1.8	0.05%	49,660
E5 1620 4C 3.5	0.54%	3,530,763	E5 2658 12C 2.2	0.03%	298,415
E5 1630 4C 3.7	0.43%	2,817,783	E5 2669 12C 2.3	0.00%	173,290
E5 2623 4C 3.0	5.22%	33,802,219	4C	0.00%	14,212
E5 2637 4C 3.5	4.06%	26,331,284	E5 2670 12C 2.4	3.10%	20,099,878
I7 5930 6C 3.5	0.76%	4,903,938	E5 2673 12C 2.4	0.19%	1,230,072
I7 5820 6C 3.3	0.96%	6,223,366	E5 2680 12C 2.5	4.57%	29,630,602
E5 1650 6C 3.5	0.66%	4,303,821	E5 2685 12C 2.6	0.03%	199,469
E5 2603 6C 1.6	5.45%	35,347,241	E5 2690 12C 2.6	3.67%	23,758,971
E5 2608L 6C 2.0	0.00%	16,749	E5 2683 14C 2.0	3.35%	21,701,746
E5 2609 6C 1.9	5.79%	37,557,026	E5 2695 14C 2.3	3.15%	20,385,871
E5 2620 6C 2.4	8.59%	55,696,622	E5 2697 14C 2.6	3.33%	21,556,052
E5 2643 6C 3.4	4.53%	29,334,644	E5 1698 16C 2.3	2.95%	19,121,233
I7 5960 8C 3.0	0.89%	5,792,265	E5 2686 18C 2.0	0.01%	45,546
E5 1660 8C 3.0	0.21%	1,377,022	E5 2699 18C 2.3	2.93%	19,015,955
E5 1680 8C 3.2	0.31%	1,989,694	E5 4655 6C 2.9	0.03%	197,866
E5 2618L 8C 2.3	0.00%	19,955	E5 4610 10C 1.7	0.04%	261,684
E5 2622 8C 2.4	0.00%	1,469	E5 2620 10C 2.0	0.05%	345,591
E5 2628 8C 2.5	0.01%	53,560	E5 4627 10C 2.6	0.03%	205,586
E5 2629 8C 2.4	0.00%	19,154	E5 4640 12C 1.9	0.03%	188,356
E5 2630 8C 2.4	9.52%	61,675,587	E5 4648 12C 1.7	0.00%	8,815
E5 2630L 8C 1.8	0.68%	4,396,036	E5 4650 12C 2.1	0.10%	643,472
E5 2540 8C 2.6	4.69%	30,390,705	E5 4660 14C 2.1	0.09%	564,935
E5 2667 8C 3.2	3.73%	24,202,814	E5 4667 16C 2.0	0.02%	102,419
E5 2666 10C 2.9	0.02%	135,704	E5 4669 18C 2.1	0.06%	368,538
E5 2628L 10C 2.0	0.01%	48,431	E7 8893 4C 3.2	0.12%	784,706
E5 2649 10C 2.3	0.00%	10,819	E7 8891 10C 2.8	0.04%	278,647
E5 2650 10C 2.3	5.98%	38,779,592	E7 8890 18C 2.5	0.06%	376,338
E5 2652 10C 2.3	0.00%	6,518	E7 8880L 18C 2.0	0.00%	16,429
E5 2660 10C 2.6	4.19%	27,125,553	E7 8880 18C 2.3	0.03%	226,182
E5 2663 10C 2.8	0.16%	1,012,571	E7 8870 18C 2.1	0.04%	236,921
E5 2687W 10C 3.1	2.87%	18,591,853	E7 8867 16C 2.5	0.03%	210,154
			E7 8860 16c 2.2	0.05%	355,342
			E7 4850 14C 2.2	0.06%	373,987
			E7 4830 12C 2.1	0.04%	269,031
			E7 4820 10C 1.9	0.06%	399,125
			E7 4809 8C 2.0	0.07%	439,141
				100.00%	

By Invitation



May 1998

Docket 9288

Docket 9341

Next installment in series looks at what's moving in Haswell and what's not moving.

E5 26xx v3 by Grade SKU High Volume Price @ 85% off 1K

Camp Marketing Consultancy

HASWELL XEON E5 2600 v3 DP
 36% of Run; 228,511,435 Units < AMC \$129
 \$14,312,073,548 Industry Financial Theft

FOUR CORE

E5 2623 3.0 GHz, 10 MB L3, 105w
 E5 2637, 3.5 GHz, 15 MB L3, 135w

\$1K Price	85% OEM Discount	TRTC Calc AMC
\$444.00	0.15	\$129
\$996.00	\$66.60	(\$62.40)
	\$149.40	\$20.40

Notation

Below Cost KEY
 \$20.40

SIX CORE

E5 2603 1.6 GHz, 15 MB L3, 85w
 E5 2608L 2.0 GHz, 15 MB L3, 50w
 E5 2609 1.9 GHz, 15 MB L3, 85w
 E5 2620 2.4 GHz, 15 MB L3, 85w
 E5 2643 3.4 GHz, 20 MB L3, 135w

\$213.00	\$31.95	(\$97.05)	Below Cost
\$441.00	\$66.15	(\$62.85)	Below Cost
\$306.00	\$45.90	(\$83.10)	Below Cost
\$417.00	\$62.55	(\$66.45)	Below Cost
\$1,552.00	\$232.80	\$103.80	Profit > Cost

EIGHT CORE

E5 2618L 2.3 GHz, 20 MB L3, 75w
 E5 2630 2.4 GHz, 20 MB L3, 85w
 E5 2630L v3 1.8 GHz, 20 MB L3, 55w
 E5 2640 2.6 GHz, 20 MB L3, 90w
 E5 2667 3.2 GHz, 20 MB L3, 135w

\$779.00	\$116.85	(\$12.15)	Below Cost
\$667.00	\$100.05	(\$28.95)	Below Cost
\$612.00	\$91.80	(\$37.20)	Below Cost
\$939.00	\$140.85	\$11.85	\$2.46 Above AMC
\$2,057.00	\$308.55	\$179.55	Profit > Cost

TEN CORE

E5 2628L 2.0 GHz, 25 MB L3, 75w
 E5 2650 2.3 GHz, 25 MB L3, 105w
 E5 2660 2.6 GHz, 25 MB L3, 105w
 E5 2663 2.8 GHz, 25 MB L3, 120w
 E5 2687W 3.1 GHz, 25 MB L3, 160w

\$1,364.00	\$204.60	\$75.60	Profit > Cost
\$1,166.00	\$174.90	\$45.90	Profit > Cost
\$1,445.00	\$216.75	\$87.75	Profit > Cost
\$1,600.00	\$240.00	\$111.00	Profit > Cost
\$2,141.00	\$321.15	\$192.15	COMPETITIVE PROFIT

TWELVE CORE

E5 2648L 1.8 GHz, 30 MB L3, 75w
 E5 2650L 1.8 GHz, 30 MB L3, 65w
 E5 2658 2.2 GHz, 30 MB L3, 105w
 E5 2669 2.3 GHz, 30 MB L3, 120w
 E5 2670 2.4 GHz, 30 MB L3, 120w
 E5 2673 2.4 GHz, 30 MB L3, 105w
 E5 2680 2.5 GHz, 30 MB L3, 120w
 E5 2686 2.6 GHz, 30 MB L3, 120w
 E5 2690 2.6 GHz, 30 MB L3, 135w

\$1,554.00	\$233.10	\$104.10	Profit > Cost
\$1,329.00	\$199.35	\$70.35	Profit > Cost
\$1,832.00	\$274.80	\$145.80	Profit > Cost
\$1,442.00	\$216.30	\$87.30	Profit > Cost
\$1,589.00	\$238.35	\$109.35	Profit > Cost
\$1,745.00	\$261.75	\$132.75	Profit > Cost
\$2,090.00	\$313.50	\$184.50	Profit > Cost
\$2,090.00	\$313.50	\$184.50	Profit > Cost

FOURTEEN CORE

E5 2683 2.0 GHz, 35 MB L3, 120w
 E5 2685 2.3 GHz, 35 MB L3, 120w
 E5 2697 2.6 GHz, 35 MB L3, 145w

\$1,846.00	\$276.90	\$147.90	Profit > Cost
\$2,424.00	\$363.60	\$234.60	COMPETITIVE PROFIT
\$2,702.00	\$405.30	\$276.30	COMPETITIVE PROFIT

SIXTEEN CORE

E5 2698 2.3 GHz, 40 MB L3, 135w

\$3,226.00	\$483.90	\$354.90	COMPETITIVE PROFIT
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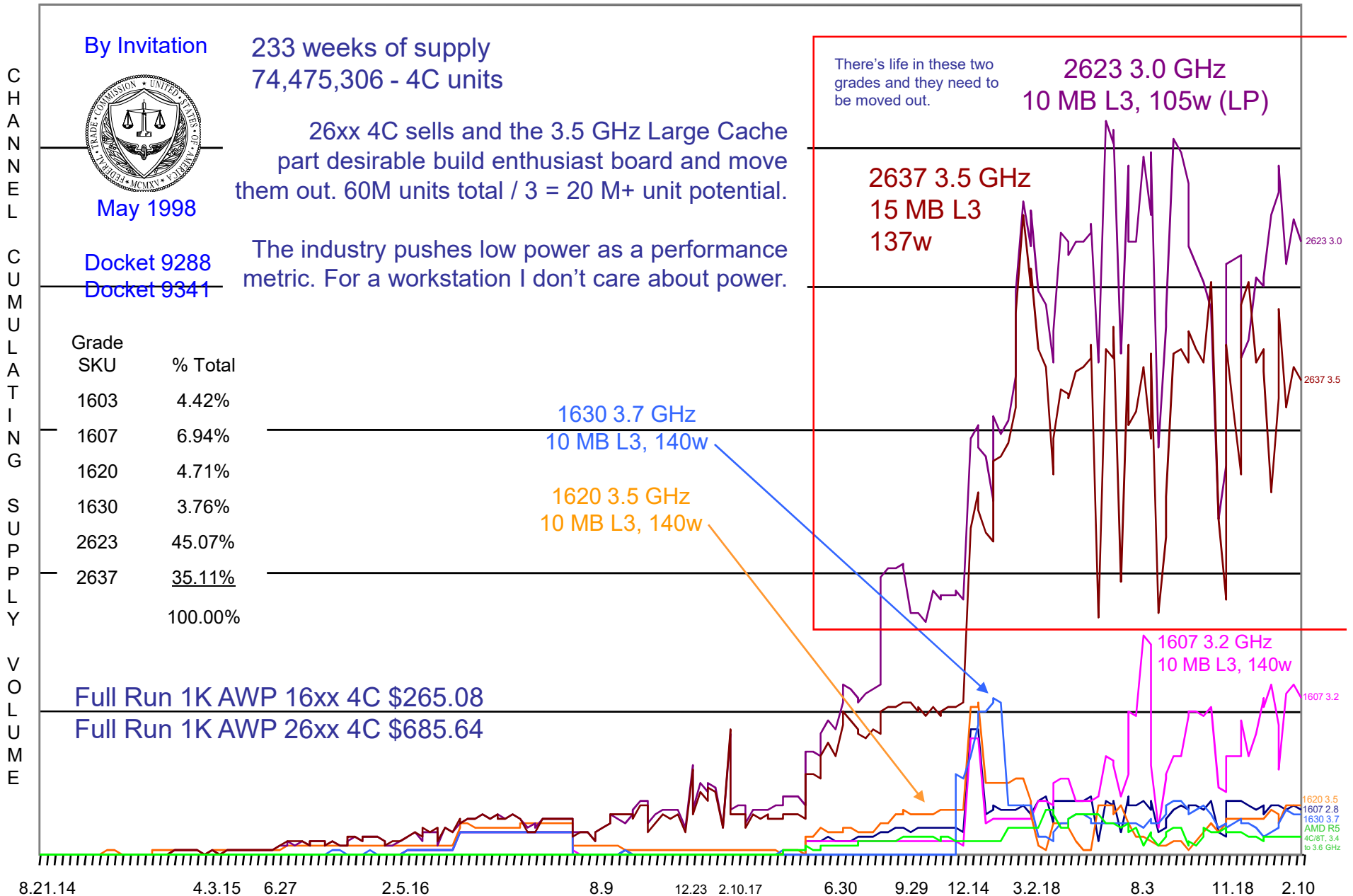
EIGHTEEN CORE

E5 2686 2.0 GHz, 45 MB L3, 120w
 E5 2699 2.3 GHz, 45 MB L3, 145w

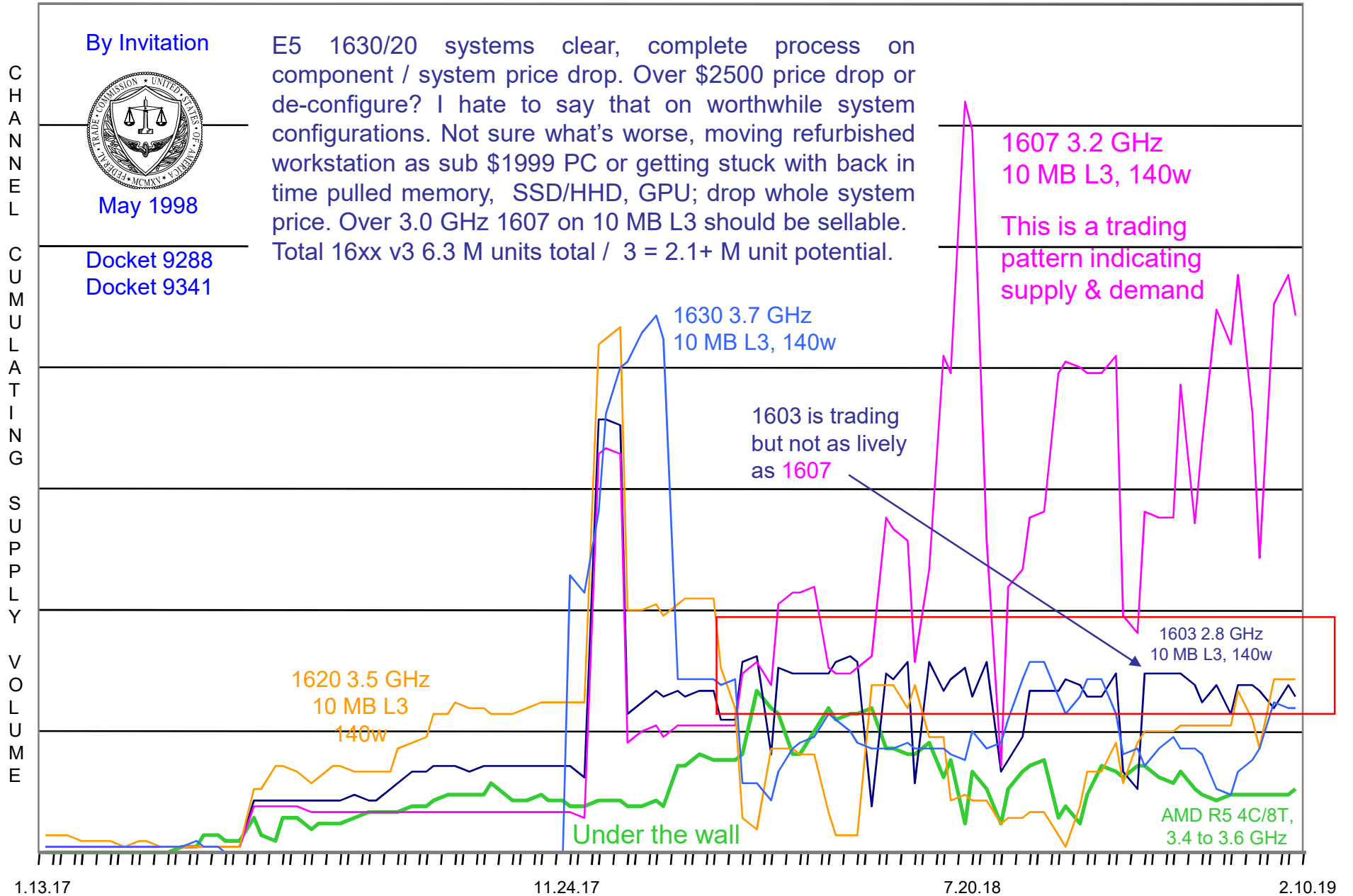
\$4,115.00	\$617.25	\$488.25	ECONOMIC PROFIT
\$4,115.00	\$617.25	\$488.25	POINTS

Update FTC / USDOJ 3.1.19

Camp Marketing Consultancy – Xeon E5 26/16xx v3 4C by Grade w/AMD R5 4C/8T



Camp Marketing Consultancy – Xeon E5 26/16xx v3 4C by Grade w/AMD R5 4C/8T



Camp Marketing Consultancy – Xeon E5 26/16xx v3 6C by Grade w/AMD R7 6C/12T

CHANNEL
CUMULATING
SUPPLY
VOLUME



By Invitation

233 weeks of supply
172,167,156 - 6C units

Full Run 1K AWP 16xx 6C \$583.00
Full Run 1K AWP 59/58xxK 6C \$474.61
Full Run 1K AWP 26xx 6C \$544.61

May 1998

Xeon E5 1600
Consumer Price
Discrimination

Week of 2.23.19
0.40% component
88.78% server
10.82% workstation

2643 3.4 GHz
20 MB L3, 135w

Glut of used Workstations.
Bought them for too much?
30 M total units
Have the OEM reimburse Intel CPU Price. They paid nothing or next to nothing

Docket 9288
Docket 9341

Grade SKU	% Total
5820K	3.59%
5930K	2.83%
1650	2.48%
2603	20.39%
2608L	0.01%
2609	21.66%
2620	32.12%
2643	<u>16.92%</u>
	100.00%

Week of 2.23.19
0.81% component
77.11% server
22.08% workstation

2620 2.4 GHz
15 MB L3, 85w
Clearing under \$250 press
Stable 2P @ steady but sure 2.4 GHz

This is what 56 M units looks like.

2609 sells, 2603 stalls
Embedded! New boards!
Amazing any of the < 2 GHz slack sells at all.

2609 1.9
15 MB 85w

2603 1.8
15 MB 85w

Thought Enthusiast Purchase

This is what 17M Extremes units look like

i7 5820K 3.3
15 MB L3, 140w
i7 5930K 3.5
15 MB L3, 140w

1650 3.5 GHz, 15 MB L3, 140w, unlocked multiplier

AMD R7 6C/12T, 3.4 to 3.6 GHz

8.21.14 4.3.15 6.27 2.5.16 8.9 12.23 2.10.17 6.30 9.29 12.14 3.2.18 8.3 11.18 2.10

Camp Marketing Consultancy – Xeon E5 26/16xx v3 8C by Grade w/AMD All 8C/16T

CHANNEL CUMULATING SUPPLY VOLUME

By Invitation

233 weeks of supply
129,005,957 - 8C units



Full Run 1K AWP 16xx 8C \$1447.54
Full Run 1K AWP 5960 8C \$999.00
Full Run 1K AWP 26xx 8C \$1012.58

Xeon E5 1600
Consumer Price
Discrimination

Originally I postulated no race conditions but this seems to be one; 2630 / 40 / 67 comprise 116 M units and forces AMD up core > 10C/12C 'faster' seeking slimmer volume zones on AMD volume capability.

May 1998

Docket 9288
Docket 9341

At 3.3 GHz 2667 is sellable
Why going flat?

Week of 2.23.19
0.43% component
85.90% server
13.67% workstation

Week of 2.3.19
0.66% component
80.21% server
19.13% workstation
2630 2.4 GHz
20 MB L3, 85w
61.675 M units
/ 3 =

Grade SKU	% Total
5960X	4.45%
1660	1.06%
1680	1.53%
2618L	0.02%
2622	0.00%
2628	0.04%
2629	0.01%
2630	47.42%
2630L	3.38%
2640	23.37%
2667	18.61%
	100.00%

Low power sells 8C @ 55w

AMD R7 8C/16T + 1900X encapsulate E5 1680/60 3.2/3.0 20 MB L3 produced in volume ~ 3.4 M units. AMD swoops in for that 8C volume displacement win AMD unlocked multiplier.

2.3 to 2.6 GHz are stable DP frequencies; this is not the workstation market, this is work loads reliably processed across platform subsystems.

Week of 2.23.19
0.93% component
83.2% server
15.81% workstation

2640 2.6 GHz
20 MB L3, 85w

2667 3.3
20 MB L3
135w

AMD R7 8C/16T & TR 1900X 8/16

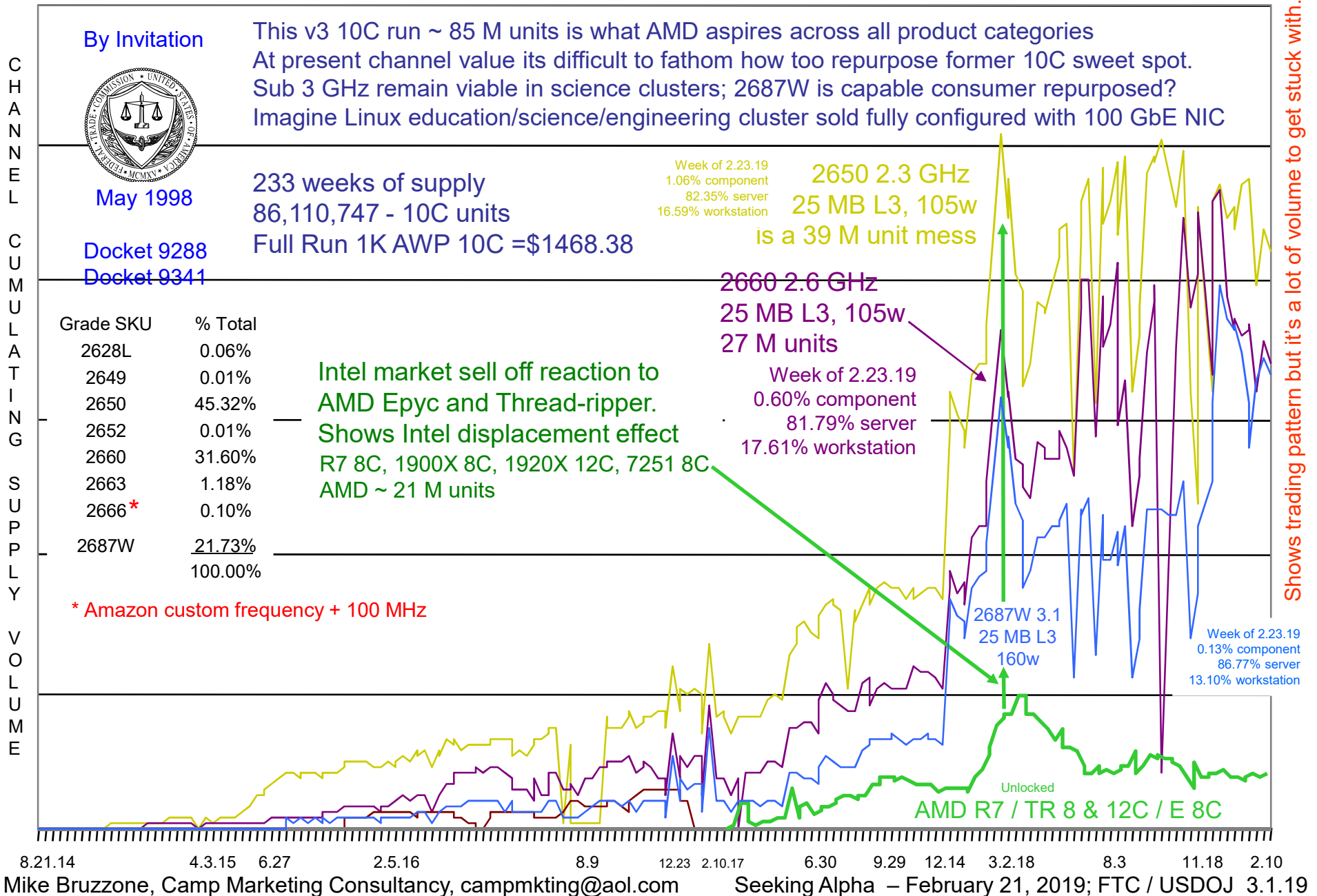
2630L 1.8
20 MB 55w

AMD

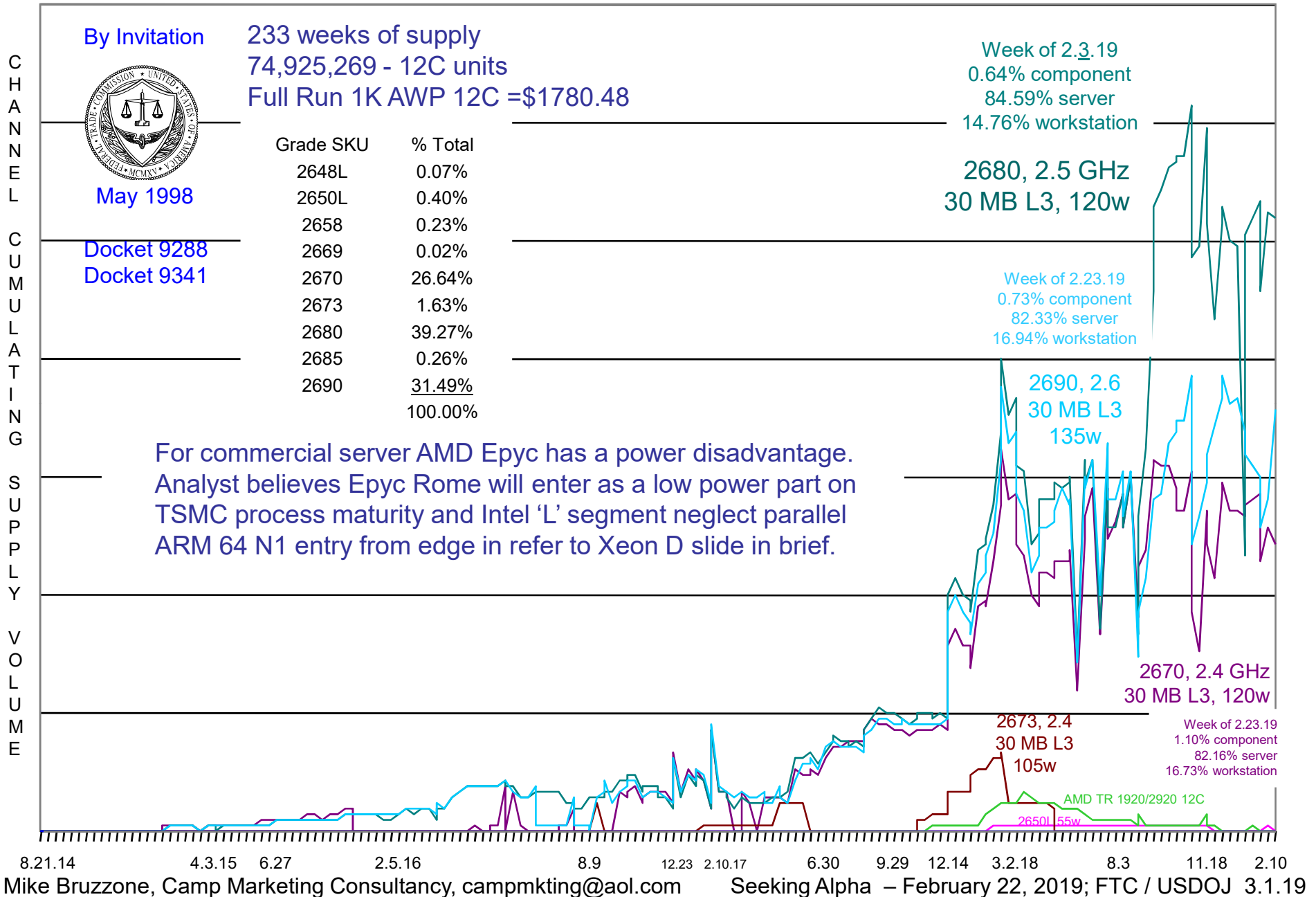
1680/60 Unlocked

8.21.14 4.3.15 6.27 2.5.16 8.9 12.23 2.10.17 6.30 9.29 12.14 3.2.18 8.3 11.18 2.10

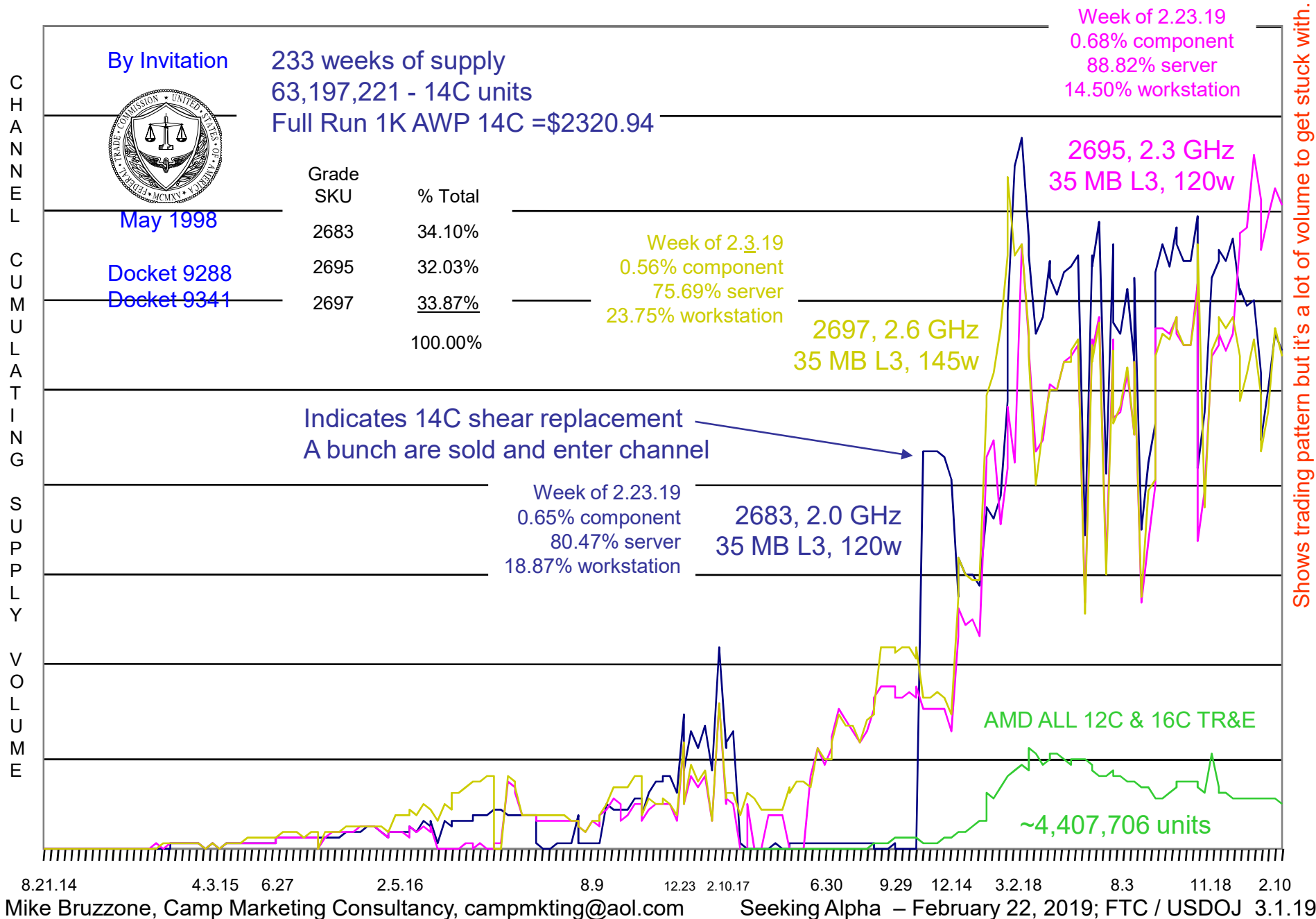
Camp Marketing Consultancy – Xeon E5 26xx v3 10C by Grade w/AMD All 8C/12C



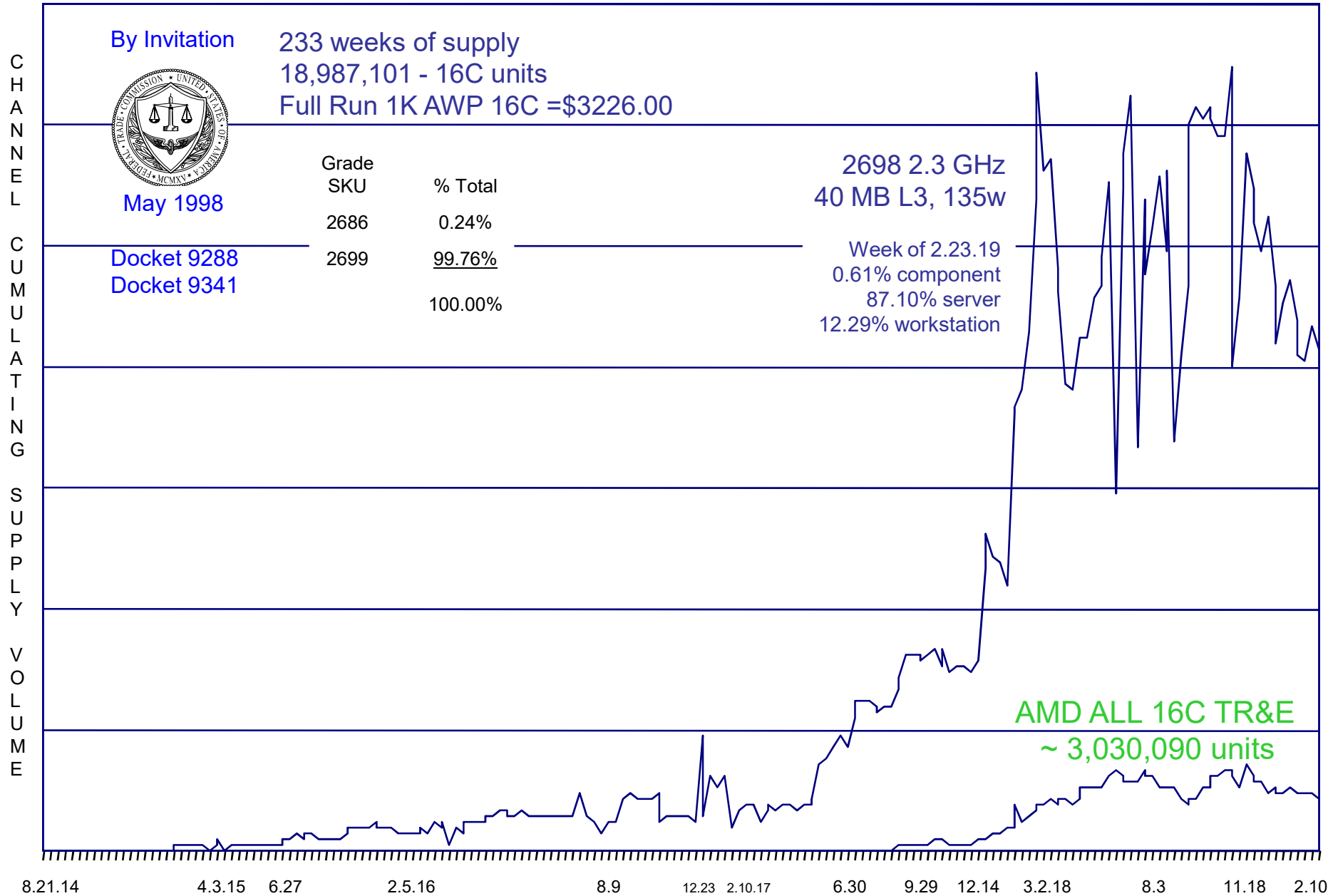
Camp Marketing Consultancy – Xeon E5 26xx v3 12C by Grade w/AMD TR 12C/24T



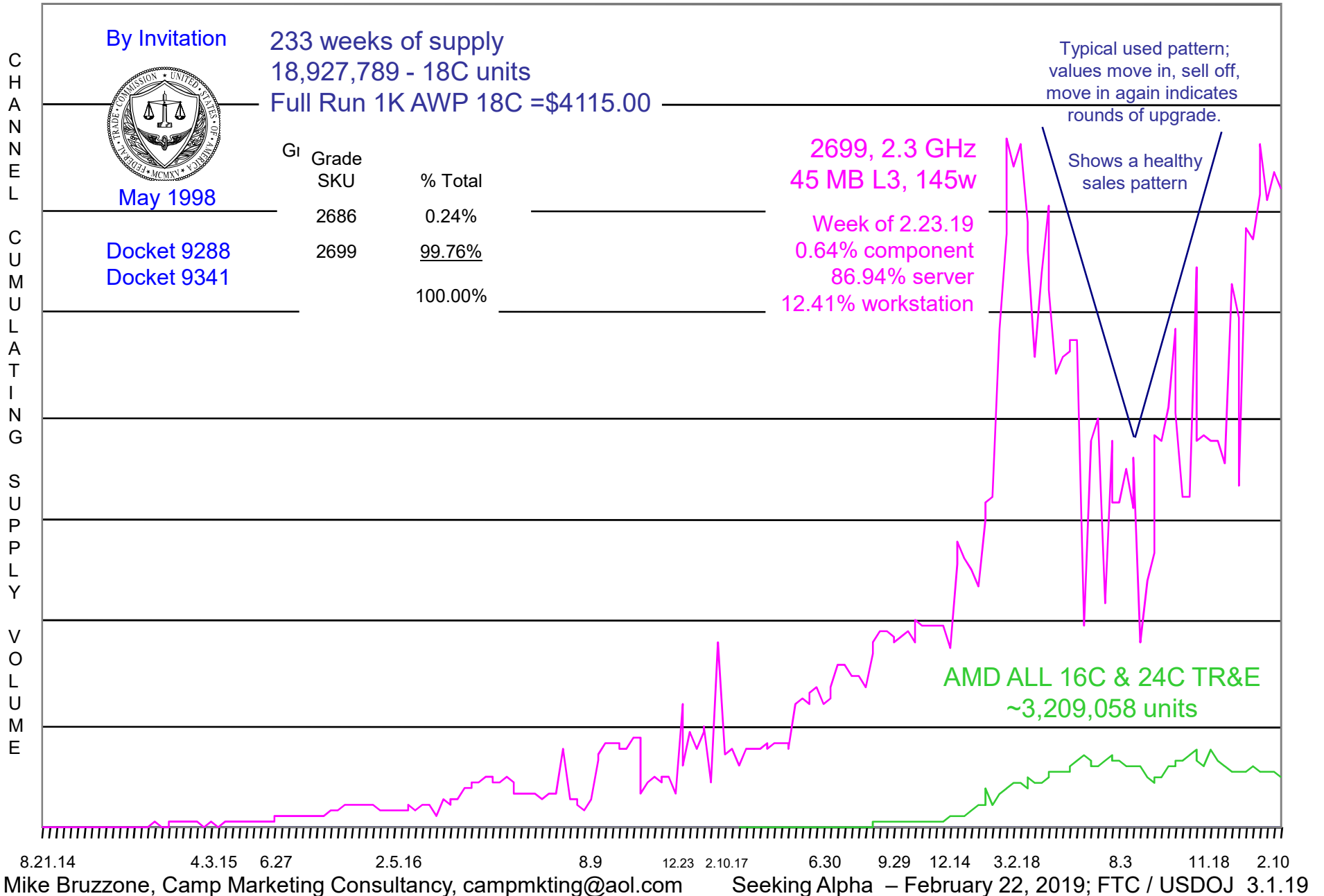
Camp Marketing Consultancy – Xeon E5 26xx v3 14C by Grade w/AMD All 12/16C



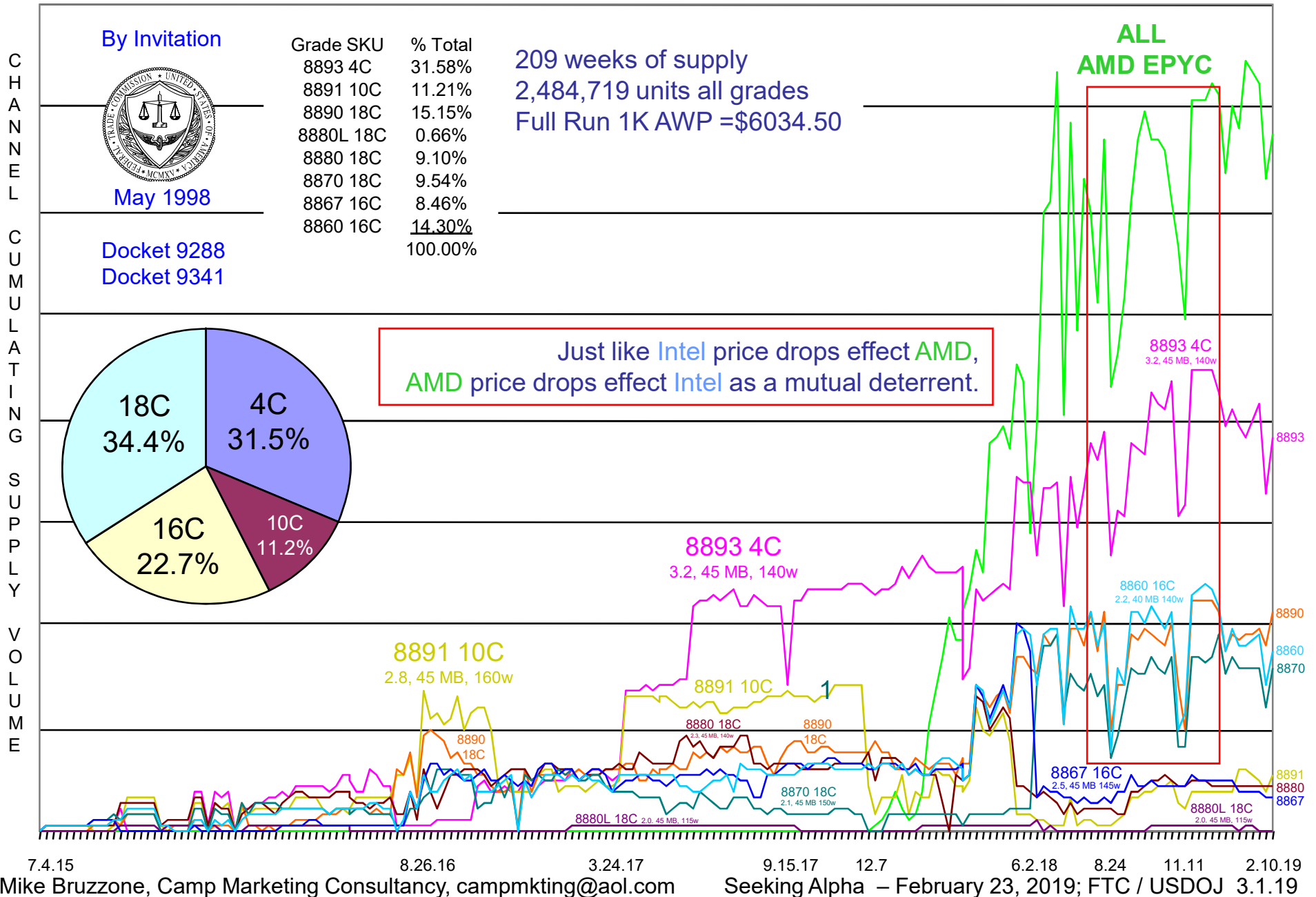
Camp Marketing Consultancy – Xeon E5 26xx v3 16C by Grade w/AMD ALL 16C



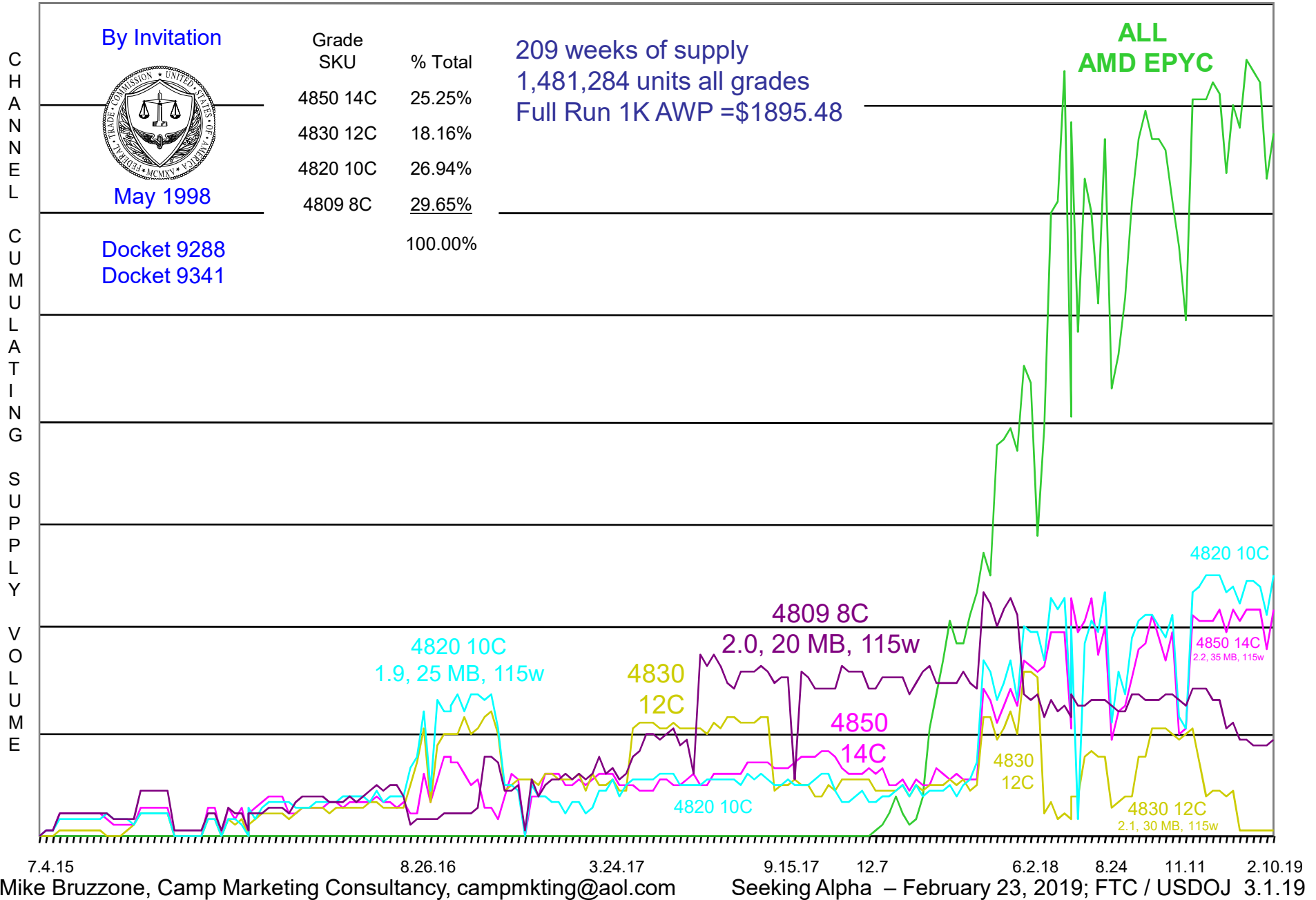
Camp Marketing Consultancy – Xeon E5 26xx v3 18C by Grade w/AMD 16C & 24C



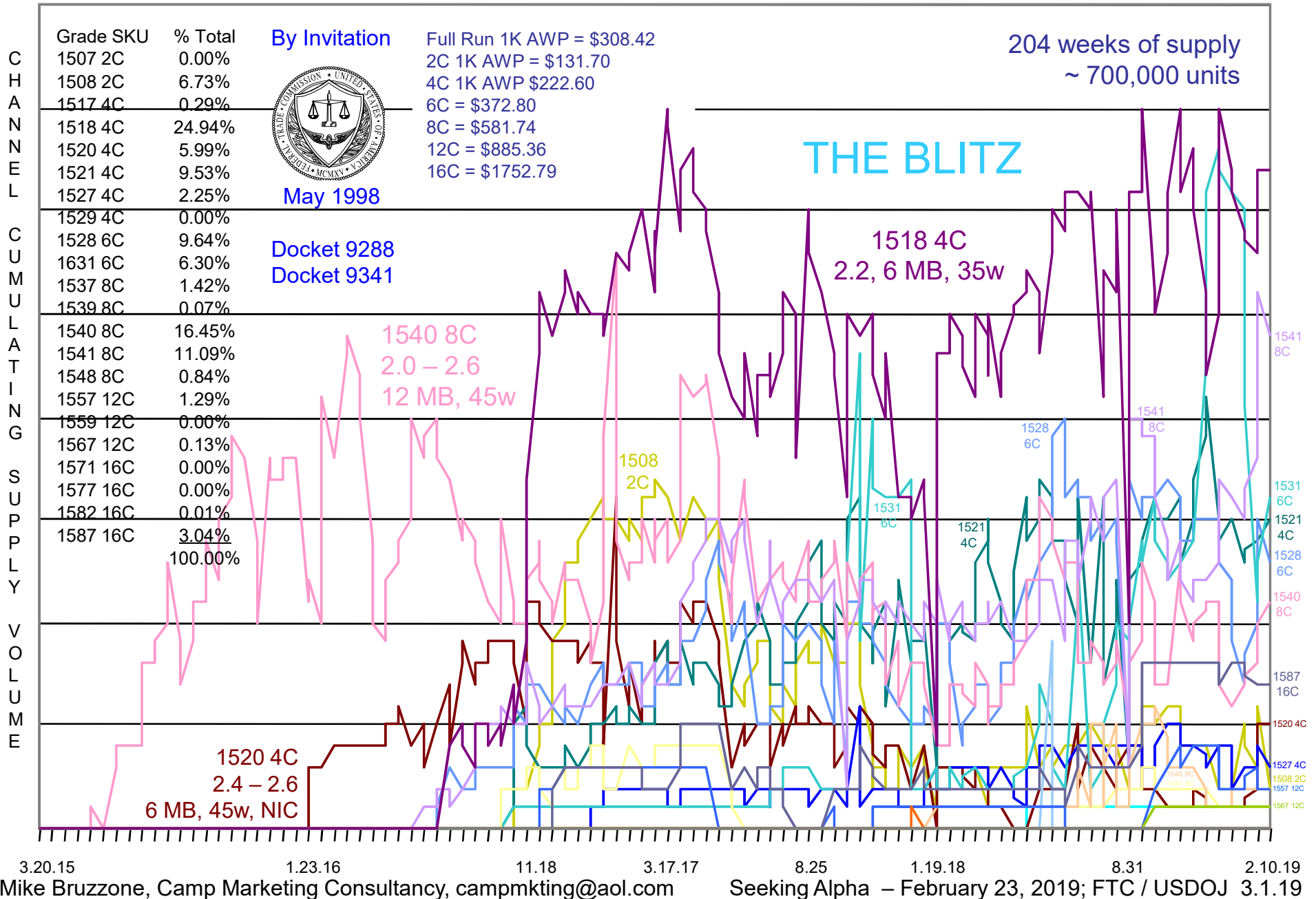
Camp Marketing Consultancy – Xeon E7 88xx v3 8-way Full Run w/AMD All Epyc SKUs



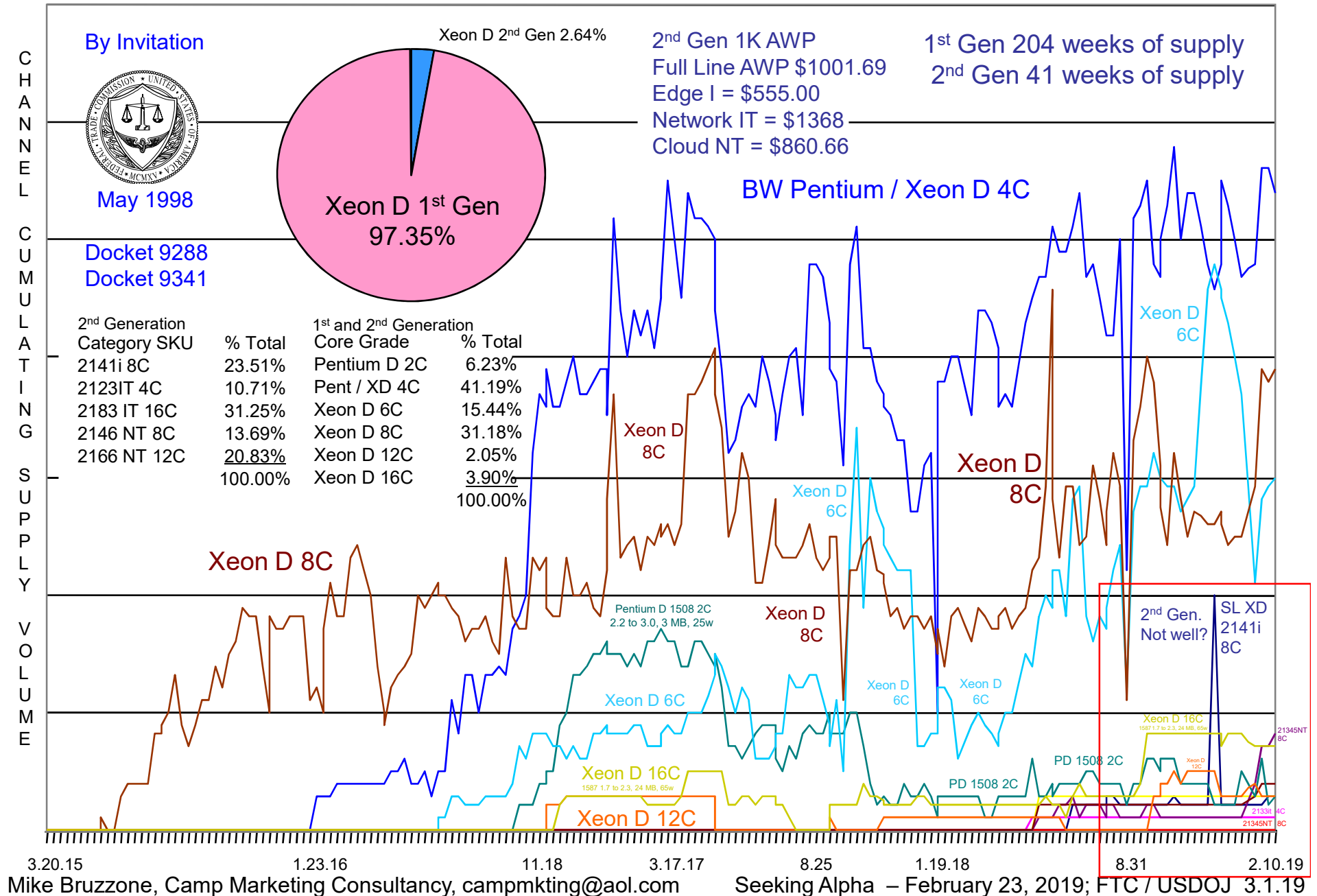
Camp Marketing Consultancy – Xeon E7 48xx v3 4-way Full Run w/AMD All Epyc SKUs



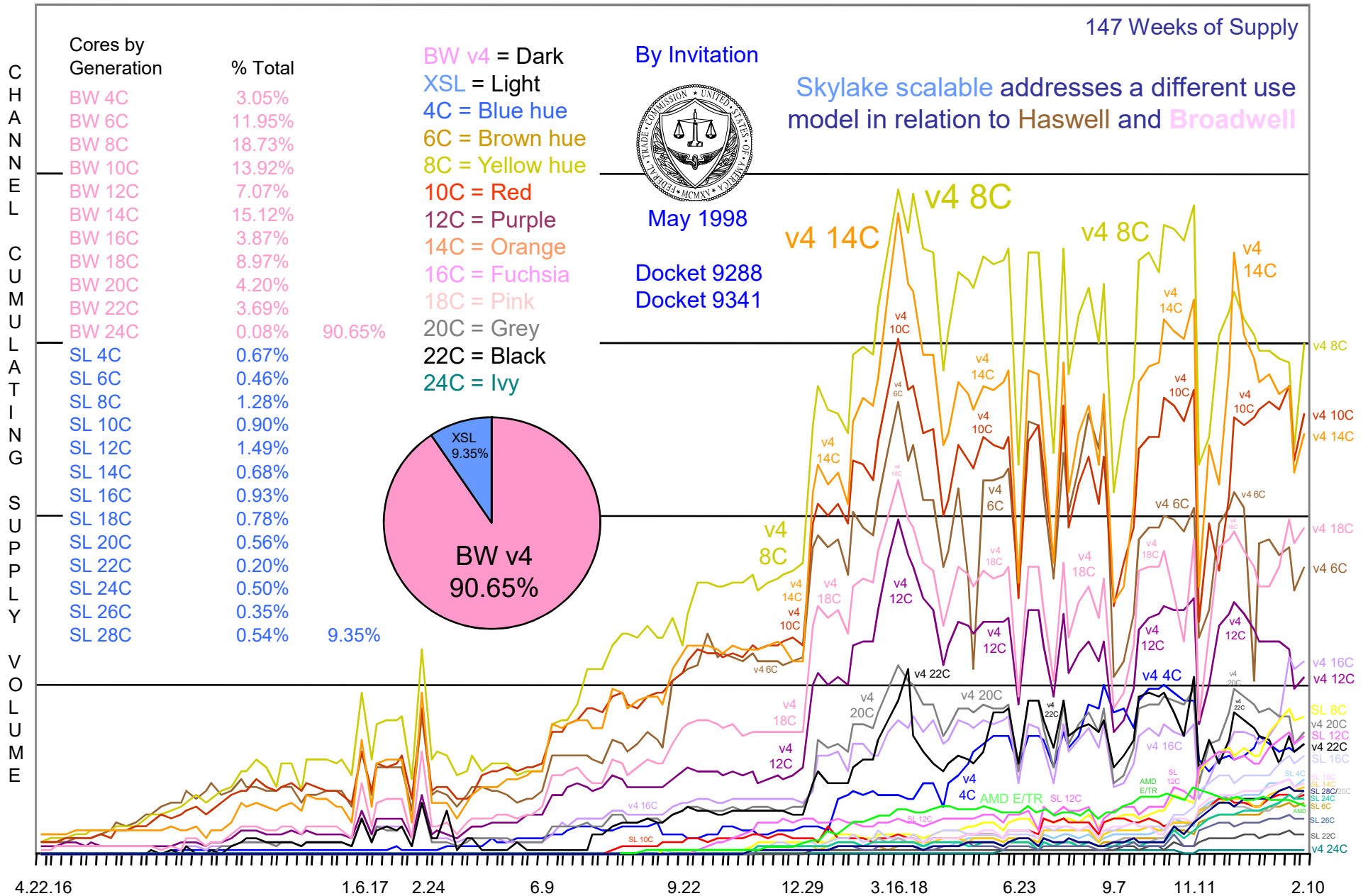
Camp Marketing Consultancy – Xeon D 1st (Broadwell) Generation



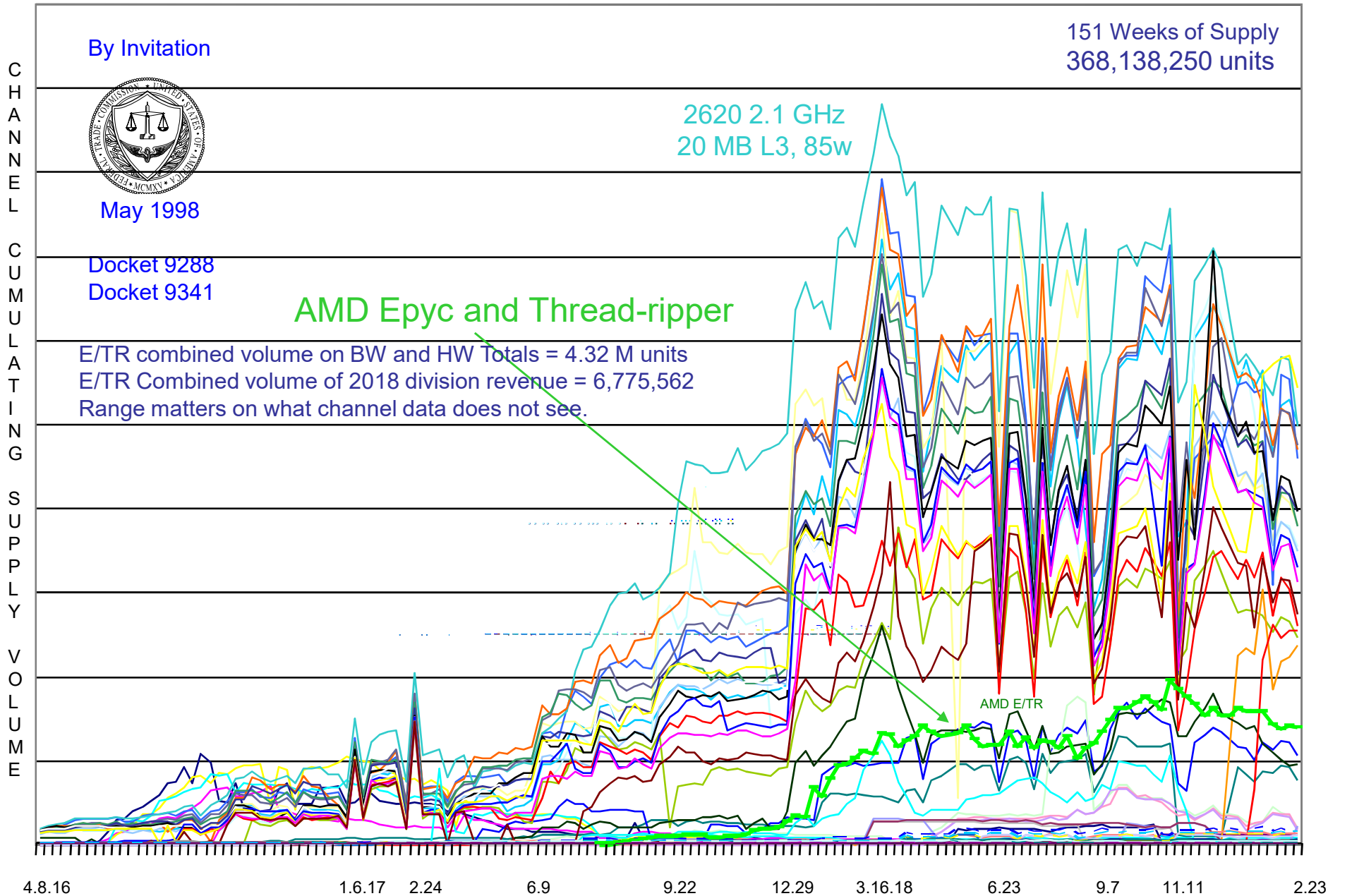
Camp Marketing Consultancy – Xeon D 1st Broadwell on 2nd Skylake Generation



Camp Marketing Consultancy – Xeon E7 / E5 v4 and XSL by Cores Inventory



Camp Marketing Consultancy – Xeon E7 / E5 v4 by Grade SKUs Channel Inventory



Camp Marketing Consultancy – Channel Xeon E7 / E5 v4 and EE by Grade SKU

CATEGORY GRADE SKU	SKU % Total	Full Run Volume 368,138,250	
1603 4C 2.8	0.05%	166,064	
1607 4C 3.1	0.03%	119,708	
1620 4C 3.5 to 3.8	0.80%	2,929,061	
1630 4C 3.7 to 3.8	1.18%	4,329,270	
2623 4C 3.0 GHz	5.68%	20,908,282	4C
2637 4C 3.5 GHz	4.78%	17,585,196	5.23%
6800K 6C 3.4 to 3.8	0.52%	1,901,757	
6850K 6 Core 3.6 to 4.0	0.35%	1,286,431	
1650 6C 3.6 to 3.8	0.44%	1,616,555	
2603 6C 1.7 GHz	5.94%	21,871,386	6C
2643 6C 3.4 GHz	4.67%	17,201,378	5.96%
6900K 8C 3.2 to 4.0	0.59%	2,158,204	
1660 8C 3.2 to 3.6	0.24%	883,118	
1680 8C 3.4 to 3.8	0.23%	856,935	
2608L 8C 1.6 GHz	0.0016%	5,903	
2609 8C 1.7 GHz	6.24%	22,956,986	
2620 8C 2.1 GHz	8.14%	29,976,659	8C
2667 8C 3.2 GHz	3.00%	11,041,077	8.69%
6950X 10C 3.0 to 4.0	0.55%	2,016,726	
2618L 10C 2.2 GHz	0.0033%	12,131	
2630L 10C 1.8 GHz	0.33%	1,216,085	
2630 10C 2.2 GHz	6.55%	24,103,185	
2640 10C 2.4 GHz	6.10%	22,467,270	10C
2689 10C 3.1 GHz	0.02%	59,894	6.50%
2628L 12C 1.9 GHz	0.01%	32,438	
2650 12C 2.2 GHz	5.51%	20,289,652	12C
2687W 3.1 GHz	1.36%	5,024,446	3.44%
2648L 12C 1.8 GHz	0.01%	31,084	
2650L 12C 1.7 GHz	0.04%	155,124	
2658 12C 2.3 GHz	0.02%	69,453	
2660 12C 2.0 GHz	5.17%	19,016,787	
2680 12C 2.4 GHz	5.02%	18,493,658	14C
2690 12C 2.6 GHz	4.63%	17,035,802	7.44%

CATEGORY GRADE SKU	SKU % Total	Full Run Volume 368,138,250	
2683 16C 2.1 GHz	3.48%	12,816,655	3.48%
2697A 16C 2.6 GHz	0.22%	811,337	1.85%
2695 18C 2.1 GHz	4.38%	16,112,149	18C
2697 18C 2.3 GHz	4.45%	16,388,146	4.52%
2698 20C 2.2 GHz	4.17%	15,333,278	4.17%
2696 22C 2.2 GHz	0.52%	1,925,206	
2699 22C 2.2 GHz	3.06%	11,274,318	22C
2699A 22C 2.4 GHz	0.0014%	5,145	1.79%
4655 8C 2.5 GHz	0.07%	243,369	
4610 10C 1.8 GHz	0.04%	145,918	
4620 10C 2.1 GHz	0.02%	81,312	
4627 10C 2.6 GHz	0.07%	258,884	
4640 12C 2.1 GHz	0.13%	494,183	
4628L 14C 2.6 GHz	0.00%	3,791	
4650 14C 2.2 GHz	0.13%	465,238	
4660 16C 2.2 GHz	0.19%	705,709	All Cores
4667 18C 2.2 GHz	0.05%	185,451	E5 4-way
4669 22C 2.2 GHz	0.06%	212,907	0.38%
8894 24C 3.4 GHz	0.0015%	5,632	
8893 4C 3.2 GHz	0.1255%	461,880	
8891 10C 2.8 GHz	0.0638%	234,785	
8890 v4 2.2 GHz	0.0795%	292,676	
8880 22C 2.2 GHz	0.0357%	131,351	
8870 20C 2.2 GHz	0.0147%	54,290	
8867 18C 2.4 GHz	0.0853%	314,013	All Cores
8860 18C 2.2 GHz	0.0259%	95,501	E7 8-way
8855 14C 2.1 GHz	0.0041%	15,244	0.22%
4850 16C 2.1 GHz	0.03%	119,166	
4830 14C 2.0 GHz	0.03%	119,356	All Cores
4820 10C 2.0 GHz	0.16%	592,717	E7 4-way
4809 10C 2.1 GHz	0.11%	420,940	0.17%
	100.00%		

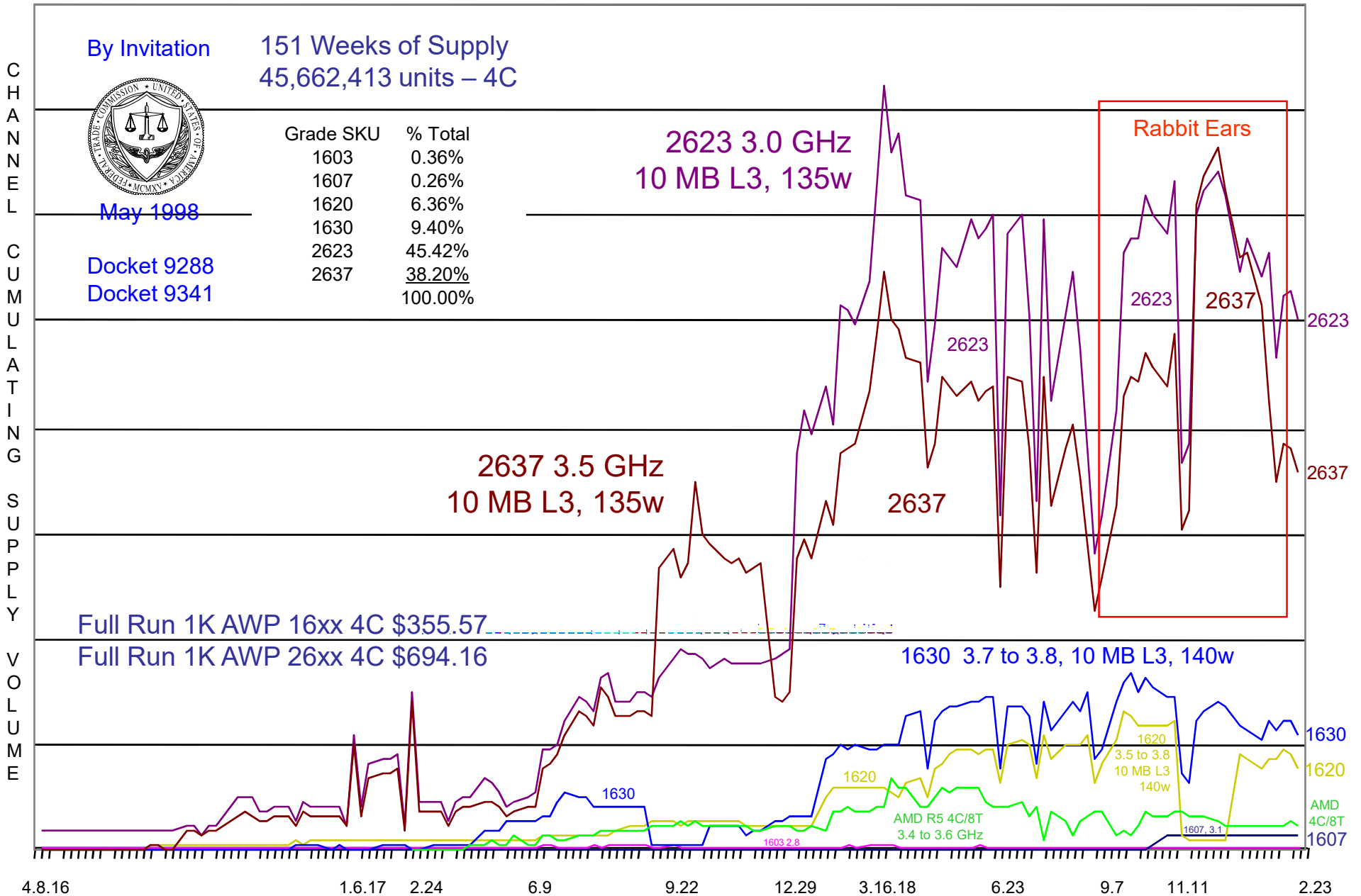
By Invitation



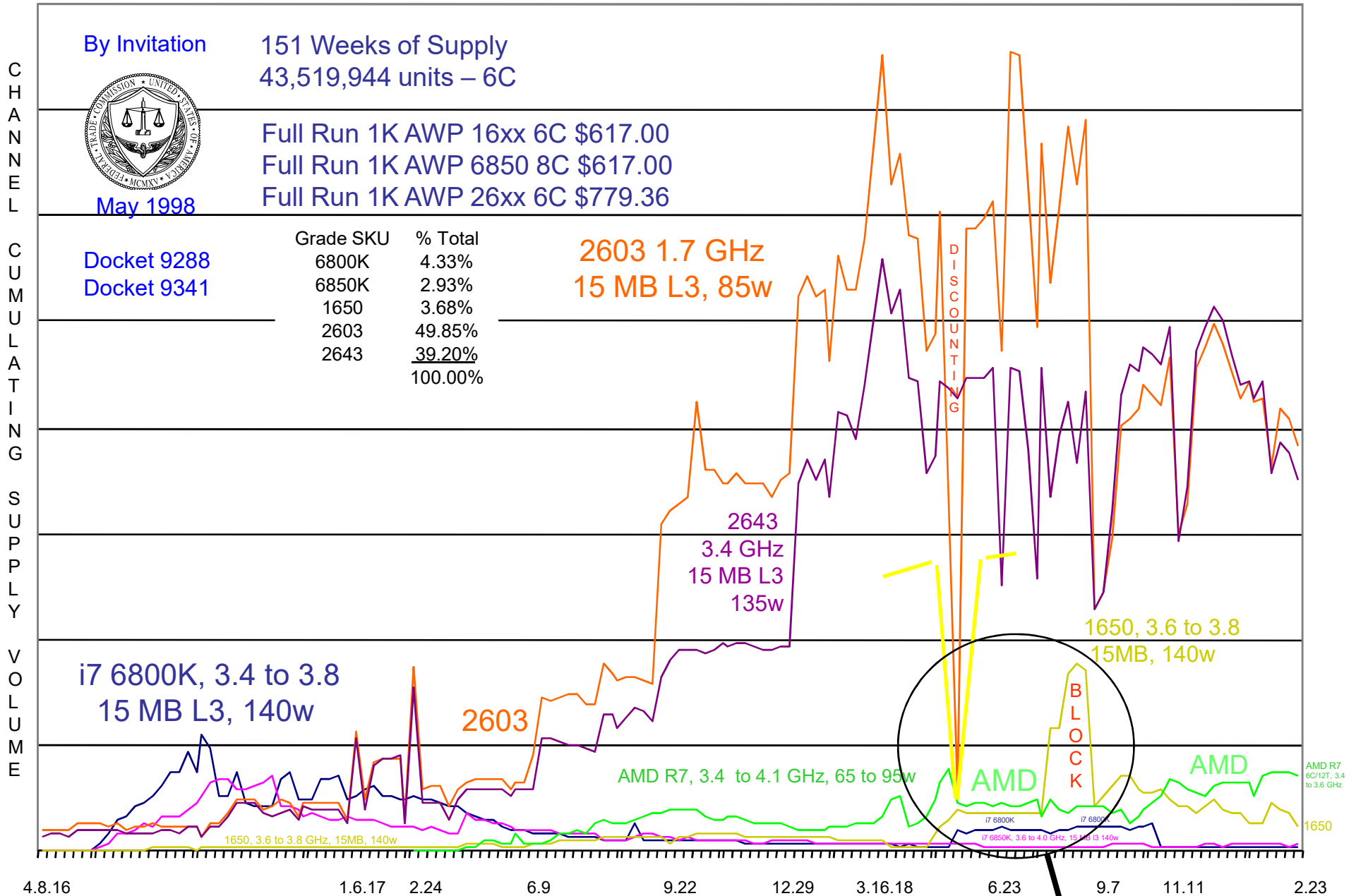
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Docket 9341

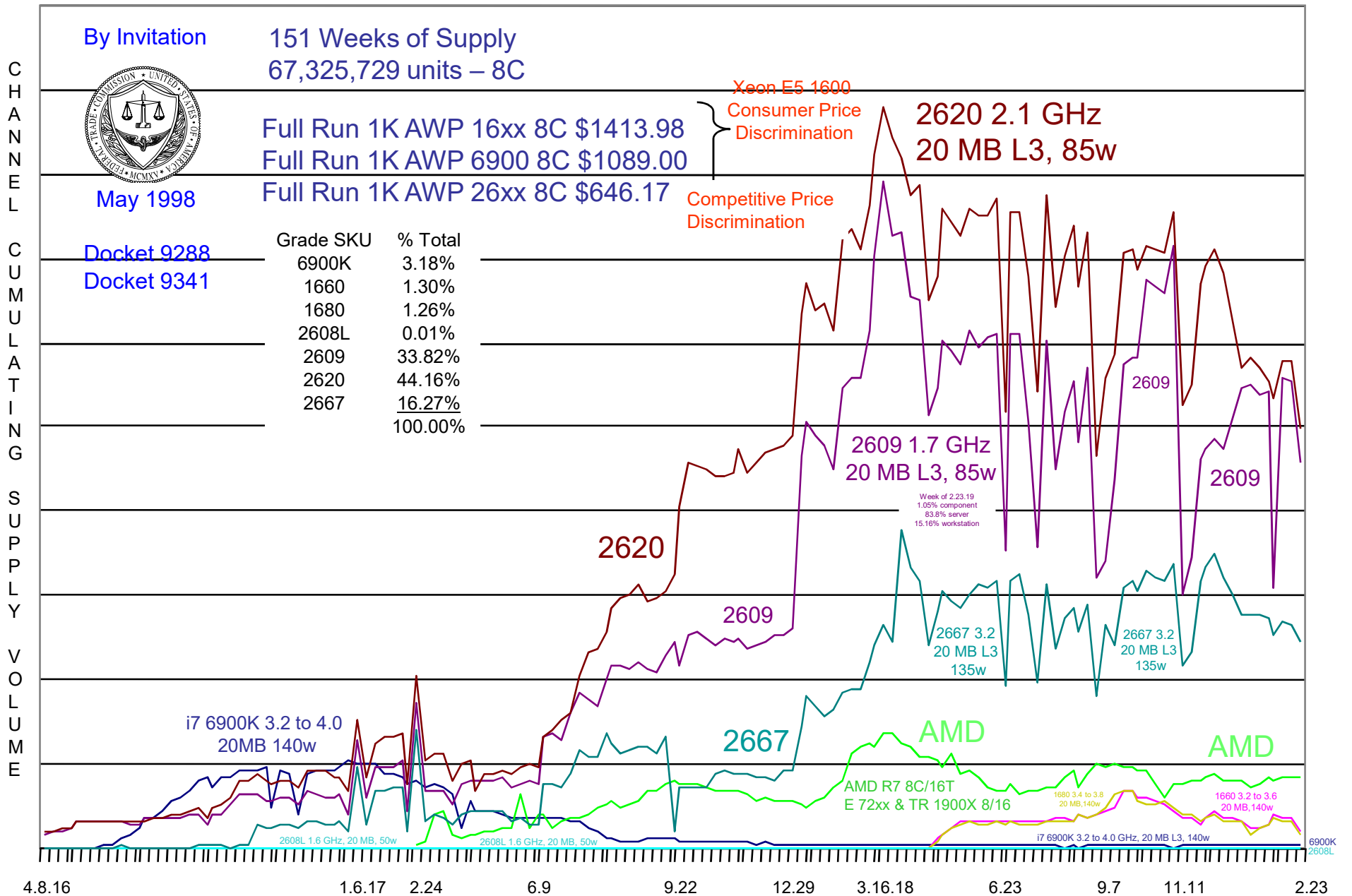
Camp Marketing Consultancy – Xeon E5 26/16xx v4 4C by Grade w/AMD R5 4C/8T



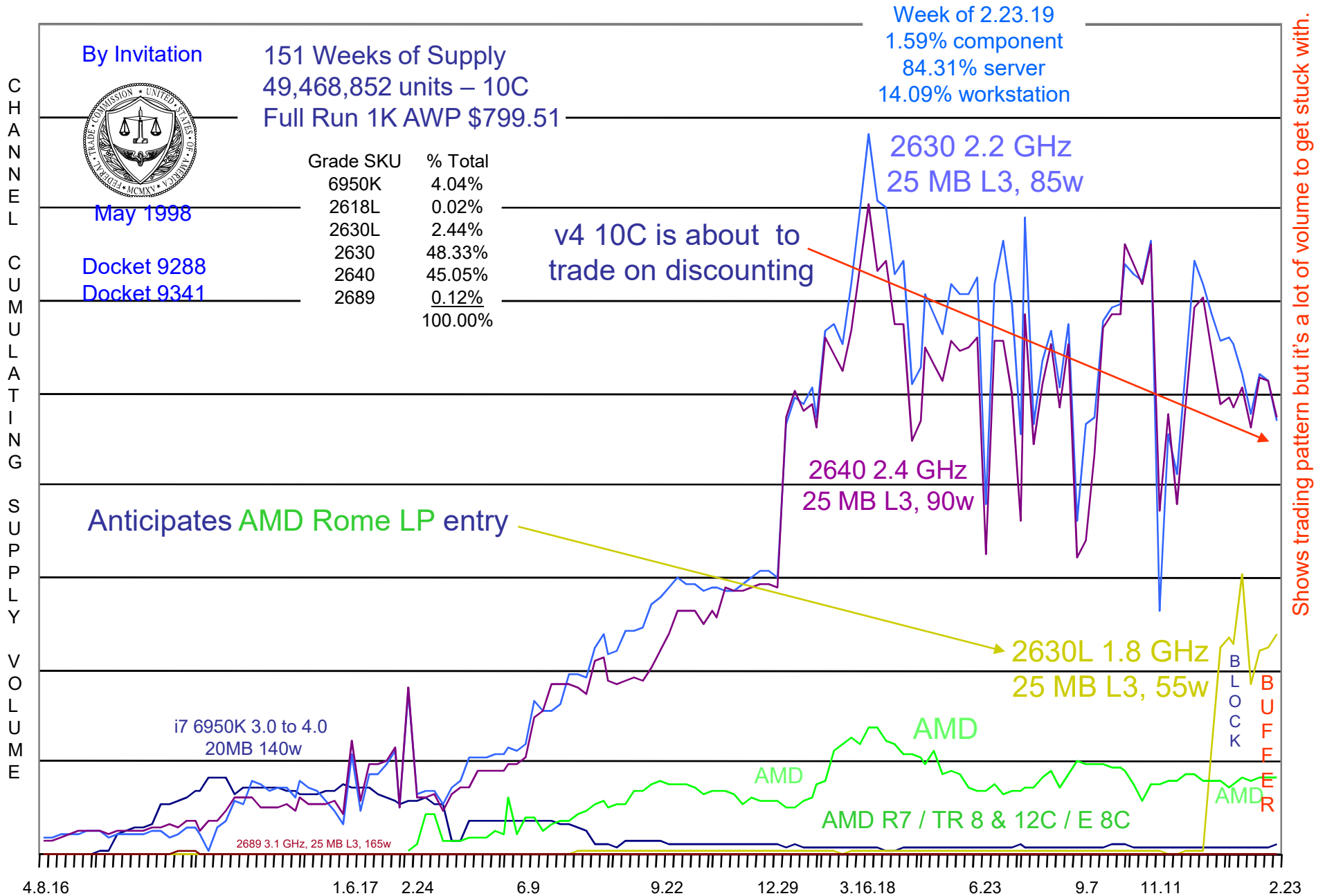
Camp Marketing Consultancy – Xeon E5 26/16xx v4 6C by Grade w/AMD R7 6C/12T



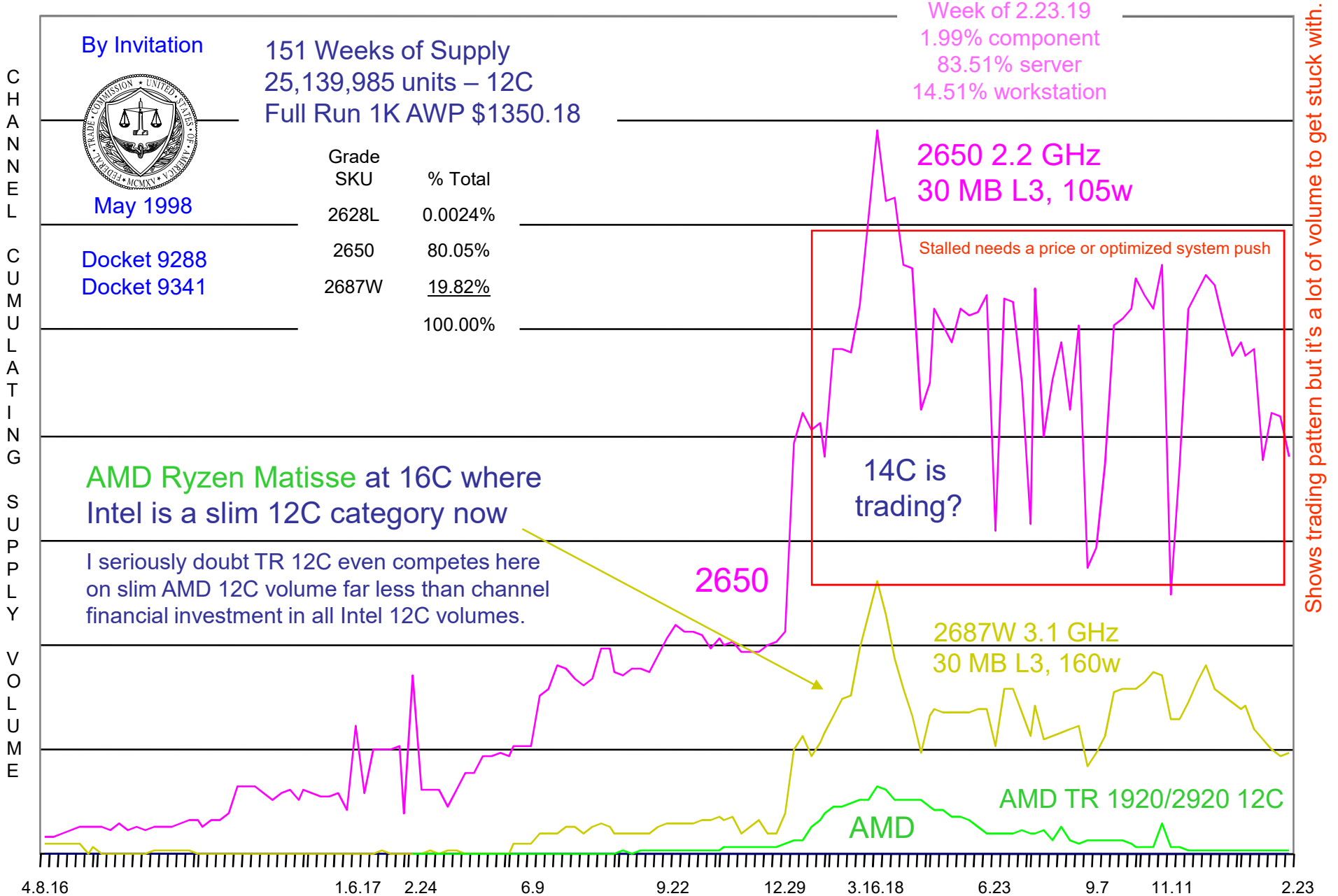
Camp Marketing Consultancy – Xeon E5 26/16xx v4 8C by Grade w/AMD All 8C/16T



Camp Marketing Consultancy – Xeon E5 26xx v4 10C by Grade w/AMD All 8C/12C

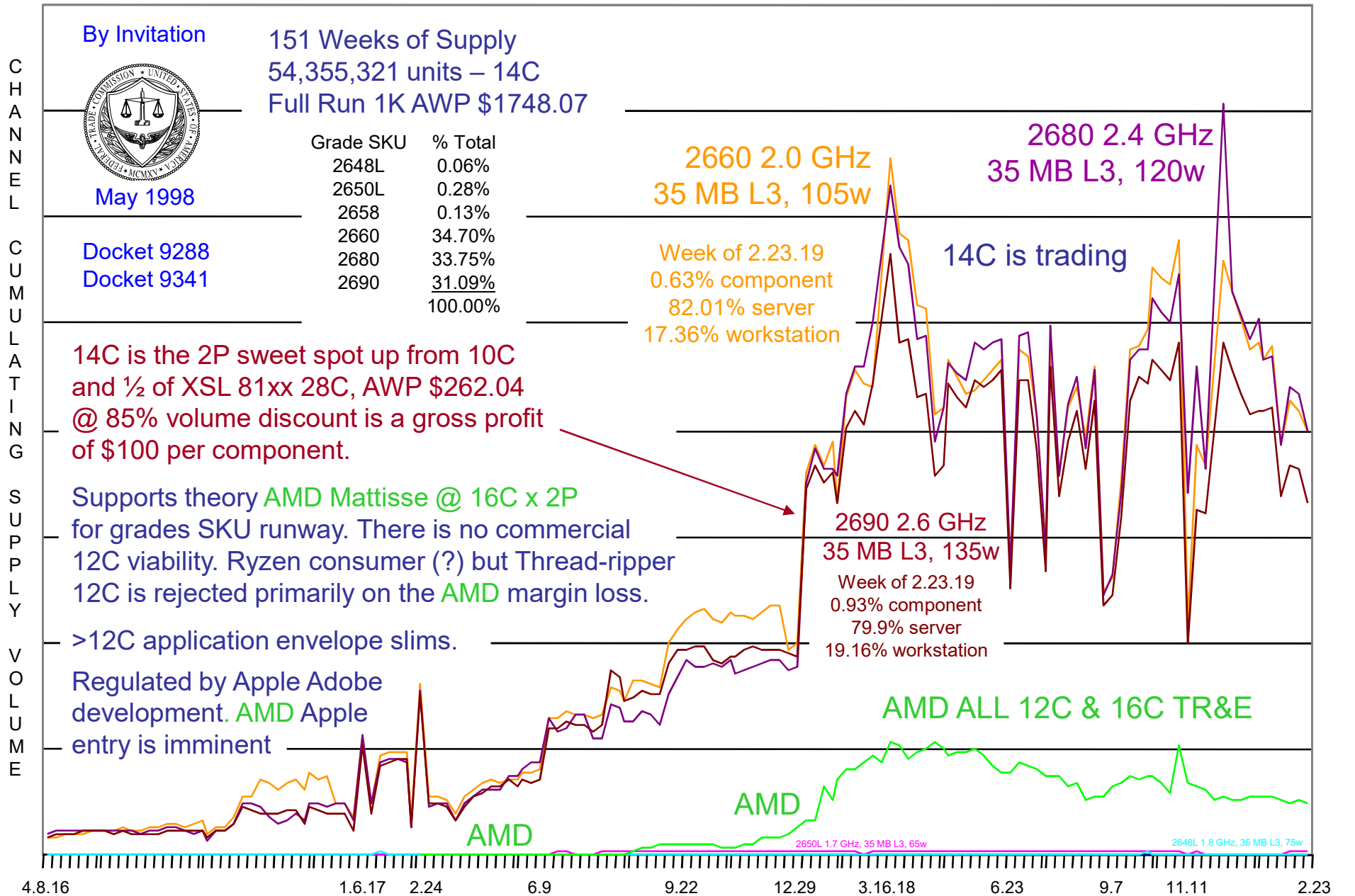


Camp Marketing Consultancy – Xeon E5 26xx v4 12C by Grade w/AMD TR 12C/24T

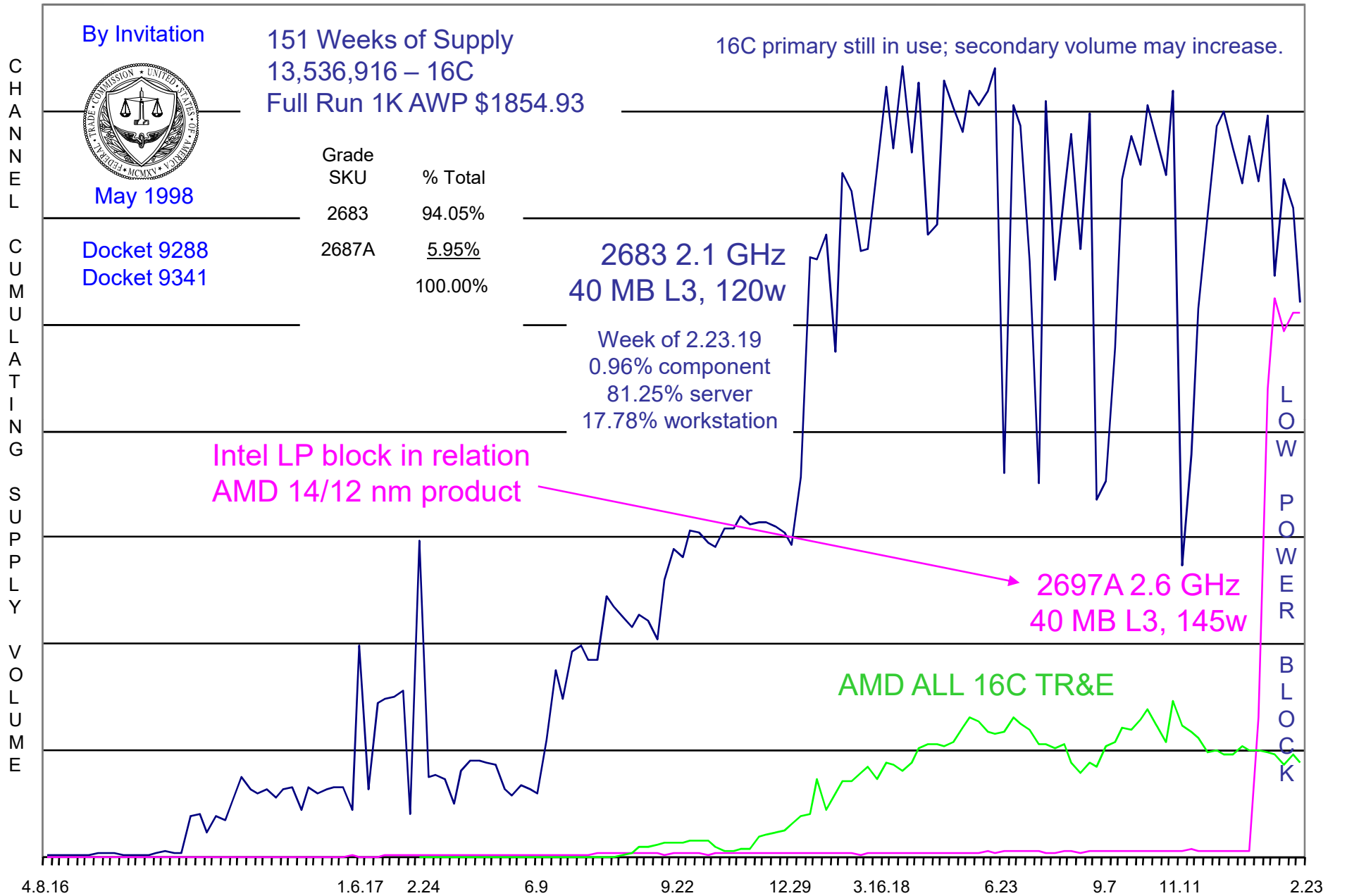


Shows trading pattern but it's a lot of volume to get stuck with.

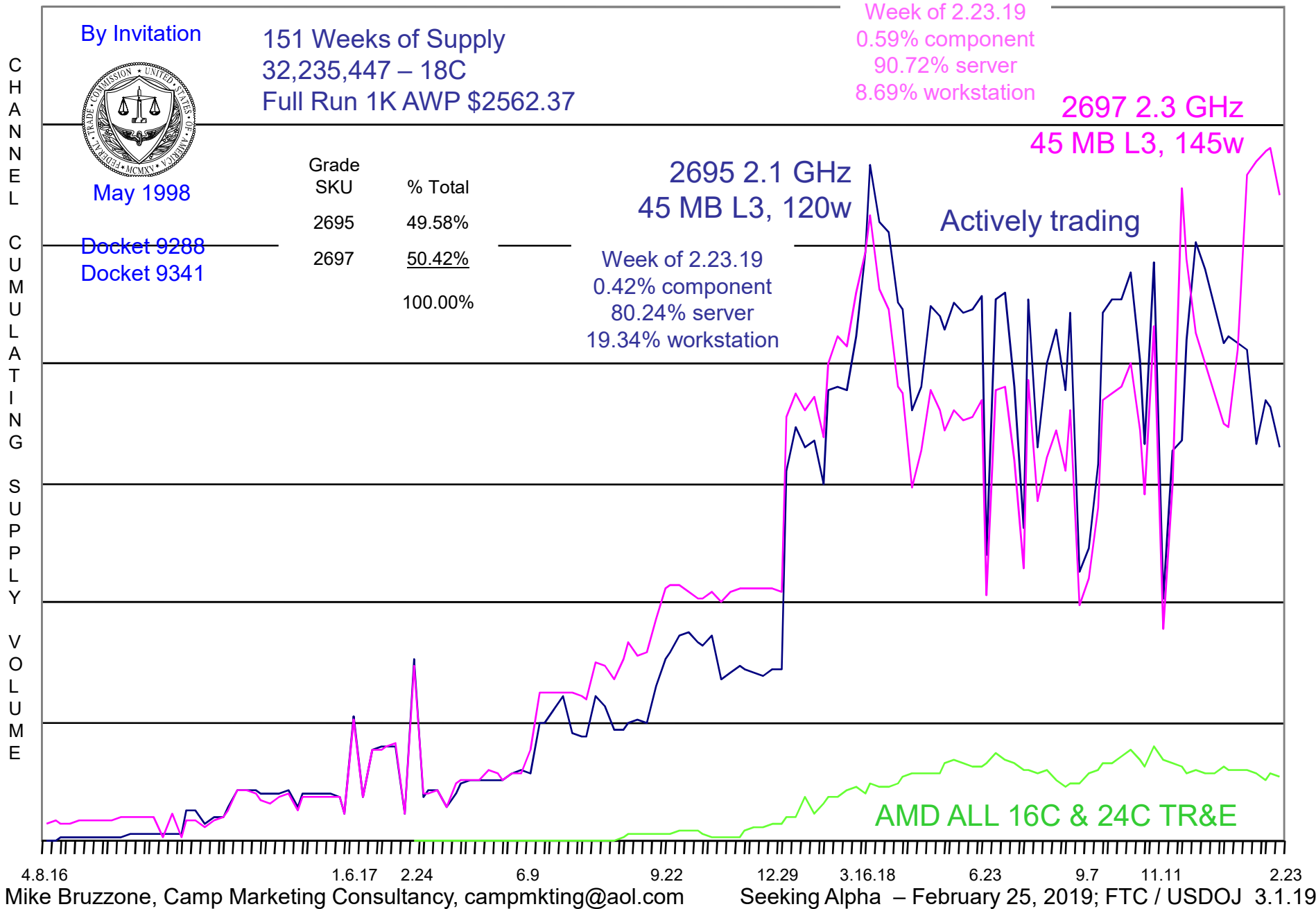
Camp Marketing Consultancy – Xeon E5 26xx v4 14C by Grade w/AMD All 12/16C



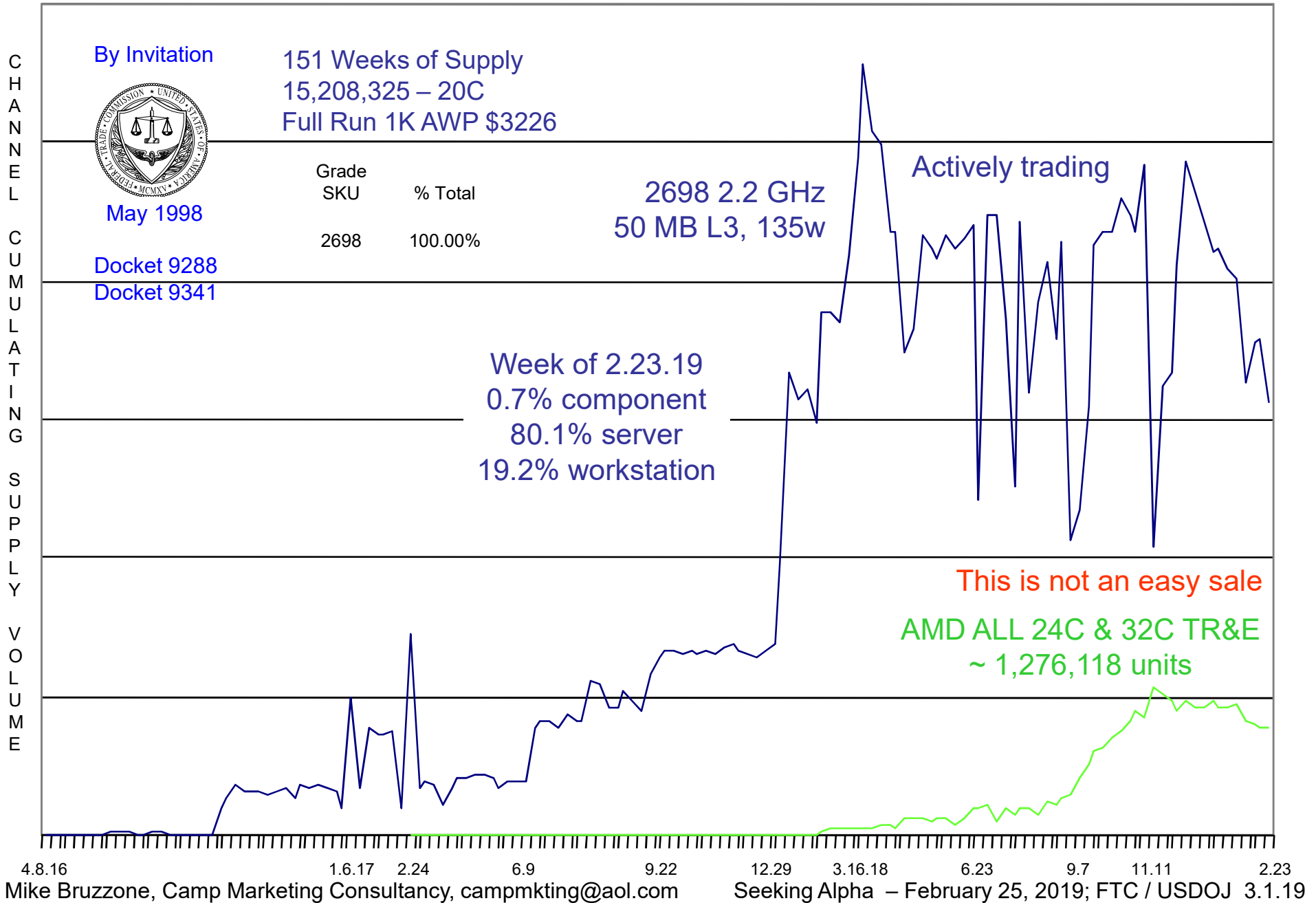
Camp Marketing Consultancy – Xeon E5 26xx v4 16C by Grade w/AMD ALL 16C



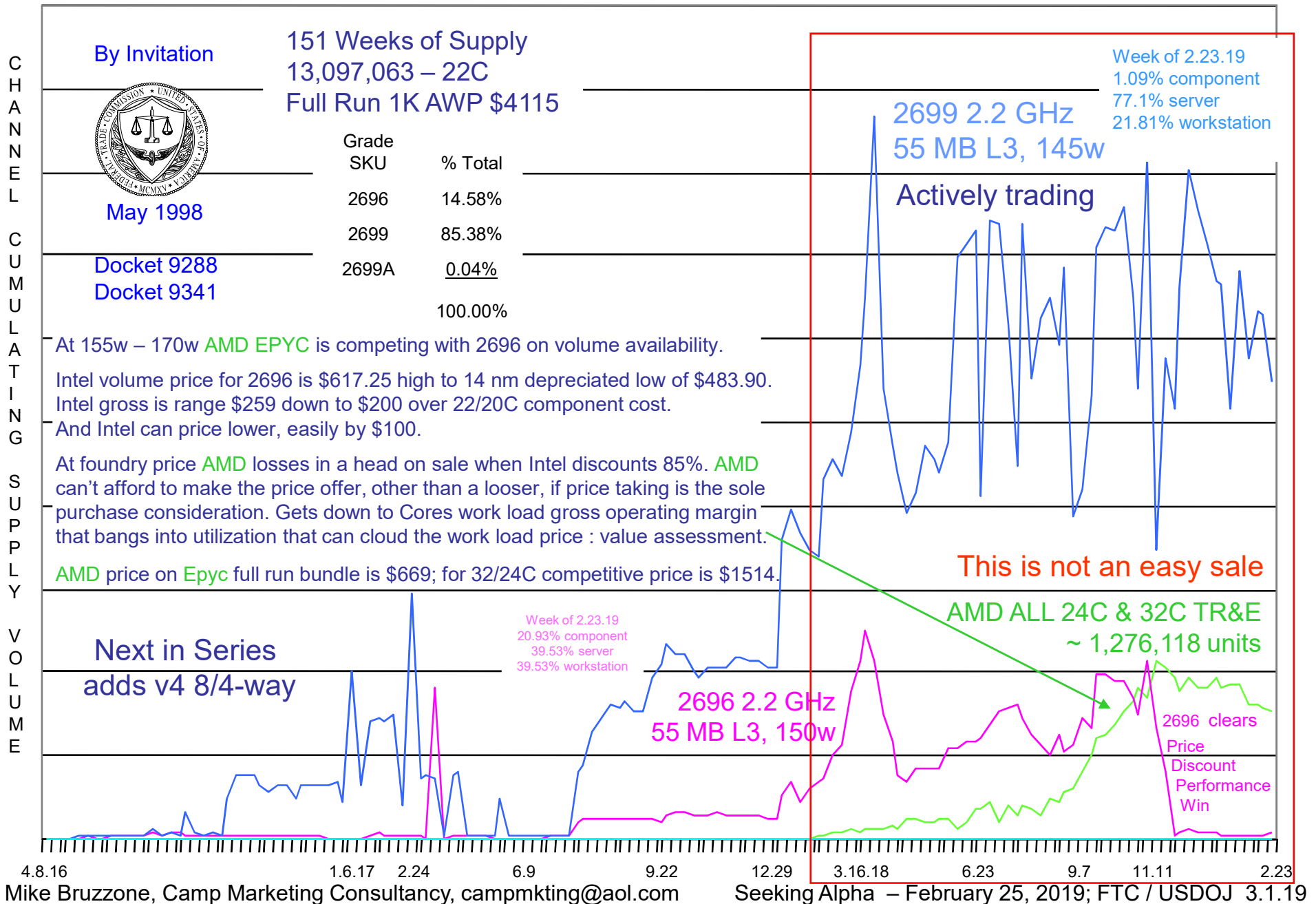
Camp Marketing Consultancy – Xeon E5 26xx v4 18C by Grade w/AMD 16C & 24C



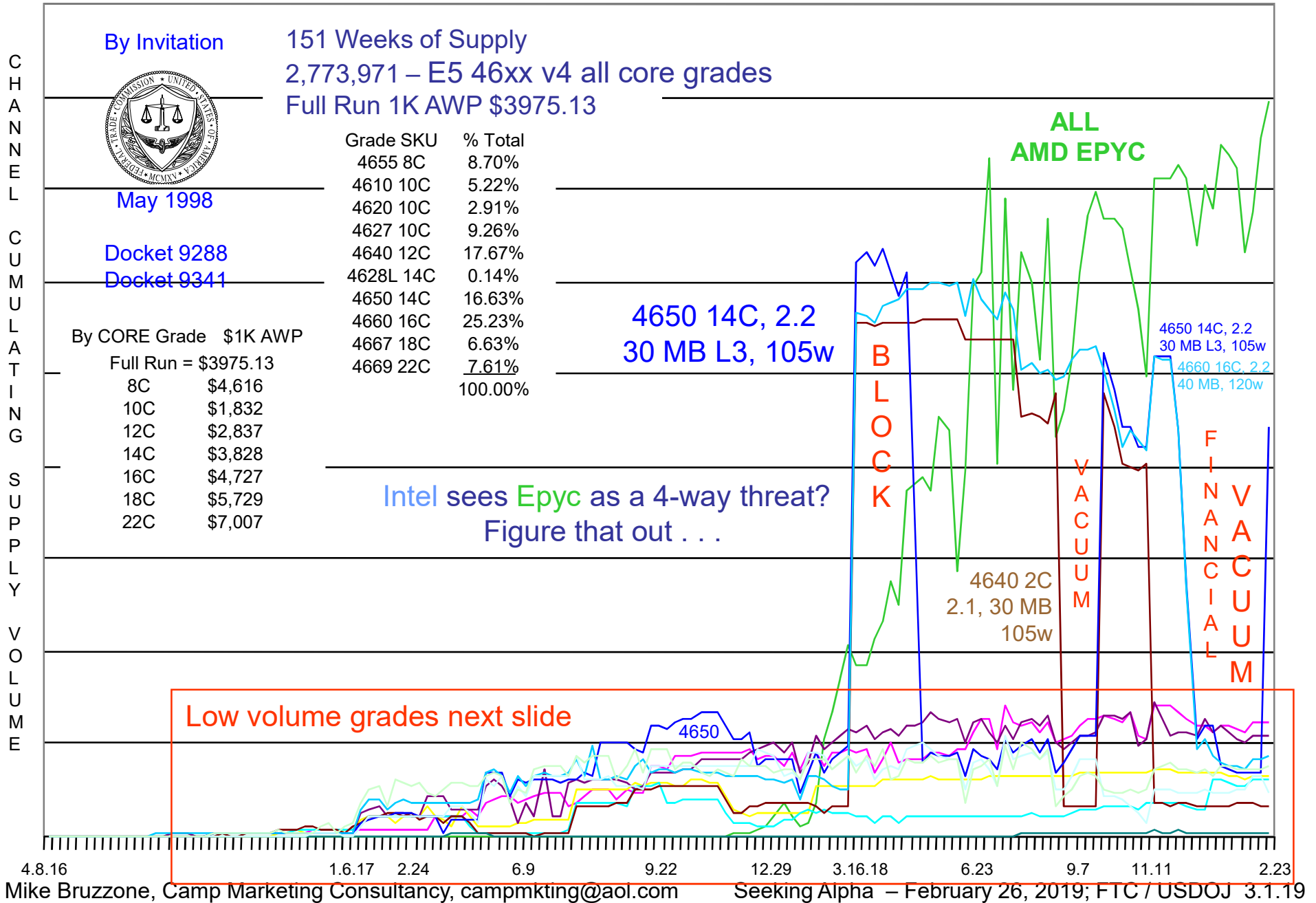
Camp Marketing Consultancy – Xeon E5 26xx v4 20 by Grade w/AMD 24C & 32C



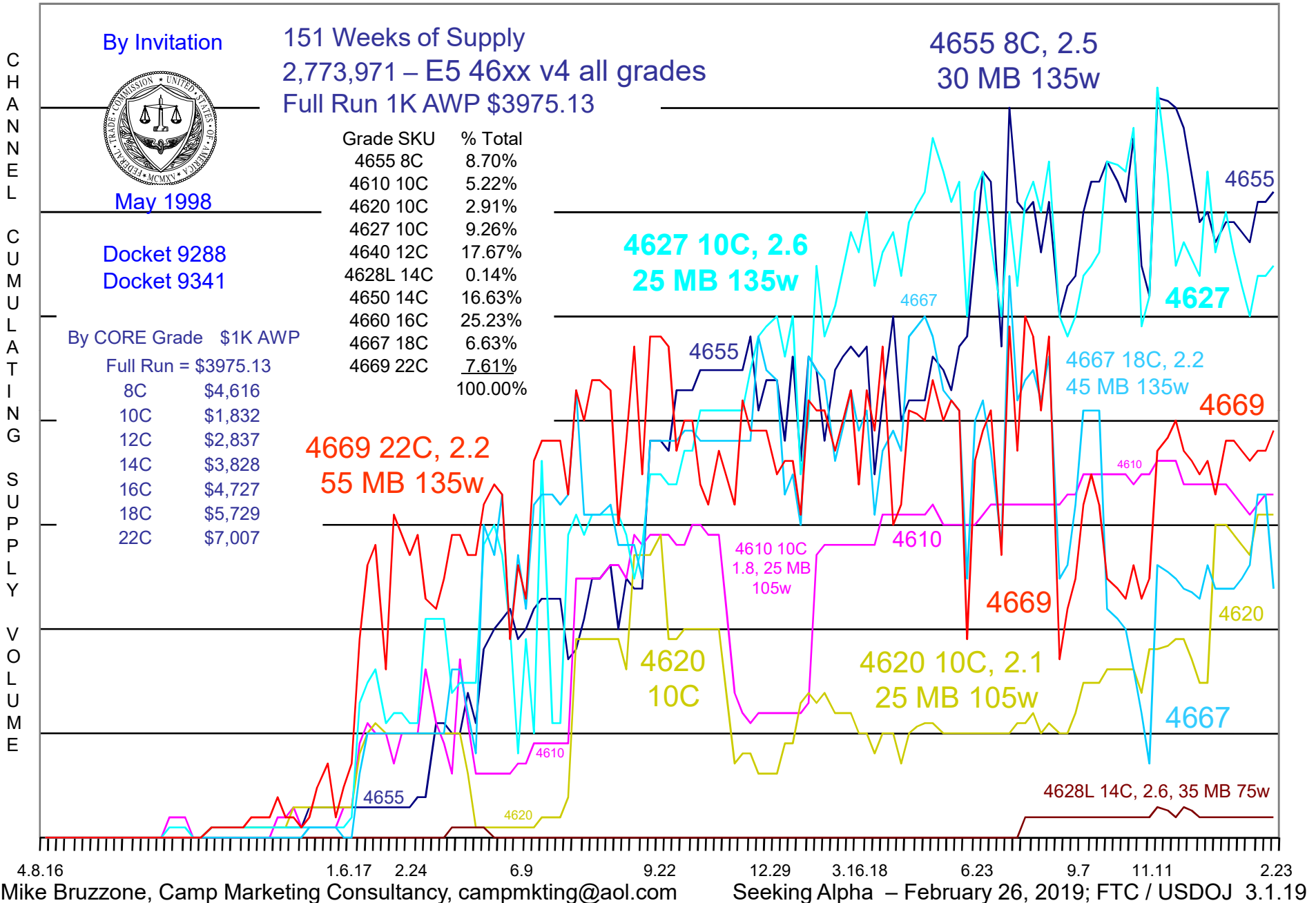
Camp Marketing Consultancy – Xeon E5 26xx v4 22 by Grade w/AMD 24C & 32C



Camp Marketing Consultancy – Xeon E5 46xx v4 4-way Full Run w/AMD All Epyc SKUs



Camp Marketing Consultancy – Xeon E5 46xx v4 4-way low volume SKUs



Camp Marketing Consultancy – Xeon E7 88xx v4 8-way Full Run w/AMD All Epyc SKUs

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By Invitation

151 Weeks of Supply
1,592,289 – E5 88xx v4 all grades
Full Run 1K AWP \$6218.21

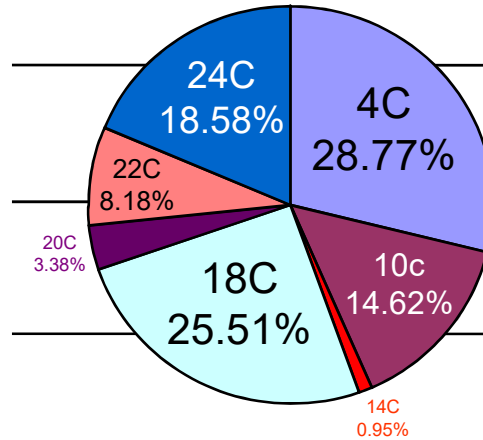


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Grade SKU	% Total
8894 24C	0.35%
8893 4C	28.77%
8891 10C	14.62%
8890 24C	18.23%
8880 22C	8.18%
8870 20C	3.38%
8867 18C	19.56%
8860 18C	5.95%
8855 14C	0.95%
	100.00%



E7 by Core Grades

ALL
AMD EPYC

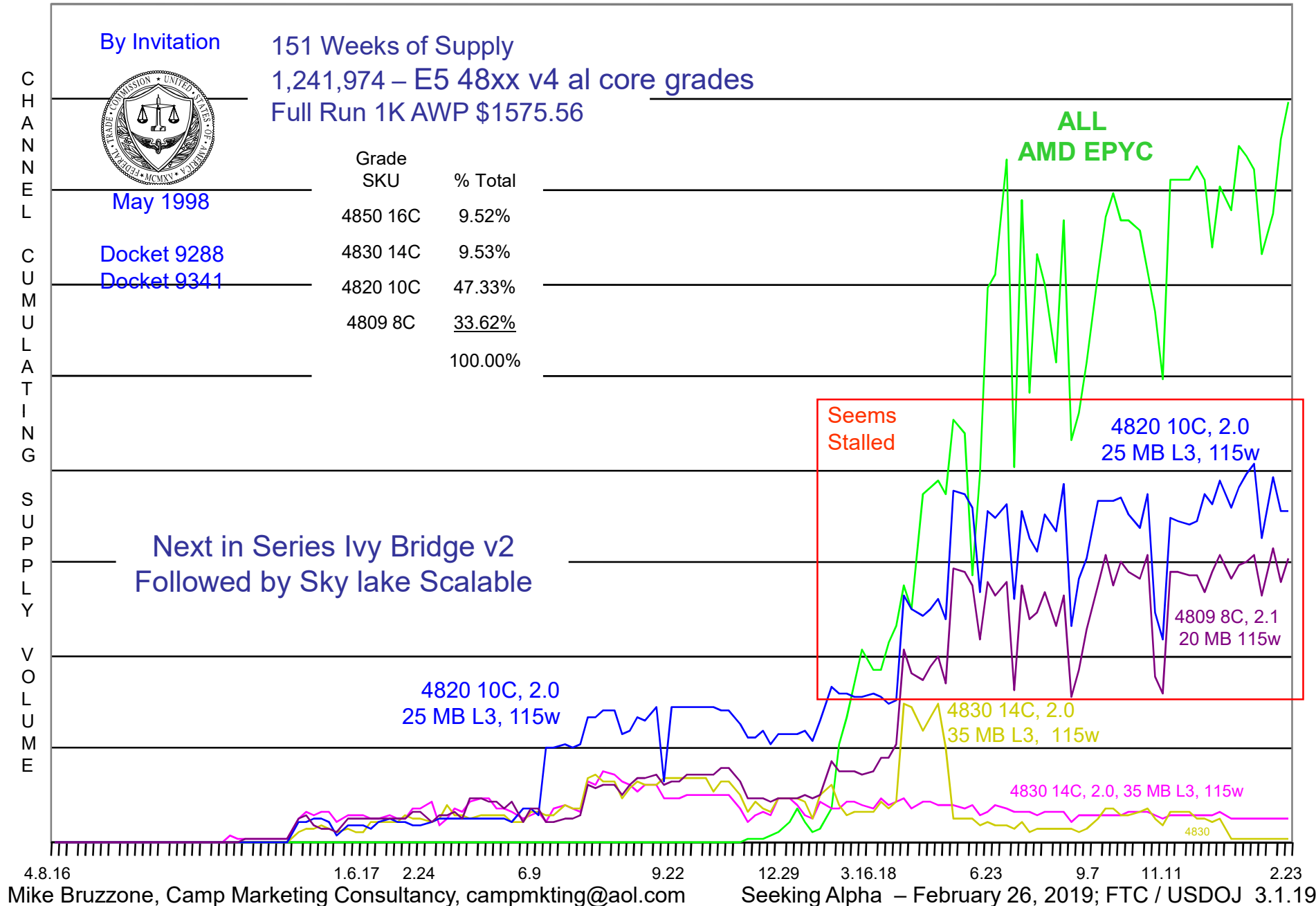
8893 4C, 3.2
60 MB, 140w

8891 10C, 2.8
60 MB, 165w

8893

4.8.16 1.6.17 2.24 6.9 9.22 12.29 3.16.18 6.23 9.7 11.11 2.23

Camp Marketing Consultancy – Xeon E7 48xx v4 4-way Full Run w/AMD All Epyc SKUs



E5 26xx v4 by Grade SKU High Volume Price @ 85% off 1K

Camp Marketing Consultancy

Update FTC / USDOJ 3.1.19

BROADWELL XEON E5 2600 DP
 44% of Run: 159,790,235 Units < AMC \$160
 \$7,981,359,518 Industry Financial Theft

E5 26xx v4 Commercial Price

FOUR CORE

E5 2623 3.0 GHz, 10 MB L3, 85W
 E5 2637 3.5 GHz, 10 MB L3, 135W

TR/TC Calc

\$1K Price	85% OEM Discount	TR/TC Calc	Notation
\$444	0.15	AMC	
\$595	\$66.60	\$160	Below Cost KEY
\$213	\$149.40	(\$93.40)	Below Cost
\$1,552	\$232.80	(\$10.60)	
			VARIABLE COST = \$38.34

SIX CORE

E5 2638 1.7 GHz, 15 MB L3, 85W
 E5 2649 3.4 GHz, 15 MB L3, 135W

EIGHT CORE

E5 2688L 1.6 GHz, 20 MB L3, 50W
 E5 2699 1.7 GHz, 20 MB L3, 85W
 E5 2620 2.1 GHz, 20 MB L3, 85W
 E5 2657 3.2 GHz, 20 MB L3, 135W

TEN CORE

E5 2688L 2.2 GHz, 25 MB L3, 75W
 E5 2630L 1.8 GHz, 25 MB L3, 55W
 E5 2630 2.2 GHz, 25 MB L3, 85W
 E5 2640 2.4 GHz, 25 MB L3, 90W
 E5 2639 3.1 GHz, 25 MB L3, 165W

TWELVE CORE

E5 2628L 1.9 GHz, 30 MB L3, 75W
 E5 2630 2.2 GHz, 30 MB L3, 105W
 E5 2637W 3.1 GHz, 30 MB L3, 160W

FOURTEEN CORE

E5 2648L 1.8 GHz, 35 MB L3, 75W
 E5 2630L 1.7 GHz, 35 MB L3, 65W
 E5 2638 2.3 GHz, 35 MB L3, 105W
 E5 2660 2.0 GHz, 35 MB L3, 105W
 E5 2680 2.4 GHz, 35 MB L3, 120W
 E5 2650 2.6 GHz, 35 MB L3, 135W

SIXTEEN CORE

E5 2683 2.1 GHz, 40 MB L3, 120W
 E5 2637A 2.6 GHz, 40 MB L3, 145W

EIGHTEEN CORE

E5 2635 2.1 GHz, 45 MB L3, 120W
 E5 2637 2.3 GHz, 45 MB L3, 145W

TWENTY CORE

E5 2638 2.2 GHz, 50 MB L3, 135W

TWENTY TWO (24) CORE

E5 2636 2.2 GHz, 55 MB L3, 150W
 E5 2639 2.2 GHz, 55 MB L3, 145W
 E5 2639R 2.2 GHz, 55 MB L3, 145W
 E5 2639A 2.4 GHz, 55 MB L3, 145W, NIC I/O

\$779	\$116.85	(\$43.15)	Below Cost
\$612	\$91.80	(\$68.20)	Below Cost
\$667	\$100.05	(\$69.95)	Below Cost
\$839	\$140.85	(\$19.15)	Below Cost
\$2,723	\$408.45	\$248.45	COMPETITIVE PROFIT
\$1,364	\$204.60	\$44.60	Profit > Cost
\$1,166	\$174.90	\$14.90	Profit > Cost
\$2,141	\$321.15	\$161.15	COMPETITIVE PROFIT
\$1,544	\$231.60	\$71.60	Profit > Cost
\$1,329	\$199.35	\$39.35	Profit > Cost
\$1,832	\$274.80	\$114.80	Profit > Cost
\$1,445	\$216.75	\$56.75	Profit > Cost
\$1,745	\$261.75	\$101.75	Profit > Cost
\$2,090	\$313.50	\$153.50	Profit > Cost
\$1,846	\$276.90	\$116.90	Profit > Cost
\$2,891	\$433.65	\$273.65	COMPETITIVE PROFIT
\$2,424	\$363.60	\$203.60	COMPETITIVE PROFIT
\$2,702	\$405.30	\$245.30	COMPETITIVE PROFIT
\$3,226	\$483.90	\$323.90	COMPETITIVE PROFIT
\$4,115	\$617.25	\$457.25	ENTERING
\$4,115	\$617.25	\$457.25	ECONOMIC PROFIT
\$4,569	\$685.35	\$525.35	POINTS
\$4,938	\$740.70	\$580.70	

Camp Marketing Consultancy – Xeon E7 / E5 v2 and EE by Cores Inventory

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By Invitation



Market value of v4/v3/v2 10C
 @ 50% off v4 10C AWP \$795.58 / 2 = \$397.79 each
 Total 10C capital financial value \$132,733,788,170

May 1998

Docket 9288 Intel Comet Lake 10C
 Docket 9341

Between v2 / v3 / v4 there are ~ 333,678,735 10 Core components.

v4 on Wellsburg C6xxx chipset can upgrade v3 2011-3 socket.
 v2 on Romley chipset board is unique but all these are viable processors.

I again suggest Intel open on foundry or exception rate a license to proceed supporting channel putting engineers and production to work; 12C and 10C v2, then v3 reclaim on independent control hub, core logic augments, sub system evolutionary upgrade on new boards for in-series platform developments.

Otherwise 333.6 M 10C financial values fall from the capital system placing a drag on industry through what is supposed to be an 'open market' monopoly (correction) - re-equilibrium - verse innovating 10C, 12C, 14C into 'commodity' platform uses. Is a governance decision as in regulation Intel has a very poor record.

26xx v2
10 Core

26xx v2
6 Core

26xx v2
8 Core

26xx v2
8 Core

2600 v2 12C

2600 v2 4C

8.21.14 4.3.15 6.27 2.5.16 8.9 12.23 2.10.17 6.30 9.29 12.14 3.2.18 8.3 11.18 2.10

Camp Marketing Consultancy – Channel Xeon E7 / E5 v2 and EE by Grade SKU

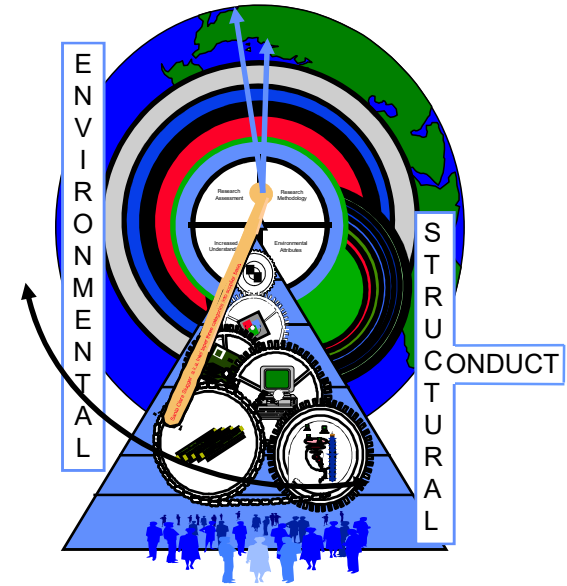
CATEGORY	SKU	Full Run Volume	CATEGORY	SKU	Full Run Volume
GRADE SKU	% Total	495,587,100	GRADE SKU	% Total	495,587,100
4820K	0.23%	1,122,337	2470	0.56%	2,775,306
1607	1.05%	5,207,652	2448L	0.00%	8,798
1620	0.26%	1,300,645	2450L	0.01%	34,544
2403	0.78%	3,850,522	2660	12.45%	61,718,412
2407	1.32%	6,543,300	2670	9.23%	45,749,986
2603	1.77%	8,770,351	2680	5.13%	25,445,611
2609	2.05%	10,144,429	2690	9.65%	47,805,665
2637	1.34%	6,658,888	2648L	0.01%	51,142
4960X	0.24%	1,212,908	2650L	0.09%	454,095
4930K	0.31%	1,529,122	2692	0.01%	45,501
1650	0.98%	4,843,912	2685	4.71%	23,350,530
1660	0.17%	860,475	2696	0.02%	105,009
1428L	0.02%	87,413	2697	2.44%	12,074,237
2420	1.13%	5,593,549	4603	0.78%	3,885,228
2430	1.15%	5,674,701	4607	0.87%	4,289,855
2418L	0.00%	6,234	4610	0.73%	3,602,343
2430L	0.07%	357,371	4620	0.88%	4,370,575
2620	5.90%	29,223,293	4627	0.62%	3,076,677
2630	10.58%	52,439,721	4624L	0.00%	16,058
2643	0.93%	4,599,835	4640	1.27%	6,282,653
2618L	0.00%	15,977	4650	0.48%	2,392,836
1680	0.03%	136,747	4657L	0.02%	108,221
2440	0.75%	3,724,652	8890	0.02%	111,702
2450	0.41%	2,042,482	8880	0.02%	94,322
2428L	0.00%	18,055	8870	0.01%	42,290
2640	3.57%	17,673,022	8880L	0.01%	37,648
2650	7.92%	39,273,751	8850	0.01%	60,776
2667	4.42%	21,918,401	8857	0.06%	276,678
2687W	0.44%	2,198,687	8891	0.16%	776,949
2628L	0.01%	55,001	8893	0.10%	500,028
			8895	0.01%	32,169
			4890	0.17%	851,327
			4880	0.17%	837,111
			4870	0.06%	303,126
			4860	0.10%	509,582
			4850	0.10%	483,646
			4830	0.20%	968,102
			4820	0.12%	592,973
			4809	0.89%	4,386,957
				100.00%	

By Invitation



May 1998

Docket 9288
Docket 9341



Camp Marketing Consultancy – Xeon E7 / E5 v2 and EE by Cores Inventory

Between v2 / v3 / v4 there are ~ 333,678,735 2P 10 Core components
Industry investment on channel capital value \$132,733,788,170

Intel Comet 14nm Lake 10C

CANCELLED

Market is flooded with 6/8/10C think up bin
Want to do a fast 10C chip . . . open Xeon v2/v3 CPU bus to independent core logic

Camp Marketing Consultancy – Xeon E5 24/16xx v2 4C & EE by Grade w/AMD 4C/8T

By Invitation



Intel competes with AMD EPYC at IB v2, like HW v3, like BW v4
 If back in time Xeon can be used as a negotiating chip; guess what.

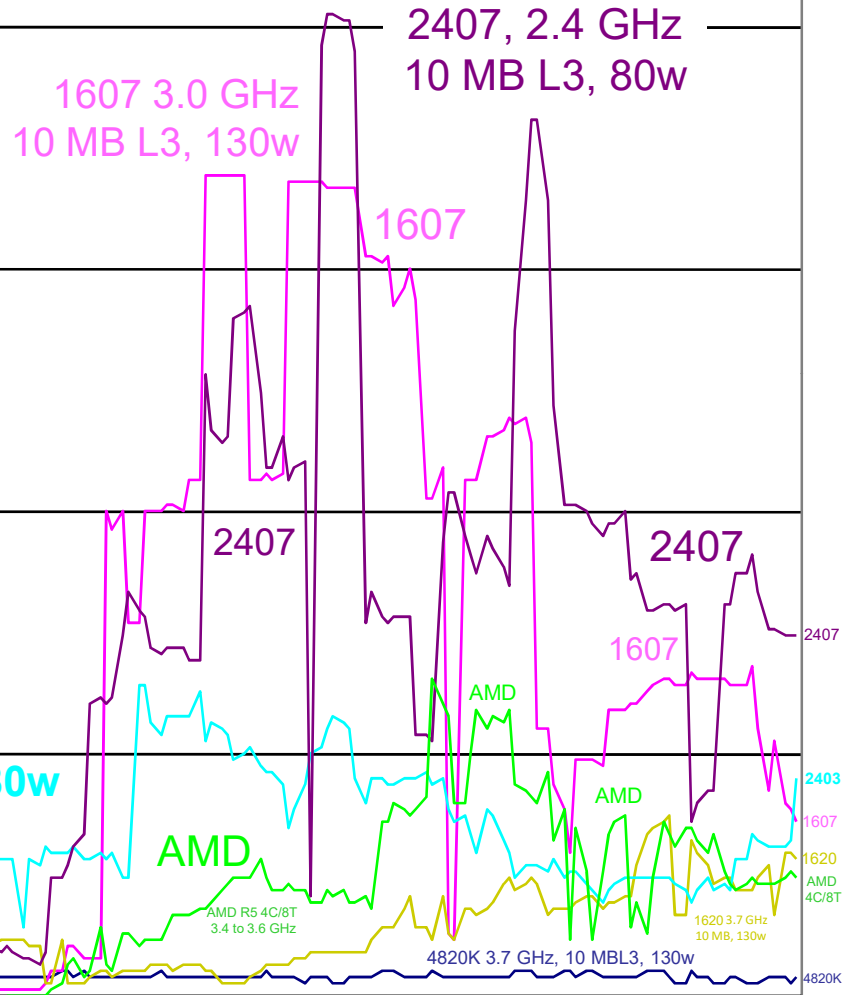
CHANNEL CUMULATING SUPPLY VOLUME

May 1998

236 Weeks of Supply Shown
 18,024,456 full run units – 24/16xx 4C

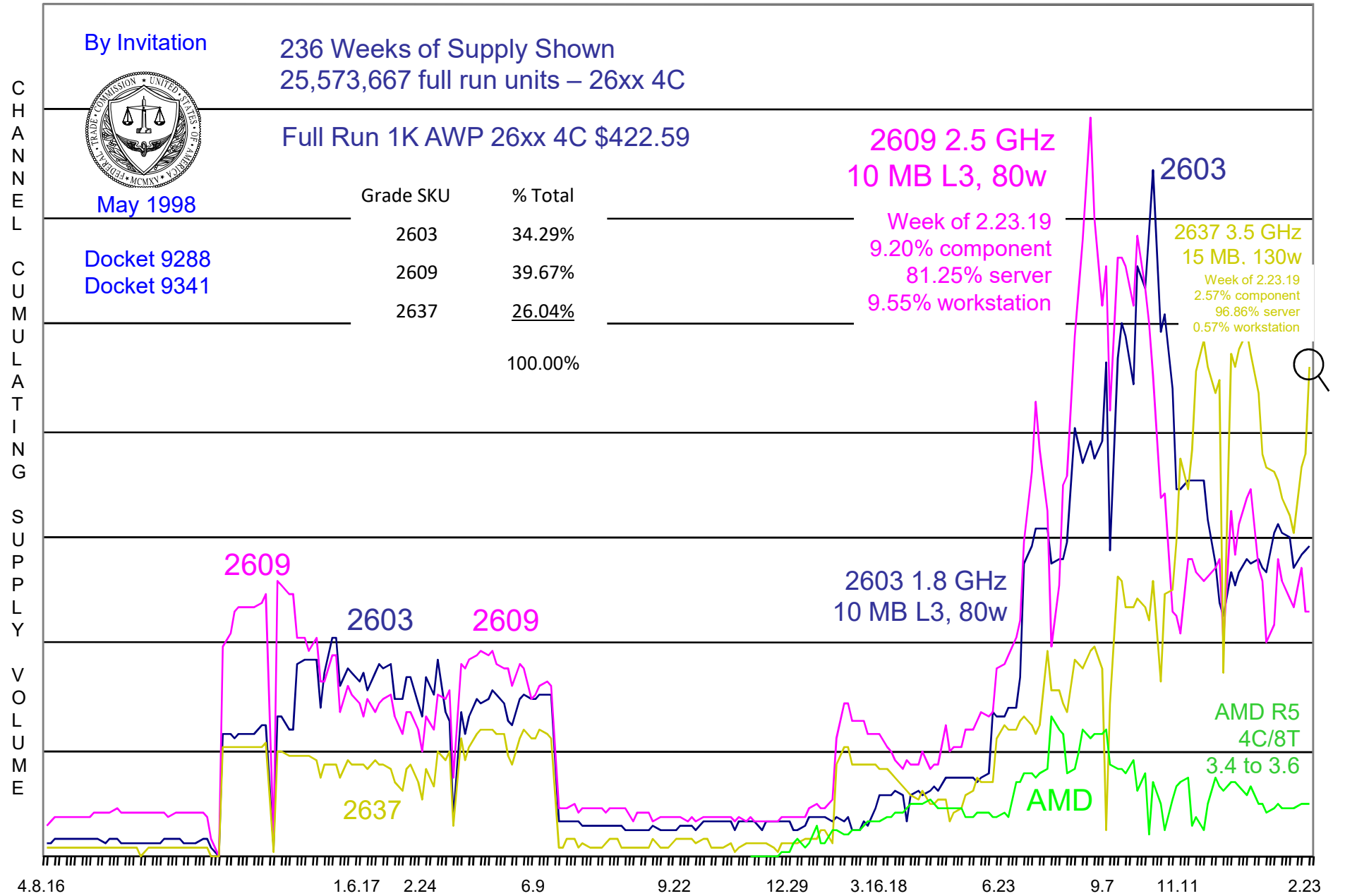
Docket 9288
 Docket 9341

Full Run 1K AWP 16xx 4C \$253.91
 Full Run 1K AWP 4820 4C \$323.00
 Full Run 1K AWP 24xx 4C \$226.88

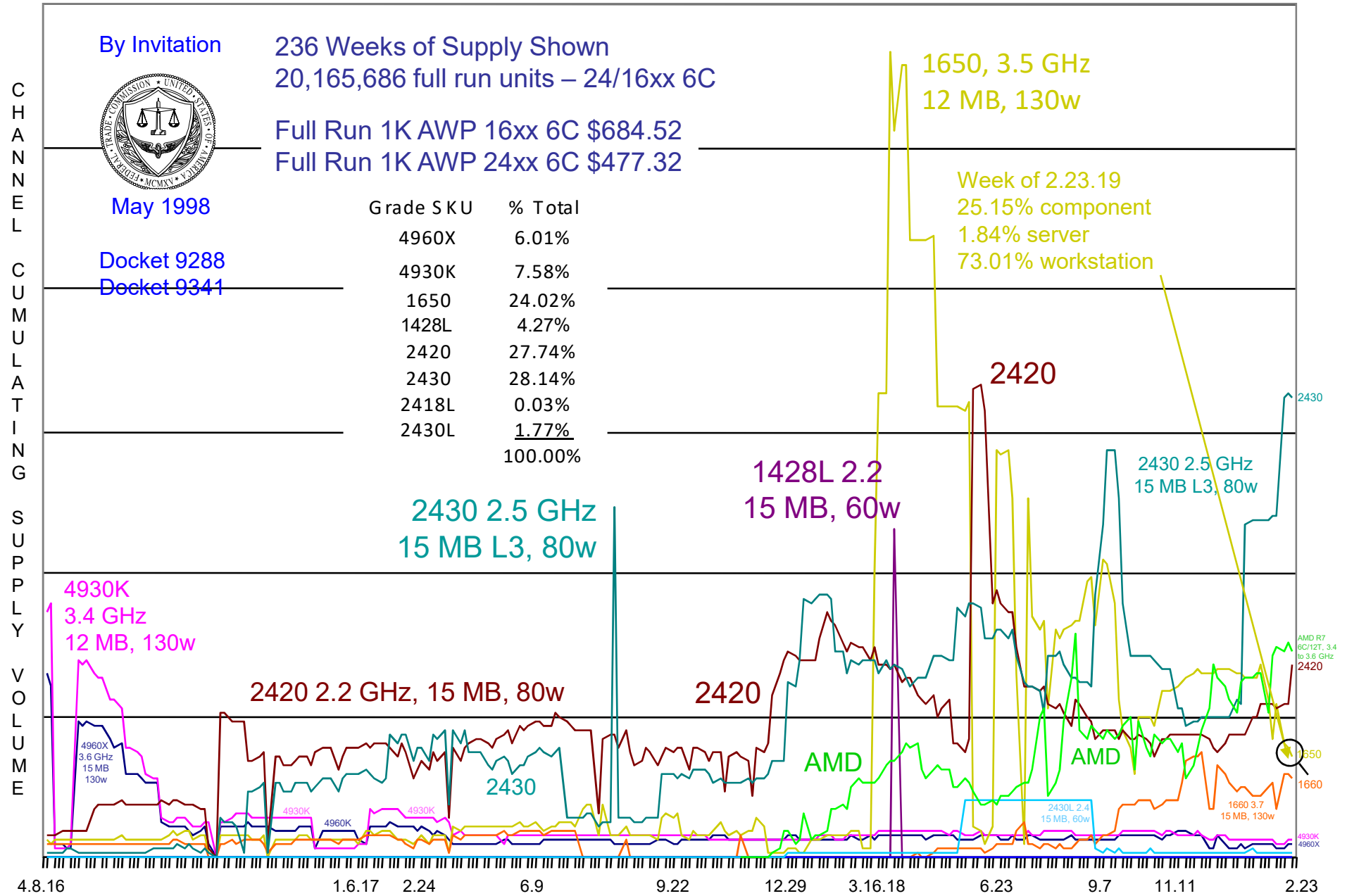


Grade SKU	% Total
4820K	6.23%
1607	28.89%
1620	7.22%
2403	21.36%
2407	<u>36.30%</u>
	100.00%

Camp Marketing Consultancy – Xeon E5 26xx v2 4C by Grade w/AMD R5 4C/8T



Camp Marketing Consultancy – Xeon E5 24/16xx v2 & EE 6C by Grade w/AMD 6C/12T



Camp Marketing Consultancy – Xeon E5 26xx v2 6C by Grade w/AMD R7 6C/12T

CHANNEL CUMULATING SUPPLY VOLUME

By Invitation



236 Weeks of Supply Shown
 86,278,827 full run units – 26xx 6C
 Full Run 1K AWP 26xx 6C \$599.98

Week of 2.23.19
 0.99% component
 88.64% server
 10.37% workstation

May 1998

Docket 9288
 Docket 9341

Grade SKU	% Total
2620	33.87%
2630	60.78%
2643	5.33%
2618L	<u>0.02%</u>
	100.00%

2630 2.6 GHz
 15 MB L3, 80w

Week of 2.3.19
 1.61% component
 83.85% server
 14.54% workstation

2620 2.1
 15 MB, 80w

2643 3.5
 25 MB
 130w
 AMD R7
 6C/12T
 3.4 to 3.6 GHz
 Bracketing

Week of 2.23.19
 8.83% component
 71.95% server
 19.22% workstation

AMD

2618L 2.0, 15 MB, 50w

4.8.16

1.6.17

2.24

6.9

9.22

12.29

3.16.18

6.23

9.7

11.11

2.23

Camp Marketing Consultancy – Xeon E5 24/16xx v2 & EE 8C Grade w/AMD 8C/16T

By Invitation

236 Weeks of Supply Shown
5,921,135 full run units – 24/16xx 8C



Full Run 1K AWP 16xx 8C \$1723
Full Run 1K AWP 24xx 8C \$929.77

AMD R7 8C/16T
E 72xx and
TR 1900X 8/16
2.1 to 4.3 GHz
16 to 32 MB L3
85w to 180w

May 1998

Grade SKU	% Total
1680	2.31%
2440	62.90%
2450	34.49%
2428L	0.30%
	100.00%

Docket 9288
Docket 9341

2440 1.9 GHz
20 MB L3, 95w

2450 2.5
20 MB, 95w

1680 3.0 GHz, 25 MB, 130w

1680 3.0 GHz, 25 MB, 130w

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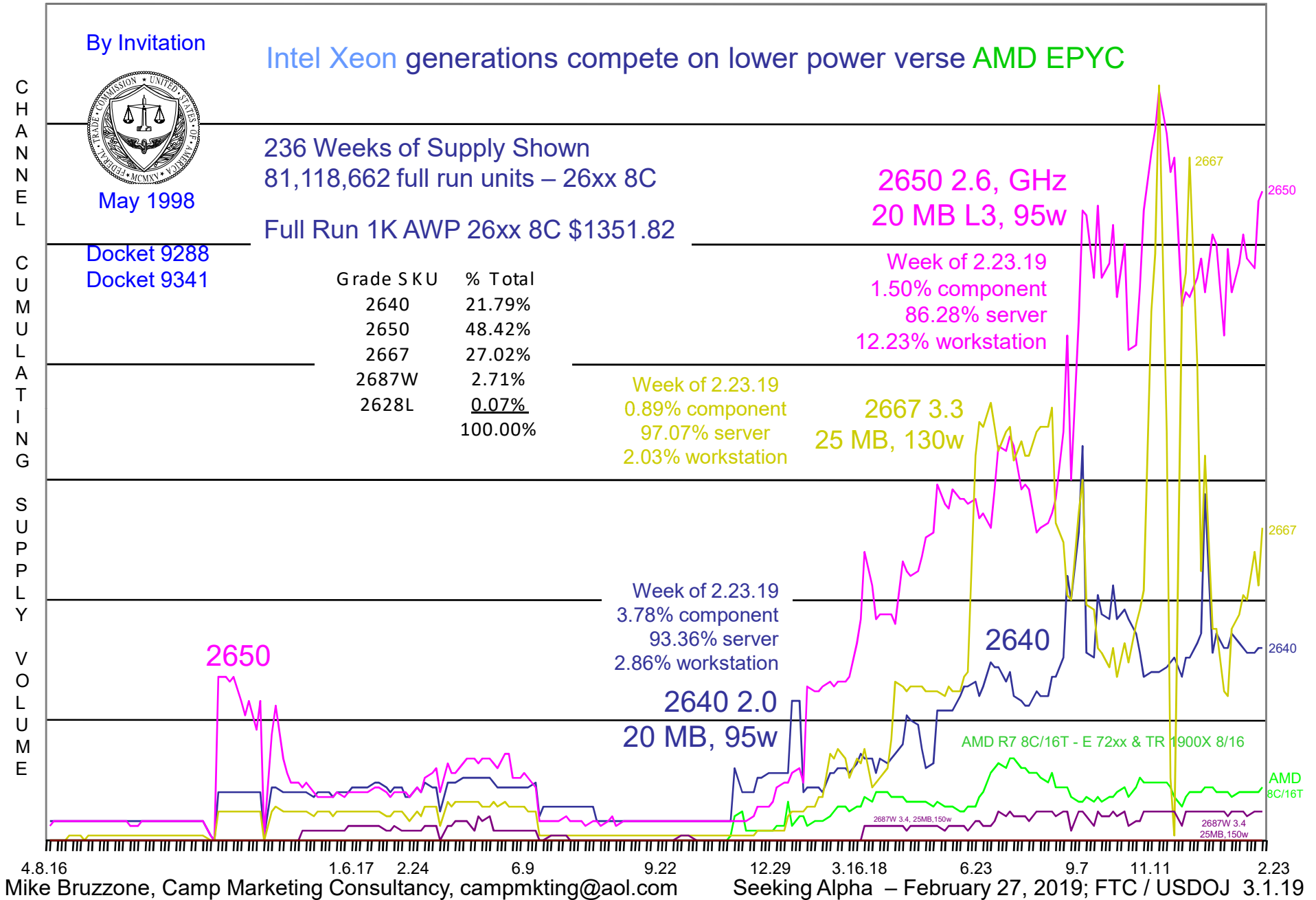
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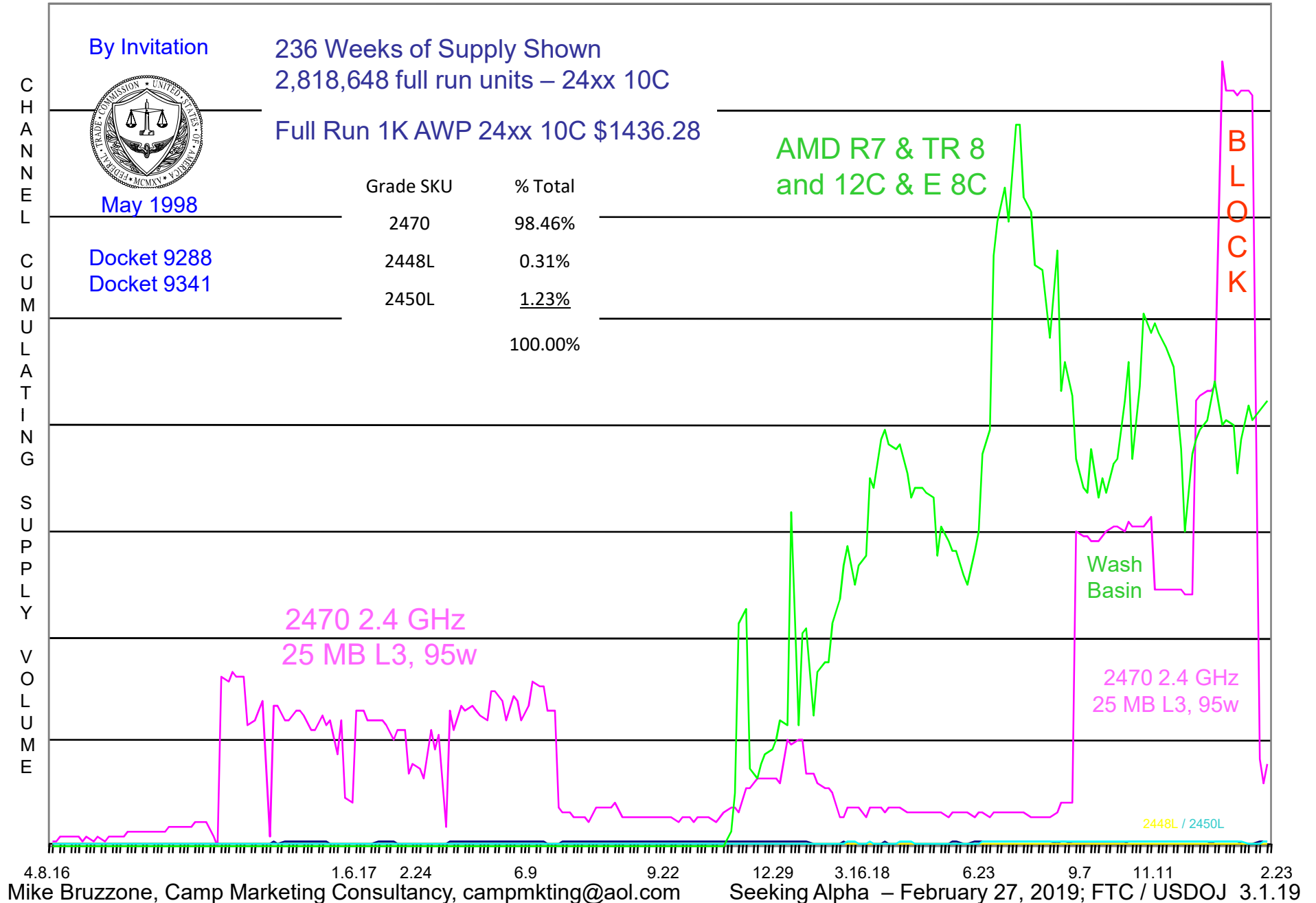
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4.8.16 1.6.17 2.24 6.9 9.22 12.29 3.16.18 6.23 9.7 11.11 2.23

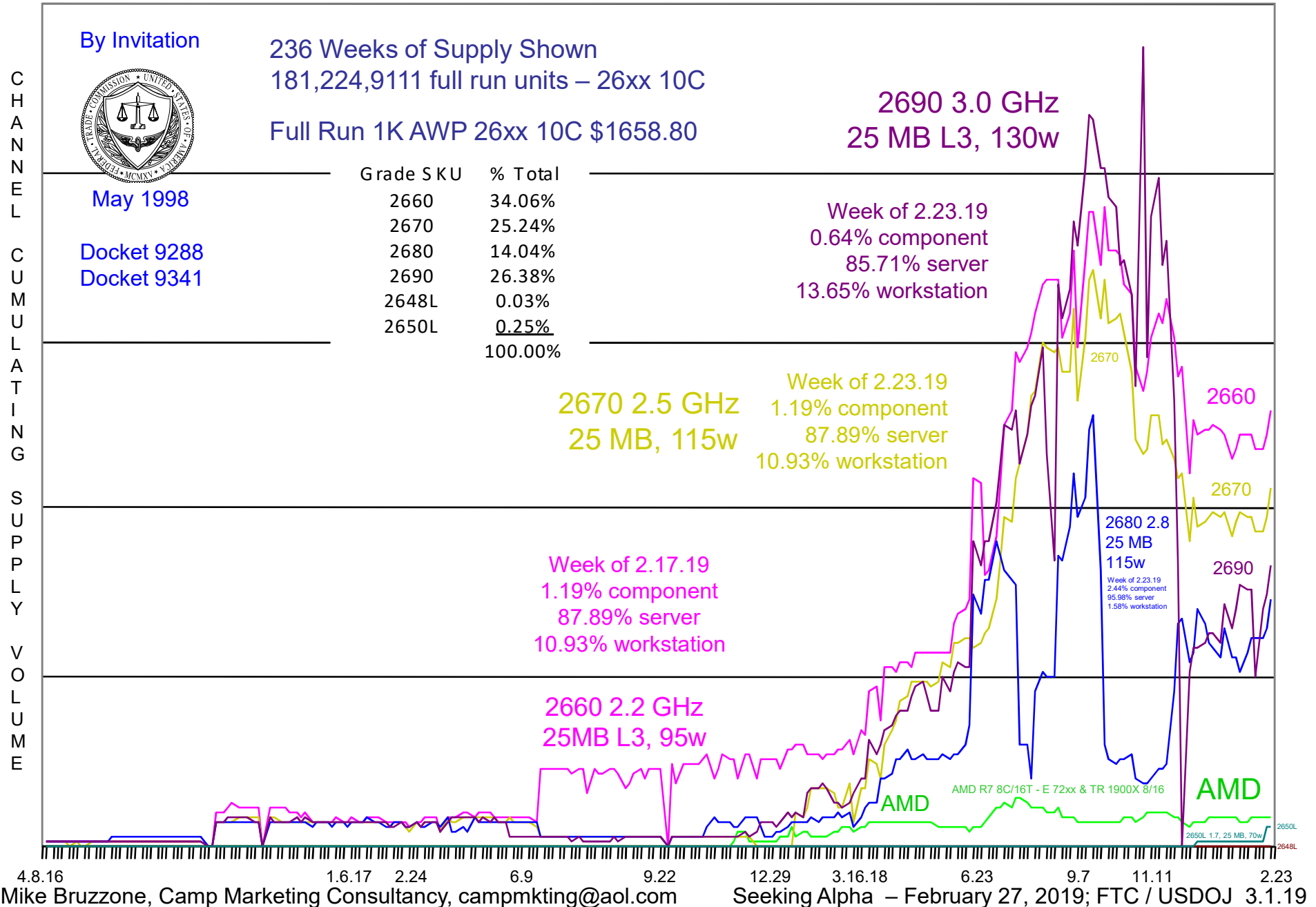
Camp Marketing Consultancy – Xeon E5 26/xx v2 8C by Grade w/AMD 8C/16T



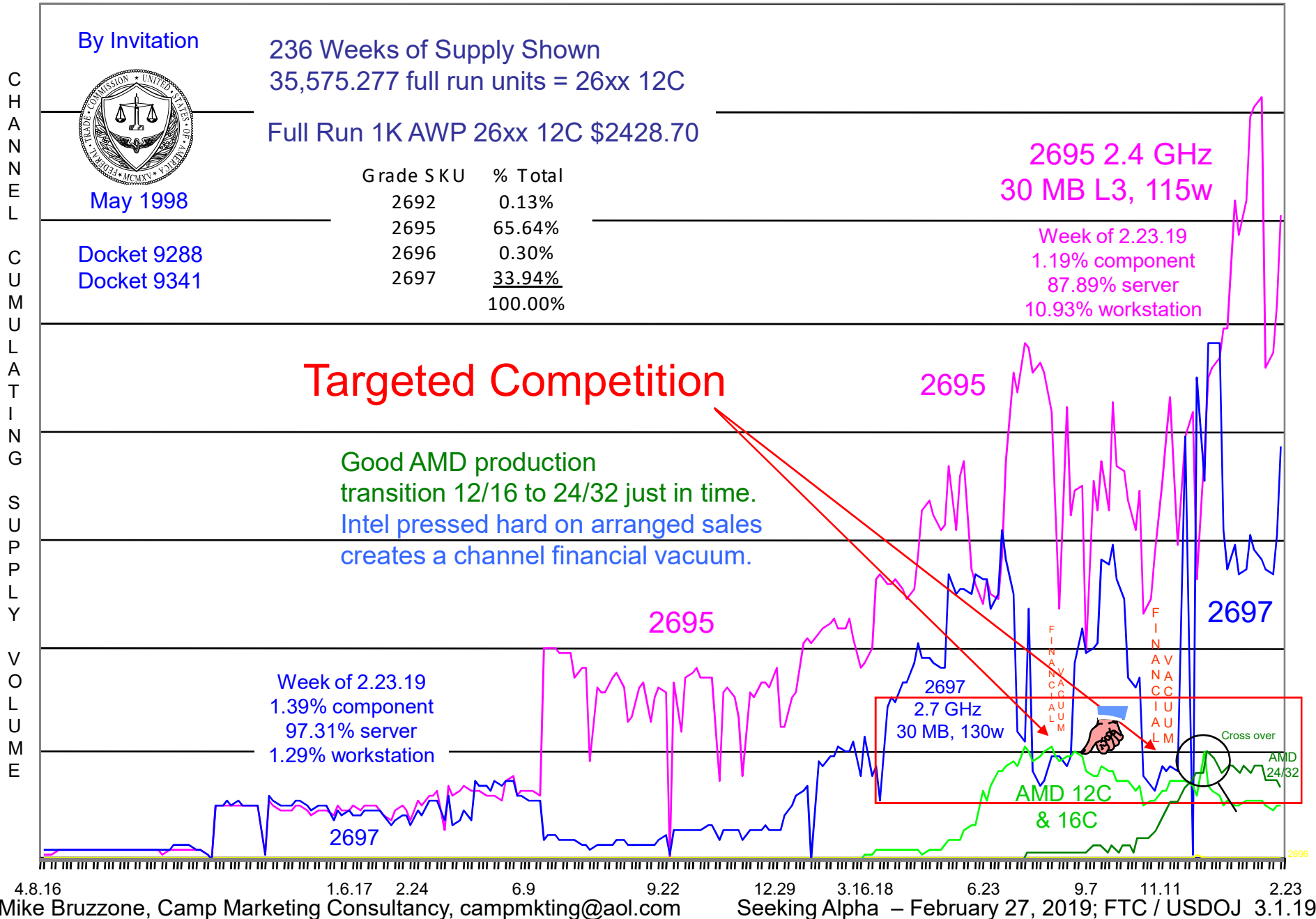
Camp Marketing Consultancy – Xeon E5 24xx v2 10C by Grade w/AMD All 8C/12C



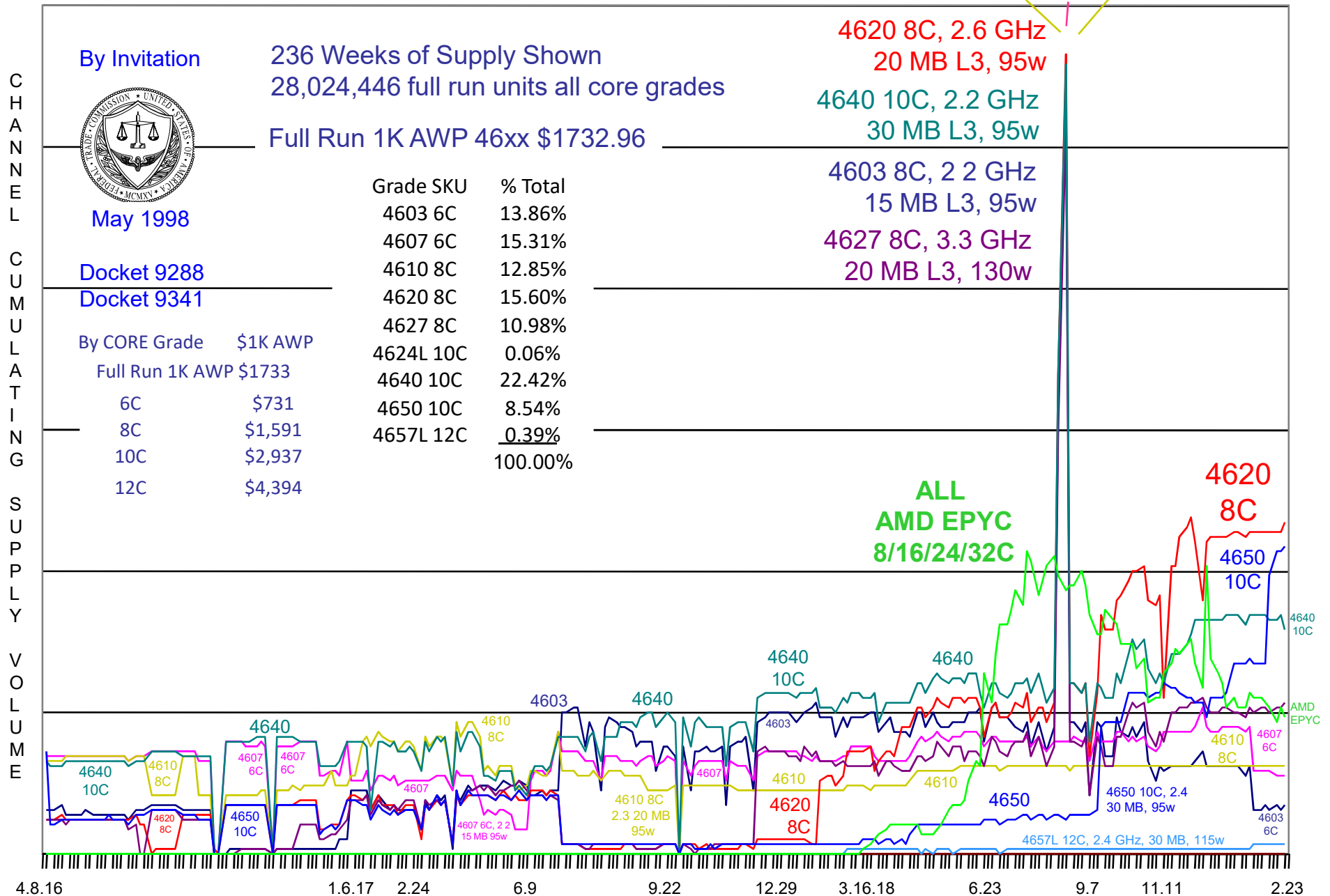
Camp Marketing Consultancy – Xeon E5 26xx v2 10C by Grade w/AMD All 8C/12C



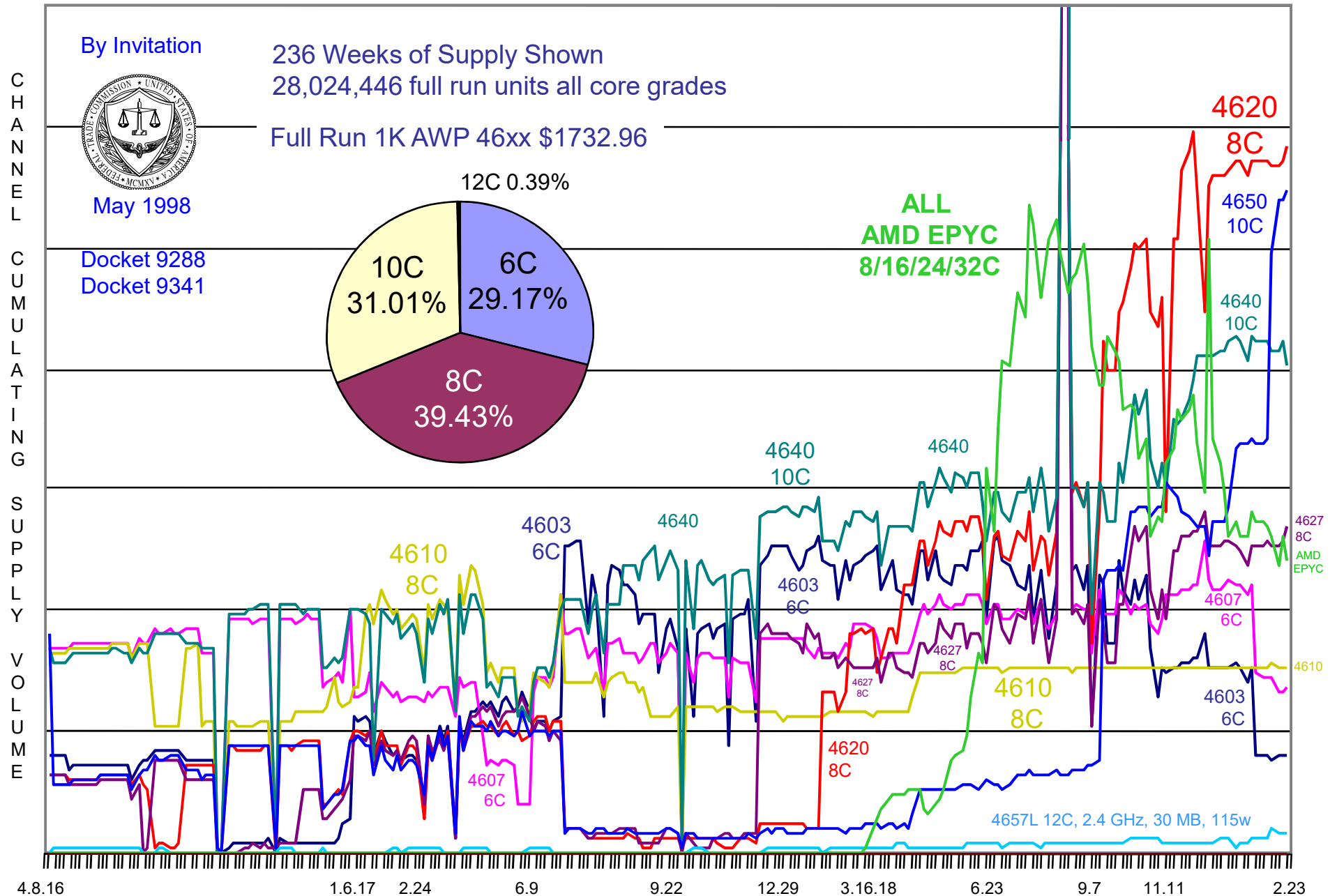
Camp Marketing Consultancy – Xeon E5 26xx v2 12C Grade w/AMD 12/16/24/32C



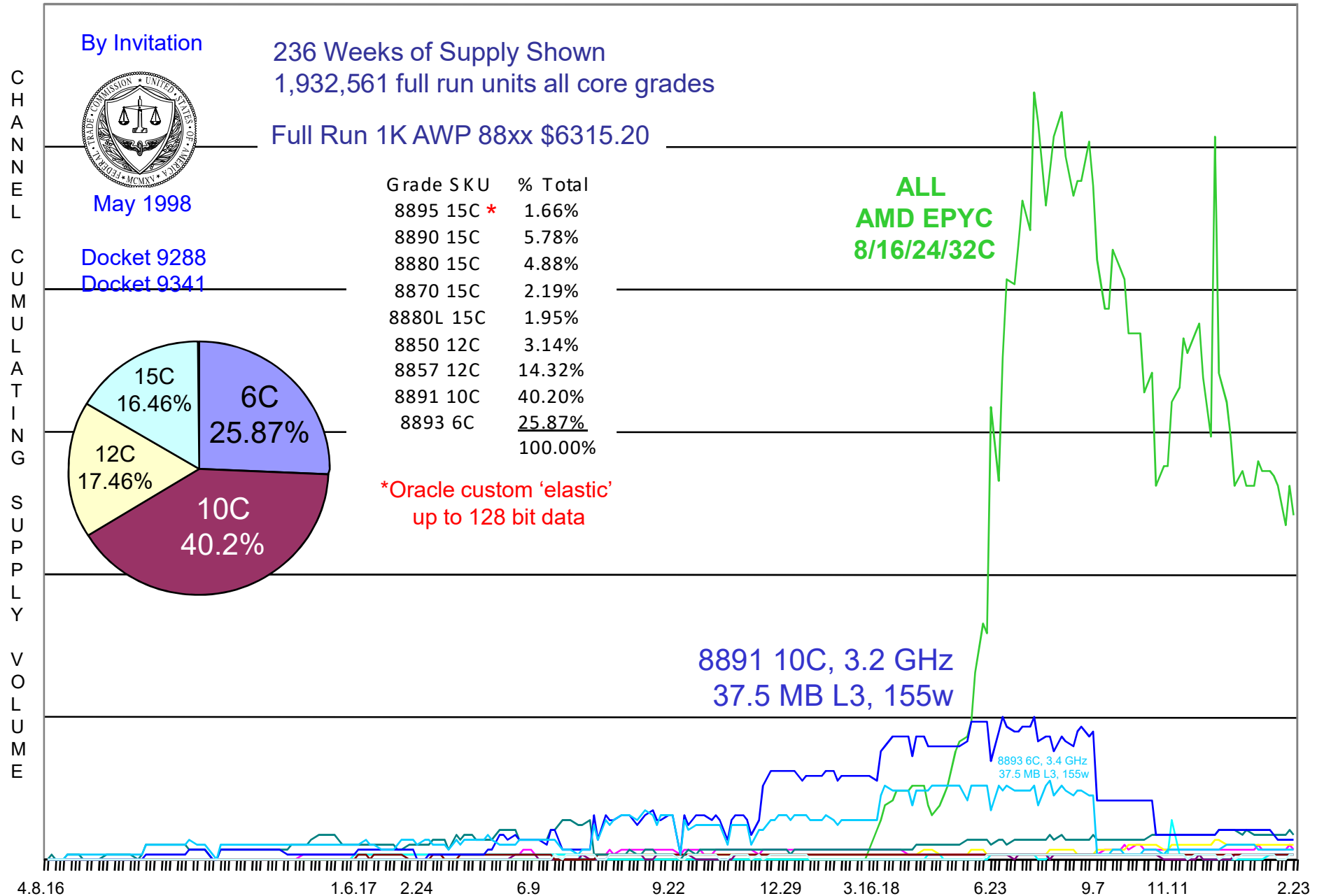
Camp Marketing Consultancy – Xeon E5 46xx v2 4-way Full Run w/AMD All Epyc SKUs



Camp Marketing Consultancy – Xeon E5 46xx v2 4-way Full Run Better Detail



Camp Marketing Consultancy – Xeon E7 88xx v2 8-way Full Run w/AMD All Epyc SKUs



Camp Marketing Consultancy – Xeon E7 48xx v2 4-way Full Run w/AMD All Epyc SKUs

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By Invitation



236 Weeks of Supply Shown
8,927,824 full run units all core grades

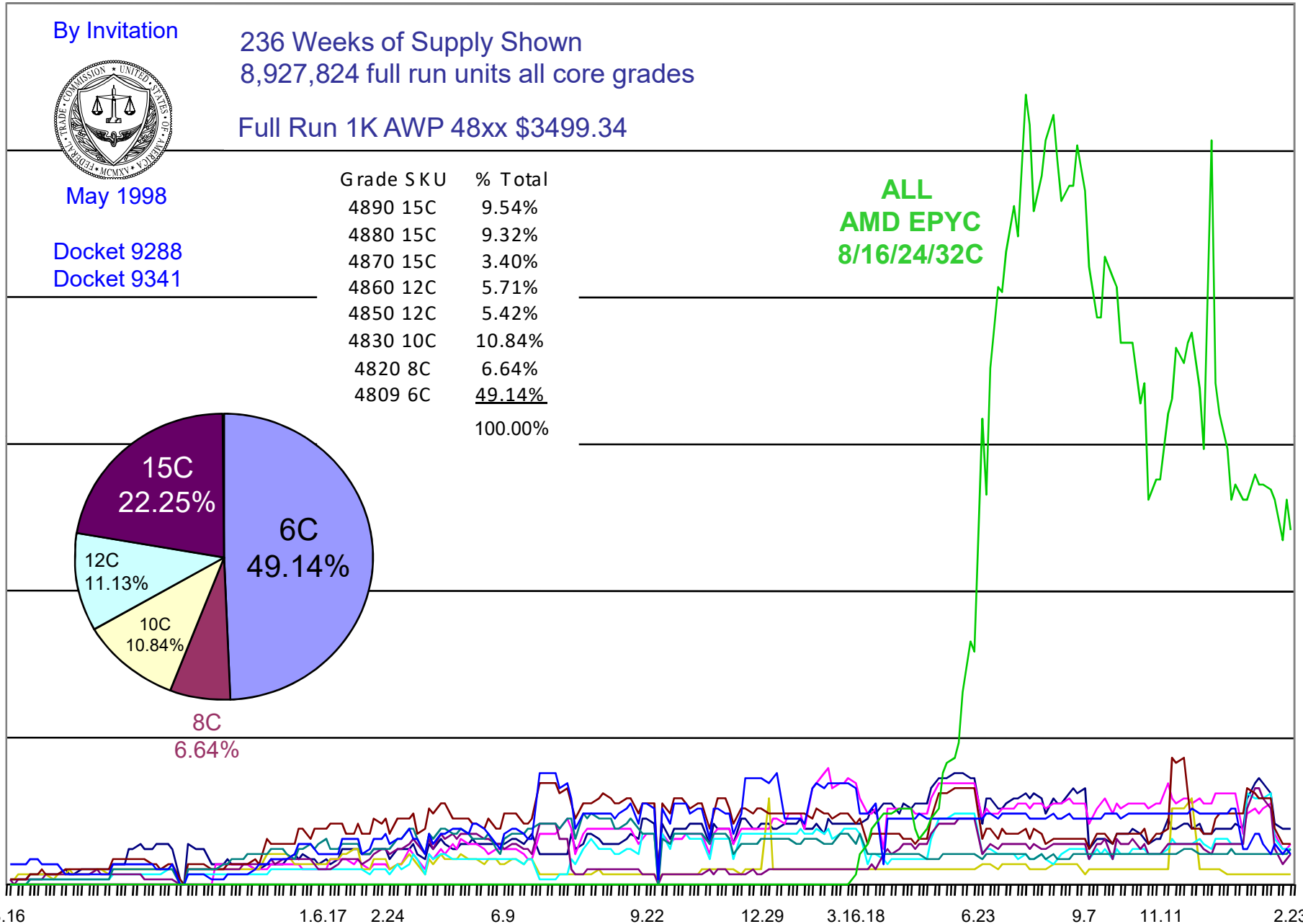
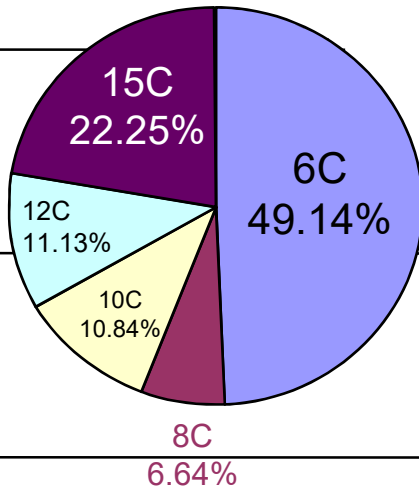
Full Run 1K AWP 48xx \$3499.34

May 1998

Docket 9288
Docket 9341

Grade SKU	% Total
4890 15C	9.54%
4880 15C	9.32%
4870 15C	3.40%
4860 12C	5.71%
4850 12C	5.42%
4830 10C	10.84%
4820 8C	6.64%
4809 6C	<u>49.14%</u>
	100.00%

ALL
AMD EPYC
8/16/24/32C



Camp Marketing Consultancy – Xeon E7 48xx v2 4-way Full Run Better Detail

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By Invitation



236 Weeks of Supply Shown
8,927,824 full run units all core grades

Full Run 1K AWP 48xx \$3499.34

4880 15C, 2.5
37.5 MB, 130w

4830 10C, 2.2
20 MB, 105w

May 1998

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Grade SKU	% Total
4890 15C	9.54%
4880 15C	9.32%
4870 15C	3.40%
4860 12C	5.71%
4850 12C	5.42%
4830 10C	10.84%
4820 8C	6.64%
4809 6C	49.14%
	100.00%

4809 6C, 1.9
12 MB, 105w

4809
6C

4890
15C

4890
15C

4830
10C

4880
15C

4809
6C

4890 15C, 2.8
37.5 MB, 155w

4820 8C, 2.0
16 MB, 105w

4830
10C

4850 12C, 2.3
24 MB, 105w

4860
12C

4860 12C, 2.6
24 MB, 130w

4820 8C

4870 15C, 2.3
30 MB L3, 130w

4.8.16 1.6.17 2.24 6.9 9.22 12.29 3.16.18 6.23 9.7 11.11 2.23

E5 26xx v2 by Grade SKU High Volume Price @ 85% off 1K

Camp Marketing Consultancy

	\$1K Price	86% OEM Discount	TR/TC Calc AMC	
IVY BRIDGE XEON				
29% of Run - 144,010,887 < AMC \$138				
\$8,555,813.552 Industry Financial Threat				
FOUR CORE				
E5 2403 V2 1.8 10 MB 80w	\$192	\$28.80	\$138	No Inflation
E5 2407 V2 2.4 10 MB 80w	\$250	\$37.50	-\$109.20	VARIABLE COST
XEON E5 2603 V2 1.8 10 MB 80w	\$202	\$30.30	-\$107.70	VARIABLE COST
XEON E5 2609 V2 2.5 10 MB 80w	\$294	\$44.10	-\$93.90	Below Cost
XEON E5 2637 V2 3.5 15 MB 130w	\$996	\$149.40	\$11.40	\$11.40 above AMC
SIX CORE				
E5 1428L V2 2.2 15 MB UNI only				
E5 2420 V2 2.2 15 MB 80w	\$406	\$60.90	-\$77.10	Below Cost
E5 2430 V2 2.5 15 MB 80w	\$551	\$82.65	-\$55.35	Below Cost
E5 2430L V2 2.4 15 MB 60w	\$612	\$91.80	-\$46.20	Below Cost
2620 V2 2.1 15 MB 80w	\$406	\$60.90	-\$77.10	Below Cost
2630 V2 2.5 15 MB 80w	\$612	\$91.80	-\$46.20	Below Cost
2643 V2 3.5 25 MB 130w	\$1,552	\$232.80	\$94.80	Profit > Cost
E5 2618L V2 2.0 15 MB 50w	\$520	\$78.00	-\$60.00	Below Cost
EIGHT CORE				
E5 2440 V2 1.9 20 MB 95w	\$832	\$124.80	-\$13.20	Below Cost
E5 2450 V2 2.5 20 MB 95w	\$1,107	\$166.05	\$28.05	Profit > Cost
2640 V2 2.0 20 MB 95w	\$885	\$132.75	-\$5.25	Below Cost
2650 V2 2.6 20 MB 95w	\$1,166	\$174.90	\$36.90	Profit > Cost
Xeon 2667 V2 3.3 25 MB 130w	\$2,057	\$308.55	\$170.55	Profit > Cost
E 5 2687 W/V2 3.4 25MB 150w	\$2,108	\$316.20	\$178.20	Profit > Cost
E5 2628L V2 1.9 20 MB 70w	\$1,000	\$150.00	\$12.00	Profit > Cost
TEN CORE				
E5 2470 V2 2.4 25 MB 95w	\$1,440	\$216.00	\$78.00	Profit > Cost
E5 2448L V2 1.8 25 MB xxw	\$1,219	\$182.85	\$292.05	Profit > Cost
E5 2450L V2 1.7 25 MB 60w	\$1,219	\$182.85	\$283.35	Profit > Cost
xeon E5 2660 V2 2.2 25MB 95w	\$1,389	\$208.35	\$316.05	Profit > Cost
xeon 2670 V2 2.5 25 MB 115w	\$1,552	\$232.80	\$326.70	Profit > Cost
2680 V2 2.8 25 MB 115w	\$1,723	\$258.45	\$247.05	Profit > Cost
2690 V2 3.0 25 MB 130w	\$2,057	\$308.55	\$308.55	Profit > Cost
E5 2648L V2 1.9 25 MB 70w	\$1,218	\$182.70	\$182.70	Profit > Cost
E5 2650L V2 1.7 25 MB 70w	\$1,219	\$182.85	\$182.85	Profit > Cost
TWELVE CORE				
E5 2692 V2 2.2 30 MB 115w	\$2,336	\$350.40	\$396.60	COMPETITIVE PROFIT
2695 V2 2.4 30 MB 115w	\$2,336	\$350.40	\$427.50	COMPETITIVE PROFIT
E5 2696 V2 2.5 30 MB 120w	\$2,614	\$392.10	\$438.30	COMPETITIVE PROFIT
2697V2 2.7 GHz 30 MB L3 MB 130w	\$2,614	\$392.10	\$297.30	COMPETITIVE PROFIT

Update FTC / USDOJ 3.1.19

Camp Marketing Consultancy

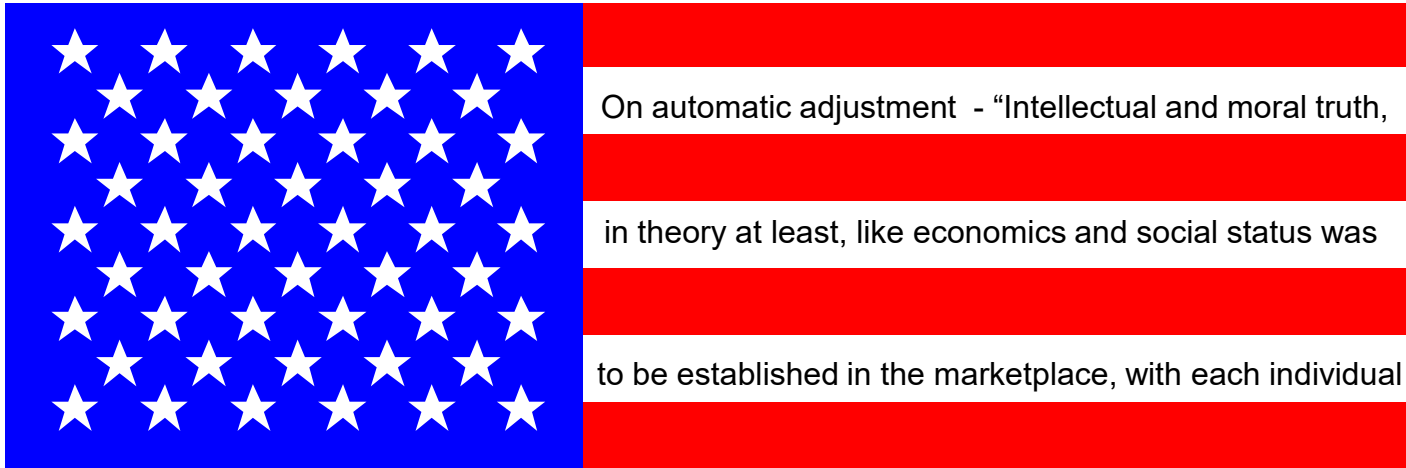
“We still think and talk of the basic problems of an industrial society as problems that can be solved by changing the ‘system’, that is the superstructure of political organization. Yet the real problems lie within the enterprise. It is not the solution of the problems of the ‘system’ that will set the structure of the enterprise. On the contrary, it is the solution of the problems of the enterprise that will shape the system under which we shall live”

Peter Drucker, The New Society, 1950

Next in series continues
Xeon Skylake Scalable

The Art & Science of Camp Marketing

All logic has a guaranteed right of equal opportunity?



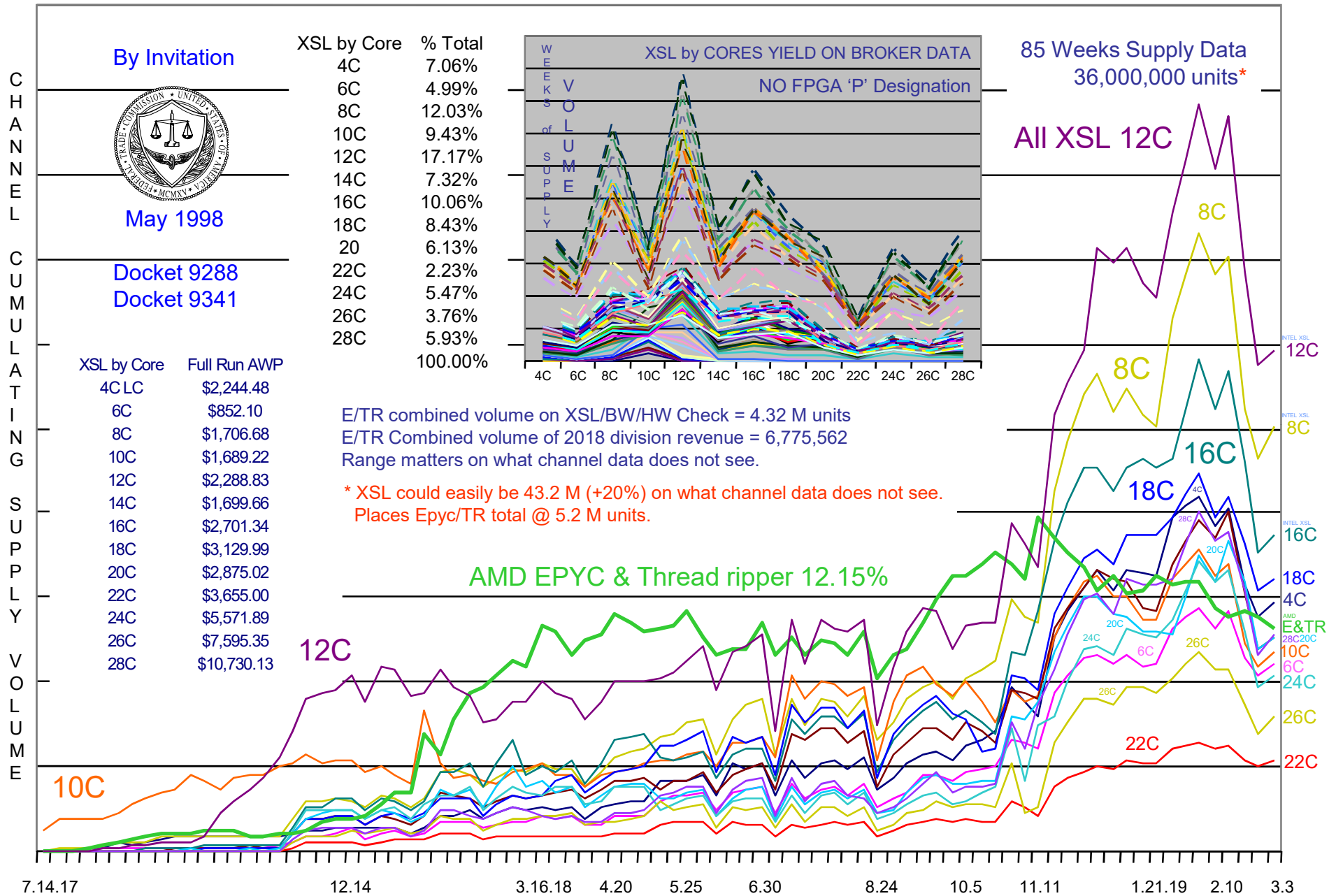
free to accept that which seemed good to his natural reason. If the forum were kept free, right and

truth, it was asserted, would automatically emerge victorious from the contest, just as competition

on the free market would automatically assign each individual to his proper place and function

in the social and economic life of society. - William O. Stanley, Educational and Social Integration, 1953

Camp Marketing Consultancy – Xeon Sky Lake Scalable Full Run w/AMD E&TR



Camp Marketing Consultancy – Xeon Sky Lake Scalable Full Run

By Invitation



May 1998

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Docket 9341

Calculated at Channel Data 36 M units
+ 20% suspect unseen total 43.2 M

SKU	PER CORE PERFORMANCE	Cores, Frequency, TDP	L3 CACHE	SKU % Total	FULL RUN
8180	28C, 2.5 - 3.8, 205w	38.5 MB	1.50%	43,200,000	
8168	24, 2.7 - 3.7, 205w	33	1.40%	648,288	
8148	20, 2.4 - 3.7, 150w	27.5	2.45%	603,275	
8154	18C, 3.0 - 3.7, 200w	24.75	1.73%	1,060,361	
8150	18, 2.7 - 3.7, 165w	24.75	1.97%	746,637	
8142	16, 2.6 - 3.7, 150w	22	2.18%	852,577	
8132	14, 2.6 - 3.7, 140w	19.25	1.99%	942,000	
8146	12, 3.2 - 4.2, 165w	24.75	1.53%	861,345	
8136	12, 3.0 - 3.7, 150w	24.75	1.90%	660,073	
8158	12, 3.0 - 3.7, 150w	24.75	1.50%	820,906	
8137	8, 3.9 to 4.1, 205w	24.75	0.0035%	646,986	
8144	8, 3.5 - 4.2, 150w	24.75	1.8568%	1,525	
8134	8, 3.2 - 3.7, 130w	24.75	1.92%	715,633	
8128	6, 3.4 - 3.7, 115w	19.25	2.00%	829,356	
8156	4, 3.6 - 3.7, 105w	16.5	1.54%	862,616	
5122	4, 3.6 - 3.7, 105w	16.5	2.42%	666,045	
				27.69%	
				11,960,957	
ZX DRAM 1.5 TB					
8180M	28, 2.5 - 3.8, 205w	38.5	1.33%	576,560	
8176M	26, 2.1 - 3.8, 165w	38.5	1.31%	565,632	
8173M	28, 2.0 - 3.5, 165w	38.5	0.07%	29,384	
8170M	26, 2.1 - 3.7, 165w	35.75	0.78%	337,549	
8160M	24, 2.1 - 3.7, 150w	33	0.93%	403,115	
8140M	18, 2.3 - 3.7, 140w	24.75	0.89%	383,515	
8142M	16, 2.6 - 3.7, 150w	22	0.92%	396,952	
8134M	8, 3.2 - 3.7, 130w	24.75	1.33%	574,844	
				7.56%	
				3,267,562	
Perf / watt					
8176	28, 2.1 - 3.8, 165w	38.5	1.39%	600,162	
8170	26, 2.1 - 3.8, 165w	35.75	1.65%	714,140	
8164	26, 2.0 - 3.7, 150w	35.75	1.27%	549,368	
8160	24, 2.1 - 3.7, 150w	33	1.93%	832,819	
8152	22, 2.1 3.7, 140w	30.25	2.19%	947,686	
8138	20, 2.0 - 3.7, 125w	27.5	2.17%	935,646	
8140	18, 2.3 - 3.7, 140w	24.75	2.16%	934,281	
8124	16, 3.0 to 3.5, 150w	24.75	0.0030%	1,302	
8130	16, 2.1 - 3.7, 125w	22	2.78%	1,200,800	
8153	16, 2.0 - 2.8, 125w	22	1.59%	688,155	
8120	14, 2.2 - 3.2, 105w	19.25	2.69%	1,162,681	
8117	14, 2.0 to 2.8, 107w	19.25	0.08%	36,515	
8126	12, 2.6 to 3.7, 125w	19.25	1.32%	570,715	
8118	12, 2.3 - 3.2, 105w	16.5	2.62%	1,132,693	
8116	12C, 2.1 - 3.0, 85w	16.5	2.34%	1,012,934	
8115	10, 2.4 - 3.2, 85w	13.75	2.44%	1,056,168	
8114	10, 2.2 - 3.0, 85w	13.75	2.26%	974,580	
8110	8, 2.1 - 3.0, 85w	11	3.23%	1,393,495	
8108	8, 1.8 - 3.0, 85w	11	2.06%	889,236	
8106	8, 1.7, 85w	11	2.60%	1,125,196	
8104	6, 1.7 - 3.0, 85w	8.25	2.54%	1,088,227	
8112	4, 2.6 - 3.0, 85w	5.5	2.33%	1,007,184	
				43.66%	
				18,862,962	

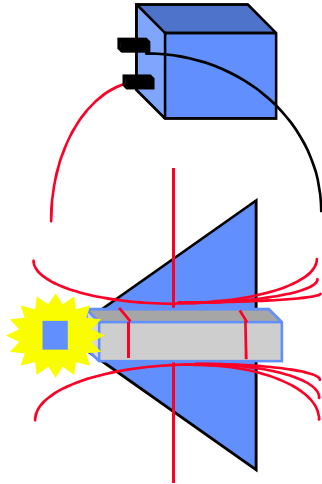
Camp Marketing Consultancy – Xeon Sky Lake Scalable Full Run

By Invitation



May 1998

Docket 9288
Docket 9341

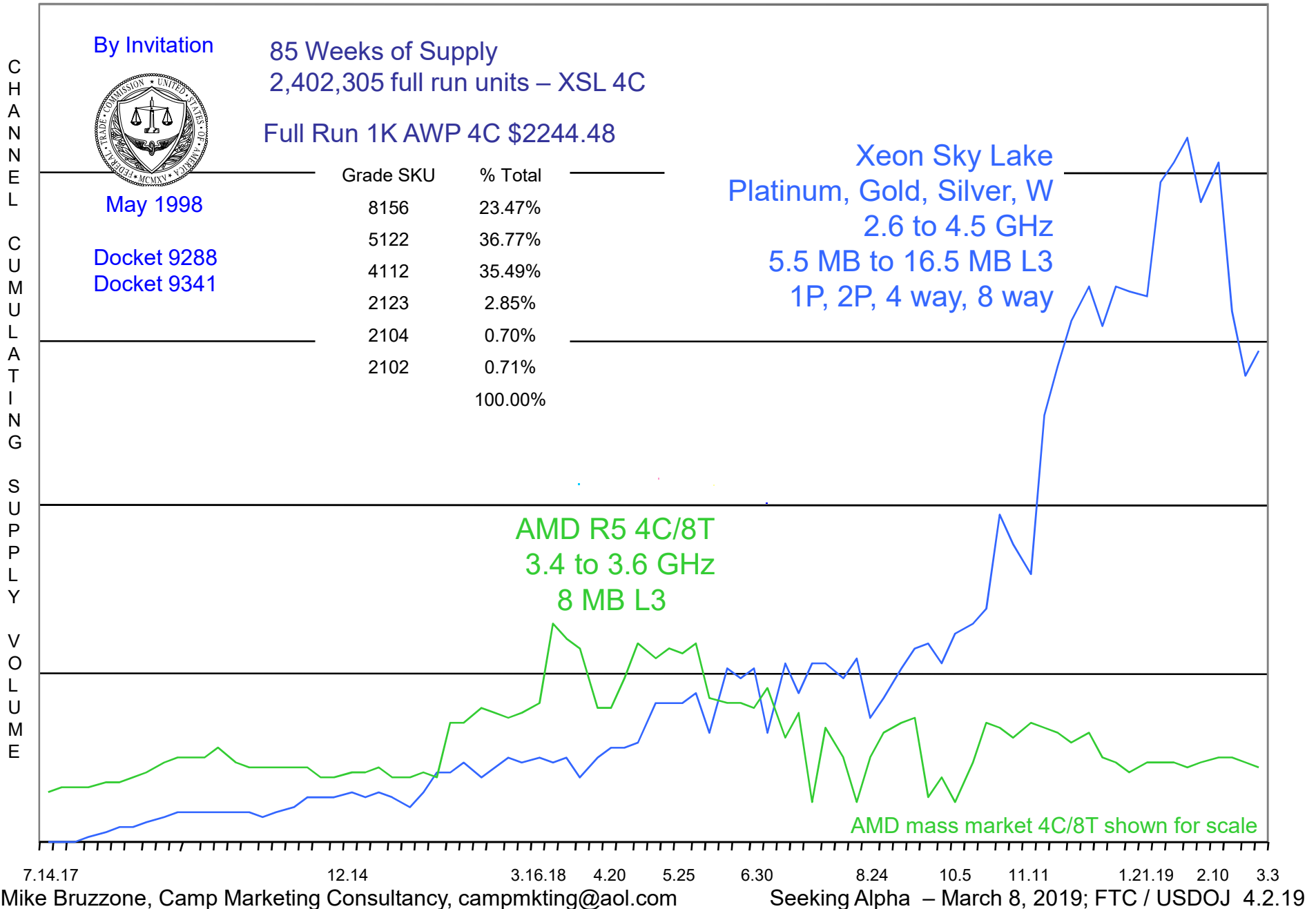


FTC DOCKET 9288, August 1999

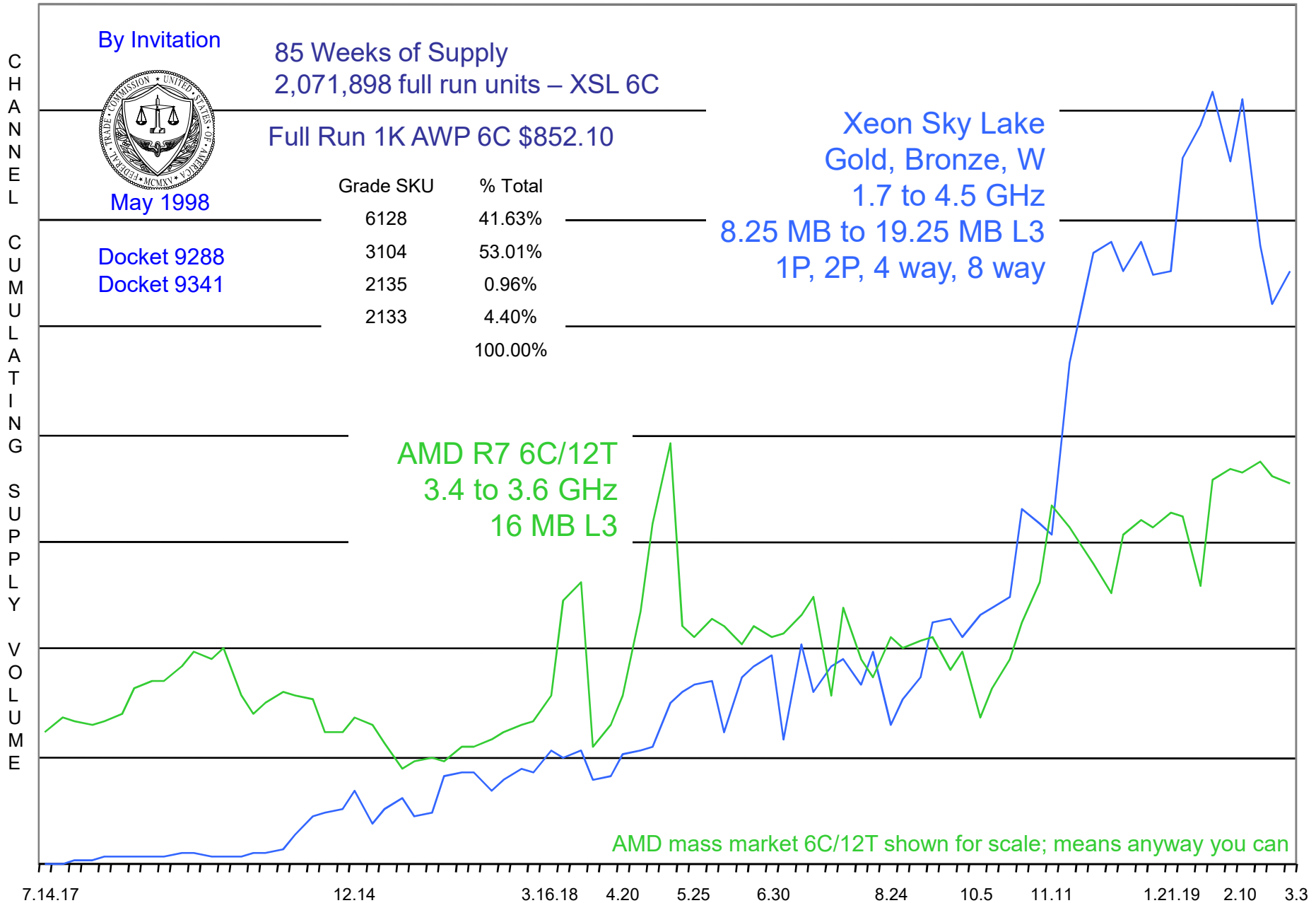
Calculated at Channel Data 36 M units
+ 20% suspect unseen total 43.2 M

OMNIPATH	Cores, Frequency, TDP	L3 CACHE	SKU % Total	FULL RUN
8176F	28, 2.1 - 3.8, 173w	38.5	0.24%	43,200,000
8160F	24, 2.1 - 3.7, 160w	33	0.48%	103,527
6148F	20, 2.4 - 3.7, 150w	27.5	0.54%	206,799
6138F	20, 2.0 - 3.7, 135w	27.5	0.46%	235,071
6142F	16, 2.6 to 3.7, 160w	22	0.17%	200,478
6130F	16, 2.1 - 3.7, 135w	22	0.42%	73,730
5117F	14C, 2.0 to 2.8, 113w	19.25	0.01%	181,100
6126F	12, 2.6 - 3.7, 135w	19.25	0.60%	3,812
10 Year Life				
8160T	24, 2.1 - 3.7, 150w	33	0.65%	258,578
6138T	20, 2.0 - 3.7, 125w	27.5	0.42%	281,323
6130T	16, 2.1 - 3.7, 125w	22	0.43%	179,416
5120T	14, 2.2 - 3.2, 105w	19.25	0.53%	184,467
5119T	14, 1.9, 85w	19.25	0.62%	230,401
6126T	12, 2.6 - 3.7, 125w	19.25	0.45%	266,901
4116T	12, 2.1 - 3.0, 85w	16.5	0.58%	193,425
4114T	10, 2.2 - 3.0, 85w	13.75	0.60%	248,477
4109T	8, 2.0 - 3.0, 79w	11	0.91%	260,834
Xeon W				
2195	18/36, 2.3 - 4.3, 140w	24.75	0.01%	391,838
2175	14/28, 2.5 - 4.3, 140w	19.25	0.01%	3,971
2155	10/20, 3.3 - 4.5, 140w	13.75	0.02%	4,479
2150B Apple	10/20, 3.0 - 4.5, 120w	19.25?	0.00%	8,672
2145	8/16, 3.7 - 4.5, 140w	11	0.06%	1,334
2140B Apple	8/16, 3.0 - 4.5, 120w	13.75?	0.00%	19,822
2135	6/12, 3.7 - 4.5, 140w	8.25	0.06%	858
2133	6/12, 3.6 - 3.9, 140w	8.25	0.06%	19,886
2125	4/8, 4.0 - 4.5, 120w	8.25	0.21%	91,169
2123 120W	4/8, 3.6 - 3.9, 120w	8.25	0.10%	45,204
2104 120W	4/8, 2.9 GHz, 120w	8.25	0.19%	80,972
2102 120W	4/8, 3.0 GHz, 120W	8.25	0.06%	19,759
SL Extremes				
i9 7980XE	18/36, 2.6 - 4.2, 165w	16.5	0.06%	20,267
i9 7960X	16/32, 2.8 - 4.2, 165w	16.5	0.73%	316,393
i9 7940X	14/28, 3.1 - 4.3, 165w	16.5	1.53%	662,678
i9 7920X	12/24, 2.9 - 4.3, 165w	16.5	1.42%	612,233
i9 7900X	10/20, 3.3 - 4.3, 140w	16.5	1.26%	544,126
			4.09%	1,765,320
			3.95%	1,707,601
			100.00%	5,291,959

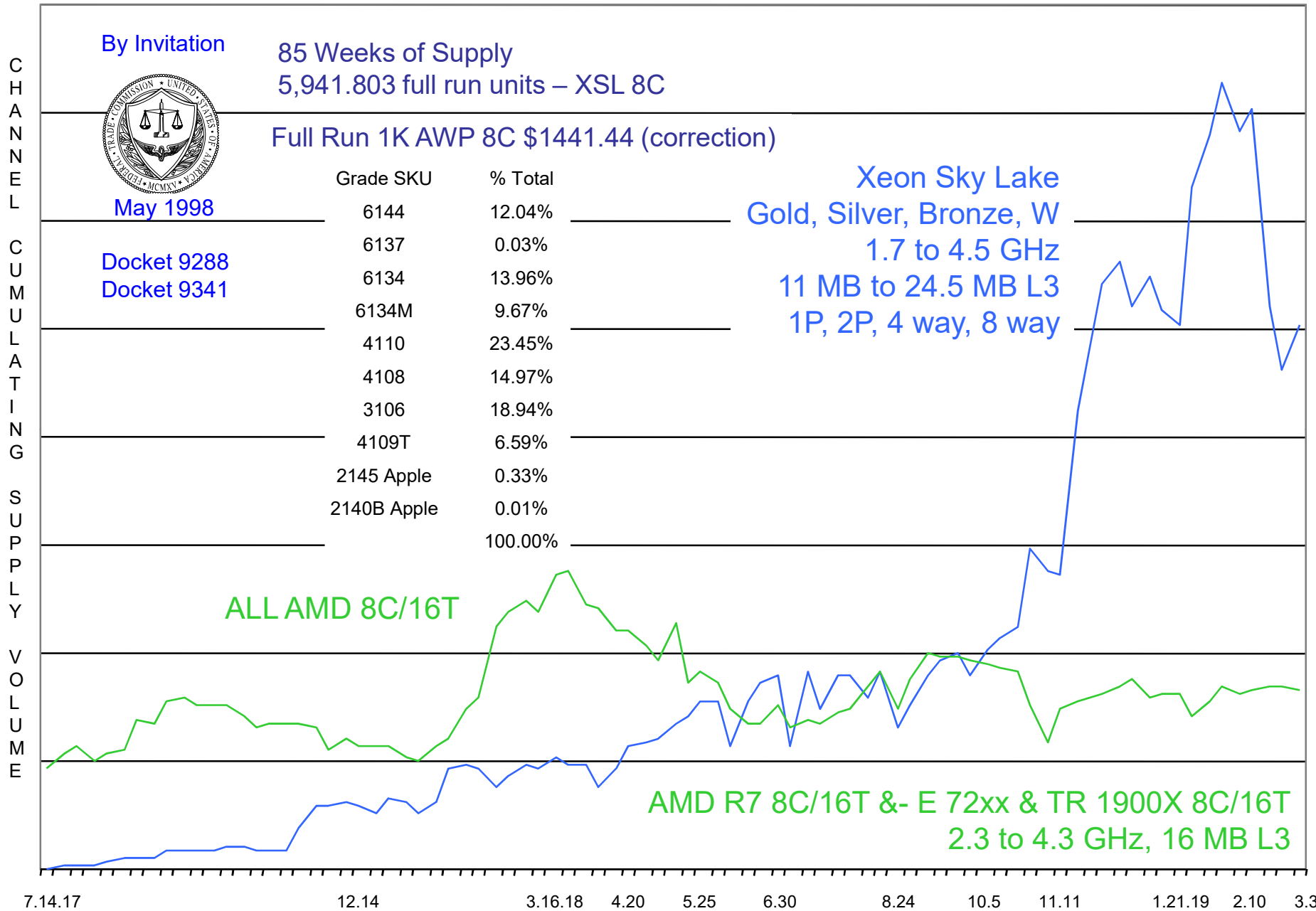
Camp Marketing Consultancy – Xeon Sky Lake Scalable 4C w/AMD R5 4C/8T



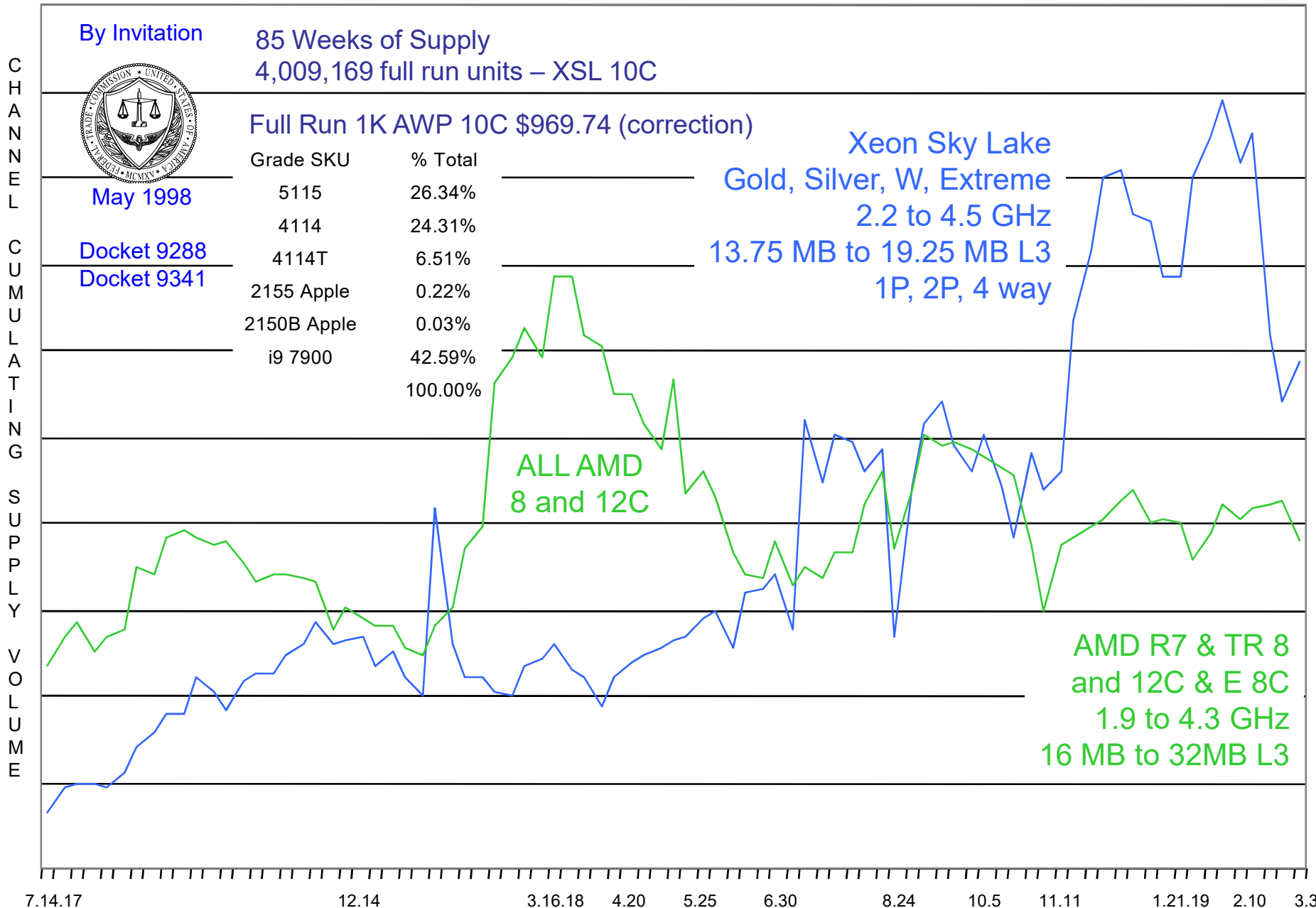
Camp Marketing Consultancy – Xeon Sky Lake Scalable 6C w/AMD R5 6C/12T



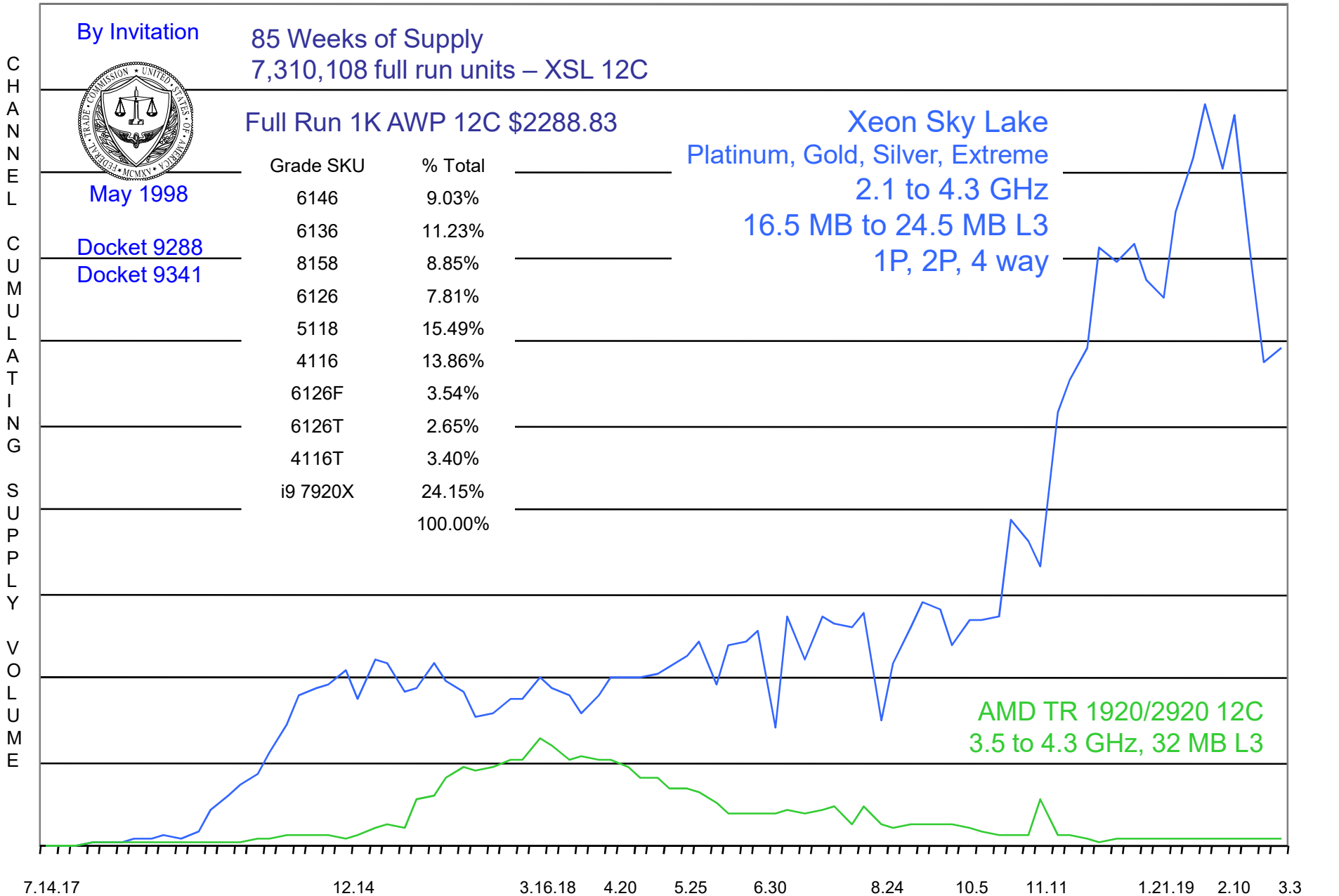
Camp Marketing Consultancy – Xeon Sky Lake Scalable 8C w/AMD 8C/16T



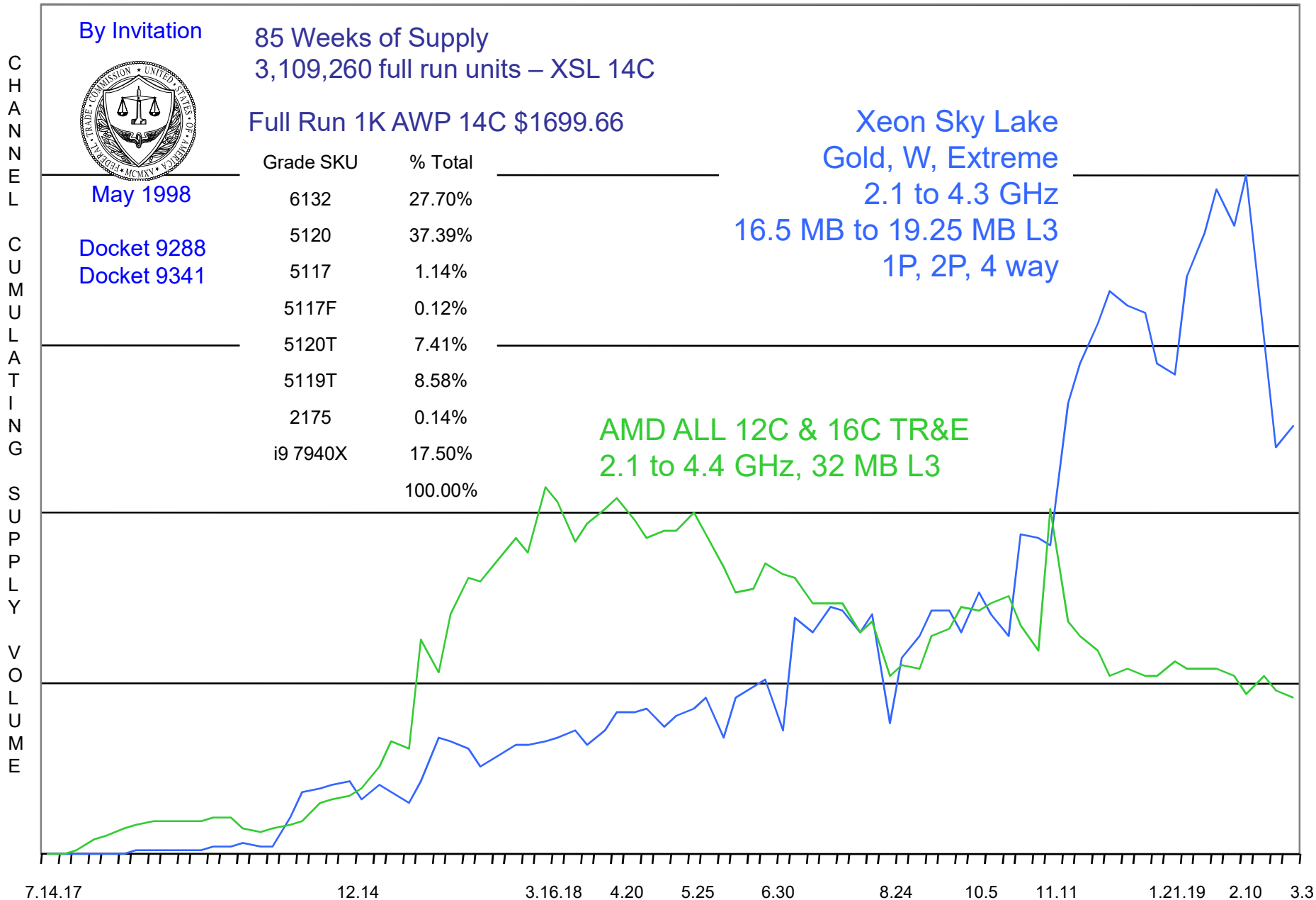
Camp Marketing Consultancy – Xeon Sky Lake Scalable 10C w/AMD 8C/12C



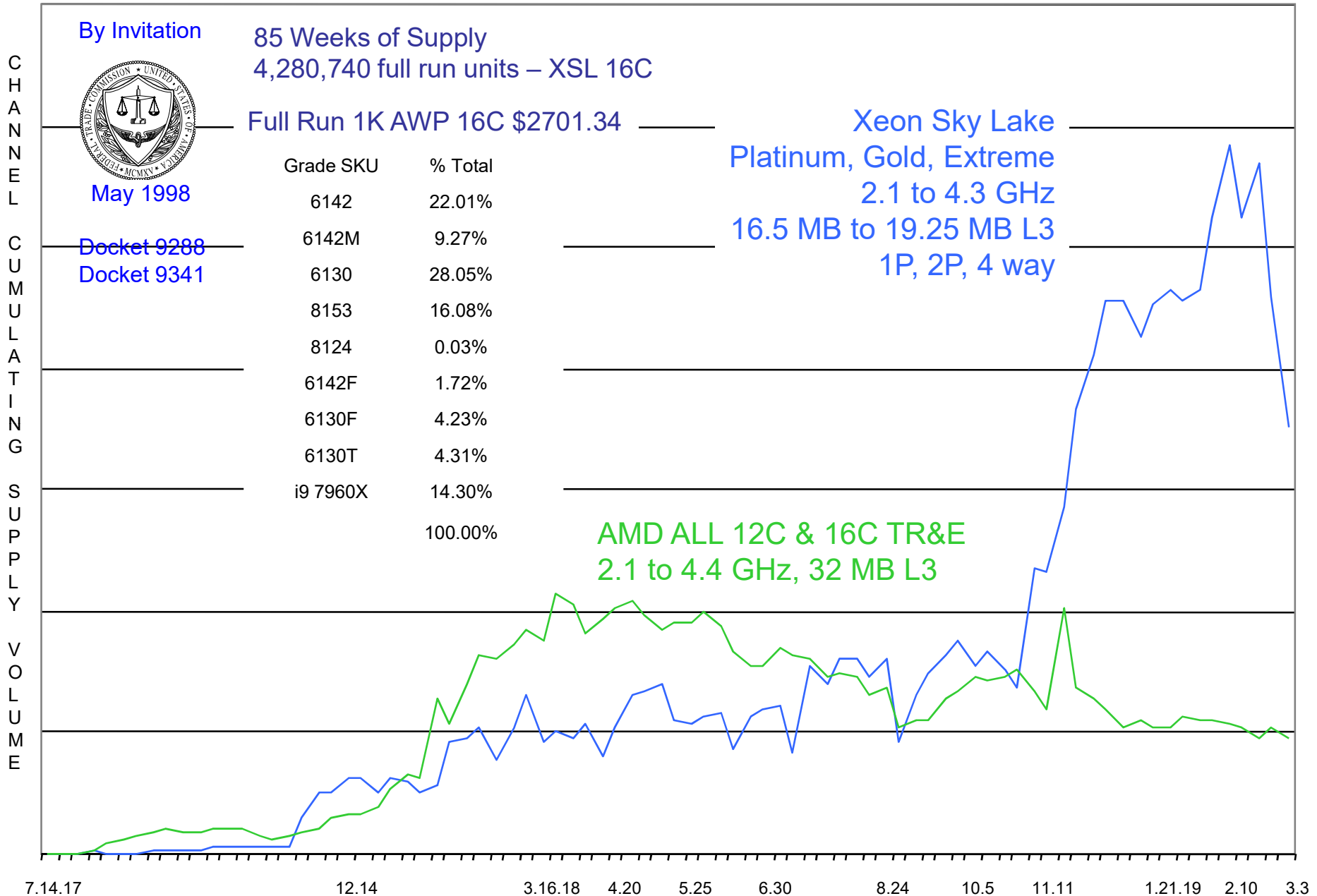
Camp Marketing Consultancy – Xeon Sky Lake Scalable 12C w/AMD TR 12C/24T



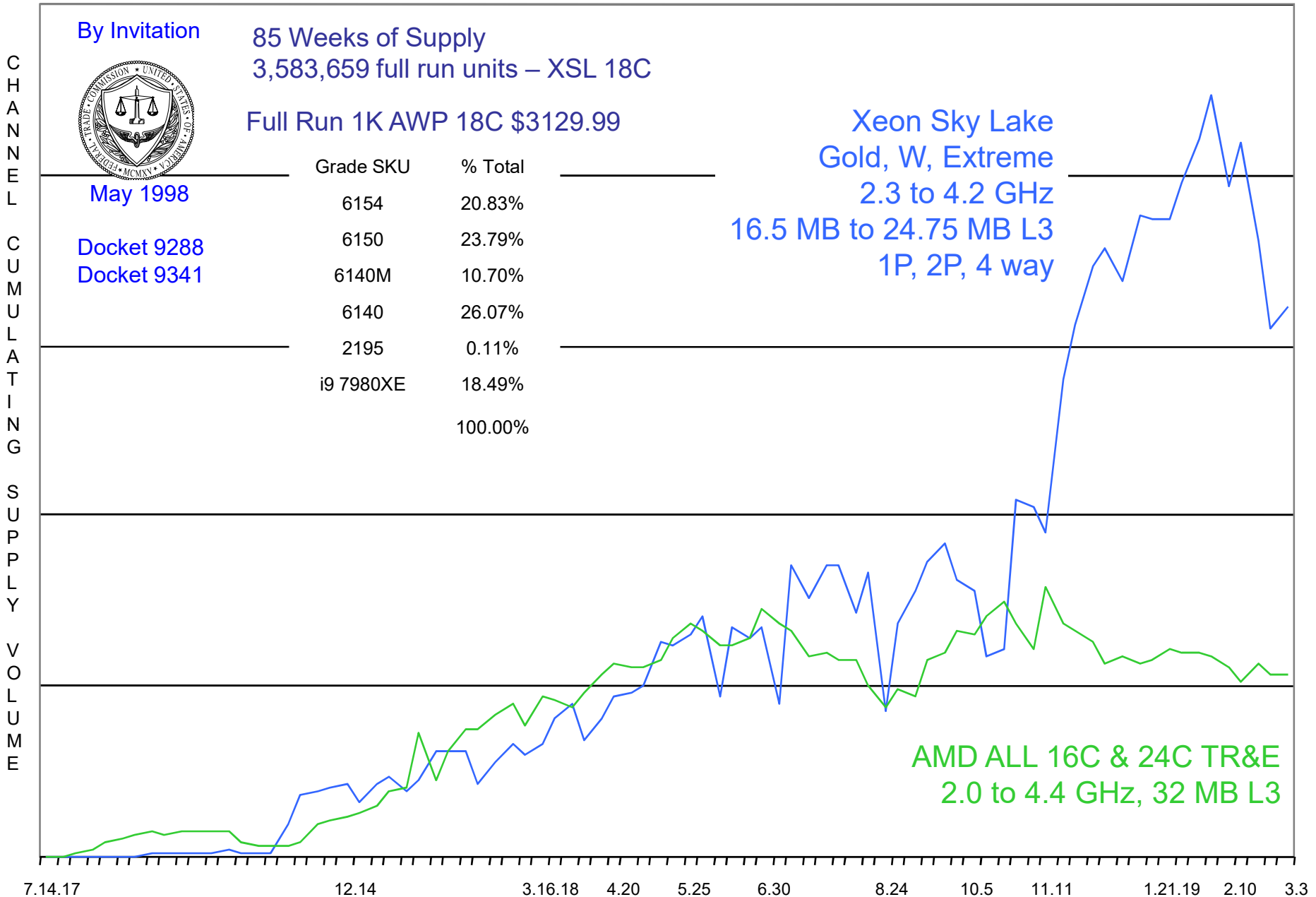
Camp Marketing Consultancy – Xeon Sky Lake Scalable 14C w/AMD All 12/16C



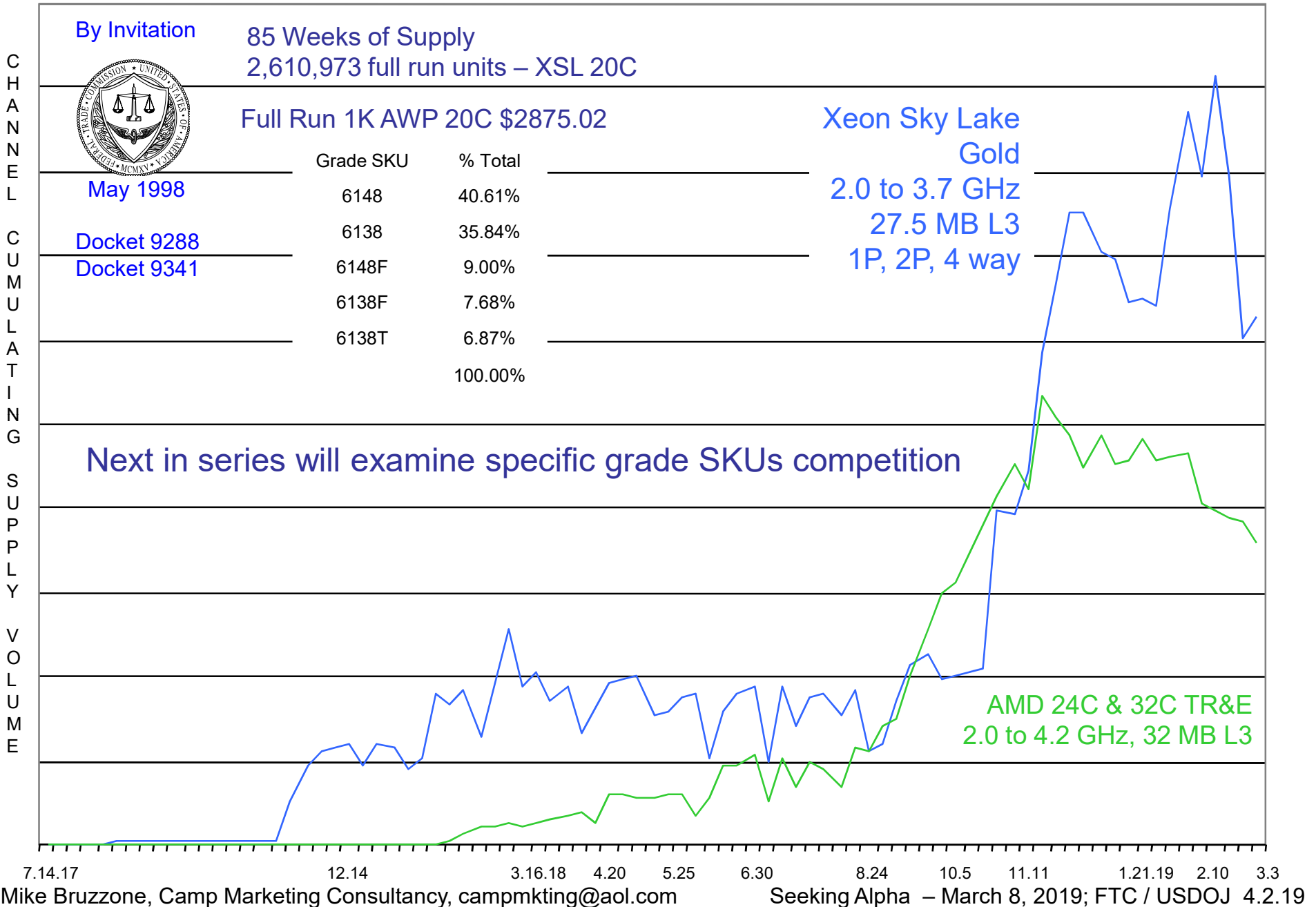
Camp Marketing Consultancy – Xeon Sky Lake Scalable 16C w/AMD All 12/16C



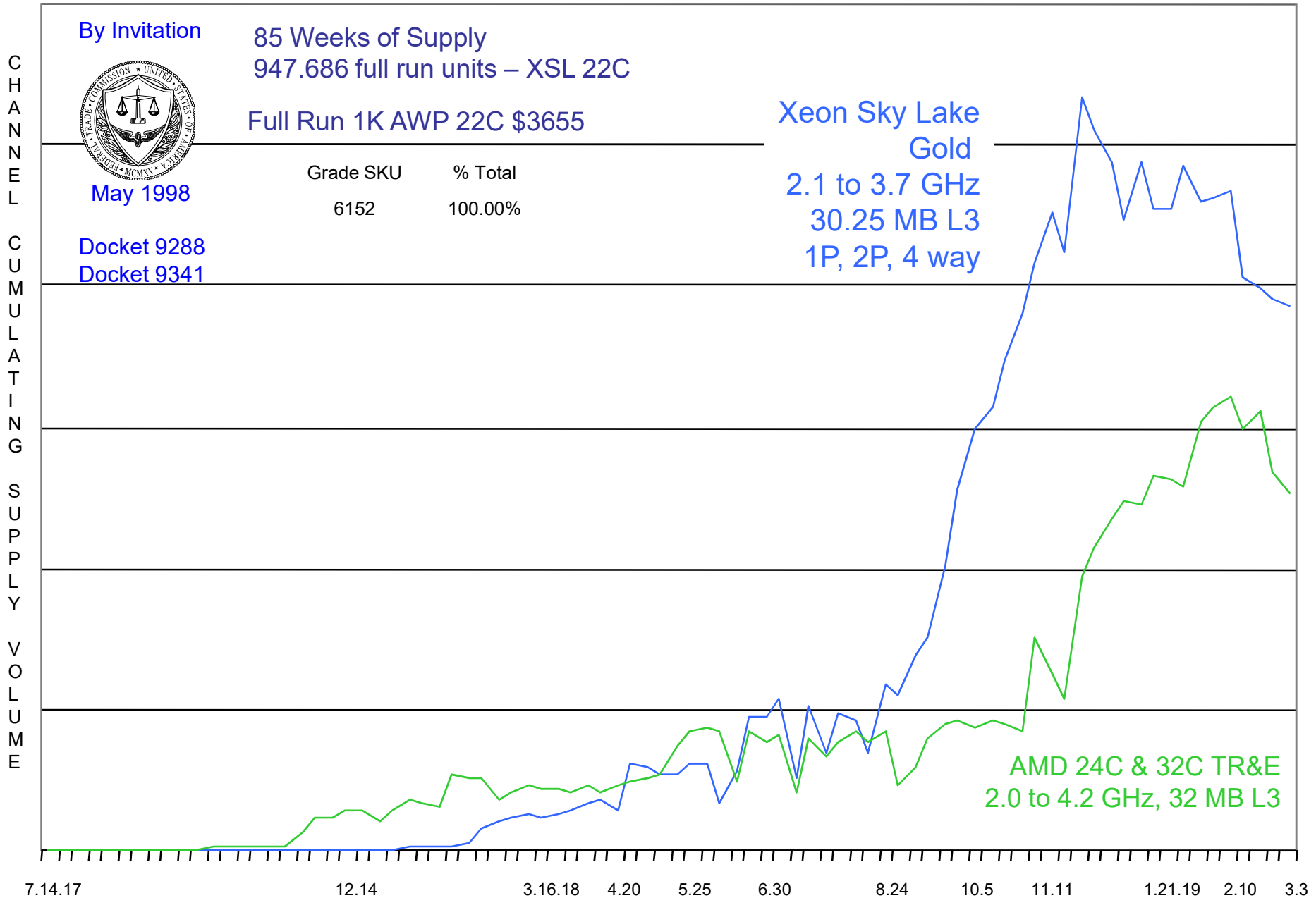
Camp Marketing Consultancy – Xeon Sky Lake Scalable 18C w/AMD 16C & 24C



Camp Marketing Consultancy – Xeon Sky Lake Scalable 20C w/AMD 24C & 32C



Camp Marketing Consultancy – Xeon Sky Lake Scalable 22C w/AMD 24C & 32C



7.14.17

12.14

3.16.18

4.20

5.25

6.30

8.24

10.5

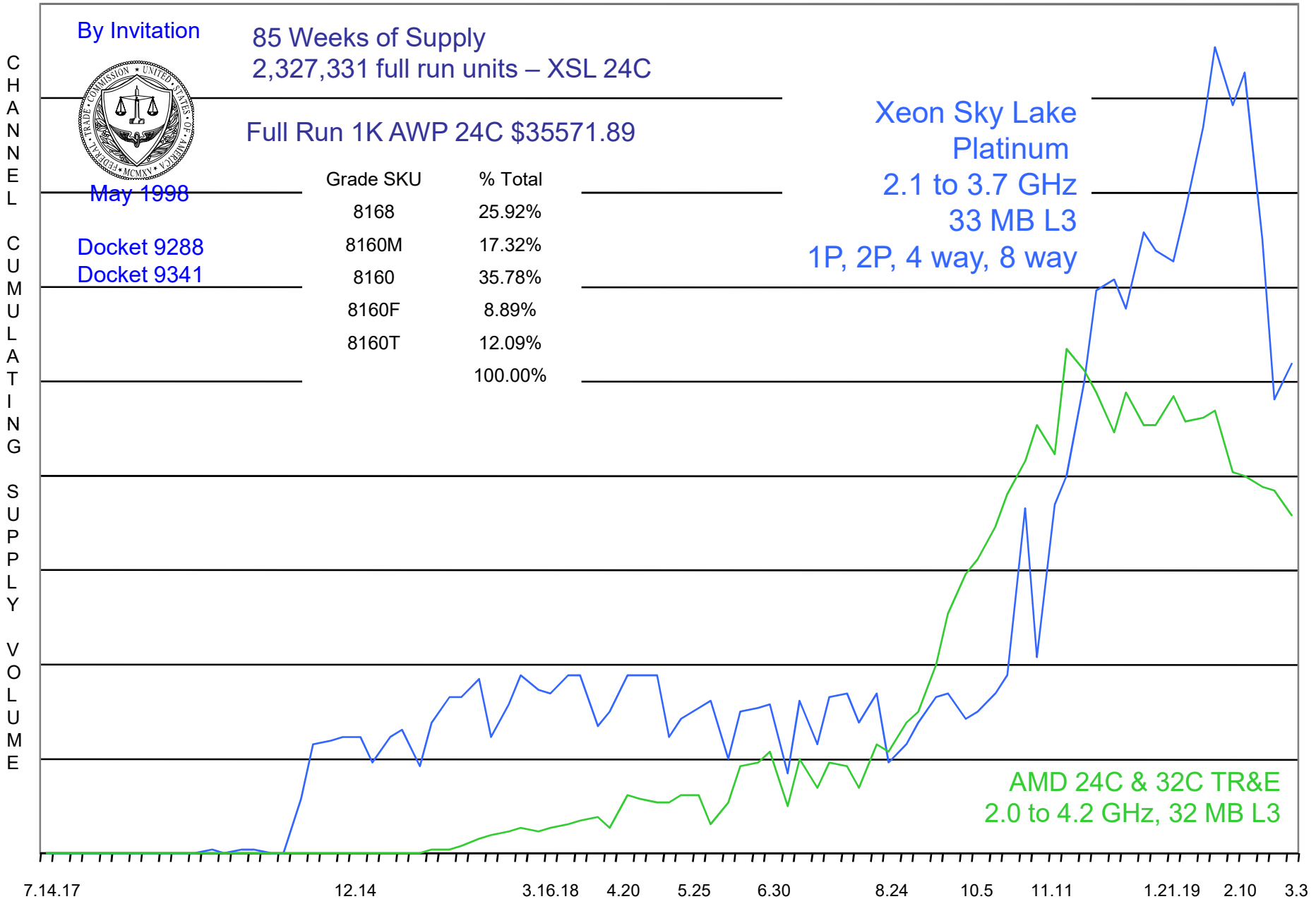
11.11

1.21.19

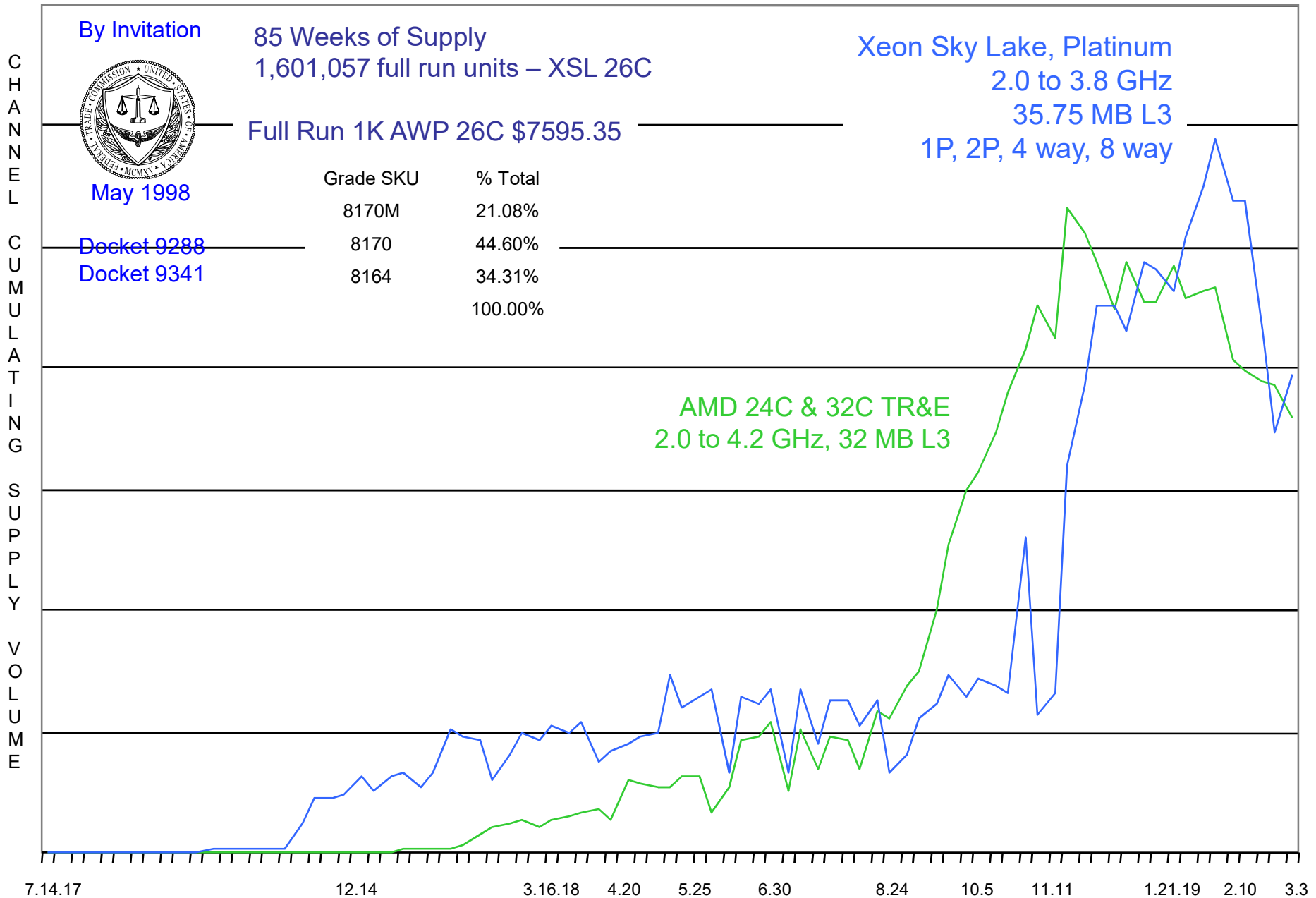
2.10

3.3

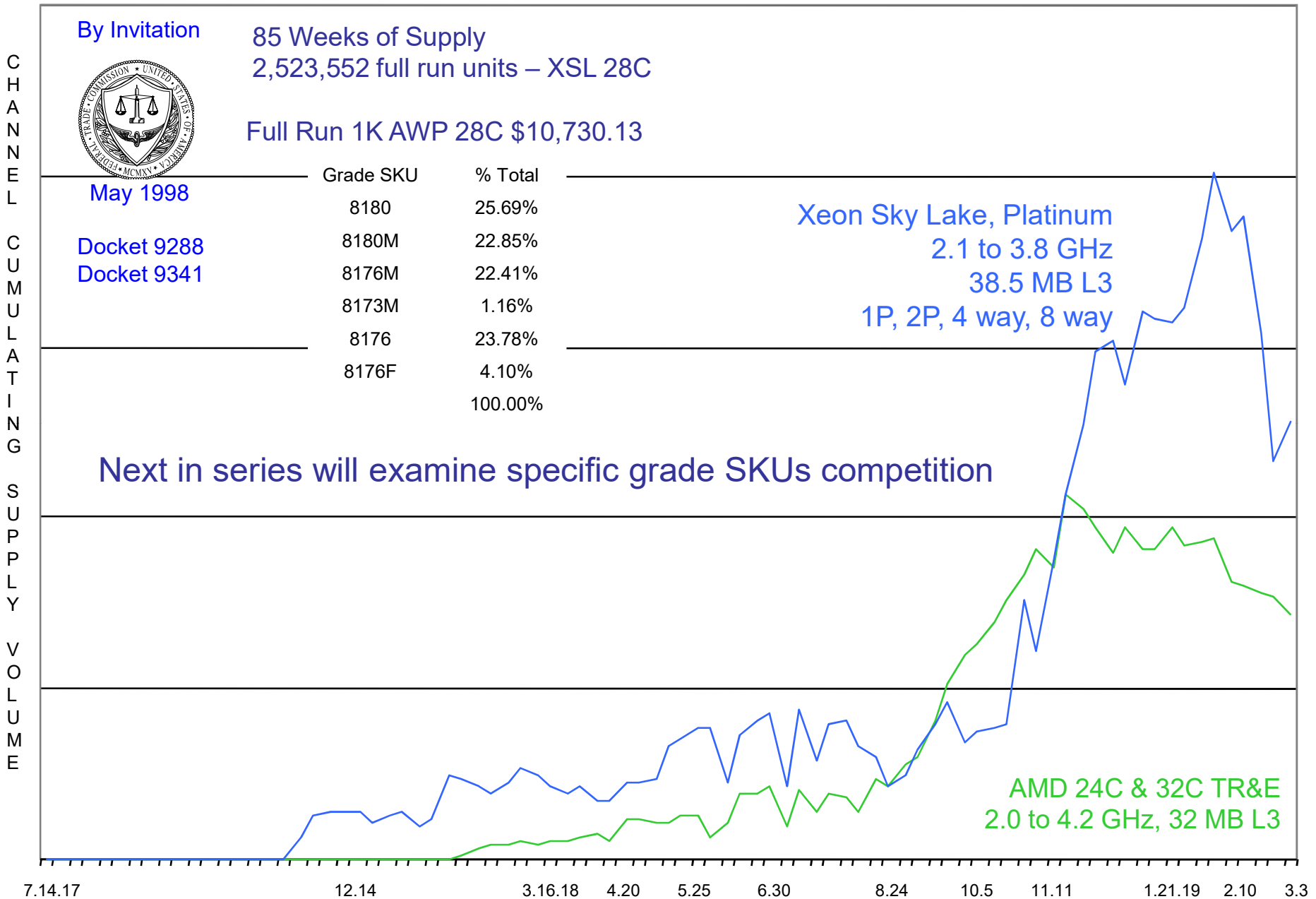
Camp Marketing Consultancy – Xeon Sky Lake Scalable 24C w/AMD 24C & 32C



Camp Marketing Consultancy – Xeon Sky Lake Scalable 26C w/AMD 24C & 32C



Camp Marketing Consultancy – Xeon Sky Lake Scalable 28C w/AMD 24C & 32C



Camp Marketing Consultancy – Xeon Sky Lake Scalable 2x DRAM w/AMD EPYC

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By Invitation



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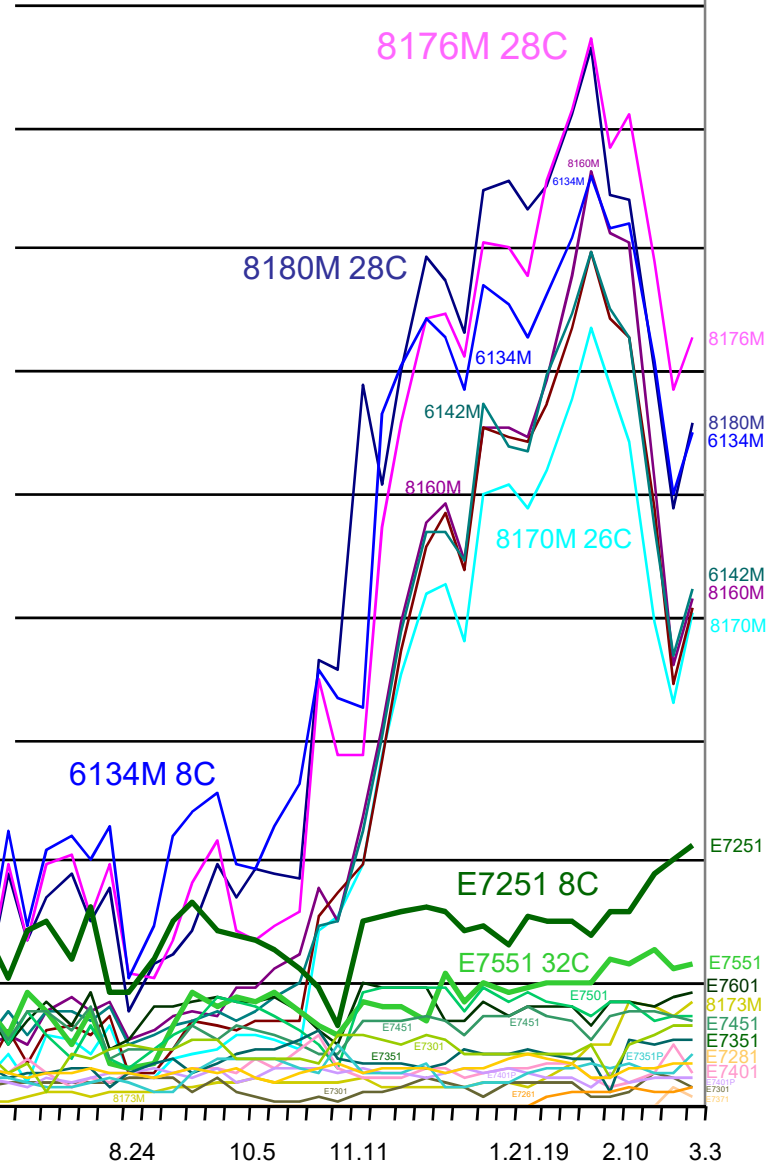
Docket 9341

@ 87 Weeks
of Supply

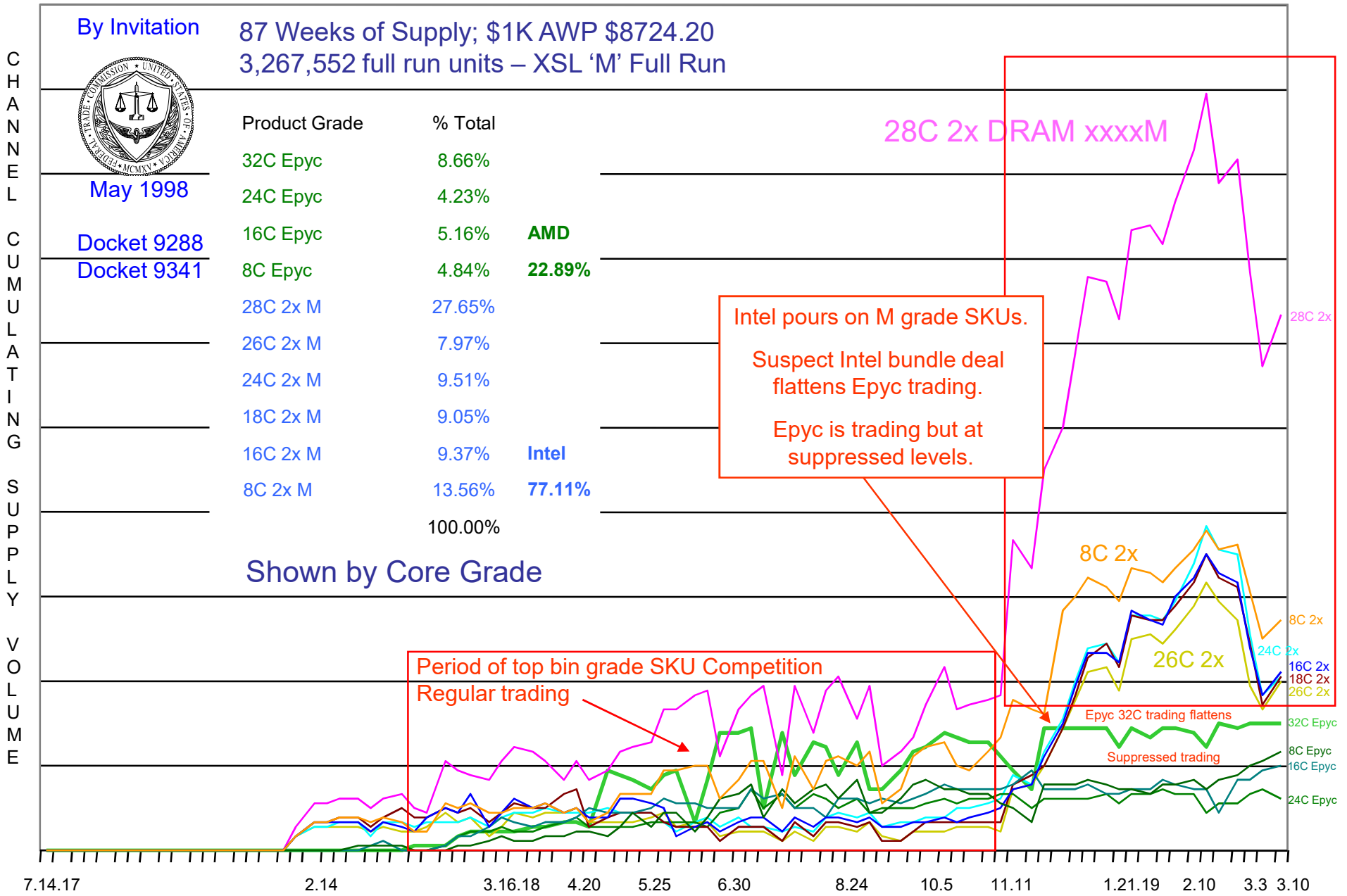
AMD Epyc positions against **XSL** memory per socket & sub system bus throughput advantage. Subsequently **M** and **Omni Path Intel** Categories are the primary **Epyc** competitive targets.

Product Category Grade SKU	% Total
XSL 8180M 28C, 2.3 to 3.8 GHz, 205w	13.61%
XSL 8176M 28C, 2.1 to 3.8 GHz, 165w	13.35%
XSL 8173M 28C, 2.0 to 3.5 GHz, 165w	0.69%
XSL 8170M 26C, 2.1 to 3.67 GHz, 165w	7.97%
XSL 8160M 24C, 2.1 to 3.7 GHz, 150w	9.51%
XSL 6140M 18C, 2.3 to 3.7 GHz, 140w	9.05%
XSL 6142M 16C, 2.6 to 3.7 GHz, 150w	9.37%
XSL 6134M 8C, 3.2 to 3.7 GHz 130w	13.56%
EPYC 7601 32C, 2.2 to 3.3 GHz, 180w	2.70%
EPYC 7551 32C, 2.0 to 3.0 GHz, 180w	2.87%
EPYC 7551P 32C, 2.0 to 3.0 GHz, 180w	0.60%
EPYC 7501 32C, 2.0 to 3.0 GHz, 155/170w	2.49%
EPYC 7451 24C 2.3 to 3.2 GHz, 180w	2.18%
EPYC 7401 24C, 2.0 to 3.0 GHz, 155/170w	1.08%
EPYC 7401P 24C, 2.0 to 3.0 GHz, 155/170w	0.98%
Epyc 7371 16C, 3.1 to 3.8 GHz, 180w	0.02%
EPYC 7351 16C, 2.4 to 2.9 GHz, 155/170w	1.38%
EPYC 7351P 16C, 2.4 to 2.9 GHz, 180w	1.03%
EPYC 7301 16C, 2.2 to 2.7 GHz, 155/170w	1.62%
EPYC 7281 16C, 2.1 to 2.7 GHz, 155/170w	1.11%
EPYC 7261 8C, 2.5 to 2.9 GHz, 155/170w	0.07%
EPYC 7251 8C, 2.1 to 2.9 GHz, 155/170w	4.77%
	100.00%

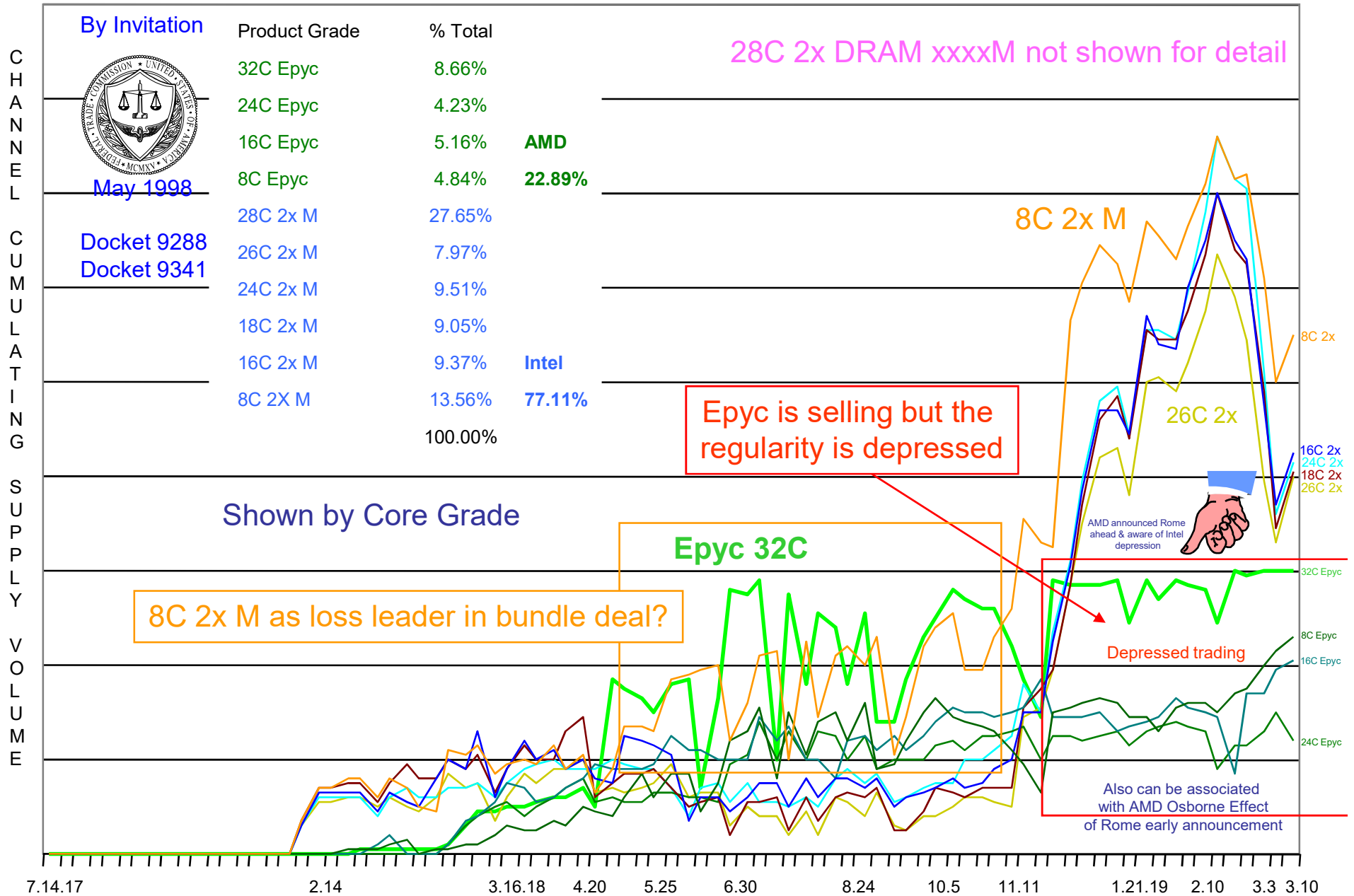
Shown by Grade SKU



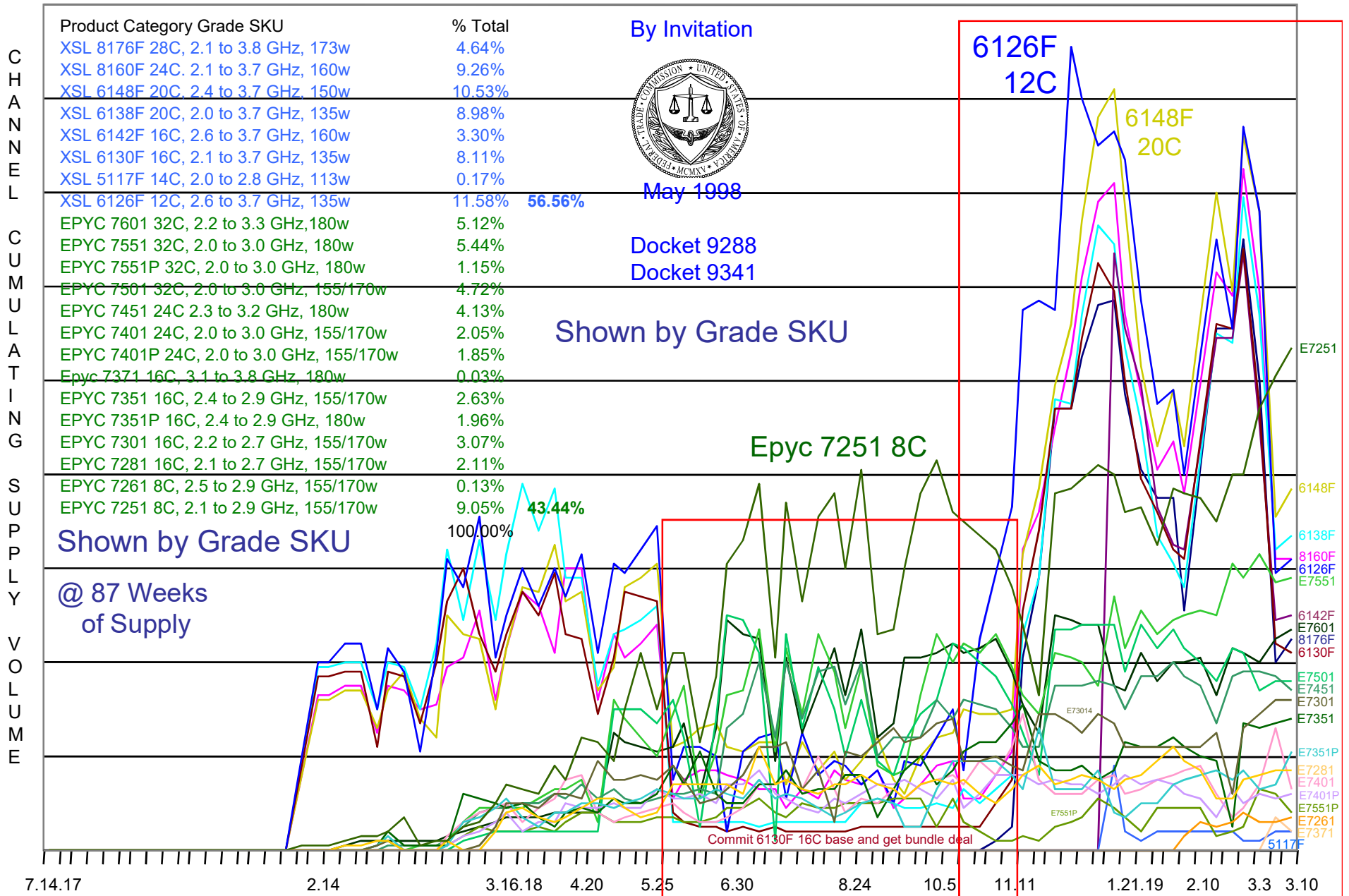
Camp Marketing Consultancy – Xeon Sky Lake Scalable 2x DRAM w/AMD EPYC



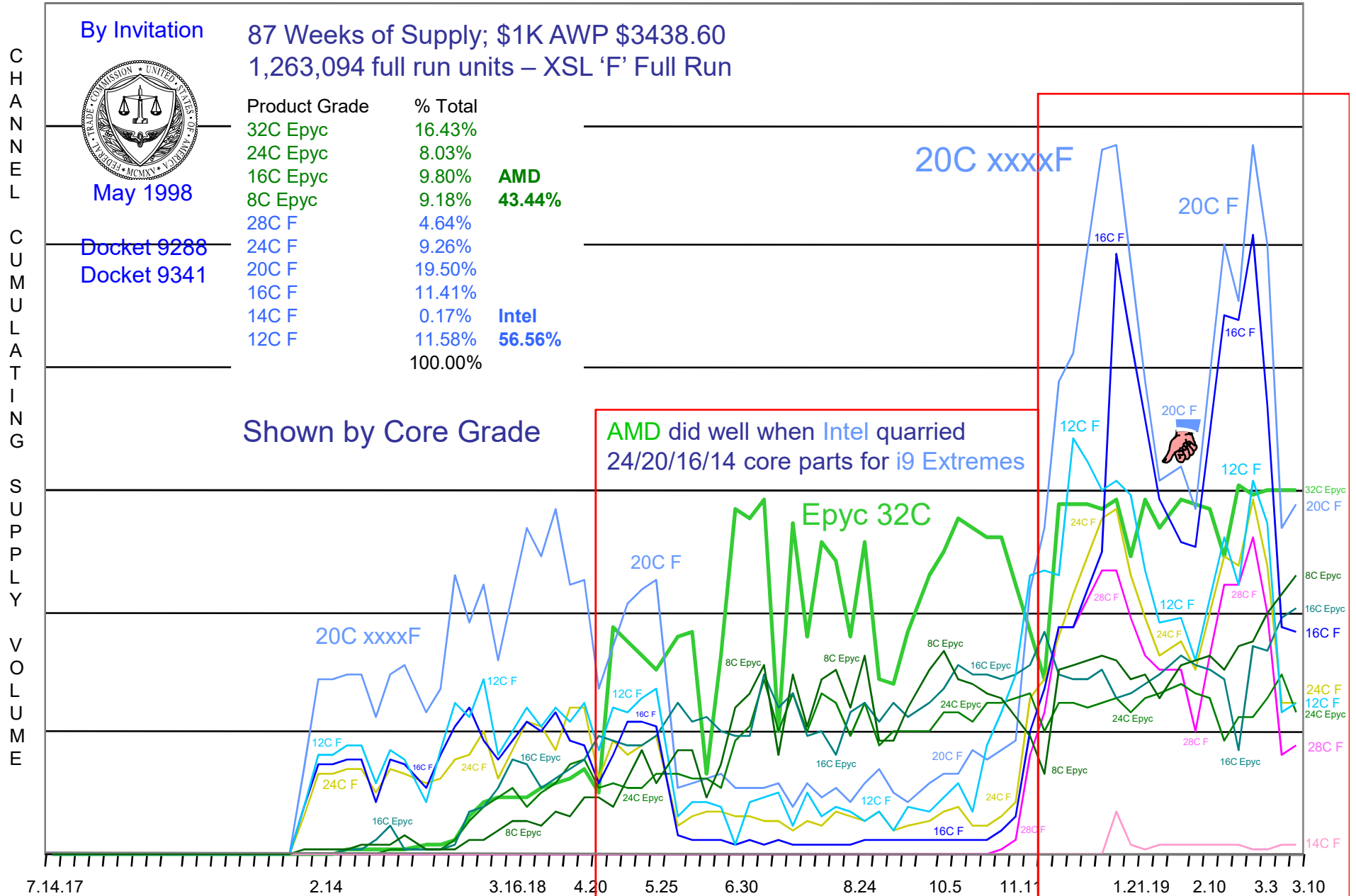
Camp Marketing Consultancy – Sky Lake Scalable 2x DRAM < 28C w/AMD EPYC



Camp Marketing Consultancy – Sky Lake Scalable Omni path w/AMD EPYC

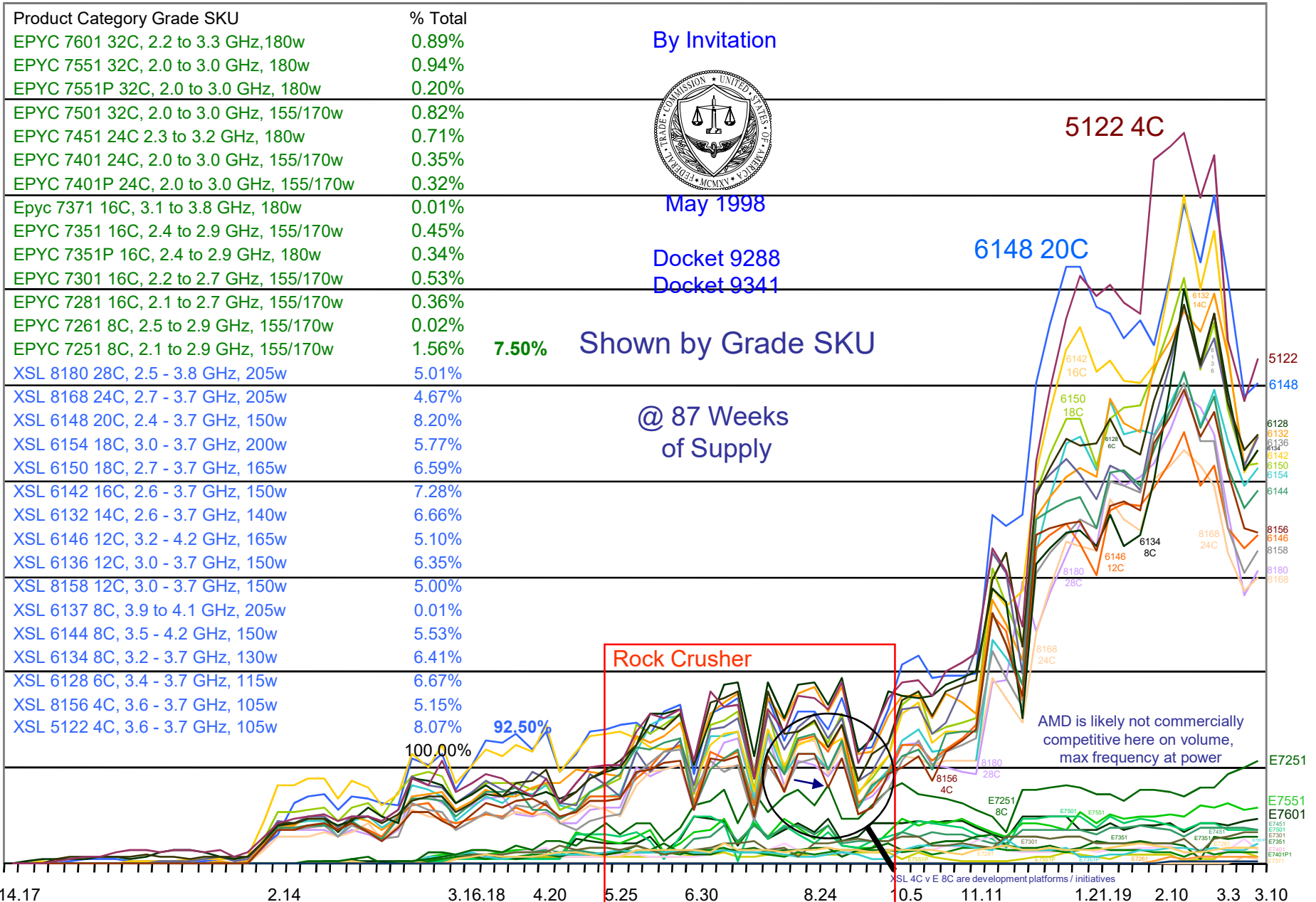


Camp Marketing Consultancy – Sky Lake Scalable Omni path w/AMD EPYC

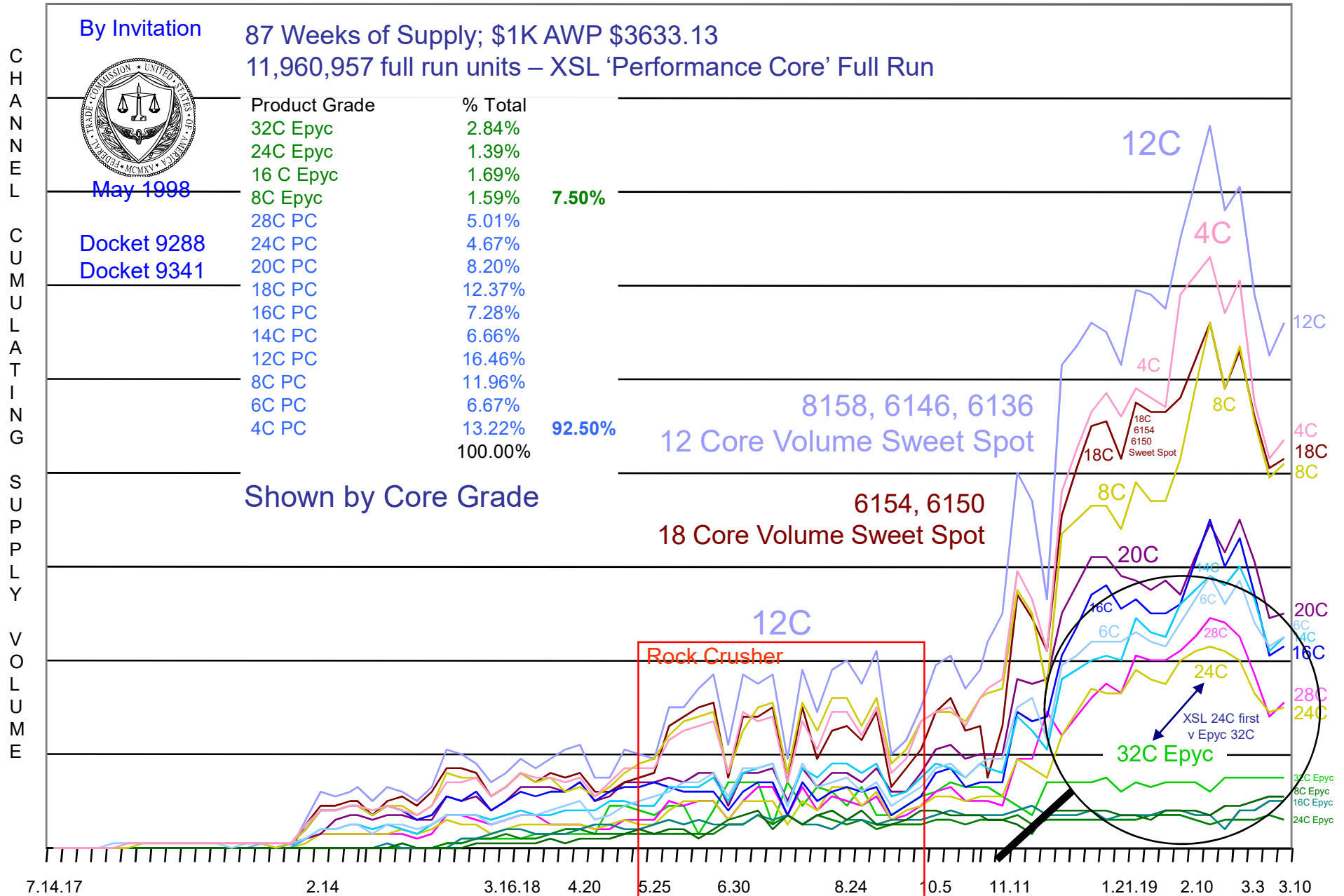


Camp Marketing Consultancy – Xeon Sky Lake Performance Core w/AMD EPYC

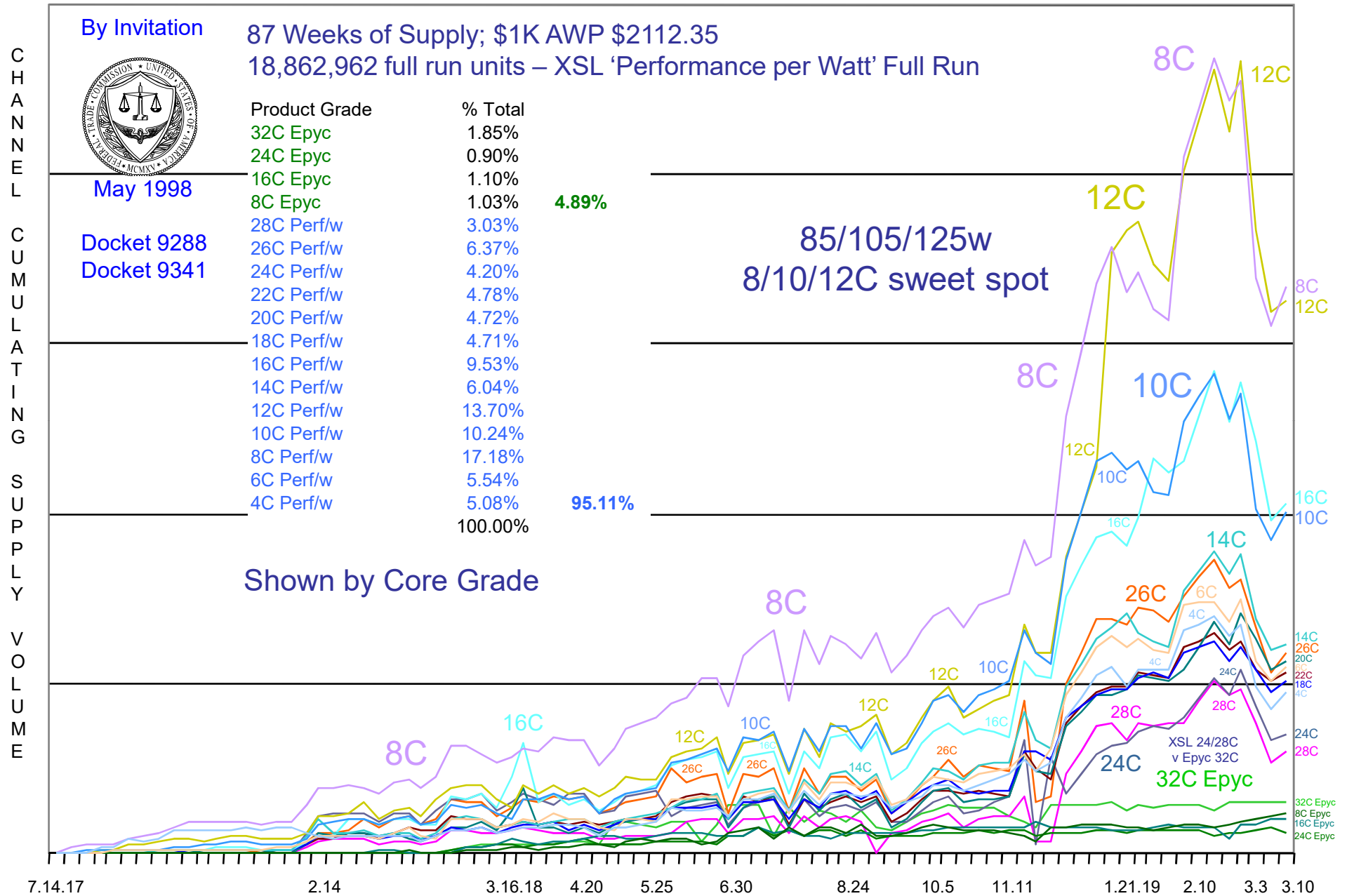
CHANNEL CUMULATIVE SUPPLY VOLUME



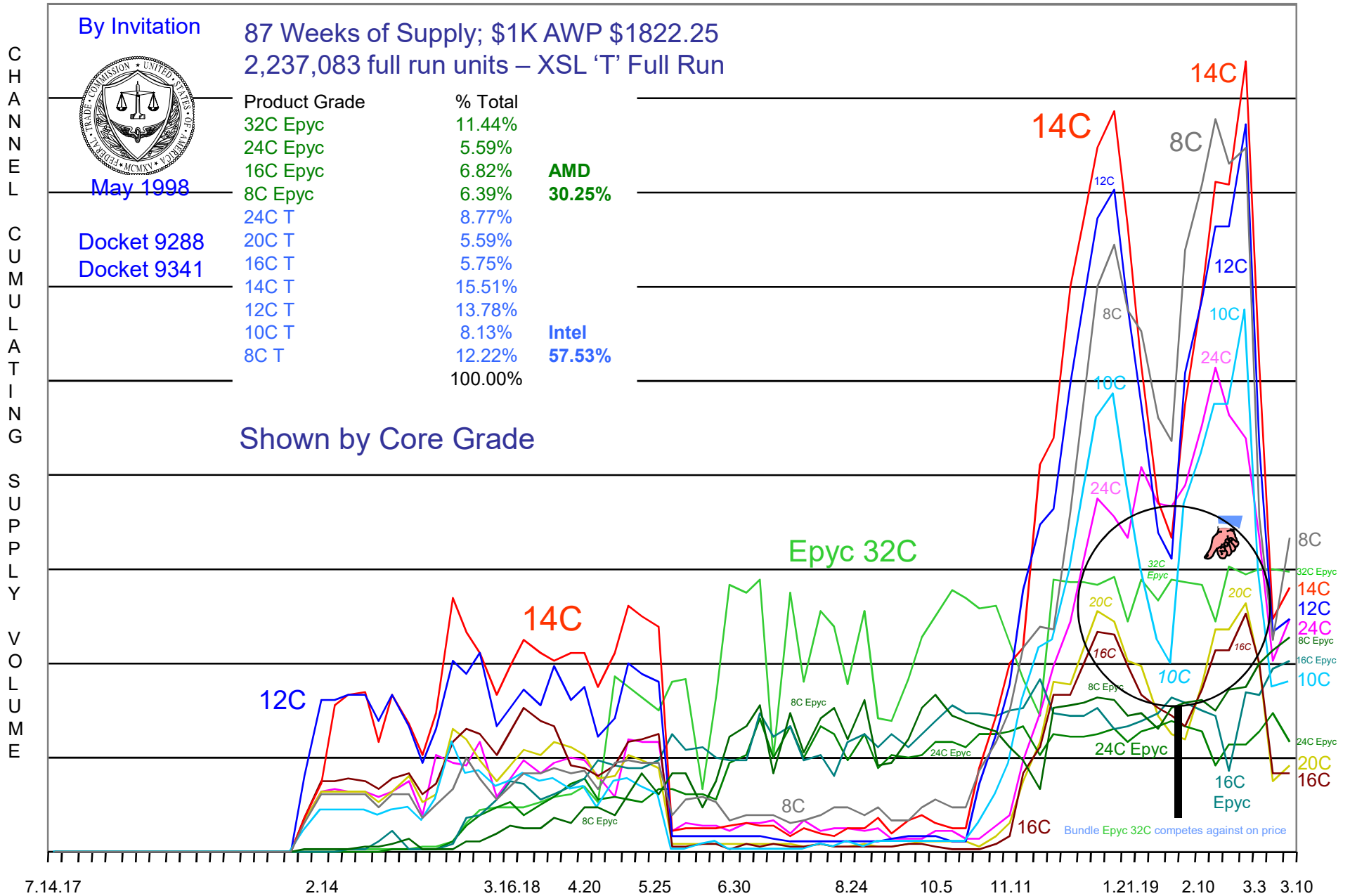
Camp Marketing Consultancy – Xeon Sky Lake Performance Core w/AMD EPYC



Camp Marketing Consultancy – Sky Lake Performance per Watt w/AMD EPYC

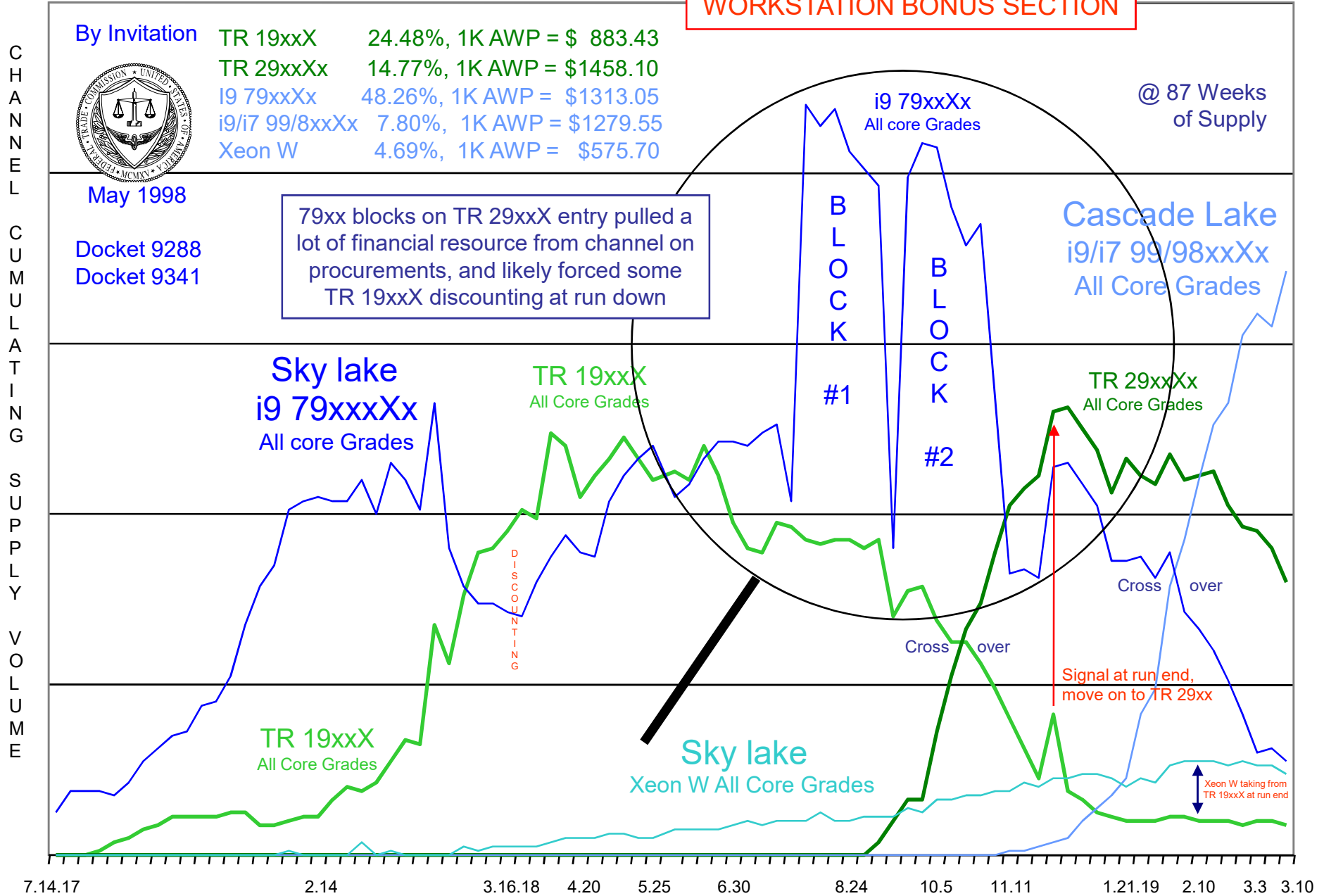


Camp Marketing Consultancy – Xeon Sky Lake 10 Year Life w/AMD EPYC



Camp Marketing Consultancy – SL W, SL Extremes, Cascade Lake EE w/AMD TR

WORKSTATION BONUS SECTION



By Invitation

TR 19xxX	24.48%, 1K AWP = \$ 883.43
TR 29xxXx	14.77%, 1K AWP = \$1458.10
i9 79xxXx	48.26%, 1K AWP = \$1313.05
i9/i7 99/8xxXx	7.80%, 1K AWP = \$1279.55
Xeon W	4.69%, 1K AWP = \$575.70

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79xx blocks on TR 29xxX entry pulled a lot of financial resource from channel on procurements, and likely forced some TR 19xxX discounting at run down

@ 87 Weeks of Supply

Cascade Lake
i9/i7 99/98xxXx
All Core Grades

Sky lake
i9 79xxxXx
All core Grades

TR 19xxX
All Core Grades

TR 29xxXx
All Core Grades

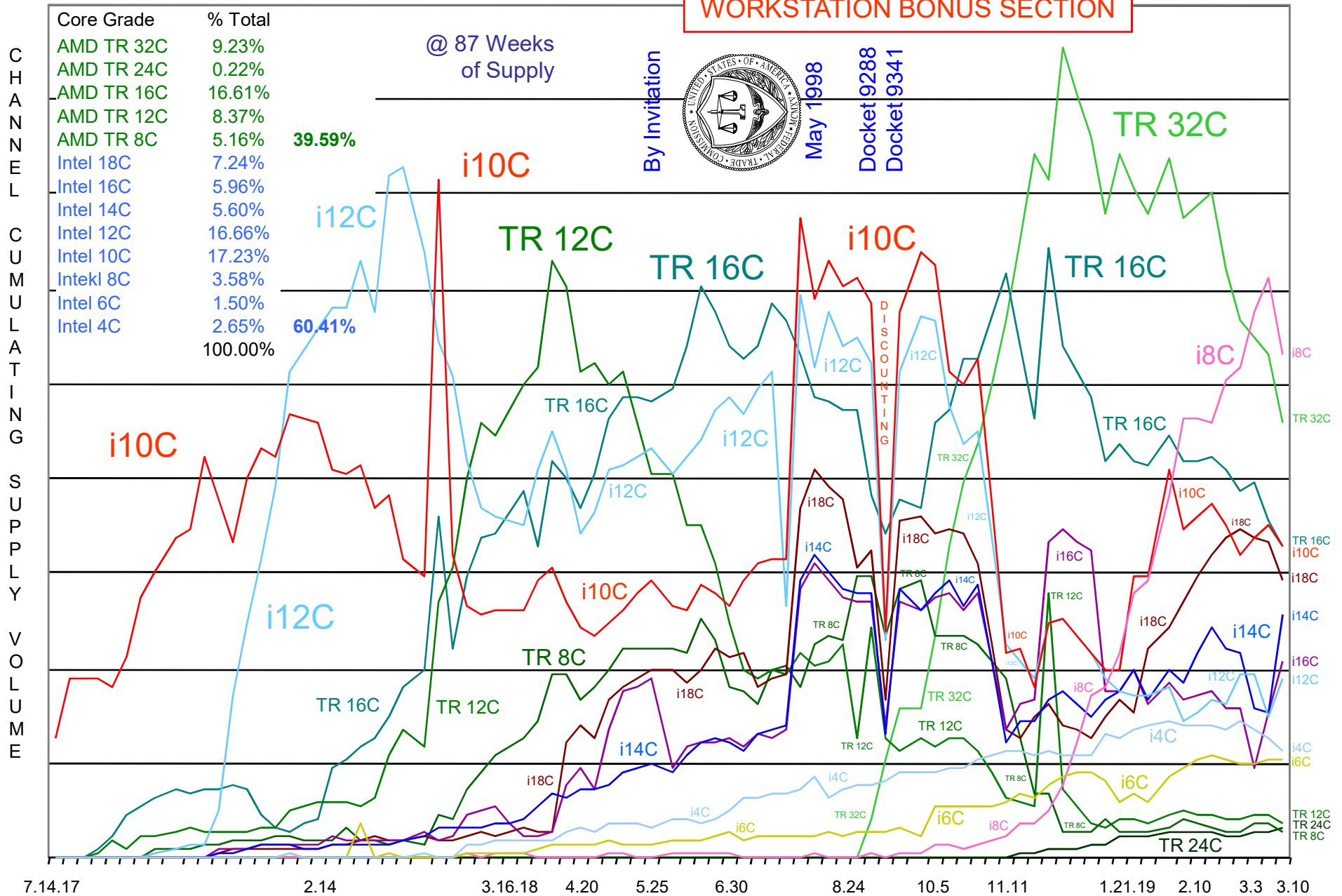
TR 19xxX
All Core Grades

Sky lake
Xeon W All Core Grades

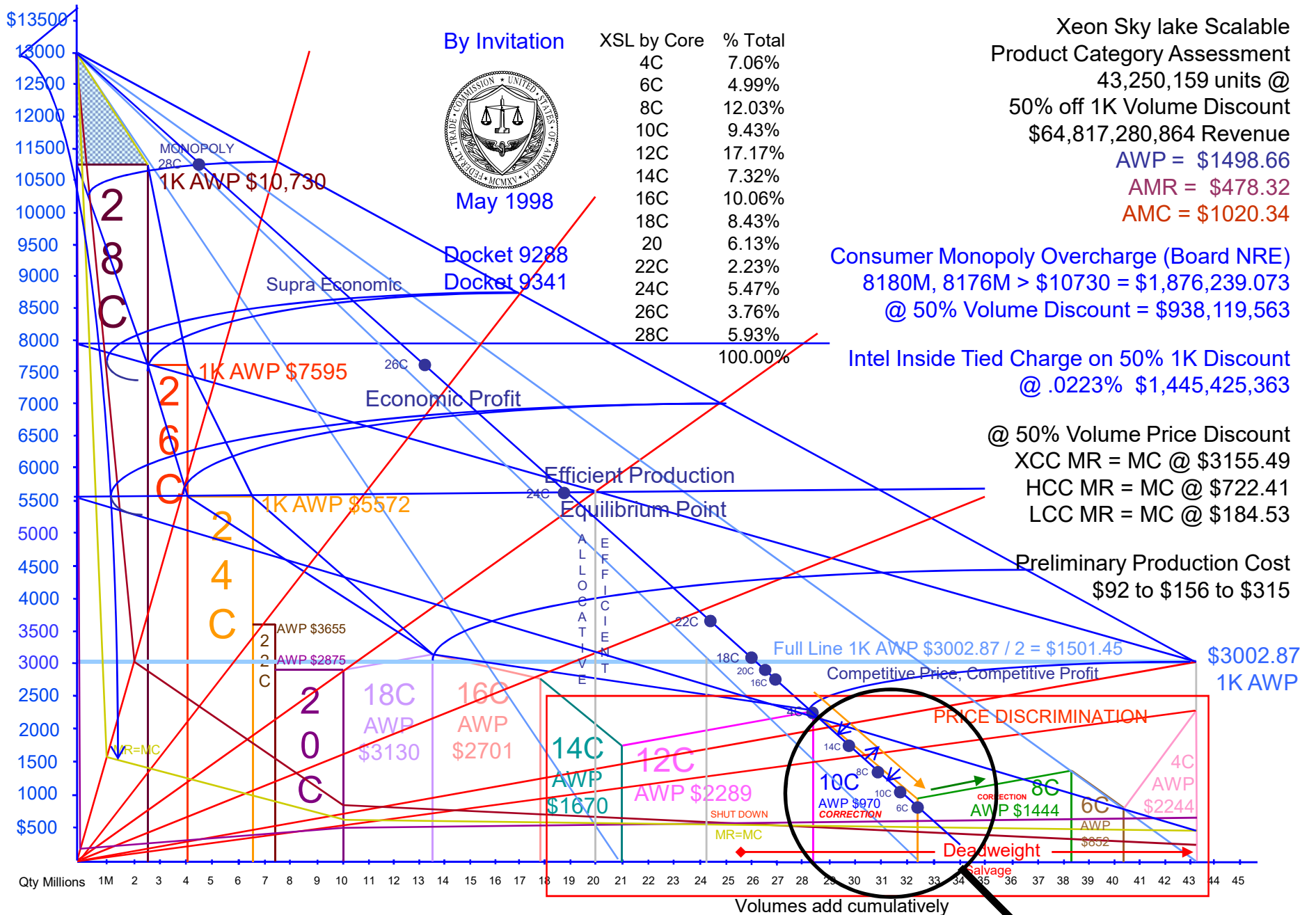
Xeon W taking from TR 19xxX at run end

Camp Marketing Consultancy – SL W, SL Extremes, Cascade Lake EE w/AMD TR

WORKSTATION BONUS SECTION



Camp Marketing Consultancy – Xeon Sky Lake Scalable Full Run @ 43,250,159 units



Camp Marketing Consultancy – Xeon Sky Lake Scalable Ramp by Product Category

By Invitation



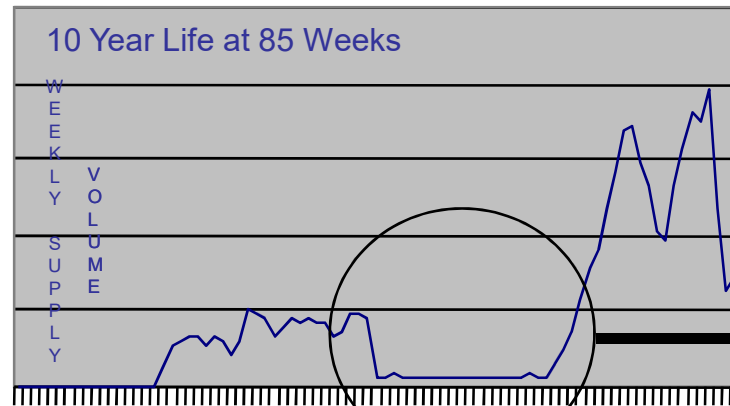
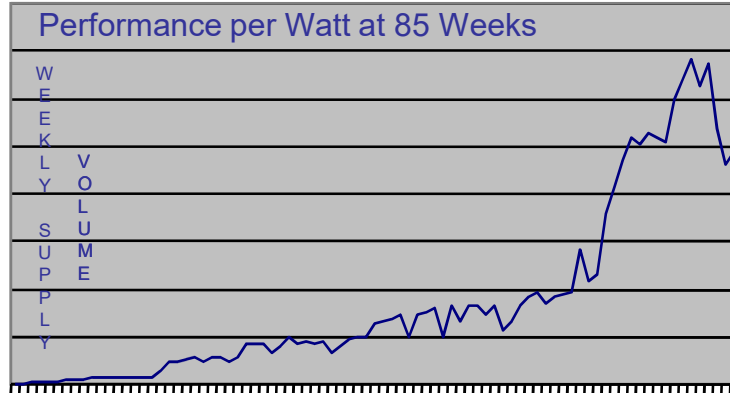
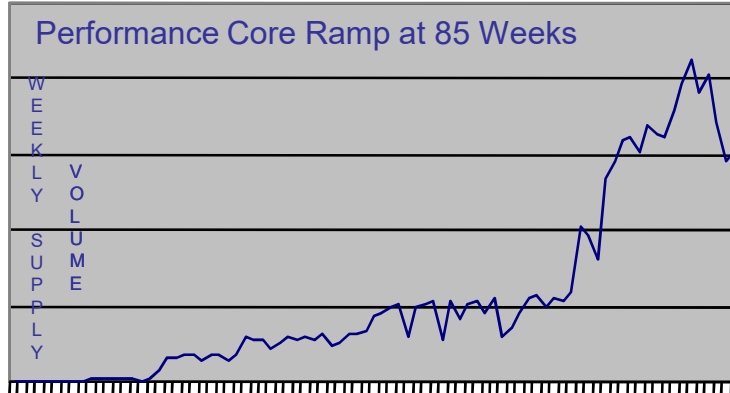
May 1998

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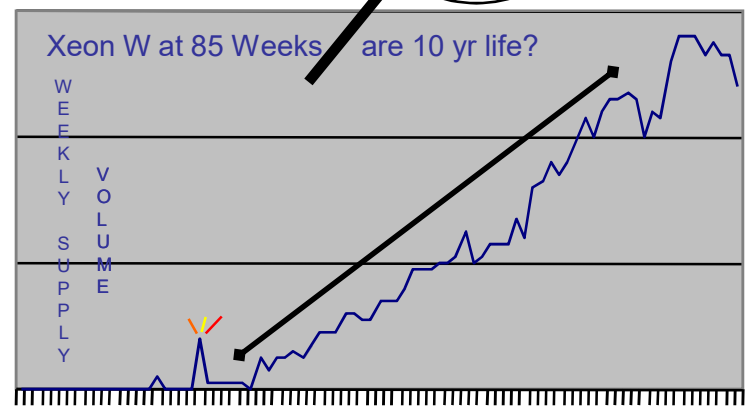
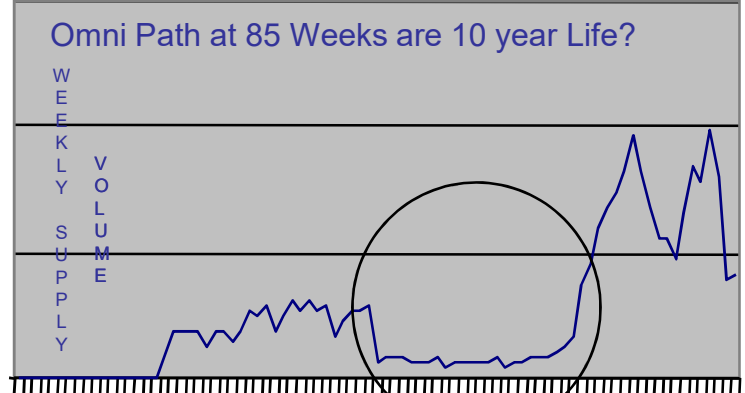
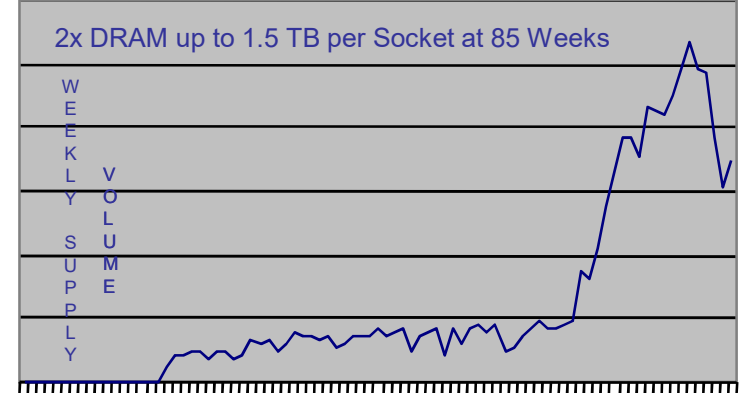
Docket 9341

“Science is basically concerned with investigating how and why things are as they are. Science, in fact, is organized knowledge about the world, not organized knowledge about itself”.

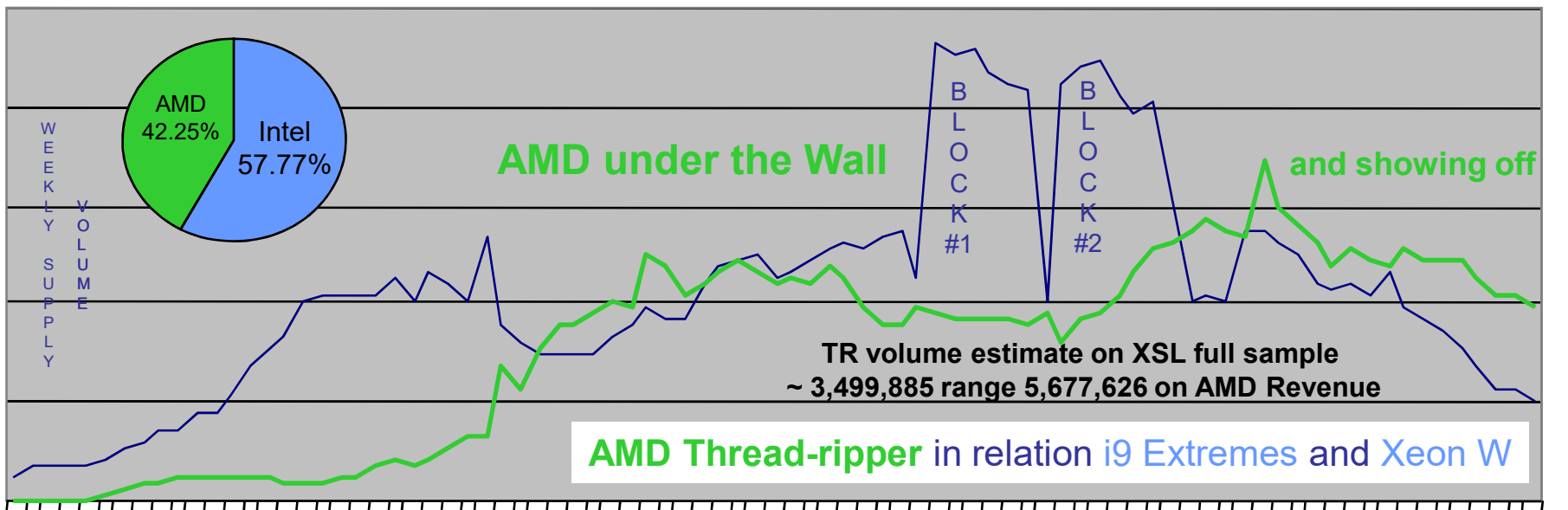
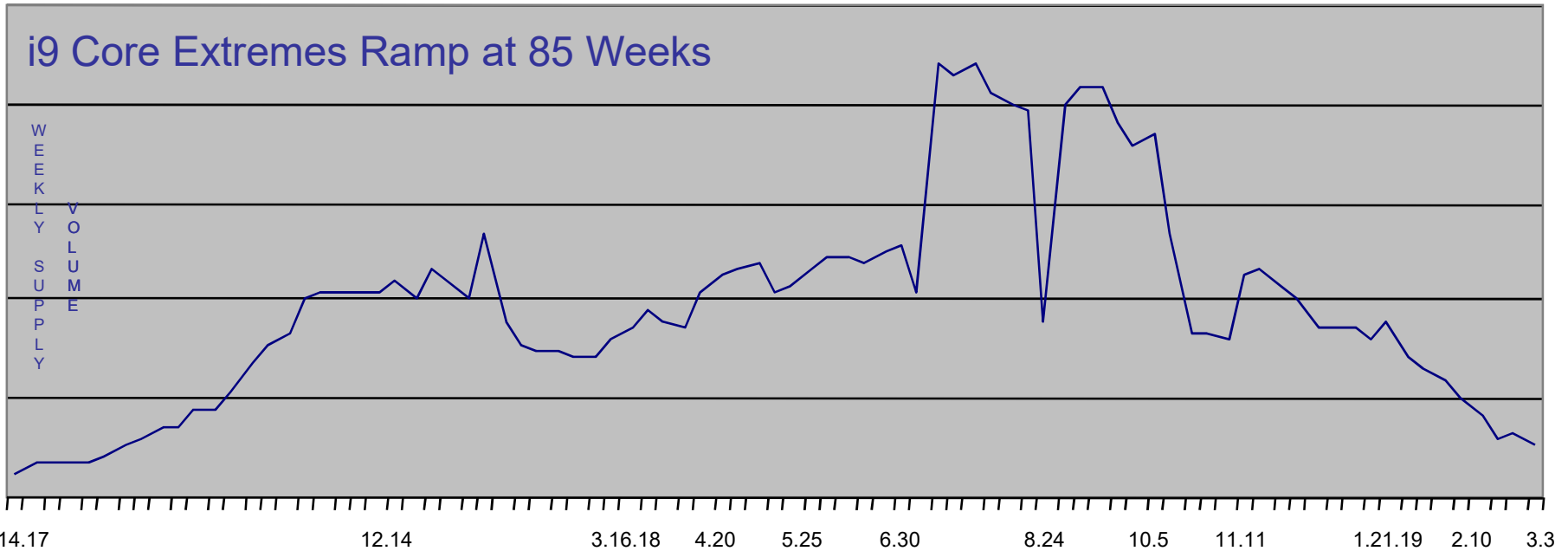
Stanford Beer, University of Manchester; Decision & Control, 1966



NEW XEON CATEGORY RAMP SUMMARY



Camp Marketing Consultancy – Xeon Sky Lake Scalable Ramp by Product Category

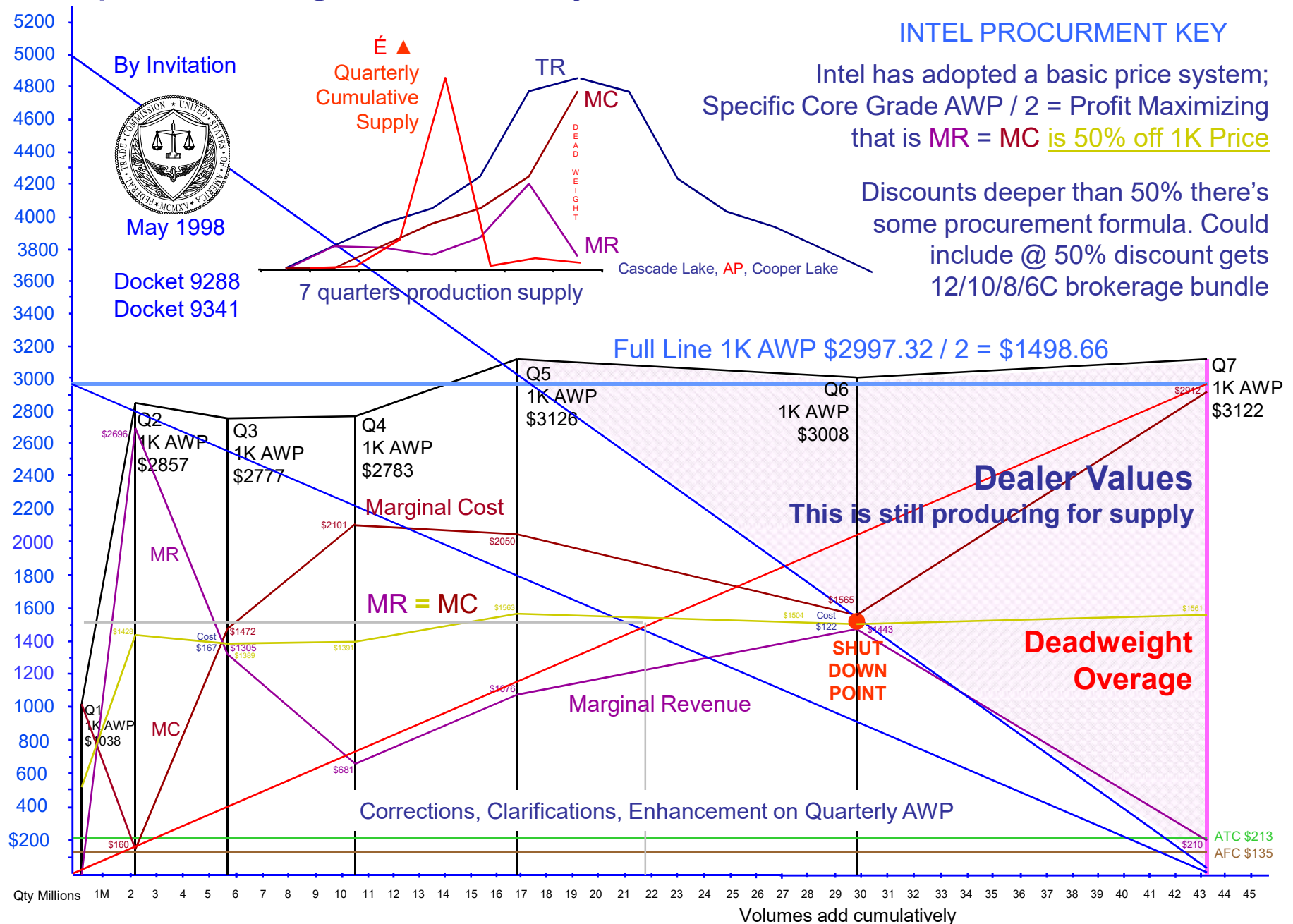


Camp Marketing Consultancy – Xeon Sky Lake Scalable Full Run @ 43,250,159 units

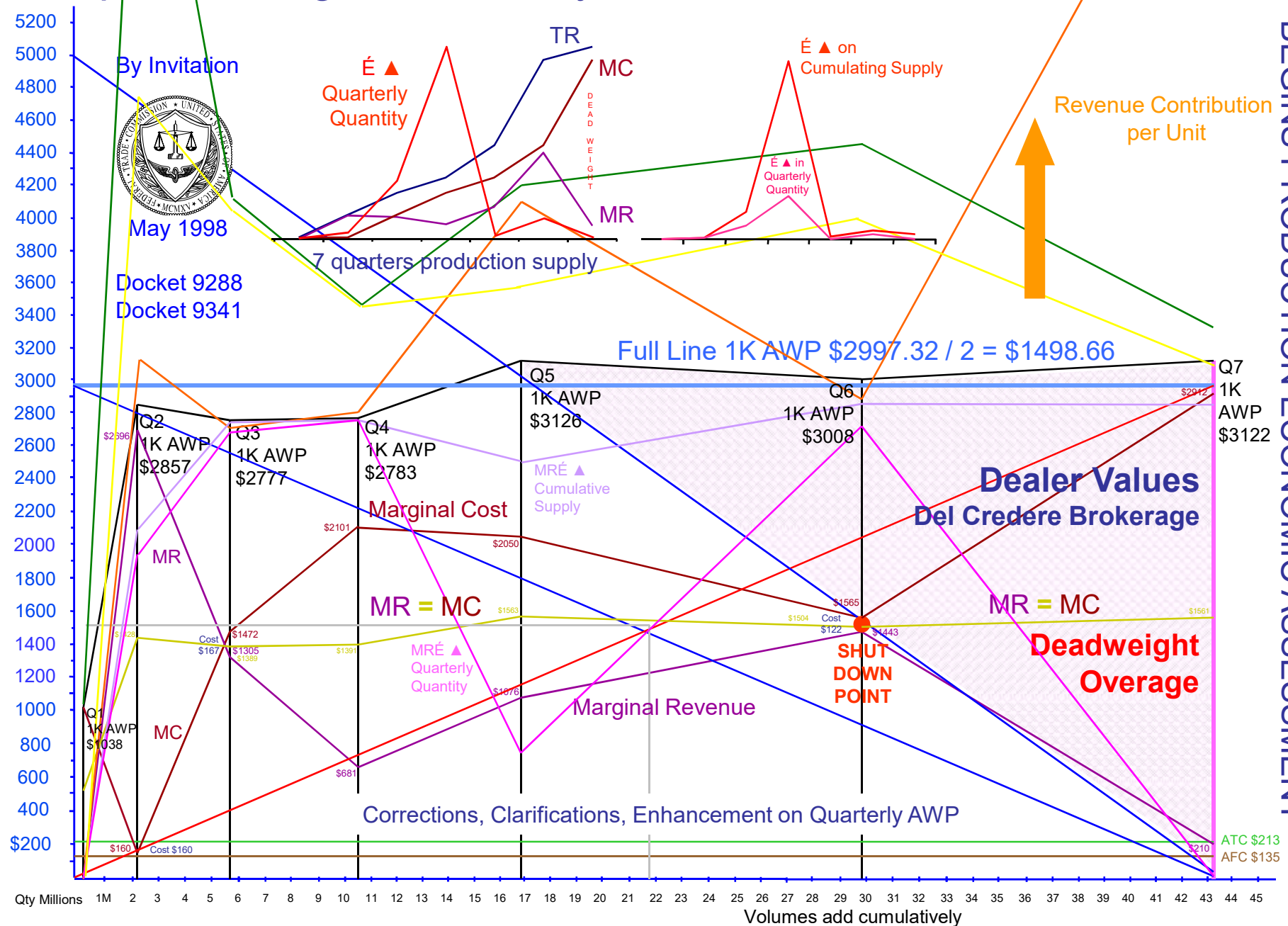
INTEL PROCURMENT KEY

Intel has adopted a basic price system;
 Specific Core Grade AWP / 2 = Profit Maximizing
 that is $MR = MC$ is 50% off 1K Price

Discounts deeper than 50% there's
 some procurement formula. Could
 include @ 50% discount gets
 12/10/8/6C brokerage bundle



Camp Marketing Consultancy – Xeon Sky Lake Scalable Full Run @ 43,250,159 units



BEGINS PRODUCTION ECONOMIC ASSESSMENT

Camp Marketing Consultancy – Xeon E Uni-processor Full Run at 33 Weeks Supply

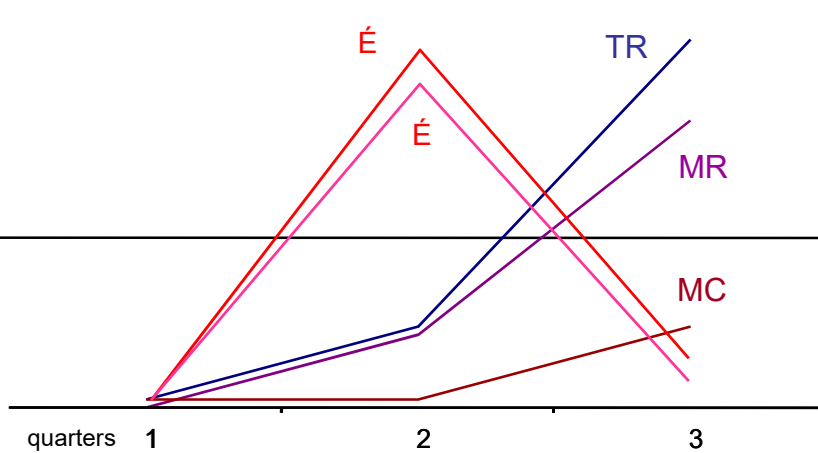
CHANNEL CUMULATING SUPPLY VOLUME

By Invitation

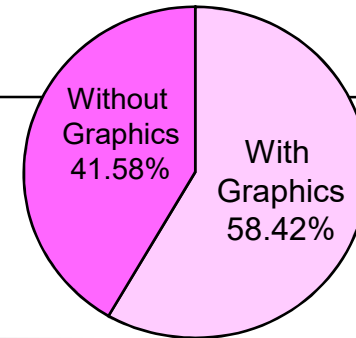


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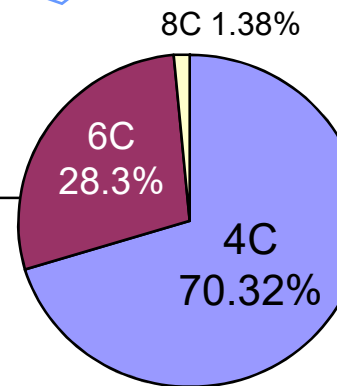


Xeon E Uni-processor (desktop) 234,977 units @
50% off 1K Volume Discount; \$309,154 Revenue
AWP = \$137.22
AMR = \$79.70
AMC = \$57.53
Hard Cost
\$13.55 to \$42.73



Product	% Total
2104G 4C/4T. 3.2 GHz, 8 MB L3, 65w	0.13%
2124 4C/4T, 3.3 to 4.3 GHz, 8 MB L3, 40 PCI, 71w, No Graphics	12.12%
2124G 4C/4T, 3.4 to 4.5 GHz, 8 MB L3, 40 PCI, 71w	8.79%
2126G 6C/6T, 3.3. to 4.5 GHz, 12 MB L3, 40 PCI, 80w	2.17%
2134 4C/8T, 3.5 to 4.5 GHz, MB L3, 40 PCI, 71w, NO Graphics	17.25%
2136 6C/12T, 3.3 to 4.5 GHz, 12 MB L3, 40 PCI, 80w, No Graphics	12.21%
2138 8C/16T, 3.1 to 4.5 GHz, 16 MB L3, 80w	1.38%
2144G 4C/8T, 3.6 to 4.5 GHz, 8 MB L3, 40 PCI, 71w	22.84%
2146G 6C/12T, 3.5 to 4.5 GHz, 12 MB L3, 40 PCI, 80w	4.25%
2174G 4C/8T, 3.8 to 4.7 GHZ, 8 MB L3, 40 PCI, 71w	9.18%
2176G 6C/12T, 3.7 to 4.7 GHz, 12 MB L3, 40 PCI, 80w	6.55%
2186G 6C/12T, 3.8 to 4.7 GHZ, 12 MB L3, 40 PCI, 95w	3.11%
2188 8C/16T. 2.6 to 4.4 GHz, 95w	0.00%
	100.00%

All Grade SKUs
Economic Profit



7.27 8.3 9.7 10.5 11.4 12.1 1.5 2.3 3.3 3.10

Camp Marketing Consultancy – Xeon Sky Lake Scalable Full Run

Next in Sky Lake Scalable series will explore specific Intel core grades production cost. ✓

Will look at channel Intel v AMD EPYC grade SKUs competition. ✓

Finalize Sky Lake Scalable OEM pricing. ✓

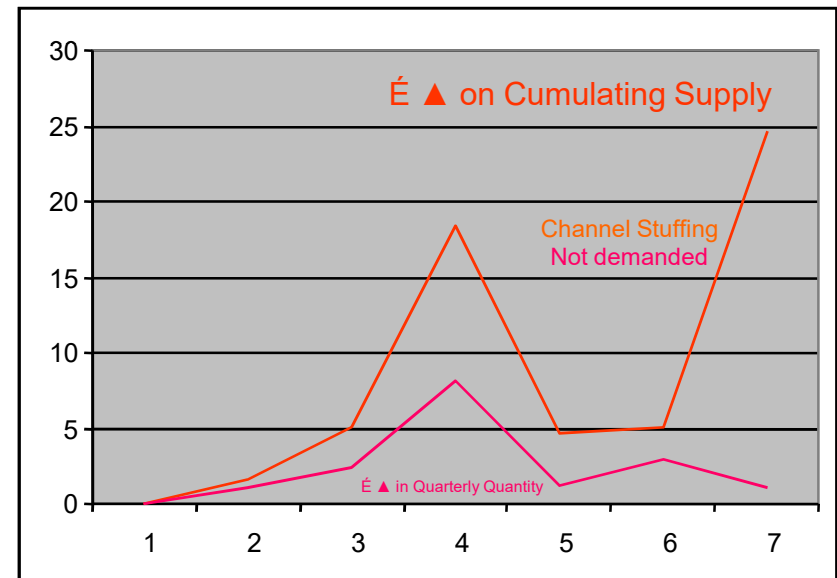
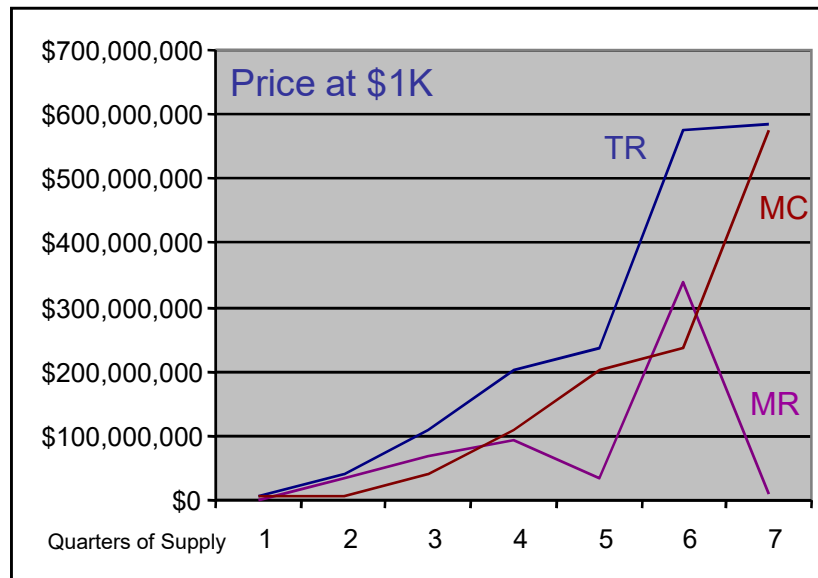
AMD design production cost. ✓

Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 4 Core

NOT FULL RUN . . . better, *in quarter*

4C Quantity in Quarter	In-Qtr \$1K AWP	Price @ 50% Off	Price @ 85% Off	Qtr MR = MC	Production Cost
26,578	\$594.81	\$297.40	\$89.22	\$44.61	\$29.74
86,865	\$1,801.55	\$900.77	\$270.23	\$135.12	\$90.08
164,038	\$2,322.16	\$1,161.08	\$348.32	\$174.16	\$116.11
295,494	\$2,187.52	\$1,093.76	\$328.13	\$164.06	\$109.38
391,716	\$1,867.20	\$933.60	\$280.08	\$140.04	\$93.36
936,711	\$2,225.51	\$1,112.76	\$333.83	\$166.91	\$111.28
<u>981,363</u>	\$2,272.20	\$1,136.10	\$340.83	\$170.42	\$113.61
2,882,766		AWP \$1083.26	AWP \$324.98 Intel i7 4C Price	\$162.49 Average	\$108.03 Average

4 Core Large Cache, Price : Cost



Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 6 Core

NOT FULL RUN . . . better, *in quarter*

6C Quantity in Quarter

7,560
47,283
128,463
222,348
289,213
679,808
697,222
2,071,898

In-Qtr \$1K AWP

\$867.20
\$856.10
\$853.80
\$910.07
\$816.97
\$846.31
\$838.29

Price @ 50% Off

\$433.60
\$428.05
\$426.90
\$455.04
\$408.49
\$423.16
\$419.15
AWP \$423.56

Price @ 85% Off

\$130.08
\$128.41
\$128.07
\$136.51
\$122.55
\$126.95
\$125.74
AWP \$127.07
i3 Price

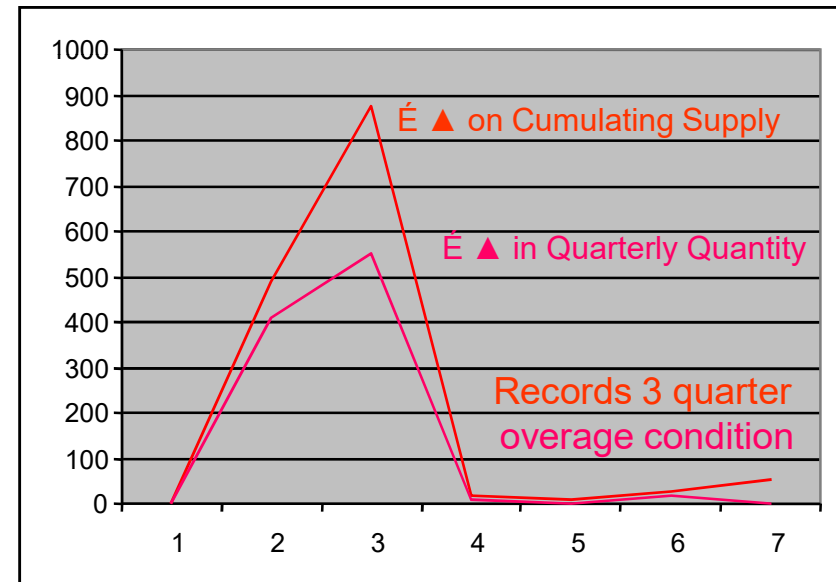
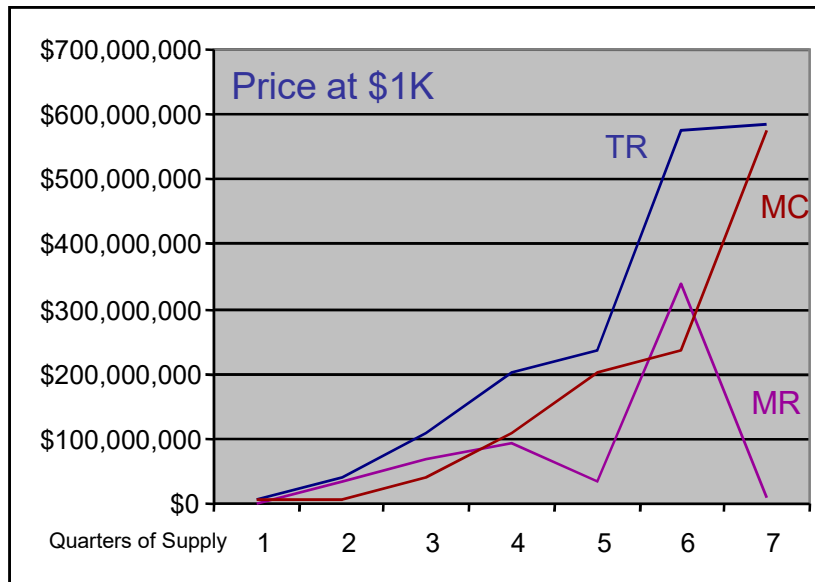
Qtr MR = MC

\$65
\$64
\$64
\$68
\$61
\$63
\$63
\$65.53 Average

Production Cost

\$43.36
\$42.80
\$42.69
\$45.50
\$40.85
\$42.32
\$41.91
\$42.35 Average
Variable Cost Production

6 Core



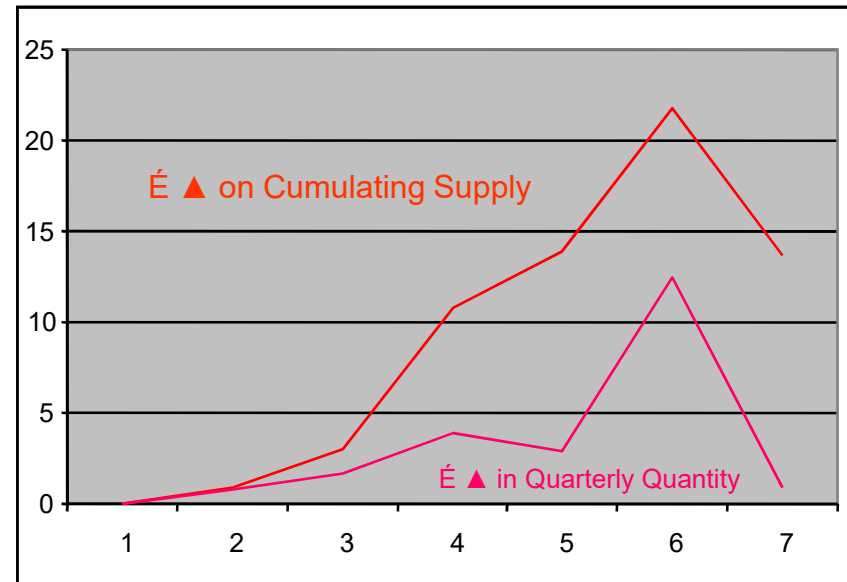
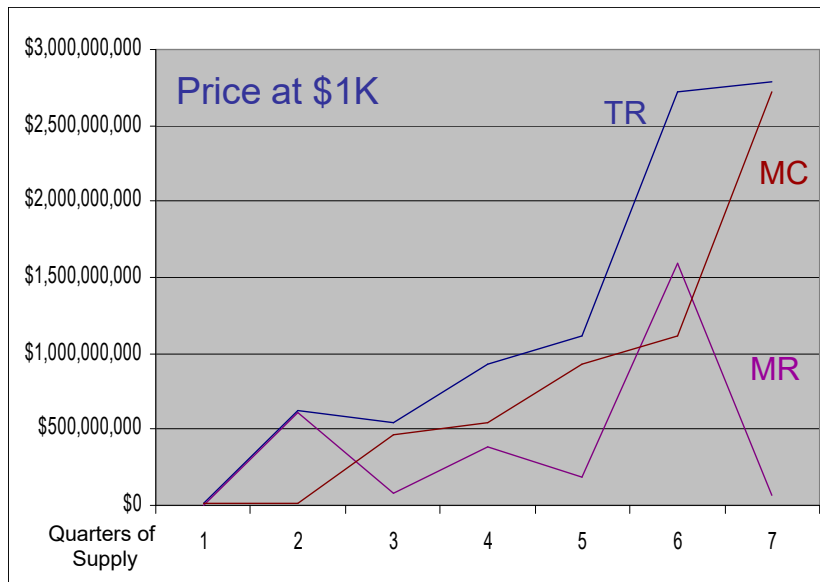
6C essentially rejected even at i3 price

Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 8 Core

NOT FULL RUN . . . better, *in quarter*

8C Quantity in Quarter	In-Qtr \$1K AWP	Price @ 50% Off	Price @ 85% Off	Qtr MR = MC	Production Cost
37,157	\$524.43	\$262.22	\$78.67	\$39	\$26.22
185,932	\$3,355.77	\$1,677.88	\$503.37	\$252	\$167.79
409,243	\$1,334.78	\$667.39	\$200.22	\$100	\$66.74
635,724	\$1,459.03	\$729.52	\$218.85	\$109	\$72.95
803,299	\$1,392.31	\$696.16	\$208.85	\$104	\$69.62
1,873,996	\$1,450.13	\$725.06	\$217.52	\$109	\$72.51
1,996,452	\$1,396.23	\$698.12	\$209.43	\$105	\$69.81
5,941,803		AWP \$735.53	AWP 220.66 i5 Price	\$110.33 Average	\$73.55 Average

8 Core

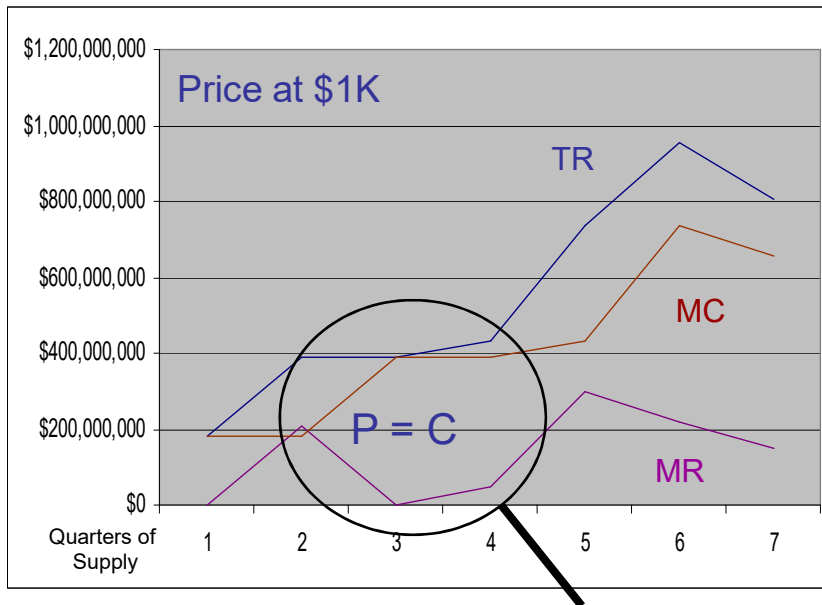


Price decline to i5 leads 8C attraction

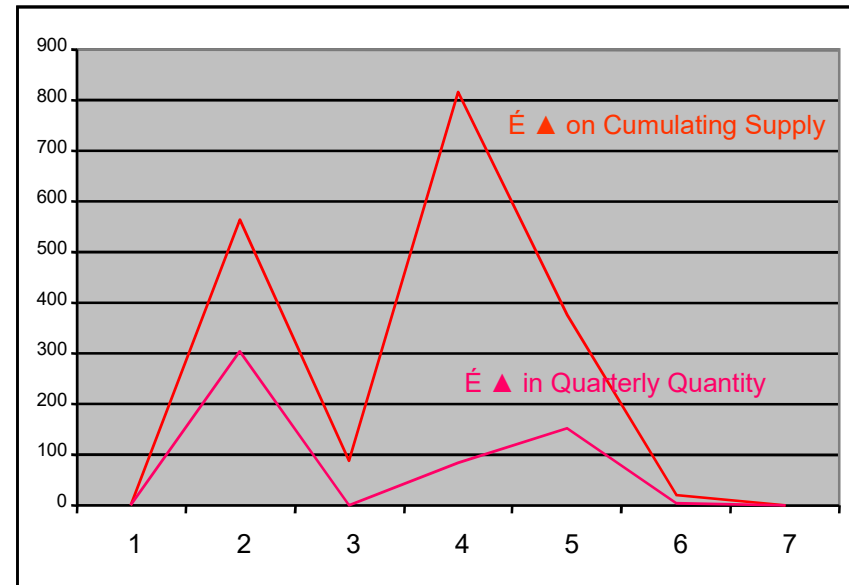
Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 10 Core

10C Quantity in Quarter	In-Qtr \$1K AWP	Price @ 50% Off	Price @ 85% Off	Qtr MR = MC	Production Cost
182,313	\$988.85	\$494.42	\$148.33	\$74	\$49.44
396,672	\$985.04	\$492.52	\$147.76	\$74	\$49.25
397,750	\$977.34	\$488.67	\$146.60	\$73	\$48.87
444,201	\$977.88	\$488.94	\$146.68	\$73	\$48.89
749,812	\$979.26	\$489.63	\$146.89	\$73	\$48.96
996,851	\$958.26	\$479.13	\$143.74	\$72	\$47.91
<u>841,571</u>	\$958.26	\$479.13	\$143.74	\$72	\$47.91
4,009,169		AWP 485.15	AWP \$145.44	\$72.77 Average	\$48.51 Average
		Incentive Discount Near Economic Profit	Giving Away		

Price aims for consumer this is a testing ground. **10 Core**



First three quarters for volume level 10C P ~ C

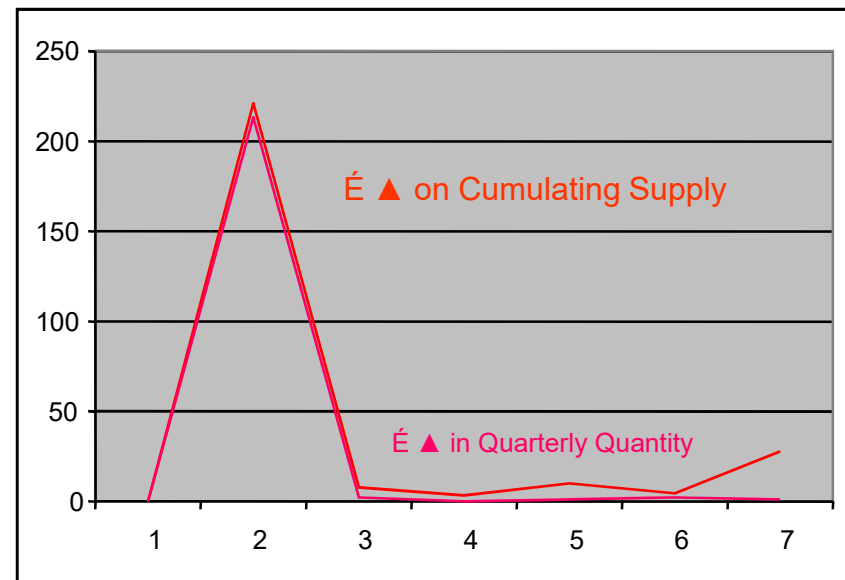


Then into 4th quarter 10 C volume increases on suspect price decline. Does not verify demand only suspect price adjustment.

Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 12 Core

12C Quantity in Quarter	In-Qtr \$1K AWP	Price @ 50% Off	Price @ 85% Off	Qtr MR = MC	Production Cost
17,281	\$1,767.03	\$883.52	\$265.05	\$133	\$88.35
539,039	\$1,517.43	\$758.72	\$227.62	\$114	\$75.87
765,118	\$1,797.34	\$898.67	\$269.60	\$135	\$89.87
870,391	\$2,126.14	\$1,063.07	\$318.92	\$159	\$106.31
997,392	\$2,226.20	\$1,113.10	\$333.93	\$167	\$111.31
2,014,097	\$2,537.19	\$1,268.60	\$380.58	\$190	\$126.86
<u>2,106,791</u>	<u>\$2,574.68</u>	<u>\$1,287.34</u>	<u>\$386.20</u>	<u>\$193</u>	<u>\$128.73</u>
7,310,108		AWP 1151.08	AWP \$345.33 New Consumer Mass Market	\$173.66 Average	Aim \$115.11 Average

Price aims for consumer this is a testing ground. **12 Core**

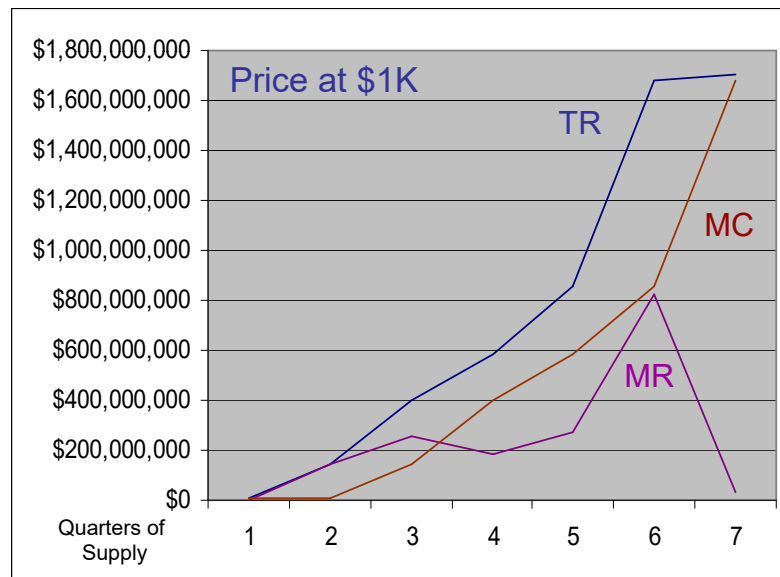


At Intel volume press, there is no 12C commercial demand at price.

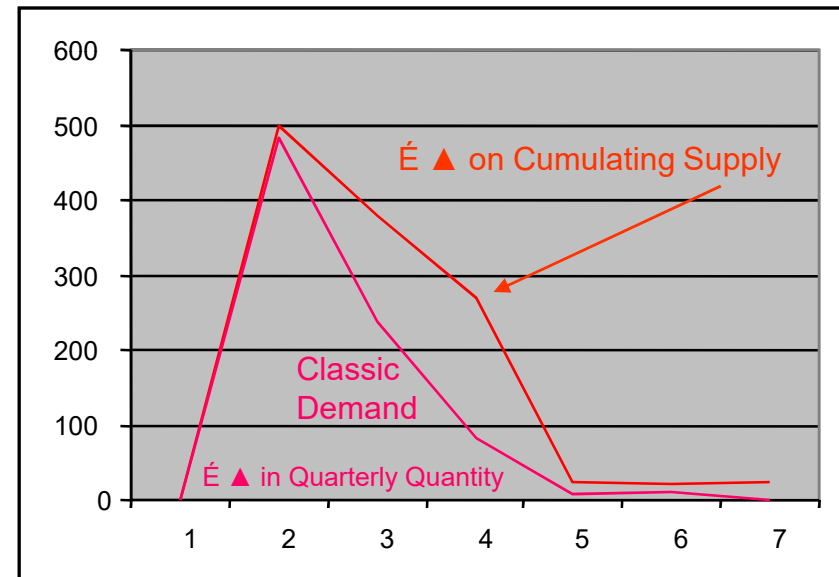
Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 14 Core

14C Quantity in Quarter	In-Qtr \$1K AWP	Price @ 50% Off	Price @ 85% Off	Qtr MR = MC	Production Cost
3,107	\$1,589.04	\$794.52	\$238.36	\$119	\$79.45
87,794	\$1,678.92	\$839.46	\$251.84	\$126	\$83.95
237,035	\$1,690.50	\$845.25	\$253.57	\$127	\$84.52
343,631	\$1,697.07	\$848.53	\$254.56	\$127	\$84.85
519,917	\$1,640.47	\$820.24	\$246.07	\$123	\$82.02
983,968	\$1,703.86	\$851.93	\$255.58	\$128	\$85.19
<u>983,968</u>	\$1,735.32	\$867.66	\$260.30	\$130	\$86.77
3,159,419		AWP \$850.34	AWP \$255.10	\$127.55 Average	Aim \$85.03 Average
			New Consumer Mass Market		

Price aims for consumer this is a testing ground. **14 Core** (Clarified)



Cost is up and revenue better than 12C.



Supply shows stuffing and resistance, demand suggests price declines at quarterly volume levels aim for clearing.

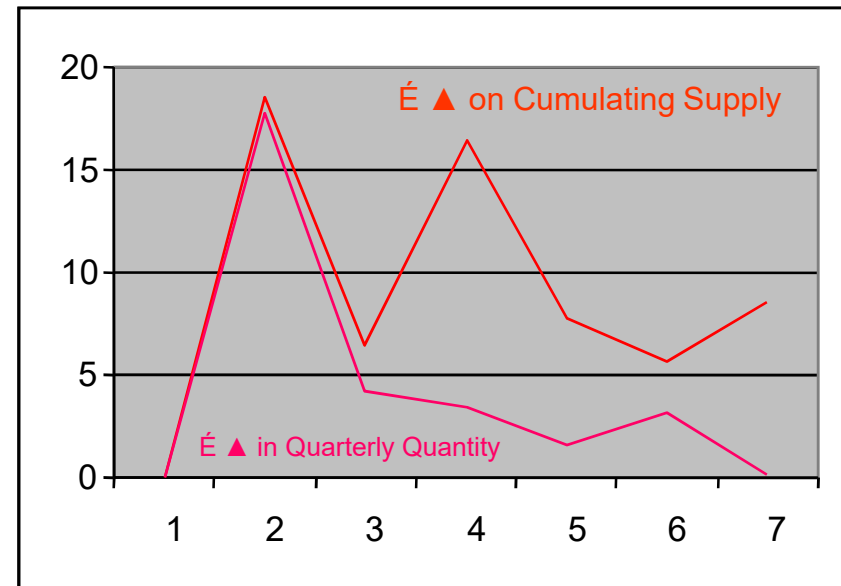
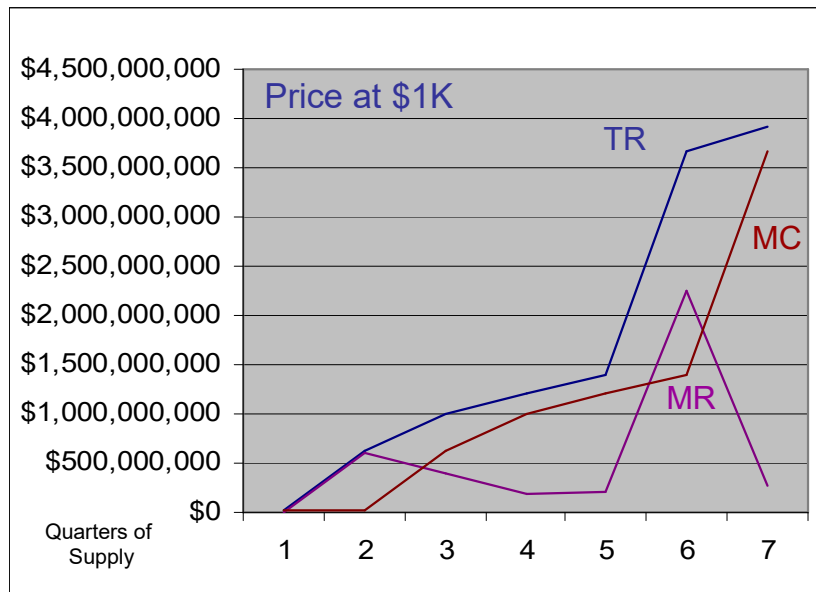
Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 16 Core

16C Quantity in Quarter	In-Qtr \$1K AWP	Price @ 50% Off	Price @ 85% Off	Qtr MR = MC	Production Cost
5,464	\$2,106.07	\$1,053.03	\$315.91	\$158	\$105.30
128,618	\$4,786.28	\$2,393.14	\$717.94	\$359	\$239.31
370,575	\$2,721.00	\$1,360.50	\$408.15	\$204	\$136.05
469,684	\$2,567.50	\$1,283.75	\$385.13	\$193	\$128.38
594,268	\$2,365.65	\$1,182.83	\$354.85	\$177	\$118.28
1,345,520	\$2,720.30	\$1,360.15	\$408.04	\$204	\$136.01
<u>1,366,612</u>	\$2,870.16	\$1,435.08	\$430.52	\$215	\$143.51 ←
4,280,740		AWP \$1381.75	AWP \$414.52	\$207.26 Average	Aim \$138.17 Average
			New Consumer Top Bin		

Full Run AMC \$143

Price aims for consumer this is a testing ground.

16 Core



Intel's aggressive on volume price discounting.

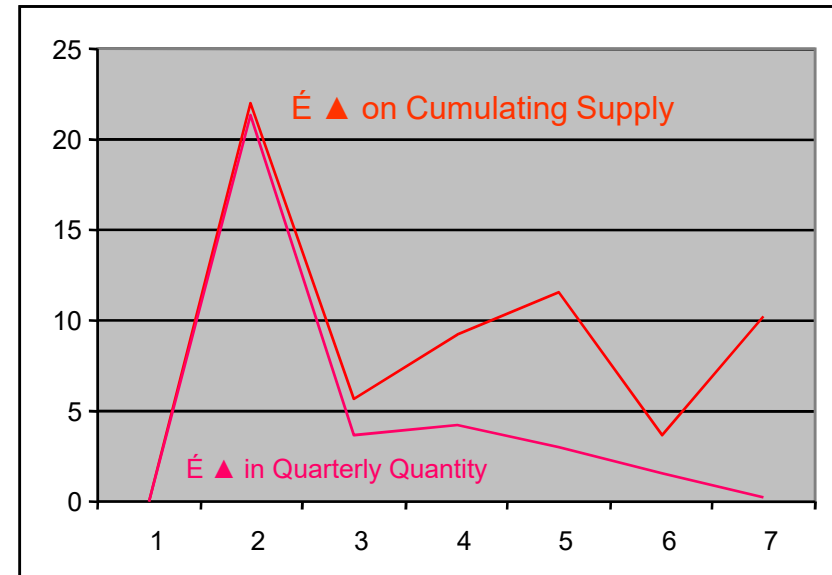
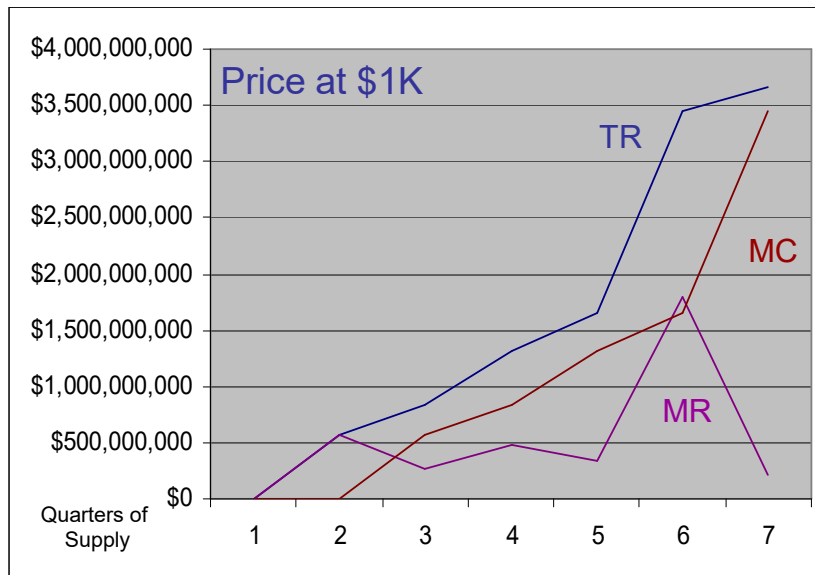
Sweat spot product Intel's stuffing into the channel, offering on price discount. Success of price strategy can be examined further in verse AMD Grade SKUs assessment *coming next*.

Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 18 Core

18C Quantity in Quarter	In-Qtr \$1K AWP	Price @ 50% Off	Price @ 85% Off	Qtr MR = MC	Production Cost
2,411	\$2,551.39	\$1,275.70	\$382.71	\$191	\$127.57
85,712	\$6,678.18	\$3,339.09	\$1,001.73	\$501	\$333.91
247,936	\$3,354.85	\$1,677.42	\$503.23	\$252	\$167.74
460,218	\$2,857.72	\$1,428.86	\$428.66	\$214	\$142.89 ←
621,300	\$2,665.35	\$1,332.67	\$399.80	\$200	\$133.27
1,073,207	\$3,216.71	\$1,608.35	\$482.51	\$241	\$160.84
1,092,874	\$3,354.12	\$1,677.06	\$503.12	\$252	\$167.71
3,583,659		AWP \$1604.41	AWP \$481.32 For a few dollars more gets 18C	\$244.66 Average	\$160.44 Average tests lows

Full Run AMC \$143

18 Core



18C top sweet spot is selling and Intel is moving mid run on discounting. Again, supply waves in next series installment will shed some light on how well moving and how well is being dumped on AMD.

Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 20 Core

20C Quantity in Quarter

3,177
92,088
275,090
276,805
273,946
844,965
844,901
2,610,973

In-Qtr \$1K AWP

\$2,860.40
\$2,871.62
\$2,883.58
\$2,883.96
\$2,873.16
\$2,885.81
\$2,859.53

Price @ 50% Off

\$1,430.20
\$1,435.81
\$1,441.79
\$1,441.98
\$1,436.58
\$1,442.91
\$1,429.77
AWP \$1437.51

Price @ 85% Off

\$429.06
\$430.74
\$432.54
\$432.59
\$430.97
\$432.87
\$428.93
AWP \$431.25
20C P < 18C
Indicates rejection

Qtr MR = MC

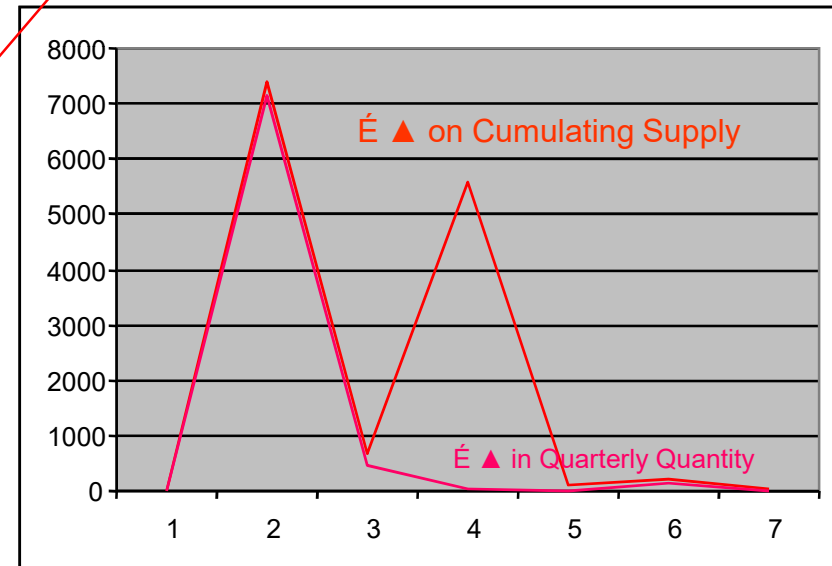
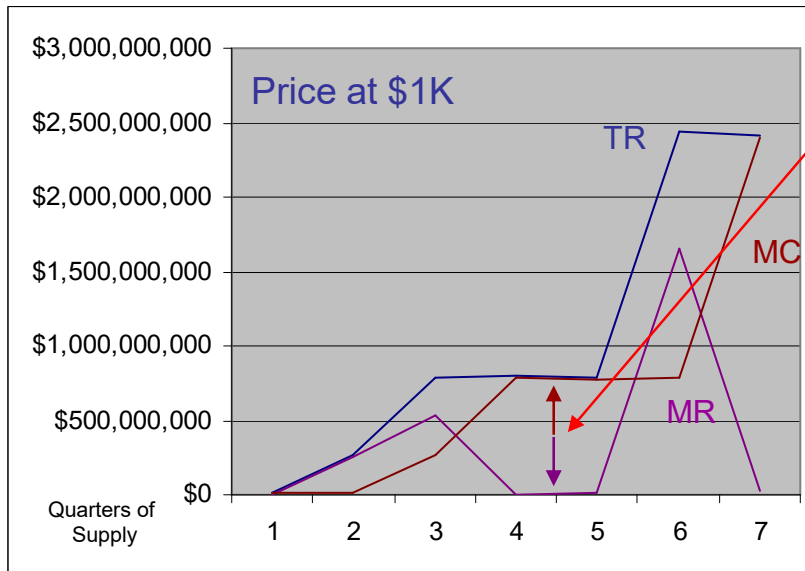
\$215
\$215
\$216
\$216
\$215
\$216
\$214
\$215.63 Average

Production Cost

\$143.02
\$143.58
\$144.18
\$144.20
\$143.66
\$144.29
\$142.98
Aim \$143.75 Average
P discount does affect model

20 Core

Full Run AMC \$143



20C part appears rejected in the commercial market on Intel P ~ C maybe will be repackaged as i9
This is not a popular core count component and there are so many v4.

Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 22 Core

22C Quantity in Quarter

762
21,600
70,582
108,955
122,360
293,511
329,914
947,686

In-Qtr \$1K AWP

\$3,655.00
\$3,655.00
\$3,655.00
\$3,655.00
\$3,655.00
\$3,655.00
\$3,655.00
\$3,655.00

Price @ 50% Off

\$1,827.50
\$1,827.50
\$1,827.50
\$1,827.50
\$1,827.50
\$1,827.50
\$1,827.50
AWP \$1827.50

Price @ 85% Off

\$548.25
\$548.25
\$548.25
\$548.25
\$548.25
\$548.25
\$548.25
AWP \$548.25

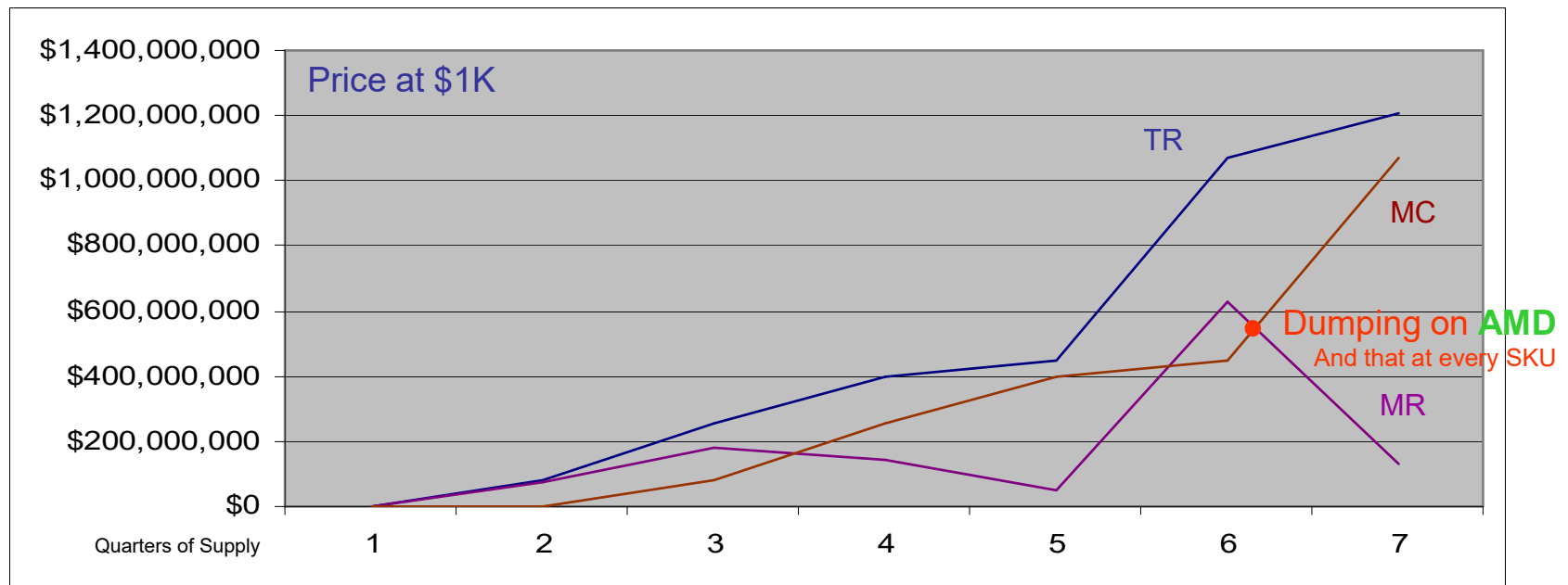
Qtr MR = MC

\$274
\$274
\$274
\$274
\$274
\$274
\$274
\$274
\$274.13 Average

Production Cost

\$182.75
\$182.75
\$182.75
\$182.75
\$182.75
\$182.75
\$182.75
\$182.75
\$182.75
Aim \$182.75 Average

22 Core

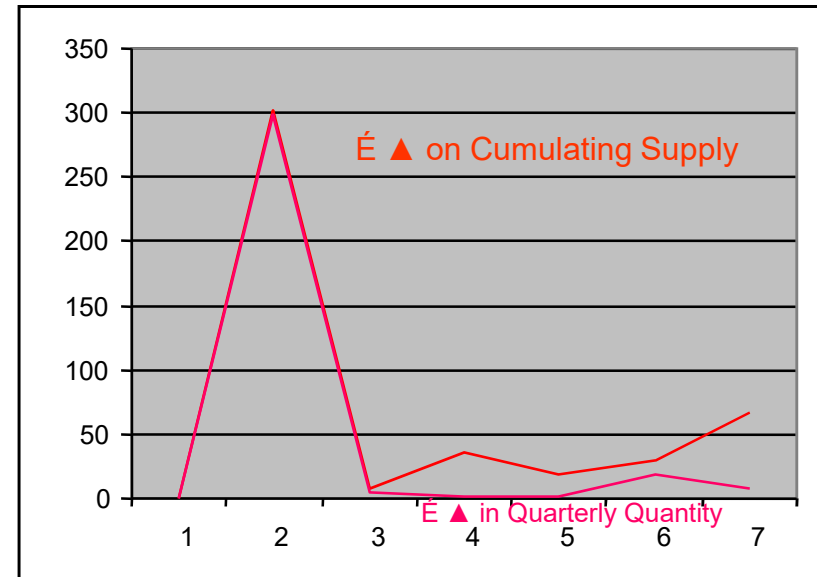


A single 22C part offers no change in SKUs mix data for price change so there's no elasticity analysis. Analyst on discounting and run end dumping suggests no one really wanted Sky Lake, in relation to Cascade Lake on Apache, but that is what was available in commercial volume. This is Willamette P4 wanting a sales analogy.

Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 24 Core

24C Quantity in Quarter	In-Qtr \$1K AWP	Price @ 50% Off	Price @ 85% Off	Qtr MR = MC	Production Cost
826	\$5,760.31	\$2,880.15	\$864.05	\$432	\$288.02
98,567	\$8,039.12	\$4,019.56	\$1,205.87	\$603	\$401.96
263,078	\$5,290.12	\$2,645.06	\$793.52	\$397	\$264.51
253,612	\$5,395.57	\$2,697.78	\$809.33	\$405	\$269.78
233,283	\$5,505.75	\$2,752.87	\$825.86	\$413	\$275.29
689,620	\$5,659.95	\$2,829.97	\$848.99	\$424	\$283.00
<u>788,345</u>	\$5,702.93	\$2,851.47	\$855.44	\$428	\$285.15
2,327,331		AWP \$2844.62	AWP \$853.59	\$426.69 Average	Aim \$284 Average to \$213 low

24 Core

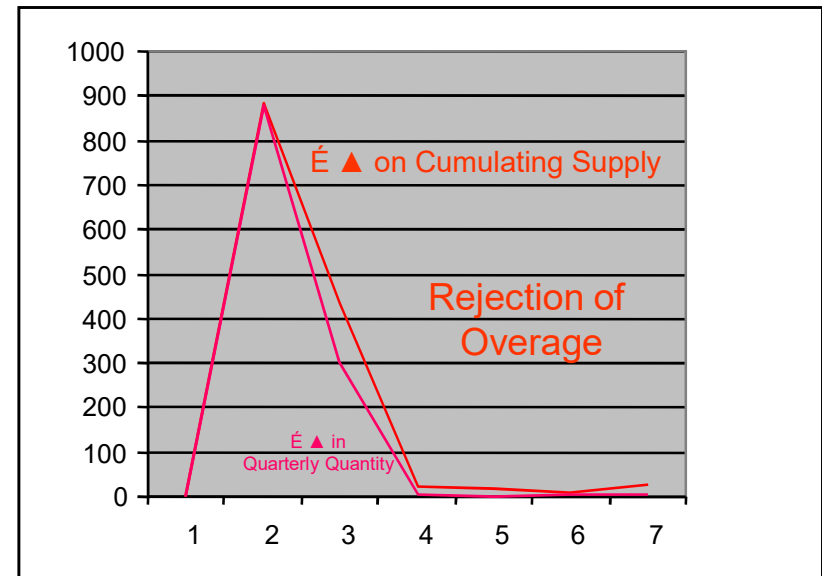
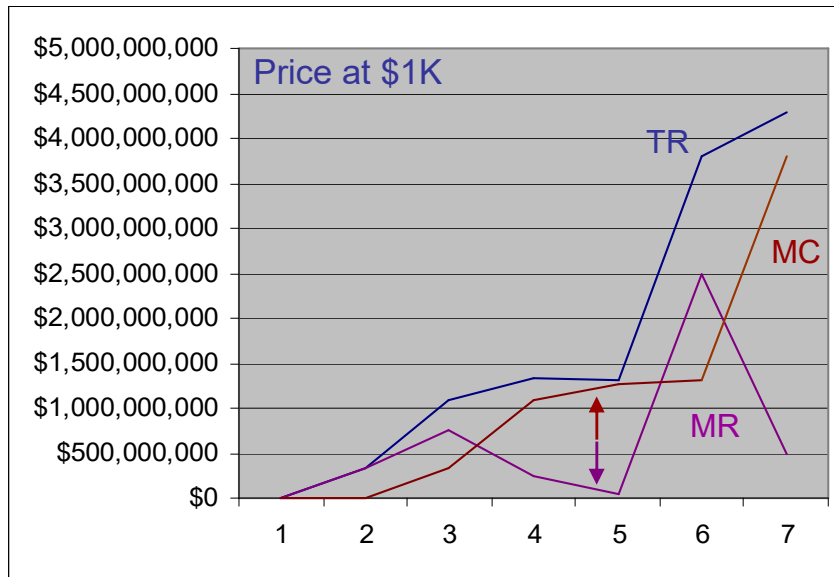


Takes a lot to move 24C/26C cache starved in relation to poke along 28C at price discount and AMD options.

Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 26 Core

26C Quantity in Quarter	In-Qtr \$1K AWP	Price @ 50% Off	Price @ 85% Off	Qtr MR = MC	Production Cost
381	\$8,907.00	\$4,453.50	\$1,336.05	\$668	\$445.35
44,503	\$7,732.75	\$3,866.38	\$1,159.91	\$580	\$386.64
142,117	\$7,676.73	\$3,838.37	\$1,151.51	\$576	\$383.84
180,807	\$7,389.10	\$3,694.55	\$1,108.36	\$554	\$369.45
181,125	\$7,188.36	\$3,594.18	\$1,078.25	\$539	\$359.42
498,013	\$7,624.62	\$3,812.31	\$1,143.69	\$572	\$381.23
554,110	\$7,736.56	\$3,868.28	\$1,160.48	\$580	\$386.83
1,601,057		AWP \$3797.67	AWP = \$1139.30	\$589.65 Average	\$379.77 Average, Aim \$279

26 Core; now with alternate XCC cost scenario slide 125



It takes a lot to move 24C and 26C cache starved part's in relation 28C price discount and AMD options. 26C is rejected until highly discounted. Moving Sky lake surplus is about buyer beware; smart v dumb.

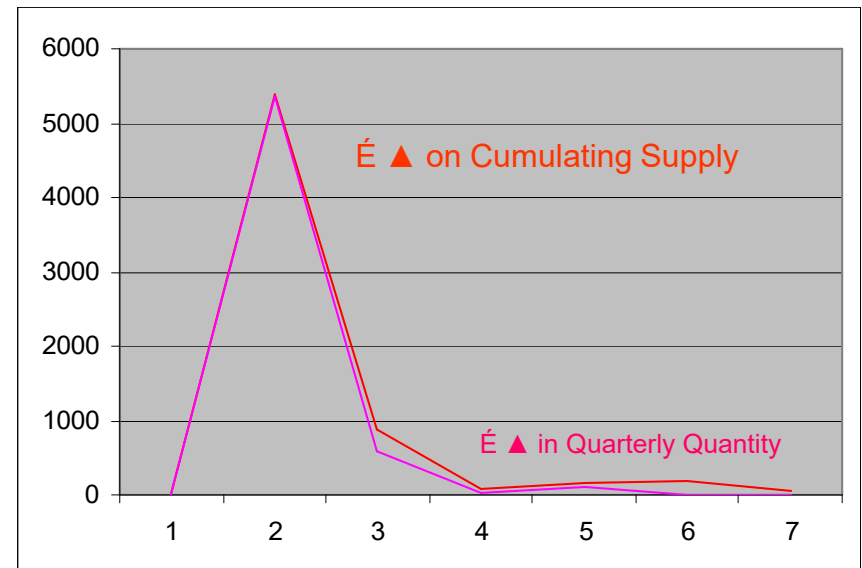
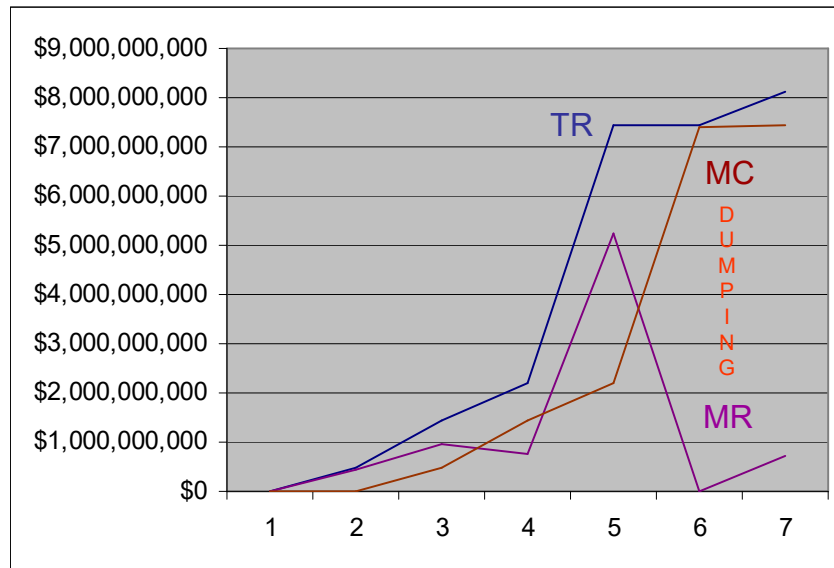
Camp Marketing Consultancy – Sky Lake Scalable In-qtr Quantity & Price - 28 Core

28C Quantity in Quarter	In-Qtr \$1K AWP	Price @ 50% Off	Price @ 85% Off	Qtr MR = MC	Production Cost
259	\$11,036.80	\$5,518.40	\$1,655.52	\$828	\$551.84
43,218	\$10,694.84	\$5,347.42	\$1,604.23	\$802	\$534.74
133,775	\$10,732.75	\$5,366.37	\$1,609.91	\$805	\$536.64
202,477	\$10,829.82	\$5,414.91	\$1,624.47	\$812	\$541.49
690,445	\$10,777.46	\$5,388.73	\$1,616.62	\$808	\$538.87
690,445	\$10,754.19	\$5,377.10	\$1,613.13	\$807	\$537.71
<u>762,932</u>	\$10,669.28	\$5,334.64	\$1,600.39	\$800	\$533.46
2,523,552		AWP \$5369.42	AWP \$1610.82	\$805.41 Average	\$536.94 Average AIM \$351

I think this is high

AIM \$305 average of all XCC
20/22/24/26/28 Core

28 Core; now with alternate XCC cost scenario next slide



28C volume price strategy satisfied 5 quarter's commercial demand, then is rejected, and will be dumped.

Camp Marketing Consultancy – Sky Lake Scalable XCC Cost : Price; Alternate Scenario

Scalable XCC Extreme Core Count 26 and 28 core = 698 mm² dice size.

Question ‘on learning curve’ are XSL 24/26/28 core dice all the same cost?

Answer; likely at run end.

Broadwell era Xeon Phi 72xx co-processor = 658 mm² dice

Statistically relevant sample of 1120 72xx units,

Knights Landing Phi Full Run 1K AWP \$3533.19

< 50% discount = \$1766.59 that is 1K MR = MC

< 85% discount = 1K \$529.97

@ 85% MR = MC @ \$264.98

Production Cost \$198.74

Xeon Phi 7290 Scenario Only at 658 mm²

1K AWP \$6254.00

< 50% discount = \$3127 that is 1K MR = MC

< 85% discount = 1K \$938.10

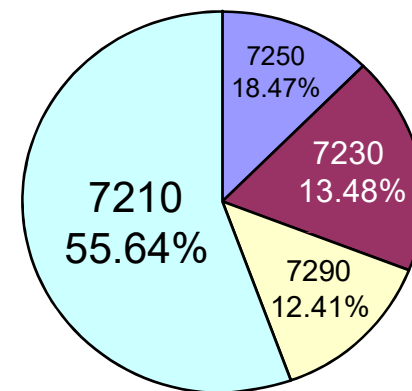
@ 85% MR = MC @ \$469.05

Production Cost \$351.79

@ \$0.50 to \$0.60 per mm² for 22 nm E5 4600 v2 \$349 to \$418

@ \$0.45 per mm² = \$296.10

@ \$0.40 per mm² = \$279.20 or $(\$198.74 + \$351.79) / 2 = \$275.26?$



**26/28 Core
NEW Alternate Cost Low**

Camp Marketing Consultancy – Sky Lake Scalable XCC Cost : Price; Alternate Scenario

By Product Category Assessment –

All Platinum Full Run 1K AWP = $\$7603.15 / 2 = 1K MR=MC @ \3801.57

1K AWP $\$7603.15 * .15$ (85% discount) = $\$1140.47$ for equal production weight grade SKU bundle

Production Cost $\$379.99$ (all chopped from 28C dice)

All Gold Full Run 1K AWP = $\$2506.76 / 2 = 1K MR=MC @ \1253.38

1K AWP $\$2506.76 * .15$ (85% discount) = $\$376.01$ for equal production weight grade SKU bundle

Production Cost $\$125.34$

1K Price < 85% discount on production equal weight grade split bundle; \$80 and \$86 respectively per unit.

All Silver Full Run 1K AWP = $\$533.14 / 2 = 1K MR=MC @ \266.57

1K AWP $\$533.14 * .15$ (85% discount) = $\$79.97$ for equal production weight grade SKU bundle

Marginal Cost of Reclaim MR=MC @ $\$266.57 * .15 = \39.98 ~ variable cost

All W Full Run 1K AWP = $\$570.36 / 2 = 1K MR=MC @ \285.18

1K AWP $\$570.36 * .15$ (85% discount) = $\$85.54$ for equal production weight grade SKU bundle

Marginal Cost of Reclaim MR=MC $\$285.18 * .15 = \42.77 ~ variable cost

Camp Marketing Consultancy - Scalable by Grade SKU High Volume Price @ 85% off 1K

Analysis; Intel substantially cleans up industry Price < Cost harms associated with v4 / v3 / v2 Xeon generations.

PERF CORE	Cores, Frequency, TDP	L3 CACHE	\$1K Price	85% Discount	TR/TC AMC \$143	Discount Ratio	Profit Type
116,756 units < C; \$8,848,826 Industry Harm							
8180	28C, 2.5 - 3.8, 205w	38.5 MB	\$10,009	\$1,501	\$1,358	9.50	Supra Economic
8168	24, 2.7 - 3.7, 205w	33	\$5,890	\$884	\$741	0.55	Commercial Premium
6148	20, 2.4 - 3.7, 150w	27.5	\$3,072	\$461	\$318	0.43	Commercial Premium
6154	18C, 3.0 - 3.7, 200w	24.75	\$3,543	\$531	\$388	1.22	Commercial Premium
6150	18, 2.7 - 3.7, 165w	24.75	\$3,358	\$504	\$361	0.93	Commercial Premium
6142	16, 2.6 - 3.7, 150w	22	\$2,946	\$442	\$299	0.83	Commercial Premium
6132	14, 2.6 - 3.7, 140w	19.25	\$2,111	\$317	\$174	0.58	Commercial Premium
6146	12, 3.2 - 4.2, 165w	24.75	\$3,286	\$493	\$350	2.01	Competitive
6136	12, 3.0 - 3.7, 150w	24.75	\$2,460	\$369	\$226	0.65	Commercial
8158	12, 3.0 - 3.7, 150w	24.75	\$7,007	\$1,051	\$908	4.02	Economic
6137	8, 3.9 to 4.1, 205w	24.75	\$2,460	\$369	\$226	0.25	Commercial Premium
6144	8, 3.5 - 4.2, 150w	24.75	\$2,925	\$439	\$296	1.31	Commercial Premium
6134	8, 3.2 - 3.7, 130w	24.75	\$2,214	\$332	\$189	0.64	Commercial Premium
6128	6, 3.4 - 3.7, 115w	19.25	\$1,691	\$254	\$111	0.59	Economic on Cost
8156	4, 3.6 - 3.7, 105w	16.5	\$7,007	\$1,051	\$908	8.21	Economic
5122	4, 3.6 - 3.7, 105w	16.5	\$1,221	\$183	\$40	0.04	~ MR=MC
2X DRAM 1.5 TB							
8180M	28, 2.5 - 3.8, 205w	38.5	\$13,011	\$1,952	\$1,809	12.65	Monopoly
8176M	28, 2.1 - 3.8, 165w	38.5	\$11,722	\$1,758	\$1,615	0.89	Commercial Premium
8173M	28, 2.0 - 3.5, 165w	38.5	\$10,409	\$1,561	\$1,418	0.88	Commercial Discount
8170M	26, 2.1 - 3.7, 165w	35.75	\$10,409	\$1,561	\$1,418	1.00	Commercial Premium
8160M	24, 2.1 - 3.7, 150w	33	\$7,704	\$1,156	\$1,013	0.71	Commercial Premium
6140M	18, 2.3 - 3.7, 140w	24.75	\$5,448	\$817	\$674	0.67	Commercial Premium
6142M	16, 2.6 - 3.7, 150w	22	\$5,949	\$892	\$749	1.11	Commercial Premium
6134M	8, 3.2 - 3.7, 130w	24.75	\$5,217	\$783	\$640	0.85	Commercial Premium

Camp Marketing Consultancy - Scalable by Grade SKU High Volume Price @ 85% off 1K

116,756 units < C; \$8,848,826 Industry Harm		L3	\$1K	85%	TR/TC AMC	Discount	Profit Type
PERF CORE	Cores, Frequency, TDP	CACHE	Price	Discount	\$143	Ratio	
Perf / watt							
8176	28, 2.1 - 3.8, 165w	38.5	\$8,719	\$1,308	\$1,165	8.15	Economic
8170	26, 2.1 - 3.8, 165w	35.75	\$7,405	\$1,111	\$968	0.83	Commercial
8164	26, 2.0 - 3.7, 150w	35.75	\$6,114	\$917	\$774	0.80	Commercial Discount
8160	24, 2.1 - 3.7, 150w	33	\$4,702	\$705	\$562	0.73	Commercial Discount
6152	22, 2.1 3.7, 140w	30.25	\$3,655	\$548	\$405	0.72	Commercial
6138	20, 2.0 - 3.7, 125w	27.5	\$2,612	\$392	\$249	0.61	Commercial Discount
6140	18, 2.3 - 3.7, 140w	24.75	\$2,445	\$367	\$224	0.90	Commercial Discount
8124	16, 3.0 to 3.5, 150w	24.75	\$3,115	\$467	\$324	1.45	Commercial
6130	16, 2.1 - 3.7, 125w	22	\$1,894	\$284	\$141	0.44	Profit Sacrafice
8153	16, 2.0 - 2.8, 125w	22	\$3,115	\$467	\$324	2.30	Competitive
5120	14, 2.2 - 3.2, 105w	19.25	\$1,555	\$233	\$90	0.28	Commercial
5117	14, 2.0 to 2.8, 107w	19.25	\$1,900	\$285	\$142	1.57	Commercial Premium
6126	12, 2.6 to 3.7, 125w	19.25	\$1,776	\$266	\$123	0.87	Profit Sacrafice
5118	12, 2.3 - 3.2, 105w	16.5	\$1,273	\$191	\$48	0.39	Variable Cost
4116	12C, 2.1 - 3.0, 85w	16.5	\$1,002	\$150	\$7	0.15	MR=MC
5115	10, 2.4 - 3.2, 85w	13.75	\$1,221	\$183	\$40	0.07	Variable Cost
4114	10, 2.2 - 3.0, 85w	13.75	\$694	\$104	-\$39	-0.97	Below Cost
4110	8, 2.1 - 3.0, 85w	11	\$501	\$75	-\$68	1.74	Below Cost
4108	8, 1.8 - 3.0, 85w	11	\$417	\$63	-\$80	1.19	Below Cost
3106	8, 1.7, 85w	11	\$306	\$46	-\$97	1.21	Below Cost
3104	6, 1.7 - 3.0, 85w	8.25	\$213	\$32	-\$111	1.14	Below Cost
4112	4, 2.6 - 3.0, 85w	5.5	\$473	\$71	-\$72	0.65	Below Cost
OMNIPATH	Cores, Frequency, TDP	CACHE					
8176F	28, 2.1 - 3.8, 173w	38.5	\$8,874	\$1,331	\$1,188	0.87	Profit Sacrafice
8160F	24, 2.1 - 3.7, 160w	33	\$4,856	\$728	\$585	0.49	Commercial Discount
6148F	20, 2.4 - 3.7, 150w	27.5	\$3,227	\$484	\$341	0.58	Commercial Premium
6138F	20, 2.0 - 3.7, 135w	27.5	\$2,767	\$415	\$272	0.80	Commercial
6142F	16, 2.6 to 3.7 160w	22	\$3,101	\$465	\$322	1.18	Commercial Premium
6130F	16, 2.1 - 3.7, 135w	22	\$2,049	\$307	\$164	0.51	Profit Sacrafice
5117F	14C 2.0 to 2.8, 113w	19.25	\$2,111	\$317	\$174	1.06	Competitive on Cost
6126F	12, 2.6 - 3.7, 135w	19.25	\$1,931	\$290	\$147	0.84	Commercial

Camp Marketing Consultancy - Scalable by Grade SKU High Volume Price @ 85% off 1K

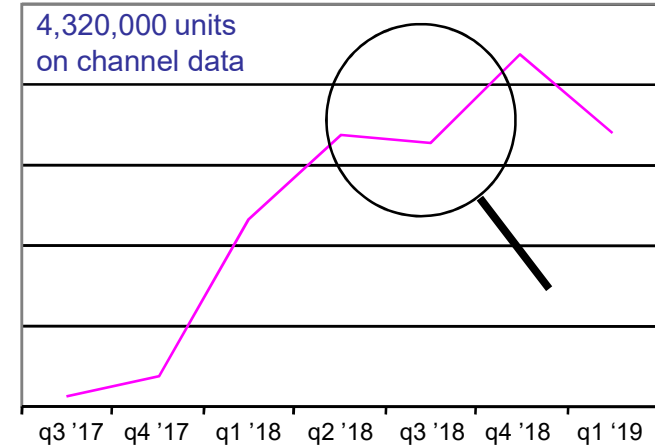
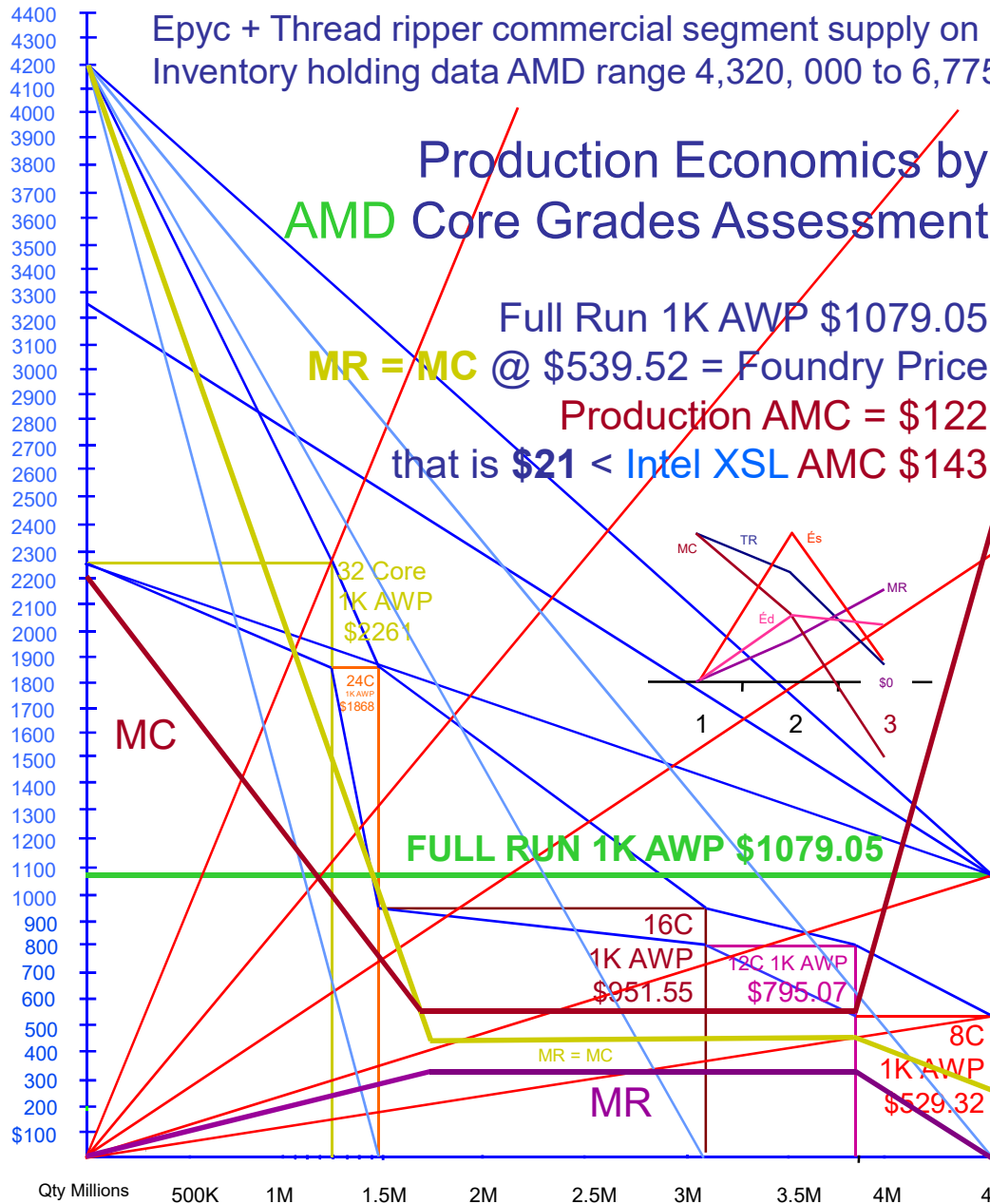
116,756 units < C; \$8,848,826 Industry Harm		L3	\$1K	85%	TR/TC AMC	Discount	Profit Type
PERF CORE	Cores, Frequency, TDP	CACHE	Price	Discount	\$143	Ratio	
10 Year Life							
8160T	24, 2.1 - 3.7, 150w	33	\$4,936	\$740	\$597	4.18	Competitive on Cost
6138T	20, 2.0 - 3.7, 125w	27.5	\$2,742	\$411	\$268	0.45	Commercial
6130T	16, 2.1 - 3.7, 125w	22	\$1,980	\$297	\$154	0.57	Profit Sacrifice
5120T	14, 2.2 - 3.2, 105w	19.25	\$1,727	\$259	\$116	0.75	Commercial
5119T	14, 1.9, 85w	19.25	\$1,555	\$233	\$90	0.78	Commercial
6126T	12, 2.6 - 3.7, 125w	19.25	\$1,776	\$266	\$123	1.37	Profit Sacrifice
4116T	12, 2.1 - 3.0, 85w	16.5	\$1,112	\$167	\$24	0.19	MR=MC
4114T	10, 2.2 - 3.0, 85w	13.75	\$773	\$116	-\$27	-1.14	Below Cost
4109T	8, 2.0 - 3.0, 79w	11	\$501	\$75	-\$68	2.51	Below Cost
Xeon W							
2195	18/36, 2.3 - 4.3, 140w	24.75	\$2,553	\$383	\$240	1.68	MR=MC
2175	14/28, 2.5 - 4.3, 140w	19.25	\$1,947	\$292	\$149	0.62	Commercial Premium
2155	10/20, 3.3 - 4.5 140w	13.75	\$1,440	\$216	\$73	0.49	MR=MC
2150B Apple	10/20 3.0 - 4.5 120w	19.25?	\$1,440	\$216	\$73	1.00	MR=MC
2145	8/16, 3.7 - 4.5, 140w	11	\$1,113	\$167	\$24	0.33	Profit Sacrifice
2140B Apple	8./16, 3.0 - 4.5, 120w	13.75?	\$1,113	\$167	\$24	1.00	Profit Sacrifice
2135	6/12, 3.7 - 4.5, 140w	8.25	\$835	\$125	-\$18	-0.74	Below Cost
2133	6/12, 3.6 - 3.9, 140w	8.25	\$617	\$93	-\$50	2.84	Below Cost
2125	4/8, 4.0 - 4.5, 120w	8.25	\$444	\$67	-\$76	1.51	Below Cost
2123 120W	4/8, 3.6 - 3.9, 120w	8.25	\$294	\$44	-\$99	1.29	Below Cost
2104 120W	4/8, 2.9 GHz, 120w	8.25	\$255	\$38	-\$105	1.06	Below Cost
2102 120W	4/8, 3.0 GHz, 120W	8.25	\$202	\$30	-\$113	1.08	Below Cost
SL Extremes							
i9 7980XE	18/36, 2.6 - 4.2, 165w	16.5	\$1,999.00	\$300	\$157	1.10	Just Above Cost
i9 7960X	16/32, 2.8 - 4.2, 165w	16.5	\$1,699.00	\$255	\$112	0.71	~ MR=MC
i9 7940X	14/28, 3.1 - 4.3, 165w	16.5	\$1,399.00	\$210	\$67	0.60	Profit Sacrifice
i9 7920X	12/24, 2.9 - 4.3, 165w	16.5	\$1,199.00	\$442	\$299	4.47	OEM Rip Off
i9 7900X	10/20, 3.3 - 4.3, 140w	16.5	\$999.00	\$150	\$7	0.02	Commercial

Camp Marketing Consultancy – Considering AMD Epyc / TR Volume Range, Cost & Margin

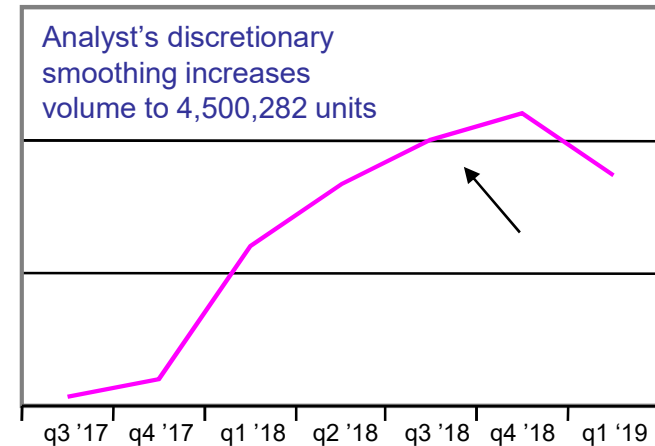
Epyc + Thread ripper commercial segment supply on Intel volume in relation AMD x86 on channel
Inventory holding data AMD range 4,320, 000 to 6,775,562 units on AMD Enterprise revenue data.

Production Economics by AMD Core Grades Assessment

Full Run 1K AWP \$1079.05
MR = MC @ \$539.52 = Foundry Price
 Production AMC = \$122
 that is **\$21 < Intel XSL AMC \$143**



Supply waveform suggests per unit loss q3 '18 into q4 '18 revealed on channel data associated a 12C related 8 v 6C dice use resolved on 6C reclaim cost. Loss also exhibited in data at 8C q4 '18 thought a void in supply data where in actual 8C then at run end P = C.

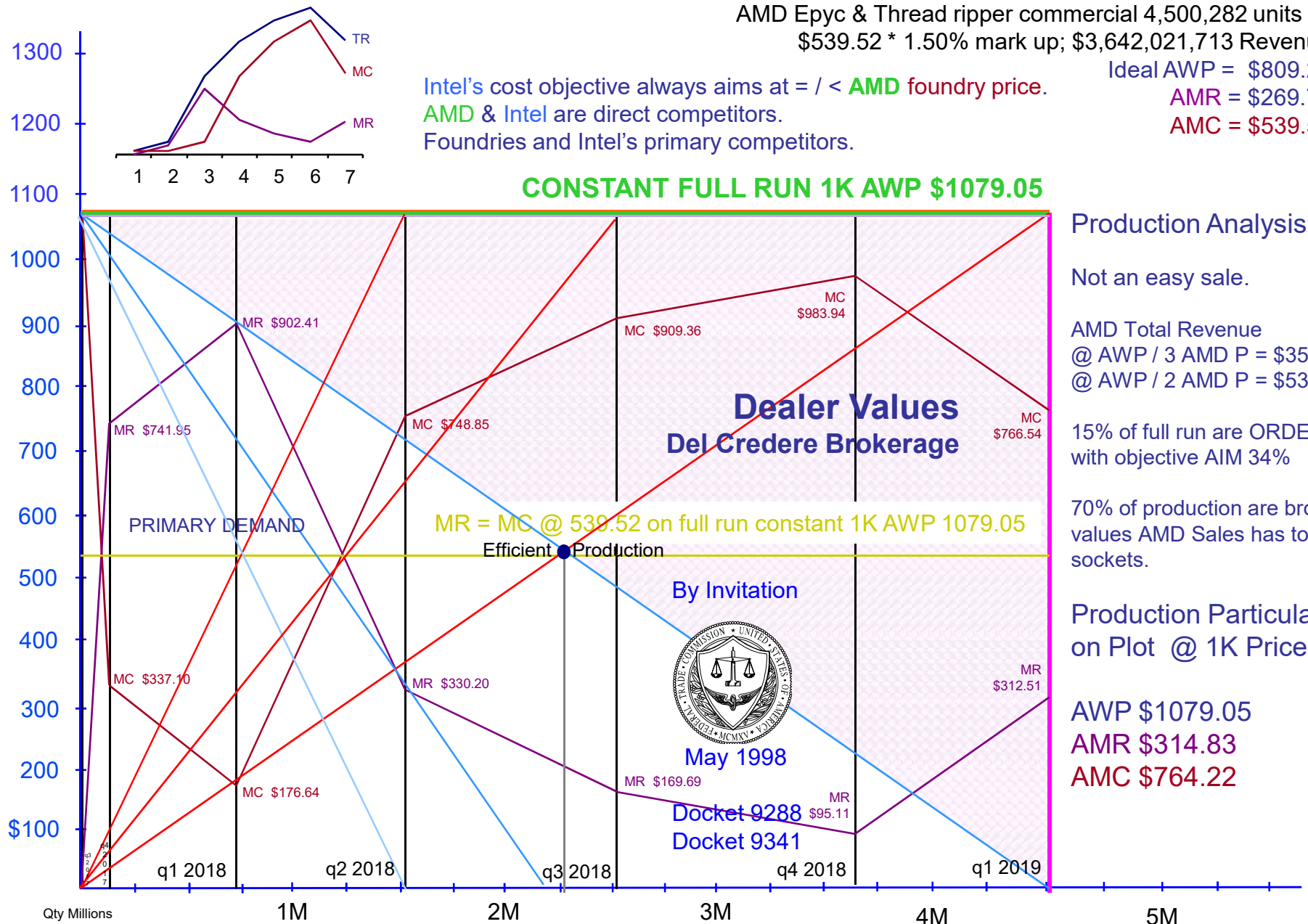


Camp Marketing Consultancy – Considering AMD Epyc / TR Volume Range, Cost & Margin

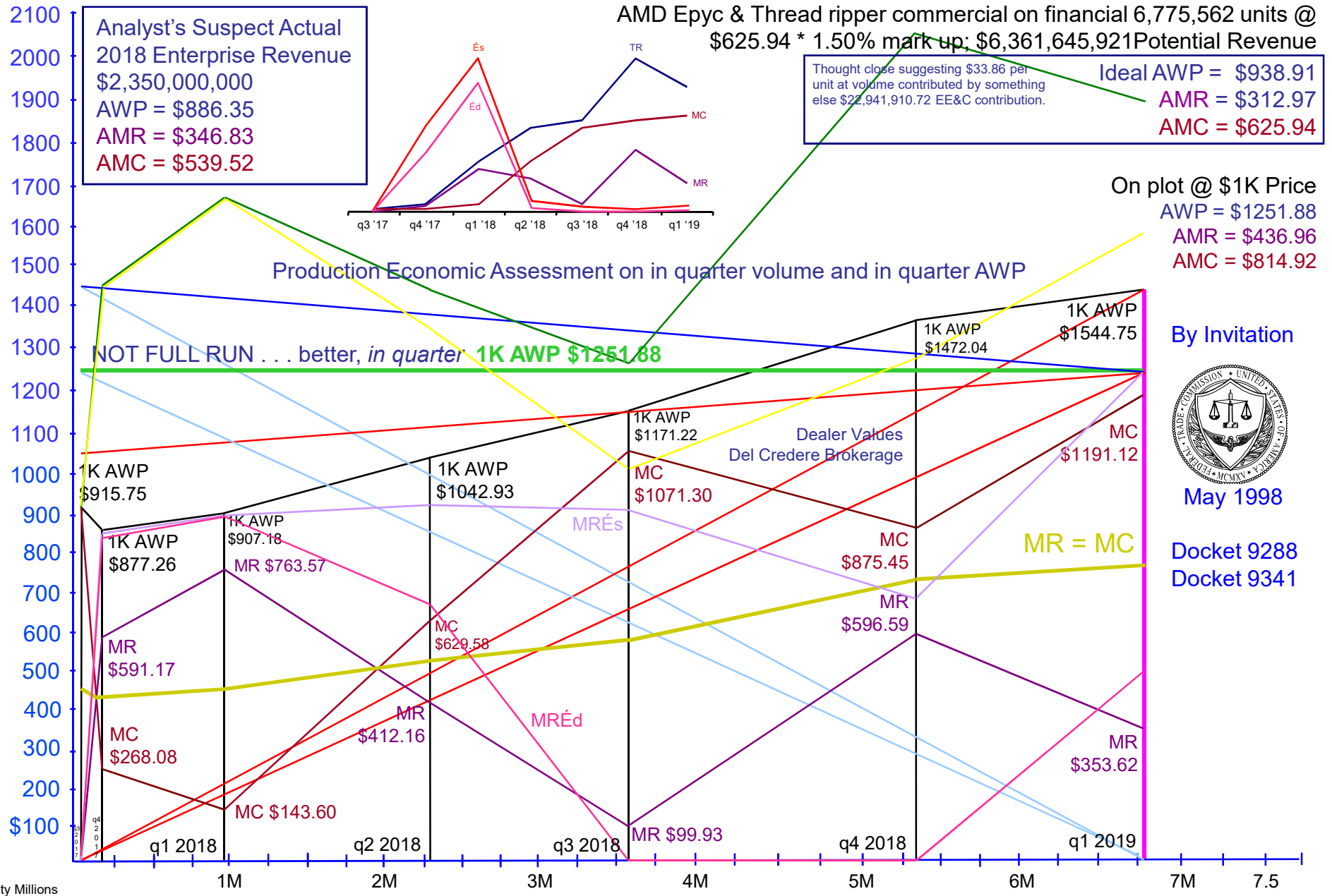
AMD Epyc & Thread ripper commercial 4,500,282 units @
\$539.52 * 1.50% mark up; \$3,642,021,713 Revenue

Ideal AWP = \$809.28
AMR = \$269.76
AMC = \$539.52

Intel's cost objective always aims at = / < AMD foundry price.
AMD & Intel are direct competitors.
Foundries and Intel's primary competitors.



Camp Marketing Consultancy – Considering AMD Epyc / TR Volume Range, Cost & Margin



By Invitation

May 1998
 Docket 9288
 Docket 9341

Camp Marketing Consultancy – Considering AMD Epyc / TR Volume Range, Cost & Margin

32C Quantity in Quarter

0
267
11,259
59,816
148,125
559,951
452,912
1,232,329

In-Qtr \$1K AWP

\$0.00
\$4,200.00
\$3,417.06
\$3,527.44
\$2,655.03
\$2,083.46
\$2,155.11
AWP \$2261.23

Increase
Decline

Price @ 50% Off

\$0.00
\$2,100.00
\$1,708.53
\$1,763.72
\$1,327.52
\$1,041.73
\$1,077.56
AWP 1130.61

< 50%

+ 50%

Stakeholder Split

Price @ / 3

\$0.00
\$1,400.00
\$1,139.02
\$1,175.81
\$885.01
\$694.49
\$718.37
AWP \$753.74

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Qtr MR = MC / 3

\$0.00
\$700.00
\$569.61
\$587.91
\$442.51
\$347.24
\$359.18
\$376.87 Average

Production Cost

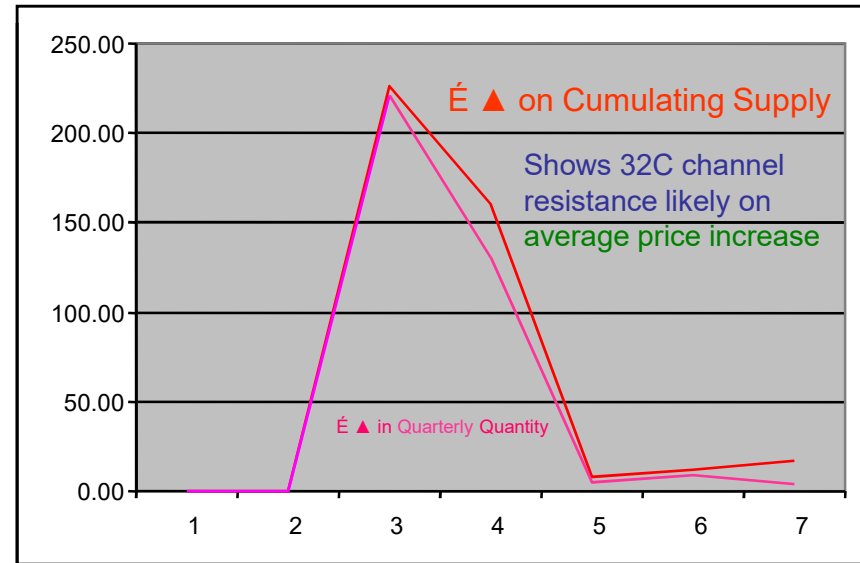
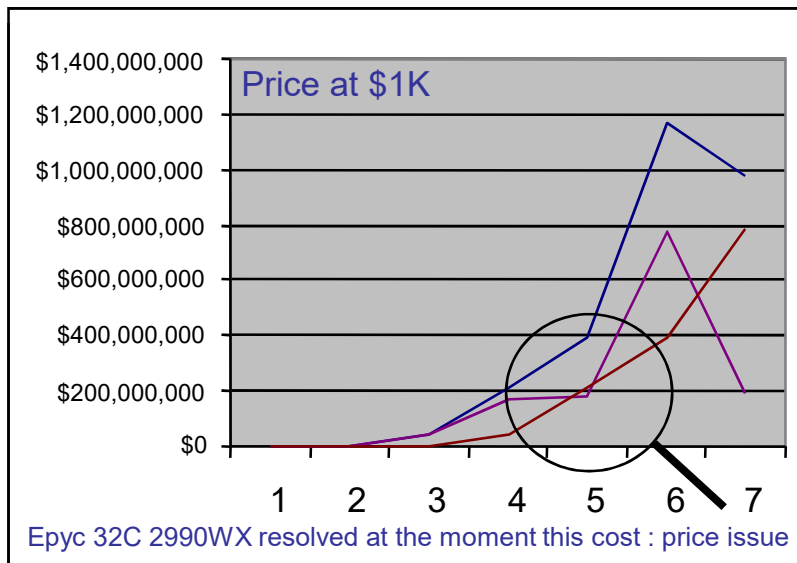
\$0.00
\$525.00
\$427.21
\$440.93
\$331.88
\$260.43
\$269.39
\$282.65 Average

Production Price to AMD @ 1K / 3

On / 3 stakeholder split, it's a traditional supply arrangement that appears to pencil out through 6 quarters; 1/3 to manufacturer, to AMD producer, to customer. 1/3 * 1.5 mark up = 50% off 1K price.

32 Core

2990WX is a save but workstation demand is restrained. Hardware is ahead of software you have to code.



Pulls well then stalls some.

Oh I got it, data center wanted fast 32C 1P, AMD got rent, for one quarter that is a long time first time, then discounted.

Camp Marketing Consultancy – Considering AMD Epyc / TR Volume Range, Cost & Margin

24C Quantity in Quarter

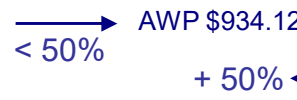
0
0
10,700
24,897
37,581
48,385
57,050
178,613

In-Qtr \$1K AWP

\$0.00
\$0.00
\$1,883.17
\$1,856.05
\$1,982.60
\$1,860.92
\$1,801.65
AWP \$1868.25

Price @ 50% Off

\$0.00
\$0.00
\$941.59
\$928.03
\$991.30
\$930.46
\$900.83



Stakeholder Split

Price @ / 3

\$0.00
\$0.00
\$627.72
\$618.68
\$660.87
\$620.31
\$600.55

AWP \$622.75
Production Price to AMD @ 1K / 3

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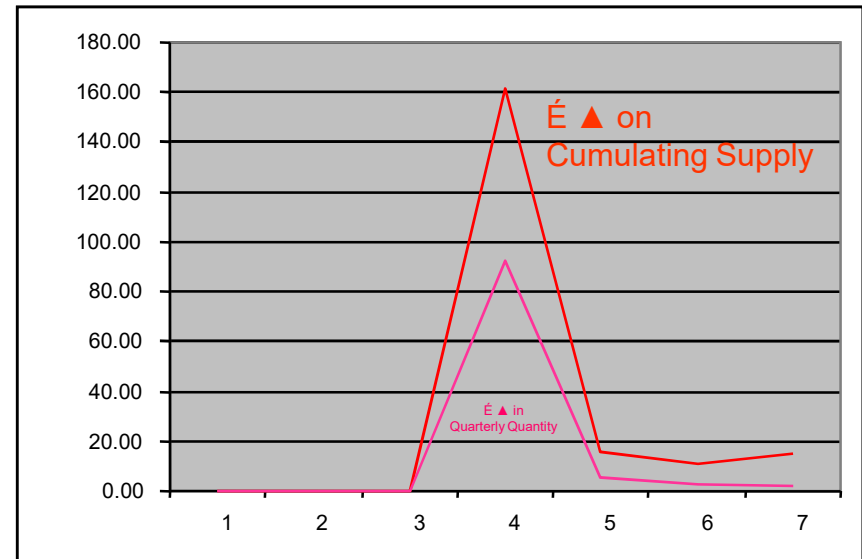
Qtr MR = MC / 3

\$0.00
\$0.00
\$313.86
\$309.34
\$330.43
\$310.15
\$300.28
\$311.37 Average

Production Cost

\$0.00
\$0.00
\$235.40
\$232.01
\$247.83
\$232.62
\$225.21
\$233.53 Average

24 Core is 6C x 4 or 8C x 3 dice?



24 Core is quasi rejected, likely based on 6C reclaim and 12C establishes channel rejection.

Camp Marketing Consultancy – Considering AMD Epyc / TR Volume Range, Cost & Margin

16C Quantity in Quarter

20,672
52,099
232,460
385,780
350,282
394,028
281,009
1,716,331

In-Qtr \$1K AWP

\$999.00
\$997.25
\$990.93
\$983.39
\$970.71
\$910.04
\$897.60
AWP \$951.55

Price @ 50% Off

\$499.50
\$498.63
\$495.46
\$491.70
\$485.35
\$455.02
\$448.80

AWP \$475.77
< 50% → + 50%

Stakeholder Split

Price @ / 3

\$333.00
\$332.42
\$330.31
\$327.80
\$323.57
\$303.35
\$299.20
AWP \$317.18

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Production Price
to AMD @ 1K / 3

Qtr MR = MC / 3

\$166.50
\$166.21
\$165.15
\$163.90
\$161.78
\$151.67
\$149.60
\$158.59 Average

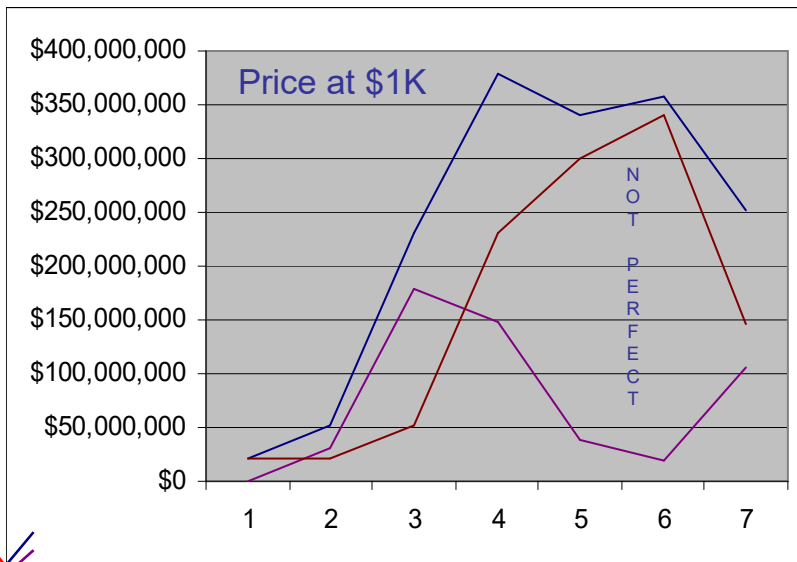
Production Cost

\$124.88
\$124.66
\$123.87
\$122.92
\$121.34
\$113.76
\$112.20
\$118.94 Average

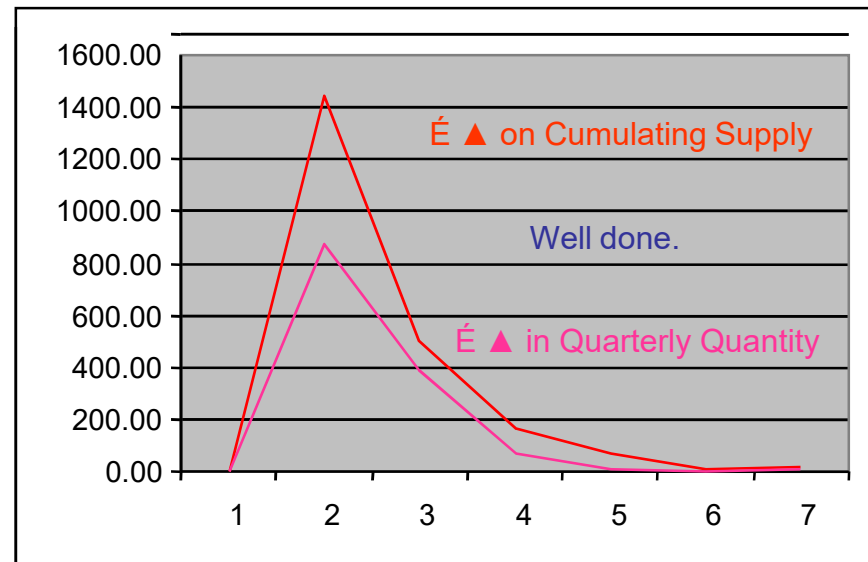
Appears production stakeholders might do better margin wise. Presents an AMD contract procurement question; whether or not some percent of foundry/package stakeholder marginal cost optimization is passed through to AMD?

Not perfect, but under the conditions an outstanding accomplishment. Well done AMD.

16 Core



For one perfect example see Slide 109 is also a much easier product run to administer.



Demanded; good elastic run on price drop. There is a MR sacrifice on volume cost increase.

Camp Marketing Consultancy – Considering AMD Epyc / TR Volume Range, Cost & Margin

12C Quantity in Quarter

8,508
33,928
280,406
242,406
111,651
50,736
28,030
755,665

In-Qtr \$1K AWP

\$799.00
\$799.00
\$799.00
\$799.00
\$799.00
\$783.26
\$721.41
AWP \$795.07

Price @ 50% Off

\$399.50
\$399.50
\$399.50
\$399.50
\$399.50
\$391.63
\$360.71
AWP \$397.03

< 50%

+ 50%

Stakeholder Split

Price @ / 3

\$266.33
\$266.33
\$266.33
\$266.33
\$266.33
\$261.09
\$240.47
AWP \$265.02

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Production Price
to AMD @ 1K / 3

Qtr MR = MC / 3

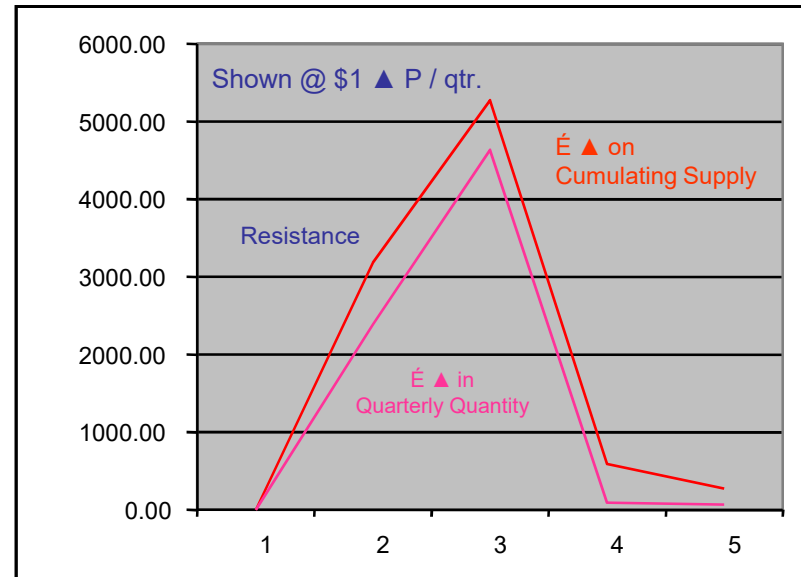
\$133.17
\$133.17
\$133.17
\$133.17
\$133.17
\$130.54
\$120.24
\$132.51 Average

Production Cost

\$99.88
\$99.88
\$99.88
\$99.88
\$99.88
\$97.91
\$90.18
\$99.38 Average

AMD entry embraced at cost development sample, missed on reclaim this SKU to save a few bad dice.

12 Core is non demanded; does 2x 6C reclaim CCX influence the decision?



No one wants 12C is absolutely rejected by the channel. I had to gang last three quarters to get a result. AMD minimally gives away 190,417 units loss of (\$14,594,812) up to the entire short run bundled in as sales incentive; (\$199,826,938). Or sold at cost \$132 to the development community stepping up from 8C but everyone I think went for TR 16C on 2 x 8C.

Camp Marketing Consultancy – Considering AMD Epyc / TR Volume Range, Cost & Margin

8C Quantity in Quarter

1,986
12,750
74,935
166,748
209,912
101,899
77,025
645,255

In-Qtr \$1K AWP

\$549.00
\$545.84
\$543.37
\$537.00
\$533.53
\$515.70
\$502.17
AWP \$529.30

Price @ 50% Off

\$274.50
\$272.92
\$271.69
\$268.50
\$266.76
\$257.85
\$251.08
AWP \$264.65

< 50%

+ 50%

Stakeholder Split

Price @ / 3
\$183.00
\$181.95
\$181.12
\$179.00
\$177.84
\$171.90
\$167.39
AWP \$176.43

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Production Price
to AMD @ 1K / 3

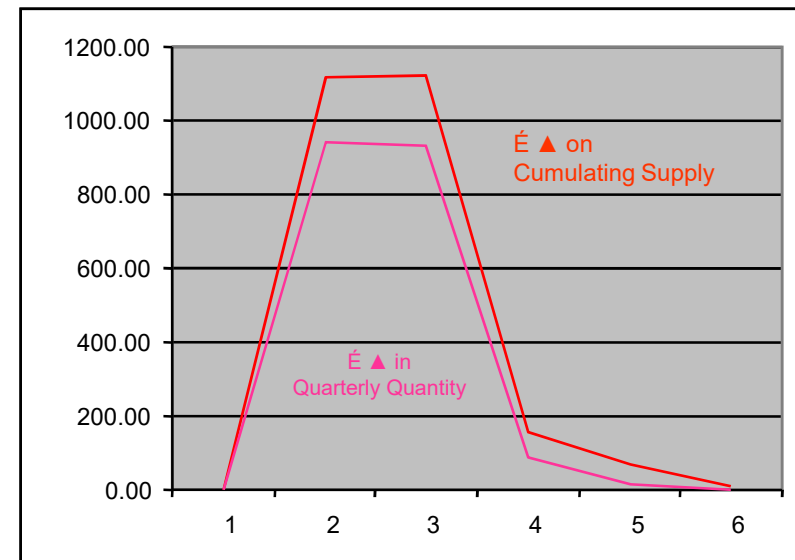
Qtr MR = MC / 3

\$91.50
\$90.97
\$90.56
\$89.50
\$88.92
\$85.95
\$83.69
\$88.22 Average

Production Cost

\$68.63
\$68.23
\$67.92
\$67.12
\$66.69
\$64.46
\$62.77
\$66.16 Average

8 Core



AMD cleared 8C that is a development (give-away); I suspect a push, not a loss, \$176 each.

Camp Marketing Consultancy

“The semiconductor industry has been reluctant to create any model that is not directly used in the development path. That is to be expected. Within most industries, *no additional work will be done unless it is demanded, such as by a regulatory body*, or customer, or has economic value.

When a model is created for usage outside of the primary development chain, *there are problems with keeping that model in sync and making sure it is available at the time when it can provide the most value.*

The creation of abstract models for well-contained blocks, such as processors, has been very successful. These models have a long lifetime, provide adequate fidelity for software development and when coupled to models for other aspects of the system enable new kinds of analysis. The digital twin (compliment modeling) brings a new dynamic into the equation.

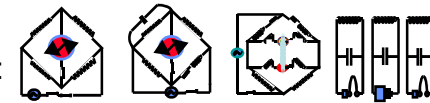
Both rely on models that are predictable and repeatable.

What this means is that two input events, that supposedly happen simultaneously, will always happen sequentially, one of them happens at an immeasurably small time ahead of the other. This is how the technology works. But that is not true in the real world and the digital twin is looking at bringing real-world stimulus into analysis. Sometimes those two inputs will change order and sometimes they will happen at exactly the same time. We may not have the necessary notions of coverage to handle such differences between the real world and our perfect simulation world.

The real world can be messy. It may be necessary to rethink some analysis tools when this happens.”

Brian Bailey, The Value of a Model, Technology Editor / EDA, Semiconductor Engineering, March 29, 2019

Camp Marketing Consulting



Project Framework:

Move beyond the box they paint for you.

To give intelligent, responsible, and capable direction for sustainable business within industry for society.

As a prerequisite for planning that serves customers and society as efficiently and effectively as possible.

Understand technology and business possibilities to meet the needs of customers and society as *cost effectively* as possible.

With exemplar stewardship cognizant of social welfare.

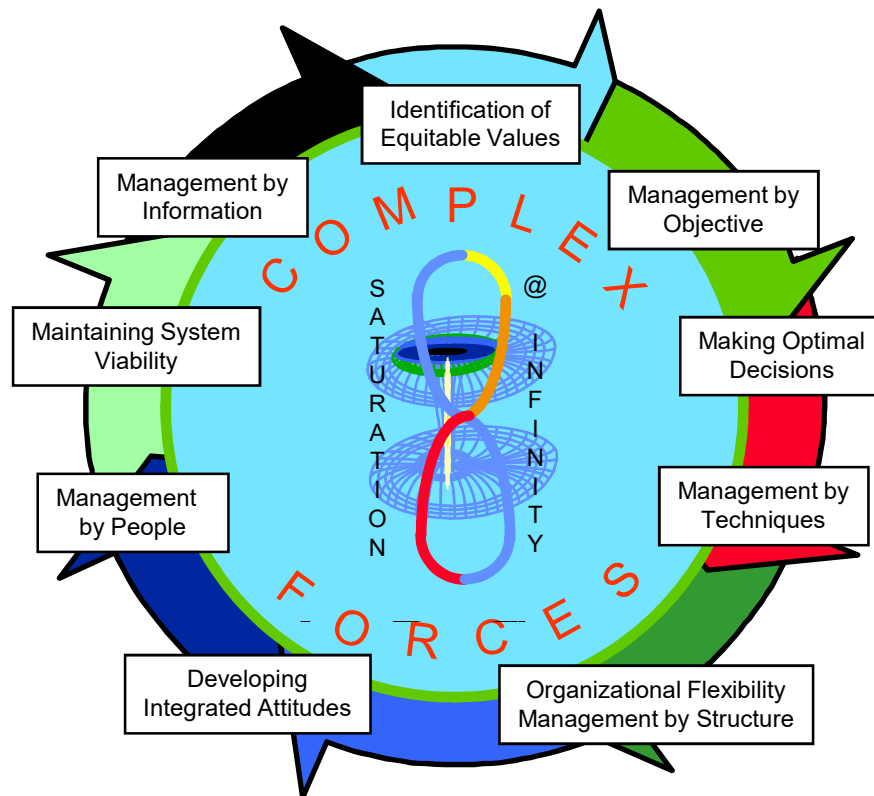
By enlarging the capabilities of the operation; melding together people, process, design, fabrication and utility knowledge for competitive advantage.

To assess equal opportunity for complimentary participation; partnership, cost and reward sharing.

To recognize the obligation to investors; planning for an *adequate* economic return on their investment.

To address economic responsibility as a design and process steward in the countries of industry operation.

To further the well being of the global electronics industry as an advocate of responsible, stable and sustainable growth models that make economic sense.



MIKE BRUZZONE – Camp Marketing Consultancy

Kaizen culture, practitioner of Benkyou, no politics, get the job done. Specializing in operational research, market relations, segment management, product evangelism, planning & tactical implementation, competitor and cluster strategy, product commercialization.