



EXCHANGING MASS, MOMENTUM AND IDEAS:

→ THE ACCRETION/OUTFLOW CONNECTION IN YOUNG STELLAR OBJECTS

October, 27-29 2015

ESA/ESTEC, Noordwijk, NL



www.cosmos.esa.int/web/accretion-outflow-workshop

Scientific Advisory Committee:

Jerome Bouvier (IPAG, France)

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Organizers:

Gráinne Costigan (Leiden Observatory)

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Mylene Riemens (ESA/ESTEC)

TUESDAY, OCTOBER 27TH

SESSION 1: INNER SCALES PROCESSES

The innermost part of the disk is an observationally unresolved region where strong magnetic fields funnel the disk material to be accreted on the star and where energetic jets originate. At the same time, these processes are known to vary on short timescales, e.g., the rotational period of the star.

9:00 am			Registration opens
10:00 am			Welcome, logistics
10:15 am	I	S. Alencar	The connection between magnetic field topology and accretion: an observational perspective
10:45 am	I	C. Zanni	Magnetospheric accretion and protostellar outflows in YSOs: a theoretical perspective
11:15 am			Coffee break
11:45 am	C	S. Edwards	Unresolved Wind Diagnostics: Perspective from Forbidden Lines
12:05 pm	C	S. Gregory	Non-dipolar magnetic field models of redshifted absorption in HeI 10830Å as a probe of accretion on to young stars
12:25 pm	C	C. Argiroffi	MHD modeling of accretion impacts in Classical T Tauri stars: Observability and diagnostics in UV and X-ray bands
12:45 pm	C	J. Owen	Time-dependant magnetically controlled accretion in YSOs
1:05 pm			Lunch break
2:30 pm	C	I. Bozhinova	The accretion zone in very low mass objects: Insights from spectrophotometric monitoring
2:50 pm	C	L. Venuti	Accretion regimes and variability in the young open cluster NGC 2264
3:10 pm	C	H. M. Guenther	Accretion and outflow in TW Hya
3:30 pm			<i>Discussion led by A. Scholz on accretion variability</i>
4:00 pm			Coffee break
4:30 pm	C	F. Massi	Physical conditions in disks and winds around Herbig Ae/Be stars from high-resolution, wide-band NIR spectroscopy with GIANO
4:50 pm	C	R. Garcia-Lopez	Probing the accretion-ejection connection with VLTI-AMBER at high spectral resolution
5:10 pm	C	J. Kluska	VLTI/PIONIER images of the brightest inner disk rims, are they all clumpy?
5:30 pm			<i>Discussion led by V. Grinin and L. Tambovtseva on modeling of spectro-interferometric observations</i>
6:00 pm			End of day

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WEDNESDAY, OCTOBER 28TH

SESSION 2: OUTER SCALES PROCESSES

On large spatial scales we are able to observe jets and outflows and to characterize their physical properties in detail. This helps us to understand their origin and whether they are connected to inner disk processes or to large scale magnetic fields and viscosity processes throughout the disk. The secular evolution of both outflows and accretion can then help us to connect the two processes and to provide constraints on current models.

9:00 am	I	C. Dougados	Observations of jet/flow launching regions
9:30 am	I	G. Lesur	Squaring the circle in YSOs: the origin of accretion in weakly ionised protoplanetary discs
10:00 am	C	T. Downes	Global, fully multi-fluid simulations of radially stratified protoplanetary disks
10:20 am	C	F. Bacciotti	Exploring the feedback of asymmetric jets on the orbital motions in protostellar discs
10:40 am			<i>Short discussion led by J. Eislöffel</i>
11:00 am			Coffee break
11:30 am	C	S. Sheikhezami	Studying the accretion-ejection structure via 3D MHD simulations: jets from binary system
11:50 am	C	A. Sanna	Gas dynamics driven by a massive YSO - from 0.1 pc down to 100 AU
12:10 pm	C	R. Ainsworth	Protostellar Jets at Very Low Radio Frequencies
12:30 pm		T. Ray	<i>Future Facilities - How Can JWST Help Us Understand Accretion and Outflows in Young Stars?</i>
1:00 pm			Lunch break
2:30 am	C	J. Tobin	Characterizing Protostars and their Jets from the Centimeter to Far-Infrared
2:50 am	C	N. Hirano	Resolving the central region of the L1448C(N) protostellar jet
3:10 pm	C	A. Gomez de Castro	The effect of disk winds shadowing in accretion disk photo evaporation during the T Tauri phase.
3:30 pm		E. Whelan	<i>Future Facilities - Investigating Accretion-Ejection Connection with Second Generation VLT Instruments</i>
3:50 pm			<i>Short discussion led by B. Nisini</i>
4:10 pm			Poster session
7:00 pm			Bus to dinner location
7:30 pm			Social dinner (see details in the booklet)

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THURSDAY, OCTOBER 29TH

SESSION 3: LONG-TERM EVOLUTION

This session focuses on the dispersal of angular momentum in disks of young stellar objects by accretion, outflows, winds, and other processes such as planet formation. Can we rank their relative importance in the global disk evolution?

9:30 am	I	X. Bai	Towards a Global Evolutionary Picture of Protoplanetary Disks
10:00 am	I	I. Pascucci	Disk Dispersal by Star-driven Photoevaporation: Progress and Perspective
10:30 am	C	D. Rodgers-Lee	Diffusion of Protostellar Low Energy Cosmic Rays in Protoplanetary Disks
10:50 am	C	C. Manara (for J. Alcalá)	X-Shooter study of the Macc vs. Mstar relationship: the case of Lupus young stellar objects
11:10 am	Coffee break		
11:40 am	C	E. Rigliaco	Observational evidence of disk dispersal mechanisms from optical to mid-ir wavelengths
12:00 am	C	B. Ercolano	Blueshifted collisionally excited emission lines from YSOs: the smoking gun of a wind, but no useful tracers of the driving mechanism
12:20 am	<i>Discussion led by S. Edwards</i>		
1:00 pm	Lunch break		
2:00 pm		M. Audard	<i>Future Facilities</i> - Accretion and outflows with ASTRO-H, Athena, and SPICA
2:20 pm	C	E. Vorobyov	Variable protostellar accretion with episodic bursts
2:40 pm	C	C. D'Angelo	How does accretion rate variability affect spin period and disc-locking in YSOs?
3:00 pm	C	M. Vasconcelos	Rotational evolution of young, low mass stars
3:20 am	<i>Discussion led by S. Cabrit and wrap-up</i>		
4:00 pm	End of workshop		

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LIST OF POSTERS

	Presenter	Title
1	Argiroffi Costanza	Measure of the accretion stream velocity of TW Hya from X-ray Doppler shift
2	Cabrit Sylvie	Water emission lines in protostars: a possible signature of MHD disk winds?
3	Caratti o Garatti Alessio	Investigating accretion and ejection processes in high-mass YSOs: from AU to parsec scales
4	Ciardi Andrea	Outflows from collapsing pre-stellar cores
5	Coffey Deirdre	Angular Momentum Transfer From Disk to Jet: A Multi-Wavelength Study of RY Tau
6	Costigan Grainne	Accretion rates of embedded YSOs in CrA
7	Fendt Christian	How to make astrophysical jets?
8	Galvan-Madrid Roberto	Testing the Jet-Accretion Connection in Young Stellar Objects in the Time Domain
9	Gregory Scott (for C. Davies)	Revolution evolution: accretion disc-regulated spin down of low mass pre-main sequence stars
10	Gregory Scott (for E. Stuart-Morrison)	The evolution of baby Sun-like stars: does a forming star with a disc spin-up when it develops a radiative core?
11	Grinin Vladimir	The accretion-outflow phenomena at the late phases of the PMS evolution. The case of the post-T Tauri and post UX Ori star RZ Psc.
12	Kaper Lex	Characterizing massive pre-main-sequence stars with VLT/X-shooter
13	Kuiper Rolf	Emmy Noether Research Group on Accretion and Feedback in Massive Star Formation
14	Liu Haiyu Baobab	Jet-Accretion Connection from the Radio Aspect
15	Makin Sally	Star formation in Cygnus X: A systematic search for young stellar outflows
16	Manara Carlo Felice	Accretion and winds in transitional disks
17	McGinnis Pauline	A study of classical T Tauri stars in NGC 2264 with extinction dominated light curves
18	Momferratos Georgios	TBD
19	Navarete Felipe	Mid-J CO Outflows in Massive star forming regions in the Inner Galaxy
20	Nisini Brunella	Connection between jets, winds, and accretion in T Tauri stars
21	Ramirez Tannus Maria Claudia	VLT/X-shooter spectroscopy of massive pre-main-sequence stars in M17
22	Schilasky Anders	From Accretion to Outflows of Massive Protostars
23	Schneider Christian	Hot jets from cool stars
24	Stelzer Beate	Accretion and disks in the TW Hya association
25	Tabone Benoit	MHD disk winds with ALMA : the HH212 test case
26	Takami Hiro	Stable and Unstable Regimes of Mass Accretion onto RW Aur A
27	Tambovtseva Larisa	Multi-component line emission in young stars. Spectroscopy and interferometry
28	Vincenzi Maria	Accretion and outflows in full and transitional disks: helium lines analysis

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Wireless Internet

The wireless service is available in the Newton Room Area and in all meeting rooms. If you have access to the eduroam network, this is the best solution. Otherwise, you can use the esa-public network with the credentials reported on the back of your visitor badge.

Banking

There are two ATM machines at ESTEC, one across from the Coffee Corner & another one in Section Ad, where ABN AMRO Bank maintains an office.

Restaurant

The ESTEC restaurant is self-service and payment can only be taken in cash. No cards are accepted.

Coffee Corner

ESTEC's Coffee Corner is open on Monday - Thursday from 8:00 - 16:30 and on Friday from 11:00 - 16:00. A variety of coffees, refreshments, sandwiches and snacks are available for purchase. International newspapers and magazines are also available. During the scheduled breaks there will be coffee and tea served near the conference room.

Space Shop with ESA merchandise

The Space shop is open Wednesday & Thursday from 13:00-14:30hrs. You can find the shop near the main entrance (between reception and restaurant)

Taxi service

For those who need to arrange a taxi transfer from Schiphol airport, or other such transfers, please contact the ESA/ESTEC preferred supplier TAXI Brouwer, tel. +31-71-361 1000 or by email at info@brouwers-tours.nl

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By public transportation

From Leiden Central station, take bus 30 or 31 to Katwijk. It stops in front of the entrance gate of ESTEC (the journey takes about 25 minutes, slightly longer with bus 31). Please note that this bus departs four times an hour during the day, and twice an hour after 19.00 hours. For more information or other busses please consult the journey planner at <http://journeyplanner.9292.nl/>.

There are several options to get to ESTEC from Noordwijk, as well. Please consult the journey planner at <http://journeyplanner.9292.nl/> for more information.

You can pay the price of the ride (2/4 €) in cash directly to the bus driver. No cards accepted.

ESTEC Hotel Shuttle

A regular service between the hotels in Noordwijk and ESTEC is available. Reservations are not necessary as the shuttle leaves at fixed times. The schedule of the Hotel Shuttle is as follows:

Noordwijk to ESTEC

1st	2nd	3rd	Morning route
07:43	08:20	08:57	Hotels van Oranje (corner Koningin Wilhelminaboulevard/Schuitegat)
07:45	08:22	08:59	Golden Tulip Noordwijk Beach
07:47	08:24	09:01	Prominent Inn Hotel (corner Koningin Wilhelminaboulevard/Olieburg)
07:50	08:27	09:04	Grand Hotel Huis ter Duin (in front of the overhead roof/canopy)
07:52	08:29	09:06	Alexander Hotel
07:54	08:31	09:08	Palace Hotel
08:06	08:43	09:20	Estec Gatehouse
08:08	08:45	09:22	Estec Main Reception

Extra morning shuttle

08:20		Heeren van Noortwijk
08:23		Hotel Admiraal
08:30		Hotel Royal
08:40		ESTEC Gatehouse (passengers without a badge leave the Hotel Shuttle)
08:42		ESTEC Main Reception

ESTEC to Noordwijk

Departure from ESTEC Reception

1st	2nd	3rd	Afternoon return route
16:30	17:15	18:00	Estec Main Reception
16:44	17:29	18:14	Palace Hotel
16:46	17:31	18:16	Alexander Hotel
16:48	17:33	18:18	Grand Hotel Huis ter Duin (in front of the overhead roof/canopy)
16:52	17:37	18:22	Hotels van Oranje (corner Koningin Wilhelminaboulevard/Schuitegat)
16:54	17:39	18:24	Golden Tulip Noordwijk Beach
16:55	17:40	18:25	Prominent Inn Hotel (corner Koningin Wilhelminaboulevard/Olieburg)

A one-way voucher costs €4.50. Again a voucher will be given by the driver which serves as a receipt. Vouchers can only be purchased using cash, please have the correct amount at hand if possible. No credit card or PIN cards are accepted.

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MENU

Starter:
Tomato Soup

Choice of Main:
Ducks Breast
Cod
Parpedelle w/ hemp
seeds & wild spinach (V)

Tiramisu

1 glass of wine

€35

LOCATION

“De Vriend”
Grand Cafe Restaurant

Doezastraat 43
2311 HA Leiden



NB: We will get to the restaurant with a bus from ESTEC.
No bus is organized after the dinner.

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Please write here the question(s) you want to raise in the final discussion on Thursday and put this page in the box!

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