

Joint Events in Order by Date	Original (Reformatted, in Excel, from The Washington Post, Sunday, October 21, 2001, Sources: Staff research and news Accounts, Chart by Bill Webster, Washington Post)	Pentagon					World Trade Center 1					World Trade Center 2					Pennsylvania		
		Hanjour (Pent)	Moqed (Pent)	Nawaf	Salem	Almihdh	Waleed Atta (WTC1)	Wail Alshehri (WTC1)	Alsheri (WTC1)	Suqami (WTC1)	Alomari (WTC1)	Al- Shehhi (WTC2)	Baniham mad (WTC2)	Ahmed	Hamza	Mohand Alsheri (WTC2)	Jarrah (PA)	Alnami (PA)	Saeed
				Alhazmi (Pent)	Alhazmi (Pent)	ar (Pent)								Algham di (WTC2)	Algham di (WTC2)				Algham di (PA)
2000	1 Video w/ bin Laden Operatives	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	2 Flying lessons San Diego/ Move in w/ Shalk	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	3 OK flight school, no enroll / pilot training Venice F	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
	4 jet simulator lessons Miami Fla	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
2001	5 rent mailbox in Del Ray Beach Fla	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Jan-June	6 visit Atlanta rent Piper Cherokee plane	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
	7 leave Hamburg apartment	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
	8 get driver's licences Coral Springs, Fla	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
	9 together Hamlet Country Club Del Ray Beach Fla	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
	10 rent Delray Racquet Club	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
2001	11 World Gym Del Ray Beach and Boynton Beach	0	0	0	0	0	1	1	1	1	0	1	1	0	0	0	0	0	0
July-Septembe	12 arrive JFK from Saudi Arabia	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	13 Car rental Wayne NJ (rental 2)	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	14 VA drivers licenses and ID cards	1	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0
	15 Car rental Wayne NJ	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	16 One-way tickets via net UA 175	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0
	17 Check-in Deerfield Beach, buy tix via net	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0
	18 One-way tickets via net	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	19 Internet Ticket Activity	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	20 Buy Tix using same address and Visa	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	21 move out of NJ appt.	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	22 Internet Ticket Activity and Hotel check-out	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	0
	23 Together in Valencia Motel	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	24 gym passes purchased	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	25 one way tix bought in Lauderdale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	26 Ft. Lauderdale to Newark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	27 raw bar in Hollywood Fla/check out DFid. Beach	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
	28 buy tickets at BWI	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	29 hotel in downtown Boston	0	0	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	0
	30 Days Inn outside Boston	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	31 Comfort Inn S.Portland Maine	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0

Joint Events index ed by Date	Levine P/A Pattern Ordering.																				First Solution
	(described in "Joint-Space Analysis of 'Pick/Any' Data: Analysis of Choices from an Unconstrained Set of Alternatives," Psychometrika, March, 1979.) © 11/5/01 joel.levine@Dartmouth.edu																				
	Nawaf Alhazmi (Pent)	Almihdh ar (Pent)	Moqed (Pent)	Salem Alhazmi (Pent)	Hanjour (Pent)	Atta (WTC1)	Al-Shehhi (WTC2)	Waleed Alshehri (WTC1)	Wail Alsheri (WTC1)	Suqami (WTC1)	Alomari (WTC1)	Jarrah (PA)	Banihamad (WTC2)	Mohand Alsheri (WTC2)	Ahmed Alghamd (WTC2)	Hamza Alghamd (WTC2)	Alnami (PA)	Saeed Alghamd (PA)			
1 Video w/ bin Laden Operatives	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.065	
2 Flying lessons San Diego/ Move in w/ Shalk	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.065	
12 arrive JFK from Saudi Arabia	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.065	
28 buy tickets at BWI	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.059	
20 Buy Tix using same address and Visa	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.059	
24 gym passes purchased	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.059	
23 Together in Valencia Motel	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.057	
19 Internet Ticket Activity	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.055	
21 move out of NJ apt.	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.053	
13 Car rental Wayne NJ (rental 2)	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.052	
15 Car rental Wayne NJ	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.052	
3 OK flight school, no enroll / pilot training Venice Fla	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	-0.050	
4 jet simulator lessons Miami Fla	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	-0.050	
6 visit Atlanta rent Piper Cherokee plane	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	-0.050	
7 leave Hamburg apartment	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	-0.050	
9 together Hamlet Country Club Del Ray Beach Fla	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	-0.050	
27 raw bar in Hollywood Fla/check out DFld. Beach	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	-0.050	
17 Check-in Deerfield Beach, buy tix via net	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	-0.049	
31 Comfort Inn S.Portland Maine	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	-0.045	
22 Internet Ticket Activity and Hotel check-out	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	-0.044	
11 World Gym Del Ray Beach and Boynton Beach	0	0	0	0	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0	-0.044	
8 get driver's licencens Coral Springs, Fla	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	-0.043	
29 hotel in downtown Boston	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	0	-0.022	
14 VA drivers licenses and ID cards	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	-0.020	
16 One-way tickets via net UA 175	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	-0.011	
5 rent mailbox in Del Ray Beach Fla	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0.112	
18 One-way tickets via net	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0.147	
30 Days Inn outside Boston	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0.147	
10 rent Delray Racquet Club	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.335	
25 one way tix bought in Lauderdale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.404	
26 Ft. Lauderdale to Newark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.404	
First Solution	-0.064	-0.063	-0.052	-0.051	-0.050	-0.049	-0.047	-0.047	-0.047	-0.037	-0.037	-0.034	-0.026	0.027	0.094	0.191	0.393	0.393			

Joint Events indexed by Date	Levine P/A Pattern Ordering. 2nd Solution																				Second Solution	
	(described in "Joint-Space Analysis of 'Pick/Any' Data: Analysis of Choices from an Unconstrained Set of Alternatives," Psychometrika, March, 1979.) © 11/5/01 joel.levine@Dartmouth.edu																					
	Nawaf Alhazmi (Pent)	Almihdh ar (Pent)	Hanjour (Pent)	Moged (Pent)	Salem Alhazmi (Pent)	Ahmed Algham di (WTC2)	Alnami (PA)	Saeed Algham di (PA)	Hamza Algham di (WTC2)	Alomari (WTC1)	Atta (WTC1)	Mohand Alsheri (WTC2)	Jarrah (PA)	Al-Shehhi (WTC2)	Waleed Alshehri (WTC1)	Wail Alsheri (WTC1)	Suqami (WTC1)	Baniham mad (WTC2)				
1 Video w/ bin Laden Operatives	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.065	0.196	
2 Flying lessons San Diego/ Move in w/ Shalk	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.065	0.196	
12 arrive JFK from Saudi Arabia	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.065	0.196	
20 Buy Tix using same address and Visa	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.059	0.182	
24 gym passes purchased	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.059	0.182	
23 Together in Valencia Motel	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.057	0.178	
28 buy tickets at BWI	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.059	0.175	
21 move out of NJ appt.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.053	0.169	
13 Car rental Wayne NJ (rental 2)	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.052	0.168	
15 Car rental Wayne NJ	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.052	0.168	
14 VA drivers licenses and ID cards	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	-0.020	0.104	
19 Internet Ticket Activity	0	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	-0.055	0.097	
18 One-way tickets via net	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0.147	0.036	
30 Days Inn outside Boston	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0.147	0.036	
25 one way tix bought in Lauderdale	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.404	0.025	
26 Ft. Lauderdale to Newark	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.404	0.025	
10 rent Delray Racquet Club	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.335	0.019	
5 rent mailbox in Del Ray Beach Fla	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0.112	-0.060	
31 Comfort Inn S.Portland Maine	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	-0.045	-0.083	
22 Internet Ticket Activity and Hotel check-out	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	0	0	-0.044	-0.134	
8 get driver's licences Coral Springs, Fla	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	-0.043	-0.138	
3 OK flight school, no enroll / pilot training Venice F	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	-0.050	-0.140	
4 jet simulator lessons Miami Fla	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	-0.050	-0.140	
6 visit Atlanta rent Piper Cherokee plane	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	-0.050	-0.140	
7 leave Hamburg apartment	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	-0.050	-0.140	
9 together Hamlet Country Club Del Ray Beach Fla	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	-0.050	-0.140	
27 raw bar in Hollywood Fla/check out DFld. Beach	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	-0.050	-0.140	
16 One-way tickets via net UA 175	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	-0.011	-0.147	
17 Check-in Deerfield Beach, buy tix via net	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	-0.049	-0.148	
29 hotel in downtown Boston	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	-0.022	-0.150	
11 World Gym Del Ray Beach and Boynton Beach	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	0	-0.044	-0.152	
First Solution	-0.064	-0.063	-0.050	-0.052	-0.051	0.094	0.393	0.393	0.191	-0.037	-0.049	0.027	-0.034	-0.047	-0.047	-0.047	-0.037	-0.026				
Second Solution	0.196	0.181	0.168	0.157	0.155	0.061	0.024	0.024	0.008	-0.039	-0.121	-0.124	-0.146	-0.148	-0.150	-0.150	-0.151	-0.156				